BUCHAN'S

DOMESTIC MEDICINE:

OR THE

FAMILY PHYSICIAN.

DESIGNED

TO RENDER THE MEDICAL ART MORE GENERALLY USEFUL, BY SHOWING PEOPLE WHAT IS IN THEIR OWN POWER;

BOTH WITH RESPECT TO THE

PREVENTION AND CURE OF DISEASES;

CHIEFLY CALCULATED

TO RECOMMEND A PROPER ATTENTION TO

REGIMEN, AND SIMPLE MEDICINES.

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PREFACE.

When I first signified my intention of publishing the following sheets, I was told by my friends it would draw on me the resentment of the whole faculty. As I never could entertain such an unworthy idea of physicians, I was resolved to make the experiment, which indeed came out pretty much as might have been expected. By the more selfish and narrow-minded part of the faculty, the performance was condemned; while many of those whose learning and liberality of sentiments do honor to medicine, received it in a manner which at once showed their indulgence, and the falsehood of the common opinion, *that all physicians wish to conceal their art.*

The reception which the book met with from the public was still more flattering, and deserves my most grateful acknowledgments. A persuasion that such a performance might be useful, and was even wished for by the public, encouraged me to print a large impression; but my most sanguine expectations could never have suggested that above five thousand copies would have been sold in a corner of Britain before another edition could be got ready.

A sense of gratitude, which public approbation seldom fails to inspire, induced me to bestow some pains to make the book more generally useful, by enlarging the *Prophylaxis*, or that part which treats of preventing diseases, and likewise adding several diseases which were entirely omitted in the former impression. This inevitably retarded the publication of the second edition, and has likewise drawn it out to a greater length than could have been wished; but these inconveniences will, I hope, be excused, as the book is certainly rendered less incomplete.

The observations relative to nursing and the management of children were chiefly suggested by an extensive practice among infants, in a large branch of the Foundling Hospital, where I had an opportunity not only of treating the diseases incident to childhood, but likewise of trying the different plans of nursing, and observing their effects. Whenever I had it in my power to place the children under the care of proper nurses, to instruct these nurses in their duty, and to be satisfied that they performed it, very few of them died; but when, from distance of place, and other unavoidable circumstances, the children were left to the sole care of mercenary nurses, without any one to instruct or superintend them, scarce any of them lived.

This was so apparent as, with me, to amount to a proof of the following melancholy fact: *that almost one half of the human species*

perish in infancy, by neglect or improper management. This reflection has made me often wish to be the happy instrument of alleviating the miseries of those suffering innocents, or of rescuing them from an untimely grave.

The application of medicine to the various occupations of life was likewise chiefly the result of observation. An extensive practice for several years, in one of the largest manufacturing towns in England, afforded me sufficient opportunities of observing the injuries which those useful people sustain from their particular employments, and likewise of trying various methods of obviating such injuries. The success which attended these trials was sufficient to encourage this attempt, which we hope will be of use to those who are under the necessity of earning their bread by such employments as are unfavorable to health.

I do not mean to intimidate men, far less to insinuate that even those arts, the practice of which is attended with some degree of danger, should not be carried on; but to guard the less cautious and unwary against those dangers which they have it in their power to avoid, and which they often, through mere fool-hardiness, incur. As every occupation in life disposes those who follow it to some particular diseases more than to others, it is certainly of importance to know these, in order that people may be upon their guard against them. It is always better to be warned of the approach of an enemy than to be surprised by him, especially where there is a possibility of avoiding the danger.

The observations concerning diet, air, exercise, &c., are of a more general nature, and have not escaped the attention of physicians in any age. They are subjects of too great importance, however, to be passed over in an attempt of this kind, and can never be sufficiently recommended. The man who pays a proper attention to these will seldom need the physician, and he who does not will seldom enjoy health, let him employ as many physicians as he will.

In the treatment of diseases, I have been peculiarly attentive to regimen. The generality of people lay too much stress upon medicine, and trust too little to their own endeavors. It is always, however, in the power of the patient, or of those about him, to do as much towards his recovery as can be effected by the physician. By not attending to this, the designs of medicine are often frustrated; and the patient, by pursuing a wrong plan of regimen, not only defeats the doctor's endeavors, but renders them dangerous. I have often known patients killed by an error in regimen, when they were using very proper medicines. It will be said, the physician always orders the regimen when he prescribes a medicine. I wish it were so, both for the honor of the faculty and the safety of their patients; but physicians, as well as other people, are too little attentive to this matter.

Though many reckon it doubtful whether medicines are more beneficial or hurtful to mankind, yet all agree in allowing the necessity and importance of a proper regimen in diseases. Indeed the very appetites of the sick prove its propriety. No man in his senses ever imagined that a person in a fever, for example, could eat, drink, or conduct himself in the same manner as one in perfect health. This part of medicine, therefore, is evidently founded in nature, and is every way consistent with reason and common sense. Had men

been more attentive to it, and less solicitous in hunting after secret remedies, medicine had never become an object of ridicule.

Indeed this seems to have been the first idea of medicine. The ancient physicians acted chiefly in the character of nurses. They went very little beyond aliment in their prescriptions; and even this they generally administered themselves, attending the sick, for that purpose, through the whole course of the disease; which gave them an opportunity not only of marking the changes of diseases with great accuracy, but likewise of observing the effects of their different applications, and adapting them to the symptoms.

The learned Dr. Arbuthnot asserts, that by a proper attention to those things which are almost within the reach of every body, more good and less mischief will be done in acute diseases than by medicines improperly and unseasonably administered; and that great cures may be effected in chronical distempers by a proper regimen of the diet only. So entirely do the doctor's sentiments agree with mine, that I would advise every person ignorant of physic to confine his practice solely to diet and the other parts of regimen; by which means he may often do much good, and can seldom do any hurt.

To render the book more generally useful, however, as well as more acceptable to the intelligent part of mankind, I have, in most diseases, besides regimen, recommended some of the most simple and approved forms of medicine, and added such cautions and directions as seemed necessary for their safe administration. No doubt it would have been more acceptable to many, had it abounded with pompous prescriptions and promised great cures in consequence of their use; but this was not my plan. I think the administration of medicines always doubtful, and often dangerous, and would much rather teach men how to avoid the necessity of using them, than how they should be used.

There are, however, several medicines, and those of considerable efficacy, which may be administered with great freedom, and at the same time with safety. Physicians generally trifle a long time with medicines before they come to know how to use them. Many peasants at present know better how to use some of the most important articles in the *materia medica* than physicians did a century ago; and doubtless the same observation will hold with regard to others some time hence. Wherever we were convinced that medicine might be used with safety, or where the cure depended chiefly upon it, we have taken care to recommend it; but where it was either highly dangerous, or not very necessary, it is omitted.

I have not troubled the reader with a useless parade of quotations from different authors, but have nevertheless made use of their observations where my own were either defective or totally wanting. Those to whom I have been most obliged were Remazina, Arbuthnot, Brookes, Cheyne, Mackenzie, and Tiffot; the last of which, in his *Avis au Peuple*, comes the nearest to my plan of any author which I have seen. Had Dr. Tiffot's plan been as complete as the execution is masterly, we should have had no occasion for any new treatise of this kind soon; but by confining himself to the acute diseases, he has, in my opinion, left out the most useful part of his subject. People in acute diseases may sometimes be their own physicians, but in the chronic the cure must ever depend chiefly upon the patient's own

endeavors. The doctor has also passed over the *Prophylaxis*, or preventive part of medicine, very slightly, though it is certainly of the greatest importance in such a performance. He had, no doubt, his reasons for so doing, and we are so far from finding fault with him, that we think his performance does great honor both to his head and to his heart.

I know some of the faculty disapprove of every attempt of this nature, imagining that it would totally destroy their influence. But this notion appears to me to be as absurd as it is illiberal. People in distress will always apply for relief to men of superior abilities, when they have it in their power; and they will do this with far greater confidence and readiness when they believe that medicine is a rational science, than when they take it to be only a matter of mere conjecture. I am far, however, from blaming any man because he differs in opinion from me. Every man has certainly a right to think and act in these matters as he pleases, nor shall any one ever be able to draw me into a dispute upon this subject.

All I shall say with regard to the following treatise is, that I have endeavored to make it plain and useful, and as accurate as my necessary avocations would permit. The language indeed is far from being so correct as I could have wished; but where utility is the aim, even critics are seldom disposed to censure an author for a few inaccuracies of style. Such as read the book with a view to this kind of criticism, will find matter enough, and I shall be far from despising their observations; but, as I would still wish to render the performance more generally useful, I shall esteem every man my friend who will be so kind as to point out any thing that may contribute to that purpose.

It was impossible to avoid some terms of art; but such as are made use of are, in general, either explained, or are such as most people understand. In short, I have endeavored to write down to the capacities of mankind in general, and, if my readers do not flatter either themselves or me, with some degree of success. This, however, on a medical subject, is not such an easy matter as some may imagine. It is easier to make a show of learning than to write plain sense, especially in a science which has been kept at such a distance from common observation. It would, however, be no difficult matter to prove, that every thing valuable in the practical part of medicine is within the reach of common sense, and that the art would lose nothing by being stripped of all that any person endued with ordinary abilities cannot comprehend.

INTRODUCTION.

The improvements in medicine, since the revival of learning, have by no means kept pace with those of the other arts. The reason is obvious. Medicine has been studied by few, except those who intended to live by it as a trade. Such, either from a mistaken zeal for the honor of medicine, or to raise their own importance, have endeavored to disguise and conceal the art. Medical authors have generally written in a foreign language; and those who were unequal to this task have even valued themselves upon couching, at least, their prescriptions, in terms and characters unintelligible to the rest of mankind.

The contentions of the clergy, which happened soon after the restoration of learning, engaged the attention of mankind, and paved the way for that freedom of thought and inquiry which has since prevailed in most parts of Europe with regard to religious matters. Every man took a side in those bloody disputes; and every gentleman, that he might distinguish himself on one side or other, was instructed in divinity. This taught men to think and reason for themselves in matters of religion, and at last totally destroyed that complete and absolute dominion which the clergy had obtained over the minds of men.

The study of law has likewise, in most civilized nations, been justly deemed a necessary part of the education of a gentleman. Every gentleman ought certainly to know at least the laws of his own country; and if he were also acquainted with those of others, it might be more than barely an ornament to him.

The different branches of philosophy have likewise of late been very universally studied by all who pretend to a liberal education. The advantages of this are manifest. It frees the mind from prejudice and superstition, fits it for the investigation of truth, induces habits of reasoning and judging properly, opens an inexhaustible source of entertainment, paves the way to the improvement of arts and agriculture, and qualifies men for acting with propriety in the most important stations of life.

Natural history has also of late become an object of general attention. And it well deserves to be so. Here the useful and agreeable are most intimately connected. Medicine, however, has not, so far as we know, in any country, been reckoned a necessary part of the education of a gentleman. But surely no sufficient reason can be assigned for this omission. No science lays open a more extensive

field of useful knowledge, or affords more ample entertainment to an inquisitive mind. Anatomy, botany, chemistry, and the *materia medica*, are all branches of natural history, and are fraught with such delight and usefulness, that the man who entirely neglects them has but a sorry claim either to taste or learning. If a gentleman has a turn for observation, says an elegant and sensible writer,* surely the natural history of his own species is a more interesting subject, and presents a more ample field for the exertion of genius, than the natural history of spiders and cockle-shells.

We do not mean that every man should become a physician. This would be an attempt as ridiculous as it is impossible. All we plead for is, that men of sense and learning should be so far acquainted with the general principles of medicine, as to be in a condition to derive from it some of those advantages with which it is fraught, and at the same time to guard themselves against the destructive influences of ignorance, superstition, and quackery.

The veil of mystery which still hangs over medicine, renders it not only a conjectural, but even a suspicious art. This has been long ago removed from the other sciences, which induces many to believe that medicine is a mere trick, and that it will not bear a fair and candid examination. Medicine, however, needs only to be better known, in order to secure the general esteem of mankind. Its precepts are such as every wise man would choose to observe, and it forbids nothing but what is incompatible with true happiness.

Disguising medicine not only retards its improvement as a science, but exposes the profession to ridicule, and is injurious to the true interests of society. An art founded on observation never can arrive at any high degree of improvement, as long as it is confined to a few who make a trade of it. The united observations of all the ingenious and sensible part of mankind, would do more in a few years towards the improvement of medicine than those of the faculty alone in a great many. Any man can tell when a medicine gives him ease as well as a physician, and if he only knows the name and dose of the medicine, and the name of the disease, it is sufficient to perpetuate the fact. Yet the man who adds one single fact to the stock of medical observations, does more real service to the art than he who writes a volume in support of some favorite hypothesis.

Very few of the valuable discoveries in medicine have been made by physicians. They have, in general, either been the effect of chance or of necessity, and have been usually opposed by the faculty till every body else was convinced of their importance. An implicit faith in the opinions of teachers, an attachment to systems and established forms, and the dread of reflections, will always operate upon those who follow medicine as a trade. Few improvements are to be expected from a man who might ruin his character and family by even the smallest deviation from an established rule.

If men of letters, says the author of the performance quoted above were to claim their right of inquiry into a matter that so nearly concerns them, the good effects on medicine would soon appear. Such men would have no separate interest from that of the art. They would detect and expose assuming ignorance under the mask of

* Observations on the Duties and Offices of a Physician.

gravity and importance, and would be the judges and patrons of modest merit. Not having their understandings perverted in their youth by false theories, unawed by authority, and unbiassed by interest, they would canvass with freedom the most universally received principles in medicine, and expose the uncertainty of many of those doctrines of which a physician dares not so much as seem to doubt.

I know it will be said, that diffusing medical knowledge among the people might induce them to tamper with medicine, and to trust to their own skill instead of calling a physician. The reverse of this, however, is true. Persons who have most knowledge in these matters are commonly most ready both to ask and follow advice, when it is necessary. The ignorant are always most apt to tamper with medicine, and have the least confidence in physicians Instances of this are daily to be met with among the ignorant peasants, who, while they absolutely refuse to take a medicine which has been prescribed by a physician, will swallow with greediness any thing that is recommended to them by their credulous neighbors. Where men will act even without knowledge, it is certainly more rational to afford them all the light we can than to leave them entirely in the dark.

It will also be alleged, that laying medicine more open to mankind would lessen their faith in it. This would indeed be the case with regard to some individuals; but it would have quite a contrary effect upon others. I know many people who have the utmost dread and horror of every thing prescribed by a physician, but who will, nevertheless, very readily take a medicine which they know, and whose qualities they are in some measure acquainted with. Hence it is evident that the dread arises from the doctor, not from the drug. Nothing ever can or will inspire mankind with an absolute confidence in physicians but an open, frank, and undisguised behavior. As long as the least shadow of mystery remains in the conduct of the faculty, doubts, jealousies, and suspicions will arise in the minds of men.

No doubt cases will sometimes occur where a prudent physician may find it expedient to disguise a medicine. The whims and humors of men must be regarded by those who mean to do them service; but this can never affect the general argument in favor of candor and openness. A man might as well allege, because there are knaves and fools in the world, that he ought to take every one he meets for such, and to treat him accordingly. A sensible physician will always know where disguise is necessary; but it ought never to appear on the face of his general conduct.

The appearance of mystery in the conduct of physicians not only renders their art suspicious, but lays the foundations of quackery, which is the very disgrace of medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been very much confounded. The line betwixt them is not sufficiently apparent; at least it is too fine for the general eye. Few persons are able to distinguish sufficiently between the conduct of that man who administers a secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the real physician, which needs no disguise, gives a sanction to that of the villain, whose whole success depends upon secrecy.

No laws will ever be able to prevent quackery, as long as people

believe that the quack is an honest man, and as well qualified as the physician. A very small degree of medical knowledge, however, would be sufficient to break this spell; and nothing else can effectually undeceive them. It is the ignorance and credulity of the multitude, with regard to medicine, which renders them such an easy prey to every one who has the hardiness to attack them on this quarter. Nor can the evil be remedied by any other means but by making them wiser. Indeed, the most effectual way to destroy quackery in any art or science, is to diffuse the knowledge of it among mankind. Did physicians write their prescriptions in the common language of the country, and explain their intentions to the patient, as far as he could understand them, it would enable him to know when the medicine had the intended effect, would inspire him with absolute confidence in the physician, and would make him dread and detest every man who pretended to cram a secret medicine down his throat.

Diffusing medical knowledge among the people would not only tend to improve the art, and to banish quackery, but likewise to render medicine more universally useful, by extending its benefits to society. However long medicine may have been known in this country, we will venture to say that many of its most important purposes have either been overlooked or very little attended to. The cure of diseases is doubtless a matter of great importance; but the preservation of health is of still greater. This is the concern of every man, and surely what relates to it ought to be rendered as plain and obvious to all as possible. It is not to be supposed that men can be sufficiently upon their guard against diseases who are totally ignorant of their causes. Neither can the legislature, in whose power it is to do much more for preserving the public health than can ever be done by the faculty, exert that power with propriety, and to the greatest advantage, without some degree of medical knowledge.

Men of every occupation and condition in life might avail themselves of a degree of medical knowledge; as it would teach them to avoid the dangers peculiar to their respective stations; which is always easier than to remove their effects. Medical knowledge, instead of being a check upon the enjoyments of life, only teaches men how to make the most of them. It has indeed been said, *that to live medically is to live miserably;* but it might with equal propriety be said, that to live reasonably is to live miserably. If physicians obtrude their own ridiculous whims upon mankind, or lay down rules inconsistent with reason or common sense, no doubt they will be despised; but this is not the fault of medicine. It proposes no rules, that I know, but such as are perfectly consistent with the true enjoyment of life, and every way conducive to the real happiness of mankind.

We are sorry indeed to observe that medicine has hitherto hardly been considered a popular science, but as a branch of knowledge solely confined to a particular set of men, while all the rest have been taught not only to neglect, but even to dread and despise it. It will however appear, upon a more strict examination, that no science better deserves their attention, or is more capable of being rendered generally useful. People are told that, if they dip the least into medical knowledge, it will render them fanciful, and make them believe that they have got every disease of which they read. Perhaps this may be the case with those who are fanciful beforehand. But sup-

pose it were so with others, they must soon be undeceived. A short time will show them their error, and a little more reading will infallibly correct it. A single instance will show the absurdity of this notion. A sensible lady, rather than read a medical performance, which would instruct her in the management of her children, must leave them entirely to the care and conduct of the most ignorant, credulous, and superstitious part of the human species.

No part of medicine is of more general importance than that which relates to the nursing and management of children. Yet few parents pay a proper attention to it. They leave the sole care of their tender offspring, at the very time when care and attention are most necessary, to hirelings, who are either too careless to do their duty, or too ignorant to know it. We will venture to affirm, that more human lives are lost by the carelessness and inattention of parents and nurses, than are saved by the faculty; and that the joint and well-conducted endeavors, both of private persons and the public, for the preservation of infant lives, would be of more advantage to society than the whole art of medicine, upon its present footing.

The benefits of medicine, as a trade, will ever be confined to those who are able to pay for them, and of course the far greater part of mankind will be every where deprived of them. Physicians, like other people, must live by their employment, and the poor must either want advice altogether, or take up with that which is worse than none. There are not, however, any where wanting well disposed people, of better sense, who are willing to supply the defect of medical advice to the poor, did not their fear of doing ill often suppress their inclination to do good. Such people are often deterred from the most noble and praiseworthy actions by the foolish alarms sounded in their ears by a set of men, who, to magnify their own importance, magnify the difficulties of doing good, find fault with what is truly commendable, and fleer at every attempt to relieve the sick which is not conducted by the precise rules of medicine. These gentlemen must however excuse me for saying, that I have often known such well-disposed persons do much good; and that their practice, which is generally the result of good sense and observation, assisted by a little medical reading, is frequently more rational than that of the ignorant retainer to physic, who, while he is dosing his patient with medicine, according to the rules of art, often neglects other things of far greater importance.

Many things are necessary for the sick besides medicine. Nor is the person who takes care to procure those for them of less importance than a physician. The poor oftener perish in diseases for want of proper nursing than of medicine. They are frequently in want of even the necessaries of life, and still more so of what is proper for a sick bed. No one can imagine, who has not been a witness of these situations, how much good a well-disposed person may do, by only taking care to have such wants supplied. There certainly cannot be a more necessary, a more noble, or a more godlike action than to administer to the wants of our fellow-men in distress. While virtue or religion are known among mankind, this conduct will be approved; and while Heaven is just, it must be rewarded.

Persons who do not choose to administer medicine to the sick may nevertheless direct their regimen. A very great medical author has

said that by diet alone all the intentions of medicine may be answered. No doubt a great many of them may; but there are other things, besides diet, which ought by no means to be neglected. Many hurtful and destructive prejudices, with regard to the treatment of the sick, still prevail among the people, which persons of better sense and learning alone can eradicate. To guard the poor against the influence of these prejudices, and to instil into their minds some just ideas of the importance of proper food, fresh air, cleanliness, and other pieces of regimen necessary in diseases, would be a work of great merit, and productive of many happy consequences. A proper regimen, in most diseases, is at least equal to medicine, and in many of them it is greatly superior.

To assist the well-meant endeavors of the humane and benevolent in relieving distress, to eradicate dangerous and hurtful prejudices, to guard the ignorant and credulous against the frauds and impositions of quacks and impostors, and to show men what is in their own power, both with regard to the prevention and cure of diseases, are certainly objects worthy of the physician's attention. These were the leading views in composing and publishing the following sheets. They were suggested by an attention to the conduct of mankind, with regard to medicine, in the course of a pretty long practice in different parts of this island, during which the author has often had occasion to wish that his patients, or those about them, had been possessed of some such plain directory for regulating their conduct. How far he has succeeded in his endeavors to supply this deficiency, must be left for others to determine; but if they be found to contribute, in any measure, towards alleviating the calamities of mankind, he will think his labor very well bestowed.

PART I.

OF THE GENERAL CAUSES OF DISEASES.

CHAPTER I.

OF CHILDREN.

The better to trace diseases from their original causes, we shall take a view of the common treatment of mankind in the state of infancy. In this period of our lives, the foundations of a good or bad constitution are generally laid; it is therefore of importance that parents be well acquainted with the various causes which may produce diseases in their offspring.

It appears from the annual registers of the dead that about one half of the children born die under twelve years of age. To many, indeed, this may appear a natural evil; but, on due examination, it will be found to be one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young. But our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those children who perish annually by art alone exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose. These will always endeavor to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been intro-

duced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than for a mother to think it below her to take care of her own child, or to be so ignorant as not to know what is proper to be done for it. If we search nature throughout, we cannot find a parallel to this. Every other creature is the nurse of its own young, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. This, whatever speculative writers may allege, is in many cases impracticable, and would inevitably prove destructive both to the mother and child. Women of delicate constitutions, subject to low spirits, hysteric fits, or other nervous disorders, make very bad nurses; and these complaints are now so common that it is rare to find a woman of fashion free from them. Such women, therefore, supposing them willing, are really unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to nature; but whoever considers how far we have deviated from her dictates, will not be surprised to find many of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, nor enjoy the benefit of free air and exercise, can neither have wholesome humors themselves, nor afford proper nourishment to an infant. Hence children who are suckled by delicate women either die young, or are weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother who can ought certainly to perform so tender and agreeable an office. But suppose it to be out of her power, she may, nevertheless, be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other offices are necessary for a child, which the mother ought at least to see done.

A mother who abandons the fruit of her womb, as soon as it is born, to the sole care of a hireling, hardly deserves the name of a parent. A child, by being brought up under the

mother's eye, not only secures her affection, but may reap all the advantages of a mother's care, though it be suckled by another. How can a mother be better employed than in superintending the nursery? This is at once the most delightful and important office; yet the most trivial business or insipid amusements are often preferred to it—a strong proof both of the bad taste and wrong education of modern females.

It is indeed to be regretted that more care is not bestowed in teaching the proper management of children to those whom nature has designed for mothers. This, instead of being made a principal, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, what to do for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence sensible people become the dupes of ignorance and superstition; and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.*

Were the time that is generally spent by females in the acquisition of trifling accomplishments employed in learning how to bring up their children, how to dress them so as not to hurt, cramp, or confine their motions, how to feed them with wholesome and nourishing food, how to exercise their tender bodies so as best to promote their growth and strength —were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public show, we have nothing to expect from them but ignorance, even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant off-

* Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care of their offspring. He says that in former times the greatest women in Rome used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the sole care of some poor Grecian wench or other menial servant. We are afraid wherever luxury and effeminacy prevail there will be too much ground for this complaint.

spring. It is their province not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that the men should pay so little regard to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would esteem it an affront were they supposed to know any thing of them. Not so, however, with the kennel or the stables. A gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Even physicians themselves have not been sufficiently attentive to the management of children. That has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill, when his attendance can only serve to divide the blame and appease the disconsolate parents.

Nurses should do all in their power to prevent diseases; but when a child is taken ill, some person of skill ought immediately to be consulted. The diseases of children are generally acute, and the least delay is dangerous.

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat them properly when sick, but likewise to give useful directions for their management when well. The diseases o children are by no means so difficult to be understood as many imagine. It is true they cannot tell their complaints; but the causes of them

may be pretty certainly discovered, by putting proper questions to the nurses and such as are about them. Besides, the diseases of infants, being less complicated, are easier cured than those of adults.*

It is really astonishing that so little attention should in general be paid to the preservation of infants. What labor and expense are daily bestowed to prop an old tottering carcass a few years, while thousands of those who might be useful in life perish without being regarded. Mankind are too apt to value things according to their present, not their future, usefulness. Though this be of all others the most erroneous method of estimation, yet upon no other principle is it possible to account for the general indifference with respect to the death of infants.

One great source of the diseases of children is the *unhealthiness of parents.* It would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitutions have been worn out with intemperance or disease.

An ingenious writer observes,† that on the constitution of mothers depends originally that of their offspring. No one who believes this will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud; or, should it struggle through a few years' existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If to the delicacy of mothers we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitutions of their parents. A sickly frame may be originally produced by hardships or intemperance,

* The common opinion, that the diseases of infants are hard to discover and difficult to cure, has deterred many physicians from paying that attention to them which they deserve. I can however, from experience, declare that this opinion is without foundation, and that the diseases of infants are neither so difficult to discover nor so ill to cure as those of adults. This we hope will induce practitioners to pay more regard to the complaints of their young patients, and not to leave them entirely in the hands of old women.

† Rousseau.

but chiefly by the latter. It is impossible that a course of vice should not spoil the best constitution. And did the evil terminate here, it would be a just punishment for the folly of the sufferer; but when once a disease is contracted and rivetted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or king's-evil, to transmit to our offspring. How happy had it been for the heir of many a great estate had he been born a beggar, rather than to inherit his father's fortunes at the expense of inheriting his diseases.

No person who labors under any incurable malady ought to marry. He thereby not only shortens his own life, but transmits misery to others. But when both parties are deeply tainted with the scrofula, the scurvy, or the like, the effects must be still worse. Such will either have no issue at all, or those whom they have must be miserable indeed. Want of attention to these things, in forming connections for life, has rooted out more families than plague, famine, or the sword; and so long as these connections are formed from mercenary views, the evil will be continued.

In our matrimonial contracts, it is amazing so little regard is had to the health and form of the object. Our sportsmen know that the generous courser cannot be bred out of the foundered jade, nor the sagacious spaniel out of the snarling cur. This is settled upon immutable laws. The man who marries a woman of a sickly constitution, and descended of unhealthy parents, whatever his views may be, cannot be said to act a prudent part. A puny scrofulous woman may prove fertile; should this be the case, the family must become an infirmary. What prospect of happiness the father of such a family has, we shall leave any one to judge.

The Jews, by their laws, were, in certain cases, forbid to have any manner of commerce with the diseased; and indeed to this all wise legislators ought to have a special regard. In some countries, diseased persons have actually been forbid to marry. This is an evil of a complicated kind, a natural deformity, and political mischief, and therefore requires a public consideration.

Such children as have the misfortune to be born of diseased parents will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do

wonders. But, when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family disease ought to be very circumspect in their manner of living. They should consider well the nature of such disease, and guard against it by a proper regimen. It is certain that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates; and the libertine, who impairs the one, does greater injury to his posterity than the prodigal who squanders away the other.

The *clothing* of an infant is so simple a matter, that it is surprising how any person should err with regard to it; yet many children lose their lives, and others are deformed, by inattention to this article.

Nature knows no other use of clothes to an infant but to keep it warm. All that is necessary for this purpose is to wrap it in a soft loose covering. Were a mother left to the dictates of nature alone, she would certainly follow this method. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary that a woman in labor should have some person to attend her. This in time became a business; and, as in all others, those who were employed in it strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwife's province, who no doubt imagined that the more dexterity she could show in this article, the more her skill would be admired. Her attempts were seconded by the vanity of parents, who, too often desirous of making a show of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body as if every bone had been fractured in the birth; while

midwifes province of course to be considered

these were often so tight as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary for life.

In several parts of Britain, the practice of rolling children with so many bandages is now, in some measure, laid aside; but it would still be a difficult task to persuade the generality of women that the shape of a child does not entirely depend on the care of the midwife. So far, however, are all their endeavors to mend the shape of children from being successful, that they constantly operate the contrary way, and mankind become deformed just in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations; so little, indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management, their children become so strong and hardy, that, by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.

Among brute animals, no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling-bands. Is nature less generous to the human kind? No; but we take the business out of her hands.

Not only the analogy of other animals, but the very feelings of infants tell us, that they ought to be kept easy and free from all pressure. They cannot indeed tell their complaints, but they can show signs of pain; and this they never fail to do, by crying, when pinched by their clothes. No sooner are they freed from their bracings, than they seem pleased and happy; yet, strange infatuation! the moment they hold their peace they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and, lest they should receive any injury from pressure in the womb, has surrounded the

fœtus everywhere with fluids. This shows the care which nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their birth as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part of the body grows too large, while another remains too small; and thus in time the whole frame becomes disproportioned and misshapen. To this we must add, that when a child is cramped in its clothes, it naturally shrinks from the part that is hurt, and, by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may indeed proceed from weakness or diseases, but in general it is the effect of improper clothing. Nine-tenths, at least, of the deformity amongst mankind must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both the animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably misshapen are strong and healthy.

The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c., afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions than bracing the body too tight with rollers, bandages, &c. Were these to be applied in the same manner to the body of an adult, for an equal length of time, they could hardly fail to hurt the digestion and make him sick. How much more hurtful must they prove to the tender bodies of infants, we shall leave any one to judge.

Whoever considers these things will not be surprised that

so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but, in fact, they oftener proceed from our own imprudent conduct. I have known a child seized with convulsion fits soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had any convulsion fits afterwards. Numerous examples of this might be given, were they necessary.

It would be safer to fix on the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion convulsions. Pins have been found sticking above half an inch into the body of a child after it had died of convulsion fits, which, in all probability, proceeded from that cause.

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth, and if loaded with too many clothes the fever must be increased. But that is not all; the child is generally laid in bed with the mother, who is often likewise feverish; to which we may add the heat of the bedchamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been for some time in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any wonder if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life. From hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular pieces of dress proper for an infant. These will always vary in different places, according to custom and the humor of parents. The great rule to be observed is, *that a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body.*

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress. The madness in favor of stays seems, however, to

be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know that the human shape does not solely depend upon whalebone and bend-leather.*

We shall only add, with respect to the clothes of children, that they ought to be kept very clean. Children perspire more than adults, and if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells, and, what is worse, tend to produce vermin and cutaneous diseases.

Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and by that means frees the body from superfluous humors, which, if retained, could not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may oblige her to give it coarse clothes, but if she does not keep them clean it must be her own fault.

Nature not only points out the food proper for an infant, but actually prepares it. This, however, is not sufficient to prevent some, who think themselves wiser than nature, from attempting to bring up their children without her provision. Nothing can show the disposition which mankind have to depart from nature more than their endeavoring to bring up children without the breast. The mother's milk, or that of a healthy nurse, is unquestionably the best food for an infant. Neither art or nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shows an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it. Besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breast, fevers, and other diseases incident to mothers.

It is strange how people came to think that the first thing

* Stays made of bend-leather are worn by all the women of lower station in many parts of England.

given to a child should be drugs. This is beginning with medicine betimes, and no wonder that they generally end with it. It sometimes happens, indeed, that a child does not discharge the *meconium* so soon as could be wished. This has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c., whether they be necessary or not. Cramming an infant with such indigestible stuff, as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long after the birth without having passage both by stool and urine, though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water-pap, to which may be added an equal quantity of new milk. If this be given without any wines, sugars, or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly, wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children need very little food for some time after the birth, and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine, or even sugar, is sufficient to heat and inflame the blood of an infant; but every person conversant in these matters must know that most of the diseases of infants proceed from the heat of their humors.

If the mother or nurse has enough of milk, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions are to be avoided in nursing. For this purpose, the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed milk itself should make a principal part of their food, not only before they are weaned, but for a long time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shows an inclination to chew; and it may at all times be allowed as much as it pleases. The very chewing of bread will promote the cutting of the teeth and the discharge of *saliva*, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the *saliva* down to the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child further advanced, bread may be mixed in veal or chicken broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well fermented; but when enriched with fruits, sugars, or such things, it becomes very unwholesome.

It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour their stomachs; but, on the other hand, too much flesh heats the blood, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

Few things are more hurtful to children than the common method of sweetening their food. It entices them to take more food than they ought to do, which makes them grow fat and bloated. It is pretty certain if the food of children were quite plain that they would never take more than enough. The excesses of children are entirely owing to nurses. If a child be gorged with food at all hours, and enticed to take it by making it sweet and agreeable to the palate, is it any

wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day, but should never be accustomed to eat in the night, neither should it have too much at a time. Children thrive best with small quantities of food frequently taken. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavoring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overloaded, but a child who is pinched with hunger will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

Many people imagine that the sort of food which they love themselves cannot be bad for their children; but this notion is very absurd. In the more advanced periods of life we often acquire an inclination for food which when children we could not endure. Besides, there are many things that may agree very well with the stomach of a grown person, which would be hurtful to a child; as high-seasoned, salted, and smoke-dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, rich soups, or the like.

All strong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other strong liquors, at every meal. Such a practice cannot fail to do mischief. Those children seldom escape the violence of the small-pox, measles, hooping cough, or some inflammatory disorder. Milk, water, buttermilk, or whey, are the most proper for children to drink. If they have any thing stronger, it may be fine small beer, or a little wine mixed with water. The stomachs of children can digest well enough without the assistance of warm stimulants. Besides, being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits.

They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed show a great inclination for fruit, and I am apt to believe that if good ripe fruit were allowed them in proper quantity it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humors. This is what most children want; only care should be taken lest they exceed. Indeed, the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.

Roots which contain a crude viscid juice should be sparingly given to children. They fill the body with gross humors, and tend to produce eruptive diseases. This caution is peculiarly necessary for the poor. Glad to obtain what will fill the bellies of their children for a little money, they stuff them two or three times a day with potatoes or other crude vegetables. Children had better eat a small quantity of food which yields a wholesome nourishment than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach and produces gross humors. Indeed, most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, we would recommend honey. Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humors. Children who eat honey are seldom troubled with worms; they are also less subject to cutaneous diseases, as itch, scabbed head, &c.

Many people err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, the scrofula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing therefore which tends to unbrace their solids ought to be carefully avoided.

We would not be understood, by these observations, as confining children to any particular kind of food. Their diet may be frequently varied, provided always that sufficient regard be had to simplicity.

Of all the causes which conspire to render the lives of children short and miserable, none has greater influence than the

want of proper *exercise*. Healthy parents, wholesome food, and proper clothing, will avail little, where exercise is neglected. Sufficient exercise will make up for several defects in nursing; but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is almost coeval with life itself. Were this principle attended to, many diseases might be prevented. But while indolence and sedentary employments prevent two-thirds of mankind from either taking sufficient exercise themselves or giving it to their children, what have we to expect but diseases and deformity among their offspring? The rickets, so destructive to children, never appeared in Britain till manufactures began to flourish, and people, attracted by the love of gain, left the country to follow sedentary employments in great towns. It is amongst these people that this disease chiefly prevails, and not only deforms, but kills many of their offspring.

The conduct of other young animals shows the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about, and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but, as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised in various ways. The best method, while they are light, is to carry them about in the nurse's arms. This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more foolish than to set one child to keep another. This conduct has proved fatal to many infants, and has rendered others miserable for life.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading-strings fixed to their backs, has many bad consequences. It makes them throw their bodies

forward and press with their whole weight upon the breast. By this means the breathing is obstructed, the breast flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs, and other diseases.

It is a common notion that if children be set upon their feet too soon their legs will become crooked. There is reason to believe that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionably light; and had they skill to direct themselves, they would soon be able to support their own weight. Who ever heard of any other animal that became crooked by using its legs too soon? Indeed, if a child be not permitted to make use of its legs till a considerable time after the birth, and be then set upon them with its whole weight at once, there may be some danger; but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

Mothers of the poorer sort think they are great gainers by making their children lie or sit while they themselves work. In this they are greatly mistaken. By neglecting to give their children exercise, they are obliged to keep them a long time before they can do any thing for themselves, and to spend more on medicine than would have paid for proper care.

To take care of their children is the most profitable business in which even the poor can employ themselves; but, alas! it is not always in their power. Poverty often obliges them to neglect their offspring, in order to procure the necessaries of life. When this is the case, it becomes the interest, as well as the duty, of the public to assist them. Ten thousand times more benefit would accrue to the state by enabling the poor to bring up their own children, than from all the hospitals that ever can be erected for that purpose.

Whoever considers the structure of the human body will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of vessels, whose fluids cannot be pushed on without the action and pressure of the muscles. But if the fluids remain inactive, obstructions must happen, and the humors will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without ac-

tion this admirable contrivance can have no effect. The final cause of this part of the animal economy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to show the importance of exercise might be drawn from every part of the animal economy. Without exercise the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise the humors cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motion of the lungs, and all the vital functions, are greatly assisted by exercise. But to point out the manner in which these effects are produced would lead us further into the economy of the human body than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that where exercise is neglected none of the animal functions can be duly performed; and when that is the case the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life; and whoever neglects it not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When a child is at school he needs no keeper. Thus the schoolmaster is made the nurse; and the poor child is fixed to a seat seven or eight hours a day, which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body. Nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.

But suppose this were the way to make children scholars, it certainly ought not to be done at the expense of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite marred unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants seldom become either scholars or men.

Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors. Their breathing not only renders the place unwholesome, but if any one of

them happens to be diseased the rest catch the infection. A single child has been often known to communicate the bloody-flux, the hooping cough, the itch, or other diseases, to almost every individual in a numerous school.

But if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interests of society, not to confine them too long at a time, but to allow them to run about and play at such active diversions as may promote their growth and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ their time in these manly and useful exercises, it would produce many excellent effects.

It would be of great service to boys if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and, when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.

An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they never will be men.

Nor is the common education of girls less hurtful to the constitution than that of boys. Miss is set down to her frame before she can put on her clothes, and is taught to believe that to excel at the needle is the only thing that can entitle her to general esteem. It is unnecessary here to insist upon the dangerous consequences of obliging girls to sit too much. They are pretty well known, and are too often felt at a certain time of life. But suppose this critical period to be got over, greater dangers still await them when they come to be mothers. Women who have been early accustomed to a sedentary life generally run great hazard in childbed; while those who have been used to romp about and take sufficient exercise are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle and a good constitution. Close and early confinement generally occasions indigestions, headaches, pale complexions, pain of the stomach, loss of appetite, coughs, consumptions of the lungs, and deformity of body. The last of these indeed is not to be won-

dered at, considering the awkward postures in which girls sit at many kinds of needlework, and the delicate, flexible state of their bodies in the early periods of life.

Would mothers, instead of having their daughters instructed in many trifling accomplishments, teach them plain work and housewifery, and allow them sufficient time to run about in the open air, they would both make them more healthy mothers and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health.

Many people imagine it a great advantage for children to be early taught to earn their bread. This opinion is certainly right, provided they were so employed as not to hurt their health or growth; but when these suffer, society, instead of being benefitted, is a real loser by their labor. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

In order to be satisfied of the truth of this observation, one needs only look into the great manufacturing towns, where he will find a puny, degenerate race of people, weak and sickly all their lives, seldom exceeding the middle period of life; or, if they do, being unfit for business, they become a burden to society. Thus arts and manufactures, though they may increase the riches of a country, are by no means favorable to the health of its inhabitants. Good policy would therefore require that such people as labor during life should not be set too early to work. Every person conversant in the breed of horses, or other working animals, knows that if they be set to hard labor too soon they never will turn out to advantage. This is equally true with respect to the human species.

There are nevertheless various ways of employing young people without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may always be adapted to their age, taste, and strength.

Such parents, however, as are under the necessity of em-

ploying their children within doors, ought to allow them sufficient time for active diversions. This would both encourage them to do more work and prevent their constitutions from being hurt.

Some imagine that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this is to make them run about in a long room or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I knew an eminent physician who used to say that he made his children dance instead of giving them physic. It were well if more people would follow his example.

The *cold bath* may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions promoted, and were it conducted with prudence, many diseases, as the rickets, scrofula, &c., might be prevented. The ancients, who took every method to render children hardy and robust, were no strangers to the use of the cold bath; and, if we may credit report, the practice of immersing children daily in cold water must have been very common among our ancestors.

The greatest objection to the use of the cold bath arises from the superstitious prejudices of nurses. These are often so strong that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effect of the water. Others will even put clothes dipped in the water upon the child, and either put it to bed or suffer it to go about in that condition. Some believe that the whole virtue of the water depends upon its being dedicated to a particular saint; while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children lose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

We ought not, however, entirely to set aside the use of the cold bath because some nurses make a wrong use of it. Every child, when in health, should at least have its extremities daily washed in cold water. This is a partial use of the

cold bath, and is better than none. In winter this may suffice; but in the warm season, if a child be relaxed, or seem to have a tendency to the rickets or scrofula, its body ought to be daily immersed in cold water. Care, however, must be taken not to do this when the body is hot or the stomach full. The child should be dipped only once at a time, should be taken out immediately, and have its skin well rubbed with a dry cloth.

Few things are more destructive to children than confined or unwholesome air. This is one reason why so few of those infants who are put into hospitals or parish workhouses live. These places are generally crowded with old, sickly, and infirm people; by which means the air is rendered so extremely pernicious that it becomes a poison to infants.

Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has no access. Though grown people who are hardy and robust may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not able to carry their children abroad into the open air, we must lay our account with losing the greater part of them. But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them?

A very bad custom prevails of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery ought always to be the largest and best aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and many other disorders.

Children who are kept within doors all day, and sleep all night in warm close apartments, may with great propriety be compared to plants nursed in a hothouse, instead of the open air. Though such plants, by extraordinary care, may be kept

alive for some time, they will never arrive at that degree of strength, vigor and magnitude which they would have acquired in the open air, nor would they be able to bear it afterwards, should they be exposed to it.

Children brought up in the country, who have been accustomed to open air, should not be too early sent to great towns, where it is confined and unwholesome. This is frequently done with a view to forward their education, but proves very hurtful to their health. All schools and seminaries of learning ought if possible to be so situated as to have fresh, dry, wholesome air, and should never be too much crowded.

Without entering into a detail of the particular advantages of wholesome air to children, or the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children which have been under my care, I do not remember one instance of a single child who continued healthy in a close, confined situation; but have often known the most obstinate diseases cured by removing them from such a situation to an open, free air.

Hired nurses are guilty of many faults, which prove fatal to infants. It is therefore the duty of parents to watch over their conduct with the greatest care, and to be extremely cautious in the choice of them.

One of the most common faults of those who nurse for hire is to dose children with stupefactives, or such things as lull them asleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not choose to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodium, saffron, or, what answers the same purpose, a dram of spirits, or other strong liquors. These, though they be certain poison to children, are every day administered by many who bear the character of very good nurses.

A nurse who has not milk enough is apt to imagine that this defect may be supplied by giving the child wines, cordial waters, or other strong liquors. This is an egregious mistake. The only thing that has any chance to supply the place of the nurse's milk must be somewhat nearly of the same quality, as cow's milk, ass's milk, or the like, with good bread. It never can be done by the help of strong liquors. These, instead of nourishing an infant, never fail to produce the contrary effect.

Children are often hurt by nurses suffering them to cry

long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. The nurse who can hear an infant cry till it has almost spent itself, without endeavoring to please it, must be cruel indeed, and is unworthy to be intrusted with the care of a human creature.

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse who had her Godfrey's cordials, Daffy's elixirs, &c., at hand. Such generally imagine that a dose of medicine will make up for all defects in food, air, exercise, cleanliness, &c.

Allowing children to continue long wet is another very pernicious custom of indolent nurses. This is not only disagreeable, but it galls and frets the infant, and, by relaxing the solids, occasions scrofulas, rickets, and other diseases. A dirty nurse is always to be suspected.

Nature often attempts to free the bodies of children from bad humors, by throwing them upon the skin. By this means fevers and other diseases are prevented. Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly, they take every method to drive them in. In this way many children lose their lives; and no wonder, as nature is opposed in the very method she takes to relieve them. It ought to be a rule, which every nurse should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked; but this is never to be done without the greatest caution. Nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the belly. Hence inflammatory fevers and other fatal diseases are occasioned. A dose of rhubarb, a gentle vomit, or some other evacuation, should always precede the use of astringent medicines.

One of the greatest faults of nurses is concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from their

nurse's arms, which she through fear concealed till the misfortune was past cure. Every parent who intrusts a nurse with the care of a child ought to give her the strictest charge not to conceal the most trifling disorder or misfortune that may befal it.

We can see no reason why a nurse who conceals any misfortune which happens to a child under her care till it loses its life should not be punished. A few examples of this would save the lives of many infants. But as there is little reason to expect that it ever will be the case, we would earnestly recommend it to all parents to look carefully after their children, and not to trust so valuable a treasure entirely into the hands of a hireling.

The above is only a small specimen of the numerous faults which we know are daily committed by mercenary nurses. It is hoped, however, that these examples will be sufficient to rouse the attention of parents, and to make them look more strictly into the conduct of those to whom they commit the care of their infant offspring.

Were it practicable to have all children nursed and educated in the country, we should lose very few of them. One seldom sees a country farmer without a numerous offspring, most of whom arrive at maturity. Many things conspire to this end. The children of these people are generally nursed by their mothers, they eat plain wholesome food, enjoy the benefit of fresh air, and have plenty of proper exercise; they have rural sports and pastimes suited to their age, and as they grow up find employments adapted to their strength and conducive to their health. In fine, we cannot help joining with the learned Mr. Locke, in recommending the example of the yeomen and substantial farmers as a model to all in the management of their children.

No person ought to imagine that these things are unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy ever will prove the ruin of any state where it prevails; and when its foundations are laid in infancy it can never afterwards be wholly eradicated.

We would therefore recommend to all parents who love their offspring and wish well to their country, to avoid, in the management of their children, every thing that may have a tendency to make them weak or effeminate, and to take every

method in their power to render their constitutions strong, healthy, and hardy.

> ——————— By arts like these
> Laconia nursed of old her hardy sons,
> And Rome's unconquered legions urged their way
> Unhurt through every toil in every clime.

CHAPTER II.

OF LABORERS, ARTIFICERS, &c.

That men are exposed to particular diseases from the occupations which they follow, is a fact well known; but how to remedy this evil is a matter of some difficulty. Most people are under a necessity of following the employments to which they have been bred, whether they be favorable to health or not. For this reason, instead of inveighing, in a general way, against those occupations which are hurtful to health, we shall endeavor to point out the circumstances in each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chemists, founders, glass-makers, &c., are often hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with noxious exhalations, but is so parched, or rather burnt, as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent these ill consequences, as far as possible, the places where such occupations are carried on ought to be constructed with the utmost care for discharging the smoke and other exhalations, and admitting a free current of fresh air. Such artists ought never to continue too long at work; and when they give over, they should suffer themselves to cool gradually, and put on their clothes before they go into the open air. They ought never to drink large quantities of cold, weak, or watery liquors while their bodies are hot, nor to

indulge in raw fruits, salads, or any thing that is cold on the stomach.

Miners, and all who work under ground, are likewise hurt by unwholesome air. The air in deep mines not only loses its proper spring and other qualities necessary for respiration, but is often loaded with such noxious exhalations as to become a most deadly poison. There is no other method of preventing this but by promoting a free circulation of air in the mine.

Miners are not only hurt by unwholesome air, but likewise by the particles of metal which adhere to their skin, clothes, &c. These are absorbed, or taken up into the body, and occasion palsies, vertigoes, and other nervous disorders, which often prove fatal. Fallopius observes, that those who work in mines of mercury seldom live above three or four years. Lead, and several other metals, are likewise very pernicious to the health.

Miners ought never to go to work fasting, nor to continue long under ground. Their food ought to be nourishing, and their liquor generous. Nothing more certainly hurts them than living too low. They should by all means avoid costiveness. This may either be done by chewing a little rhubarb or taking a sufficient quantity of salad oil. Oil not only opens the body, but sheathes and defends the intestines from the ill effects of the metals. All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people than a strict, and almost religious, regard to cleanliness.

Plumbers, painters, gilders, makers of white lead, and many others who work in metals, are liable to the same diseases as miners, and ought to observe the same directions for avoiding them.

Tallowchandlers, boilers of oil, and all who work upon putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners; and when they are troubled with nausea, sickness, or indigestion, we would advise them to take a vomit or a gentle purge. Such substances ought always to be manufactured as fresh as possible. When long kept, they not only become unwholesome to those who manufacture them, but likewise to people who live in the neighborhood.

It would greatly exceed the limits of this part of our subject to specify the diseases peculiar to persons of every occupation; we shall therefore consider mankind under the following general classes, viz. the LABORIOUS, the SEDENTARY, and the STUDIOUS.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which in this country are often very great and sudden, and occasion colds, coughs, quincies, rheumatisms, fevers, and other inflammatory disorders, and are likewise forced to work hard, and often carry burdens above their strength, which, by overstraining the vessels, occasion asthmas, fevers, ruptures, &c.

Those who labor without doors are often afflicted with intermitting fevers or agues, occasioned by the frequent vicissitudes of heat and cold, poor living, bad water, sitting or lying on the damp ground, evening dews, night air, &c., to which these people are frequently exposed.

Those who bear heavy burdens, as porters, laborers, &c., are obliged to draw in the air with much greater force, and also to keep their lungs distended with more violence, than is necessary for common respiration. By this means the tender vessels of the lungs are over-stretched, and often burst, insomuch that a spitting of blood or fever ensues. Hippocrates mentions an instance, to this purpose, of a man who, upon a wager, carried an ass. The man, he says, was immediately seized with a fever, a vomiting of blood, and a rupture.

Carrying heavy burdens is often the effect of mere laziness, which prompts people to do at once what should be done at twice. It likewise proceeds frequently from bravado, or an emulation to outdo others. Hence it is that the strongest men are most commonly hurt by heavy burdens, hard labor, or feats of activity. It is rare to find one who excels in this way, without a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly. One would imagine that the daily instances we have of the fatal effects of carrying great weights, running, wrestling, &c., would be sufficient to prevent such practices.

There are indeed some employments which necessarily require a great exertion of strength, as blacksmiths, carpenters,

&c. None ought to follow these but men of a strong body; and they should never exert their strength to the utmost, nor work too long. When the muscles are violently strained, frequent rest is necessary, in order that they may recover their tone; without this, the strength and constitution will soon be worn out, and a premature old age brought on.

The erisipelas, or St. Anthony's fire, is likewise very incident to the laborious. It is occasioned by whatever gives a sudden check to the perspiration, as drinking cold liquor when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c. It is impossible for those who labor without doors always to guard against these inconveniences; but it is known from experience that their ill consequences might often be prevented by proper care.

The laborious are often afflicted with the iliac passion, the colic, and other complaints of the bowels. These are generally occasioned by the causes mentioned above, but they may likewise proceed from flatulent and indigestible food. Laborers eat unfermented bread made of pease, beans, rye, and other windy ingredients. They also devour great quantities of unripe fruits, baked, stewed, or raw, with various kinds of roots and herbs, upon which they drink sour milk, stale small beer, &c. Such a composition cannot fail to fill the bowels with wind, and occasion diseases of those parts.

Inflammations, whitlows, and other diseases of the extremities, are very common amongst those who labor without doors. These diseases are often attributed to venom, or some kind of poison; but they generally proceed either from sudden heat after cold, or the contrary. When laborers, milkmaids, &c., come from the field cold or wet, they run to the fire and often plunge their hands in warm water, by which means the blood and other humors in those parts are suddenly expanded, and the vessels not yielding so quickly, a strangulation happens, and an inflammation or mortification ensues.

When laborers come home cold, they ought to keep at a distance from the fire for some time, to wash their hands in cold water, and to rub them well with a dry cloth. It sometimes happens that people are so benumbed with cold as to be quite deprived of the use of their limbs. In this case, the only remedy is to rub the parts affected with snow, or, where it cannot be had, with cold water. If they be held near the fire, or plunged into warm water, a mortification will generally ensue.

Laborers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous that they often wake in a burning fever. These burning fevers, which prove so fatal about the end of summer and beginning of autumn, are often occasioned by this means. When laborers leave off work, which they ought always to do during the heat of the day, they should go home, or at least get under some cover, where they may repose themselves in safety.

Laborers frequently follow their employments in the fields from morning till night without eating any thing. This cannot fail to hurt their health. However homely their fare be, they ought to have it at regular times; and the harder they work, the more frequently they should eat. If the humors be not frequently replenished with fresh nourishment, they soon become putrid, and produce fevers of the very worst kind.

Laborers are extremely careless with respect to what they eat or drink, and often, through mere indolence, use unwholesome food, when they might for the same expense have that which is wholesome. In many parts of Britain the peasants are too careless even to take the trouble of dressing their own victuals. Such people would live upon one meal a day in indolence, rather than labor, though it were to procure them the greatest affluence.

Fevers of a very bad kind are often occasioned among laborers by *poor living*. When the body is not sufficiently nourished, the humors become bad, and the solids weak; from whence the most fatal consequences ensue. Poor living is likewise productive of many of those cutaneous diseases so frequent among laborers. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shows how much a good state of the humors depends upon a sufficient quantity of proper nourishment.

Poverty not only occasions, but aggravates, many of the diseases of the laborious. Few of them have much foresight, and if they had, it is seldom in their power to save any thing. They are glad to make a shift to live from day to day; and when any disease renders them unable to work, their families are ready to starve. Here the godlike virtue of charity ought always to be exerted. To relieve the industrious poor in distress is surely the most exalted act of religion and humanity.

They alone who are witnesses of those scenes of calamity can form a notion of what numbers perish in diseases for want of proper assistance, and even for the want of the necessaries of life.

Laborers are often hurt by a foolish emulation which prompts them to vie with one another, till they overheat themselves to such a degree as .o occasion a fever, or even to drop down dead. As this is the effect of vanity, it ought always to be checked by those who have the superintendence of them. Such as wantonly throw away their lives in this manner, deserve to be looked upon in no better light than self-murderers. It is pity that poor widows and fatherless children should suffer by such rediculous conduct. Could we speak to the passions of men, we would bid them think of their wives and children, and then consider of how great importance their own lives are.

The office of a *soldier*, in time of war, may be ranked amongst the laborious employments. Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, &c. These occasion fevers, fluxes, rheumatisms, and other fatal diseases, which generally do greater execution than the sword, especially when campaigns are continued too late in the year. One week of cold rainy weather will kill more men than many months when it is dry and warm.

Those who have the command of armies should take care that their soldiers be well clothed and well fed. They ought also to finish their campaigns in due season, and to provide their men with dry and well-aired winter-quarters. These rules, taking care, at the same time, to keep the sick at a proper distance from those in health, would tend greatly to preserve the lives of the soldiery.

Sailors may also be numbered amongst the laborious. They undergo great hardships from change of climate, the violence of weather, hard labor, bad provisions, &c.

One great source of the diseases of sea-faring people is excess. When they get on shore, after having been long at sea, without regard to the climate or their own constitutions, they plunge headlong into all manner of riot, and often persist till a fever puts an end to their lives. Thus intemperance, and not the climate, is often the cause why so many of our brave sailors die on foreign coasts. We would not have sea-

faring people live too low; but they will find moderation the best defence against fevers, and many other maladies.

Sailors, when on duty, cannot avoid sometimes getting wet. When this happens, they should change their clothes as soon as they are relieved, and take every proper method to restore perspiration. They should not, in this case, have recourse to spirits, or other strong liquors, but should rather drink such as are weak and diluting, of a proper warmth, and go immediately to bed, where a sound sleep and a gentle sweat would set all to rights.

But the health of sailors suffers most from unwholesome food. The constant use of salted provisions vitiates their humors, and occasions the scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet we cannot help thinking, that much might be done towards effecting so desirable an end, were due pains bestowed for that purpose. For example, various roots, greens, and fruits, might be kept a long time at sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either fresh or fermented, may. With these all the drink, and even the food of the ship's company, ought to be acidulated in long voyages.

Stale bread and beer likewise contribute to vitiate the humors. Meal will keep for a long time on board, of which fresh bread might frequently be made. Malt too might be kept, and infused with boiling water at any time. This liquor, when drank even in form of wort, is very wholesome, and is found to be an antidote against the scurvy. Small wines and cider might likewise be plentifully laid in; and should they turn sour, they would still be useful as vinegar. Vinegar is a very great antidote against diseases, and should be used by all travellers, especially at sea.

Such animals as can be kept alive ought likewise to be carried on board, as hens, ducks, pigs, &c. Fresh broths made of portable soup, and puddings made of pease, or other vegetables, ought to be used plentifully. Many others things will readily occur to people conversant in these matters, which would tend to preserve the health of that brave and useful set of men.

We have reason to believe, if due attention were paid to the diet, air, clothing, &c. of sea-faring people, that they

would be the most healthy set of men in the world; but when these are neglected, the very reverse will happen.

The best *medical antidote* that we can recommend to sailors or soldiers on foreign coasts, is the Peruvian bark. This will often prevent fevers, and other fatal diseases. About a dram of it may be chewed every day; or if this should prove disagreeable, an ounce of bark, with half an ounce of orange-peel, and two drams of snakeroot coarsely powdered, may be infused for two or three days in an English quart of brandy, and half a wine glass of it taken twice or thrice a day, when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine be taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary, with syrup of lemons, oranges, or the like.

SEDENTARY.

Though nothing can be more contrary to the nature of man than a sedentary life, yet this class comprehends the far greater part of the species. Almost the whole female world, and in manufacturing countries the major part of the males, may be reckoned sedentary.

Agriculture, the first and most healthful of all employments, is now followed by few who are able to carry on any other business. But those who imagine that the culture of the earth is not sufficient to employ all its inhabitants, are greatly mistaken. An ancient Roman, we are told, could maintain his family from the produce of one acre of ground.

Agriculture is the great source of domestic riches. Where it is neglected, whatever wealth may be imported from abroad, poverty and misery will abound at home. Such is and ever will be the fluctuating state of trade and manufactures, that thousands of people may be in full employment to-day and in beggary to-morrow. This can never happen to those who cultivate the ground. They can eat the fruit of their labor, and can always by industry obtain, at least, the necessaries of life.

Though sedentary employments are necessary, yet there seems to be no reason why any person should be confined for life to these alone. Were such employments intermixed with the more active and laborious, they would never do hurt. It

is constant confinement that ruins the health. A man shall not be hurt by sitting four or five hours a day; but if he is obliged to sit ten or twelve, will soon contract diseases.

But it is not want of exercise alone which hurts sedentary people; they often suffer from the confined air which they breathe. It is very common to see ten or a dozen tailors, or stay-makers, for example, crowded into one small apartment, where there is hardly room for one single person to breathe freely. In this situation they generally continue for many hours at a time, often with the addition of sundry candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly loses its spring, and becomes unfit for expanding the lungs. This is one cause of the phthisical coughs, and other complaints of the breast, so incident to sedentary artificers.

Even the perspiration from a great number of persons pent up together, renders the air unwholesome. The danger from this quarter will be greatly increased if any one of them happens to have bad lungs, or to be otherwise diseased. Those who sit near him, being forced to breathe the same air, can hardly fail to be infected. It would be a rare thing, however, to find a dozen of sedentary people all sound. The danger of crowding them together must be evident to every one.

Many of those who follow sedentary employments are constantly in a bending posture, as shoemakers, tailors, cutlers, &c. Such a situation is extremely hurtful. A bending posture obstructs all the vital motions, and of course must destroy the health. Accordingly we find such artificers generally complaining of indigestions, headaches, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, the action of the muscles, &c., is in a manner confined in the bowels. Hence indigestions, costiveness, wind, and other hypochondriacal symptoms, the constant companions of the sedentary. Indeed none of the excretions can be duly performed where exercise is wanting, and when the matter which ought to be discharged in this way is retained too long in the body, it must have bad effects, as it is again taken up into the mass of humors.

A bending posture is likewise hurtful to the lungs. When this organ is compressed, the air cannot have free access into all its parts, so as to expand them properly. Hence tubercles,

adhesions, &c. are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for making good blood, when that organ fails, the humors soon become universally depraved, and the whole constitution goes to wreck.

Sedentary artificers are not only hurt by pressure on the bowels, but also on the inferior extremities, which obstructs the circulation in these parts, and renders them weak and feeble. Thus tailors, shoemakers, &c. frequently lose the use of their legs altogether; besides, the blood and humors are, by stagnation, vitiated, and the perspiration is obstructed; from whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases, so common among sedentary artificers.

A bad figure of body is a very common consequence of close application to sedentary employments. The spine, for example, by being continually bent, puts on a crooked shape, and generally remains so ever after. But a bad figure of body has already been observed to be hurtful to health, as the vital functions, &c. are thereby impeded.

A sedentary life seldom fails to occasion a universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrofula, consumption, hysterics, with all the numerous train of nervous diseases which now abound, were very little known before sedentary artificers became so numerous; and they are very little known still among such of our people as follow active employments without doors, though in the great manufacturing towns at least two thirds of the inhabitants are afflicted with them.

It is very difficult to remedy those evils, because many who have been accustomed to a sedentary life, like rickety children, lose all inclination for exercise; we shall, however, throw out a few hints with respect to the most likely means of preserving the health of this useful set of people, which some of them, we hope, will be wise enough to observe.

It has been already observed, that sedentary artificers are often hurt by their bending posture. They ought therefore to stand or sit as erect as the nature of their employments will permit. They should likewise change their posture frequently, and should never sit too long at a time; but leave off work and walk, ride, run, or do any thing that will promote the vital motions.

Sedentary artificers are generally allowed too little time for exercise; yet, short as it is, they seldom employ it properly. A journeyman tailor or weaver, for example, instead of walking abroad for exercise and fresh air, at his hours of leisure, chooses often to spend them in a public house, or in playing at some sedentary game, by which he generally loses both his time and his money.

The awkward postures in which many sedentary artificers work, seem rather to be the effect of custom than necessity. For example, a table might surely be contrived for ten or a dozen tailors to sit round, with liberty for their legs either to hang down, or rest upon a foot-board, as they should choose. A place might likewise be cut out for each person, in such a manner that he might sit as conveniently for working as in the present mode of sitting cross-legged.

We would recommend to all sedentary artificers the most religious regard to cleanliness. Both their situation and occupations render this highly necessary. Nothing would contribute more to preserve sedentary artificers in health than a strict attention to it; as such of them as neglect it not only run the hazard of losing their health, but of becoming a nuisance to society.

Sedentary people ought to avoid food that is windy, or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors will soon throw off a debauch; but one who sits has by no means an equal chance. Hence it often happens that sedentary people are seized with fevers after hard drinking or a feast. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride, or walk in the fields. This would remove the complaint more effectually than strong liquor, and would never hurt the constitution.

Instead of multiplying particular rules for preserving the health of the sedentary, we shall recommend to them the following general plan, viz: That every person who follows a sedentary employment should cultivate a piece of ground with his own hands. This he might dig, plant, sow, and weed at leisure-hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

Laboring the ground is every way conducive to health.

It not only gives exercise to every part of the body, but the very smell of the earth and fresh herbs revives and cheers the spirits, whilst the perpetual prospect of something coming to maturity, delights and entertains the mind. We are so made as to be always pleased with somewhat in prospect, however distant or however trivial. Hence the happiness that most men feel in planting, sowing, building, &c. These seem to have been the chief employments of the early ages; and when kings and conquerors cultivated the ground, there is reason to believe that they knew as well wherein true happiness consisted as we do.

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield, in Yorkshire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not possess a piece of ground, which he cultivates as a garden. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat many greens, roots, &c. of their own growth, which they would never think of purchasing. There can be no reason why manufacturers in any other town in Great Britain should not follow the same plan.

Mechanics are too much inclined to crowd into great towns. This situation may have some advantages; but it has likewise its disadvantages. All mechanics who live in the country have it in their power to possess a piece of ground; which indeed most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as our observation reaches, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring.

In a word, exercise without doors, in one shape or another, is absolutely necessary to health. Those who neglect it, though they may for a while drag out life, can hardly be said to enjoy it. Their humors are generally vitiated, their solids relaxed, and their spirits depressed.

STUDIOUS.

Intense thinking is so destructive to health, that few instances can be produced of studious persons who are strong

and healthy, or live to an extreme old age. Hard study always implies a sedentary life; and when intense thinking is joined to the want of exercise, the consequences must be bad. We have frequently known even a few months of close application to study ruin an excellent constitution, by inducing a train of nervous complaints, which could never be removed. Man is evidently not formed for continual thought more than for perpetual action, and would be as soon worn out by the one as by the other.

So great is the power of the mind over the body, that, by its influence, the whole vital motions may be accelerated or retarded, to almost any degree. Thus cheerfulness and mirth quicken the circulation, and promote all the secretions; whereas sadness and profound thought never fail to retard them. Hence it would appear, that even a degree of thoughtlessness is necessary to health. Indeed the perpetual thinker seldom enjoys either health or spirits; while the person, who can hardly be said to think at all generally enjoys both.

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the greatest blessings may be abused. Thinking, like every thing else, when carried to extreme, becomes a vice: nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, or the like.

Instead of attempting to investigate the nature of that connection which subsists between the mind and body, or to inquire into the manner in which they mutually affect each other, we shall only mention those diseases to which the learned are more peculiarly liable, and endeavor to point out the means of avoiding them.

Studious persons are very subject to the gout. This painful disease is generally occasioned by indigestion and an obstructed perspiration. It is impossible that the man who sits from morning till night should either digest his food, or have any of the secretions in due quantity. But when that matter which should be thrown off by the skin is retained in the body, and the humors are not duly prepared, diseases must ensue.

The studious are often afflicted with the stone and gravel. Exercise greatly promotes both the secretion and discharge

of urine; consequently a sedentary life must have the contrary effect. Any one may be satisfied of this by observing, that he passess much more urine by day than in the night, and also when he walks or rides than when he sits.

The circulation in the liver being slow, obstructions in that organ can hardly fail to be the consequence of inactivity. Hence sedentary people are frequently afflicted with scirrhous livers. But the proper secretion and discharge of the bile is so necessary a part of the animal economy, that where these are not duly performed, the health must soon be impaired. Jaundice, indigestion, loss of appetite, and a wasting of the whole body, seldom fail to be the consequences of a vitiated state, or obstructions of the bile.

Few diseases prove more fatal to the studious than consumptions of the lungs. It has already been observed, that this organ cannot be duly expanded in those who do not take proper exercise, and where that is the case, obstructions, adhesions, &c. will ensue. Not only want of exercise, but the posture in which studious persons generally sit, is very hurtful to the lungs. Those who read or write much are ready to contract a habit of bending forwards, and often press with their breast upon a table or bench. This posture cannot fail to hurt the lungs.

No person can enjoy health who does not properly digest his food. But intense thinking and inactivity never fail to weaken the powers of digestion. Hence the humors become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

Long and intense thinking often occasions grievous headaches, which bring on apoplexies, vertigoes, palsies, and other fatal disorders. The best way to prevent these is, never to study too long at one time, and to keep the belly regular, either by proper food, or taking frequently a little of some opening medicine.

Those who read or write much are often afflicted with sore eyes. Studying by candle-light is peculiarly hurtful to the sight. This ought to be practised as seldom as possible. When it is unavoidable, the eyes should be shaded, and the head should not be held too low. When the eyes feel stiff and painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

It has already been observed, that the excretions are very defective in the studious. The dropsy is often occasioned by

the retention of those humors which ought to be carried off in this way. Any person may observe that sitting makes his legs swell, and that this goes off by exercise; which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing is so destructive to the nerves as intense thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effect of close application to study. In fine, there is no disease which can proceed either from a bad state of the humors, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.

The most afflicting of all the diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies, than a single one. To what a wretched condition are the best of men often reduced by it. Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine, where, alas! it is not to be found. Those who labor under this disorder, though they be often made the subject of ridicule, justly claim our highest sympathy and compassion.

Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom a useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed, it rarely happens that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute skeptics, and overwhelm them with doubts and uncertainty. All that is necessary for man to know, in order to be happy, is easily obtained, and the rest, like the forbidden tree, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or diversion, that will so far occupy the thoughts as to make them forget the business of the closet. A solitary

ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind, when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

Learned men often contract a contempt for what they call trifling company. They are ashamed to be seen with any but philosophers. This, however, is no proof of their being philosophers themselves. No man deserves that name who is ashamed to unbend his mind, by associating with the cheerful and gay. Even the society of children will relieve the mind, and expel the gloom which application to study is apt to occasion.

As studious people are necessarily much within doors, they should make choice of a large and well-aired place for study. This would not only prevent the bad effects which attend confined air, but would cheer the spirits, and have a most happy influence both on the body and mind. It is said of Euripides the tragedian, that he used to retire to a dark cave to compose his tragedies, and of Demosthenes, the Grecian orator, that he chose a place for study where nothing could either be heard or seen. With all deference to such venerable names, we cannot help condemning their taste. A man may surely think to as good purpose in an elegant apartment as in a cave; and may have as happy ideas where the all-cheering rays of the sun render the air wholesome, as in places where they never reach.

Those who read or write much should be very attentive to their posture. They ought to sit and stand by turns, always keeping as nearly in an erect posture as possible. Those who dictate may do it walking. It has an excellent effect frequently to read or speak aloud. This not only exercises the lungs, but almost the whole body. Hence studious people are greatly benefitted by delivering discourses in public. Such indeed sometimes hurt themselves by over-acting their part; but this is their own fault. The man who dies a martyr to mere vociferation merits not our sympathy.

The morning has by all medical writers been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty, and the spirits refreshed with sleep. Studious people should therefore sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them

return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to take diversion only when we can think no longer. Every studious person should make it a part of his business, and should let nothing interrupt his hours of recreation more than those of study.

Music has a very happy effect in relieving the mind when fatigued with study. It would be well if every studious person were so far acquainted with that science as to amuse himself after severe thought, by playing such airs as have a tendency to raise the spirits, and inspire cheerfulness and good humor.

It is the reproach of learning, that so many of her votaries, to relieve the mind after study, betake themselves to the use of strong liquors. This indeed is a remedy; but is a desperate one, and always proves destructive. Would such persons, when their spirits are low, get on horseback, and gallop ten or a dozen miles, they would find it a more effectual remedy than any cordial medicine in the apothecary's shop, or all the strong liquors in the world.

It is much to be regretted that learned men, while in health, pay so little regard to these things. Nothing is more common than to see a miserable object, overrun with nervous diseases, bathing, walking, riding, and, in a word, doing every thing for health after it is gone; yet, if any one had recommended these things to him by way of prevention, the advice would, in all probability, have been treated with contempt, or, at least, with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others.

With regard to the diet of the studious, we see no reason why they should abstain from any kind of food that is wholesome, provided they use it in moderation. They ought, however, to be sparing in the use of every thing that is sour, windy, rancid, or hard of digestion. Their suppers should always be light, and taken soon in the evening. Their drink may be water, fine malt liquor, not too strong, good cider, wine and water, or, if troubled with acidities, water mixed with a little brandy.

We shall only observe, with regard to those kinds of exercise which are most proper for the studious, that they should not be too violent, nor ever carried to the degree of excessive fatigue. They ought likewise to be frequently varied, so as

to give action to all the different parts of the body; and should, as often as possible, be taken in the open air. In general, riding on horseback, walking, working in a garden, or playing at some active diversions, are the best.

We would likewise recommend the use of the cold bath to the studious. It will, in some measure, supply the place of exercise, and should not be neglected by persons of a relaxed habit, especially in the warm season.

The studious ought neither to take exercise, nor to study, immediately after a full meal.

CHAPTER III.

OF ALIMENT.

Unwholesome food, and irregularities in diet, occasion many diseases. There is no doubt but the whole constitution of body may be changed by diet. The fluids may be thereby attenuated or condensed, rendered mild or acrimonious, coagulated or diluted, to almost any degree. Nor are its effects upon the solids less considerable. They may be braced or relaxed, have their sensibility, motions, &c. greatly increased or diminished, by different kinds of aliment. A very small attention to these things will be sufficient to show how much the preservation of health depends upon a proper diet.

Nor is an attention to diet necessary for the preservation of health only; it is likewise of importance in the cure of diseases. Every intention, in the cure of many diseases, may be answered by diet alone. Its effects, indeed, are not always so quick as those of medicine; but they are generally more lasting. Besides, it is neither so disagreeable to the patient, nor so dangerous as medicine, and is always more easily obtained.

Our intention here is not to inquire minutely into the nature and properties of the various kinds of aliment in use among mankind; nor to show their effects upon the different constitutions of the human body; but to mark some of the most pernicious errors which people are apt to fall into, with

respect both to the quantity and qualities of their food, and to point out their influence upon health.

It is not indeed an easy matter to ascertain the exact quantity of food proper for every age, sex, and constitution; but a scrupulous nicety here is by no means necessary. The best rule is to avoid all extremes. Mankind were never intended to weigh and measure their food. Nature teaches every creature when it has enough; and the calls of thirst and hunger are sufficient to inform them when more is necessary.

Though *moderation* be the chief rule with regard to the quantity, yet the quality of food merits farther consideration. There are many ways by which provisions may be rendered unwholesome. Bad seasons may either prevent the ripening of grain, or damage it afterwards. These, indeed, are acts of Providence, and we must submit to them; but surely no punishment can be too severe for those who suffer provisions to spoil by hoarding them, on purpose to raise the price. The soundest grain, if kept too long, becomes unfit for use.

Animal, as well as vegetable food, may be rendered unwholesome, by being kept too long. All animal substances have a constant tendency to putrefaction; and, when that has proceeded too far, they not only become offensive to the senses, but hurtful to health. Diseased animals, and such as die of themselves, ought never to be eaten. It is a common practice, however, in some grazing countries, for servants and poor people to eat such animals as die of any disease, or are killed by accident. Poverty, indeed, may oblige people to do this; but they had better eat a smaller quantity of what is sound and wholesome; it would both afford a better nourishment, and be attended with less danger.

The injunctions given to the Jews, not to eat any creature which died of itself, seem to have a strict regard to health, and ought to be observed by Christians as well as Jews. Animals never die of themselves without some previous disease; but how a diseased animal should be wholesome food, is inconceivable. Even those which die by accident must be hurtful, as their blood is mixed with the flesh, and soon turns putrid.

Animals which feed grossly, as tame ducks, swine, &c. are neither easily digested, nor afford wholesome nourishment. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle, hogs, &c., are cram-

med with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their humors, not being properly prepared or assimilated, remain crude, and occasion indigestions, gross humors, and oppression of the spirits, in those who feed upon them.

Animals are often rendered unwholesome by being over-heated. Excessive heat causes a fever, exalts the animal salts, and mixes the blood so intimately with the flesh, that it cannot be separated. For this reason butchers should be severely punished who over-drive their cattle. No person would choose to eat the flesh of an animal which had died in a high fever; yet that is the case with all over-driven cattle; and the fever is often raised to the degree of madness.

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane of animals with air, in order to make them appear fat, is every day practised. This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing which comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a dirty fellow, perhaps laboring under the very worst of diseases?

No people in the world eat such quantities of animal food as the English; this is one reason why they are so generally tainted with the scurvy, and its numerous train of consequences, as indigestion, low spirits, hypochondriacism, &c. Animal food was surely designed for man, and, with a proper mixture of vegetables, it will be found the most wholesome; but to gorge beef, mutton, pork, fish, and fowl, twice or thrice a day, is certainly too much. All who value health ought to be contented with making one meal of flesh-meat in the twenty-four hours, and this ought to consist of one kind only.

The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. From hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer putrid and inflammatory fevers.

Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on tea and other watery

diet, generally become weak, and unable to digest solid food; from whence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry renders the solids in a manner rigid, and the humors viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

The arts of cookery render many things unwholesome, which are not so in their own nature. By jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook.

The liquid part of our aliment likewise claims our attention. Water is not only the basis of most liquors, but also composes a great part of our solid food. Good water must therefore be of the greatest importance in diet. The best water is that which is most pure, and free from any mixture of foreign bodies. Water takes up parts of most bodies with which it comes into contact; by which means it is often impregnated with metals or minerals of a hurtful or poisonous nature.

The inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England, have large tumors or wens on their necks. This disease is generally imputed to the snow-water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.

When water is impregnated with foreign bodies, it generally appears by its weight, color, taste, smell, heat, or some other sensible quality. Our business therefore is to choose such water, for common use, as is lightest, and without any particular color, taste, or smell.

Before water be brought into great towns, the strictest attention ought to be paid to its qualities, as many diseases may be occasioned or aggravated by bad water; and when once it has been procured at a great expense, people are unwilling to give it up.

The common methods of rendering water clear by filtration, or soft by exposing it to the sun and air, &c. are so generally known, that it is unnecessary to spend time in explaining them. We shall only, in general, advise all to avoid waters which stagnate long in small lakes, ponds, or the like, as such waters often become putrid. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air. When either animal or vegetable substances are suffered to lie at the bottom of wells, they corrupt and taint the water. Even the air itself, when confined in wells, becomes poisonous, and must render the water less wholesome.

Fermented liquors, which are too strong, hurt digestion, rather than assist it; and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine, that hard labor could not be supported without drinking strong liquors. This is a very erroneous notion. Men who never take strong liquors are not only able to endure more fatigue, but also live much longer than those who use them daily. But, suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, heats and inflames the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong. When that is the case, they must either be drunk new, or they become sour and dead. When such liquors are drunk new, the fermentation not being over, they generate air in the bowels, and occasion flatulencies; and when kept till stale, they sour on the stomach, and hurt digestion. For this reason all malt-liquors, cider, &c. ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long, though they should not become sour, yet they generally contract a hardness, which renders them unwholesome. Thus we find that bottled ale hurts the stomach, occasions the gravel, &c.

All families, who can, ought to prepare their own liquors. Since preparing and vending of liquors became one of the most general branches of business, every method has been tried to adulterate them. The great object both of the

makers and venders of liquor is, to render it intoxicating. But it is well known that this may be done by other ingredients than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say, that the practise is very common, and that all the ingredients used for this purpose are of a narcotic or stupefactive nature. But as all opiates are of a poisonous quality, it is easy to see what must be the consequence of their general use. Though they do not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion, &c.

Were fermented liquors faithfully prepared, kept to a proper age, and used in moderation, they would prove real blessings to mankind. But, while they are ill prepared, various ways adulterated, and taken to excess, they must have many bad consequences.

We would recommend it to families, not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe, is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too fine; well fermented, and made of wheat flour, or rather of wheat and rye mixed together.

To specify the different kinds of aliment, to explain their nature and properties, and to point out their effects in different constitutions, would far exceed the limits of our design. Instead of a detail of this kind, which would not be generally understood, and of course little attended to, we shall only mention the following easy rules with respect to the choice of aliment.

Persons whose solids are weak and relaxed ought to avoid all viscid food, or such things as are hard of digestion. Their diet, however, ought to be solid; and they should take plenty of exercise in the open air.

Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ale, &c. Their food should consist mostly of

bread and other vegetable substances; and their drink ought to be water, whey, and the like.

Fat people should not eat freely of oily, nourishing diet. They ought frequently to use radish, garlic, spices, or such things as are heating and promote perspiration and urine. Their drink should be water, coffee, tea, or the like; and they ought to take much exercise and little sleep.

Those who are too lean must follow an opposite course.

Such as are troubled with acidities, or whose food is apt to sour on their stomach, should live much on flesh-meats; and those who are afflicted with hot alkaline eructations ought to use a diet consisting chiefly of acid vegetables.

People who are affected with the gout, low spirits, hypochondriac or hysteric disorders, ought to avoid all flatulent food, every thing that is viscid or hard of digestion, all salted or smoke-dried provisions, and whatever is austere, acid, or apt to sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

The diet ought not only to be suited to the age and constitution, but also to the manner of life. A sedentary or studious person should live more sparingly than one who labors hard without doors. Many kinds of food will nourish a peasant very well, which would be almost indigestible to a citizen; and the latter will live upon a diet on which the former would starve.

Diet ought not to be too uniform. The constant use of one kind of food might have some bad effects. Nature teaches us this, by the great variety of aliments which she has provided for man, and likewise by giving him an appetite for different kinds of food.

Those who labor under any particular diseases ought to avoid such aliments as have a tendency to increase it. For example, a gouty person should not use rich wines, strong soups or gravies, and should avoid all acids. One who is troubled with the gravel ought to shun all austere and astringent aliments; and those who are scorbutic should not indulge in animal food, &c.

In the first period of life, our food ought to be light, nourishing, and of a diluting nature, but frequently used. Food that is solid, with a sufficient degree of tenacity, is most proper for the state of manhood. The diet suited to the last period of life, when nature is upon the decline, approaches nearly to that of the first. It should be lighter, and more

diluting, than that of vigorous age, and likewise more frequently taken.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine that long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are over-distended with food, they lose their proper tone, and by long fasting they become weak and inflated with wind. Thus either gluttony or fasting destroys the powers of digestion.

The frequent repetition of aliment is not only necessary for repairing the continual waste of our bodies, but likewise to keep the humors sound and sweet. Our humors, even in the most healthy state, have a constant tendency to become putrid, which can only be prevented by frequent supplies of fresh nourishment. When that is wanting too long, the putrefaction often proceeds so far as to occasion very dangerous fevers. From hence we may learn the necessity of regular meals. No person can enjoy a good state of health whose vessels are either frequently overcharged, or the humors long deprived of fresh supplies of chyle.

Long fasting is extremely hurtful to young people; it vitiates their humors, and prevents their growth and strength. Nor is it less injurious to the aged. Most persons in the decline of life are afflicted with wind. This complaint is not only increased, but even rendered dangerous, and often fatal, by long fasting. Old people, when their stomachs are empty, are frequently seized with giddiness, headaches, and faintness. These complaints may generally be removed by a bit of bread and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable that many of the sudden deaths which happen in the advanced periods of life are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind; we would therefore advise people in the decline of life never to allow their stomachs to be too long empty. Many people take nothing but a few cups of tea and a bit of bread from nine o'clock at night till two or three next afternoon. Such may be said almost to fast three-fourths of their time. This can hardly fail to ruin the appetite, vitiate the humors, and fill the bowels with wind; all which might be prevented by a solid breakfast.

It is a very common practice to eat a light breakfast and a

heavy supper. This custom ought to be reversed. When people sup late, their supper should be very light; but the breakfast ought always to be solid. If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effect of a plethora, or too great fulness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humors. When these are suddenly increased, by an overcharge of rich and nourishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers after a feast or debauch.

All great and sudden changes in diet are dangerous. What the stomach has been long accustomed to digest, though less wholesome, will agree better with it than food of a more salutary nature which it has not been used to. When therefore a change becomes necessary, it ought always to be made gradually; as a sudden transition from a poor and low to a rich and luxurious diet, or the contrary, might so disturb the functions of the body as to endanger health, or even to occasion death itself.

When we recommend regularity in diet, we would not be understood as condemning every small deviation from it. It is next to impossible for people at all times to avoid some degree of excess, and living too much by rule might make even the smallest deviation dangerous. It may therefore be prudent to vary a little, sometimes taking more, sometimes less, than the usual quantity of meat and drink, provided always that regard be had to moderation.

CHAPTER IV.

OF AIR.

Unwholesome air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat and drink, but seldom regard what goes into the lungs, though the latter proves often more suddenly fatal than the former.

Air, as well as water, takes up parts of most bodies with which it comes into contact, and is often so replenished with those of a noxious quality as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptible influences of bad air prove more generally hurtful to mankind; we shall therefore endeavor to point out some of these, and to show from whence the danger chiefly arises.

Air may become noxious many ways. Whatever greatly alters its degree of heat, cold, moisture, &c. renders it unwholesome. For example, that which is too hot dissipates the watery parts of the blood, exalts the bile, and renders the whole humors adust and thick. Hence proceed bilious and inflammatory fevers, cholera morbus, &c. Very cold air obstructs the perspiration, constringes the solids, and congeals the fluids. It occasions rheumatisms, coughs and catarrhs, with other diseases of the throat, breast, &c. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to agues, or intermitting fevers, dropsies, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free current, it soon becomes unwholesome. Hence it is that delicate persons are so apt to turn sick or faint in crowded churches, assemblies, or any place where the air is exhausted by breathing, fires, candles, or the like.

In great cities so many things tend to pollute the air, that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but is likewise loaded with sulphur, smoke, and other exhalations, besides the vapors continually arising from innumerable putrid substances, as dunghills, slaughter-houses, &c. All possible care should be taken to keep the streets of large towns open

and wide, that the air may have a free current through them. They ought likewise to be kept very clean. Nothing tends more to pollute and contaminate the air of a city than dirty streets.

It is very common in this country to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to the custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay, pernicious customs, often become sacred. Certain it is, that thousands of putrid carcasses, so near the surface of the earth, in a place where the air is confined, cannot fail to taint it; and that such air, when breathed into the lungs, must occasion diseases.

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in jails not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than jails. These low dirty habitations are the very lurking places of bad air and contagious diseases. Such as live in them seldom enjoy good health; and their children commonly die young. In the choice of a house, those who have it in their power ought always to pay the greatest attention to free open air.

The various methods which luxury has invented to make houses close and warm, contribute not a little to render them unwholesome. No house can be wholesome unless the air has a free passage through it. For which reason houses ought daily to be ventilated by opening opposite windows, and admitting a current of fresh air into every room. Beds, instead of being made up as soon as people rise out of them, ought to be turned down and exposed to the fresh air from the open windows through the day. This would expel any noxious vapor, and could not fail to promote the health of the inhabitants.

In hospitals, jails, ships, &c. where that cannot be conveniently done, ventilators should be used. The method of expelling foul, and introducing fresh air, by means of ventilators, is a most salutary invention, and is indeed the most useful of all our modern medical improvements. It is capable

of universal application, and is fraught with numerous advantages, both to those in health and sickness.

Air which stagnates in mines, wells, cellars, &c. is extremely noxious. That kind of air is to be avoided as the most deadly poison. It often kills almost as quickly as lightning. For this reason, people should be very cautious in opening cellars that have been long shut, or going down into deep wells, or pits, especially if they have been kept close covered.

Many people who have splendid houses choose to sleep in small apartments. This conduct is very imprudent. A bedchamber ought always to be well aired; as it is generally occupied in the night only, when all doors and windows are shut. If a fire be kept in it, the danger becomes still greater. Many have been stifled when asleep by a fire in a small apartment.

Those who are obliged, on account of business, to spend the day in close towns, ought, if possible, to sleep in the country. Breathing free air in the night will, in some measure, make up for the want of it through the day. This practice would have a greater effect in preserving the health of citizens than is commonly imagined.

Delicate persons ought, as much as possible, to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should fly cities as they would do the plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women. Many people, indeed, have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad into the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

It was necessary in former times, for safety, to surround cities, colleges, and even single houses, with high walls. These, by obstructing the free current of air, never fail to render such places damp and unwholesome. As such walls are now, in most parts of this country, become useless, they ought to be pulled down, and every method taken to admit a free passage to the air. Proper attention to *air* and *clean-*

liness would tend more to preserve the health of mankind than all the endeavors of the faculty.

Surrounding houses too closely with planting, or thick woods, likewise tends to render the air unwholesome. Wood not only obstructs the free current of the air, but sends forth great quantities of moist exhalations, which render it constantly damp. Wood is very agreeable at a proper distance from a house, but should never be planted too near it, especially in a flat country. Many of the gentlemen's seats in England are rendered very unwholesome from the great quantity of wood which surrounds them.

Houses situated in low marshy countries, or near large lakes of stagnating water, are likewise unwholesome. Waters which stagnate not only render the air damp, but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries ought to make choice of the dryest situations they can find, to live generously, and to pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where a patient lies without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not however to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

The air of a sick person's chamber may be greatly freshened, and the patient much revived, by sprinkling the floor, bed, &c. frequently with vinegar, juice of lemon, or any other strong vegetable acid.

In places where numbers of sick are crowded into the same house, or, which is often the case, into the same apartment, the frequent admission of fresh air becomes absolutely necessary. Infirmaries, hospitals, &c. often become so noxious, for want of proper ventilation, that the sick run more hazard from them than from the disease. This is particularly the case when putrid fevers, dysenteries, and other infectious diseases prevail.

Physicians, surgeons, and others who attend hospitals, ought, for their own sake, to take care that they be properly ventilated. Such persons as are obliged to spend much of their time amongst the sick run great hazard of being themselves infected when the air is bad. All hospitals, and places for the sick, ought to have an open situation, at some distance from any great town.

CHAPTER V.

OF EXERCISE.

Many people look upon the necessity man is under of earning his bread by labor as a curse. Be this as it may, it is evident, from the structure of the body, that exercise is not less necessary than food for the preservation of health. Those whom poverty obliges to labor for daily bread are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place such above want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the common longevity of such as follow agriculture every where, evidently prove it to be the most healthful, as well as the most useful employment.

The love of activity shows itself very early in man. So strong is this principle, that a healthy youth cannot be restrained from exercise, even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law throughout the whole animal creation, that no creature without exercise should enjoy health. Every creature, except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to induce a universal relaxation of the solids, which occasions innumerable diseases. When the solids are relaxed, neither the digestion, nor any of the secre-

tions, can be duly performed. In this case, the worst consequences must ensue. How can persons who loll all day in easy chairs, and sleep all night on beds of down, fail to be relaxed? Nor do such greatly mend the matter who never stir abroad but in a coach, sedan, or such like. These elegant pieces of luxury are become so common, that the inhabitants of great towns seem to be in some danger of losing the use of their limbs altogether. It is now below any one to walk who can afford to be carried. How ridiculous would it seem, to a person unacquainted with modern luxury, to behold the young and healthy swinging along on the shoulders of their fellow-creatures, or to see a fat carcass, overrun with diseases occasioned by inactivity, dragged along the streets by half a dozen horses.

Glandular obstructions, which are now so common, generally proceed from inactivity. These are the most obstinate of all maladies. So long as the liver, kidneys, and other glands duly perform their functions, health is seldom impaired; but when they fail, nothing can preserve it. Exercise is almost the only cure we know for glandular obstructions; indeed, it does not always succeed as a remedy; but there is reason to believe that it would seldom fail to prevent these complaints, were it used in due time. One thing is certain, that amongst those who take sufficient exercise glandular diseases are very little known; whereas the indolent and inactive are seldom free from them.

Weak nerves are the constant companions of inactivity. Nothing but exercise and open air can brace and strengthen the nerves, or prevent the endless train of diseases which proceed from a relaxed state of these organs. We seldom hear the active or laborious complain of nervous diseases; these are reserved for the sons of ease and affluence. Many have been completely cured of these disorders by being reduced from a state of opulence to labor for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented.

It is absolutely impossible to enjoy health where the perspiration is not duly carried on; but that can never be the case where exercise is neglected. When the matter which ought to be thrown off by perspiration is retained in the body, it vitiates the humors, and occasions the gout, fevers, rheumatism, &c. Exercise alone would prevent many of

those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author, (Cheyne) in his excellent treatise on health, says, that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whose business does not oblige them to take sufficient exercise, as sedentary artificers, shop-keepers, studious persons, &c. Such ought to use exercise as regularly as they take food. This might generally be done without any interruption to business or real loss of time.

No piece of indolence hurts the health more than the modern custom of lolling abed too long in a morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and, in some measure, answers the purpose of a cold bath. Let any one, who has been accustomed to lie abed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains of the stomach, flatulencies, indigestions, &c. These complaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

Exercise, if possible, ought always to be taken in the open air. When that cannot be done, various methods may be contrived for exercising the body within doors, as the dumb bell, dancing, fencing, &c. It is not necessary to adhere strictly to any particular kind of exercise. The best way is to take them by turns, and to use that longest which is most suitable to the strength and constitution. Those kinds of exercise which give action to most of the bodily organs are always to be preferred, as walking, running, riding, digging, swimming, and such like.

It is much to be regretted that active and manly diversions are now so little practised. Diversions make people take more

exercise than they otherwise would do, and are of the greatest service to such as are not under the necessity of laboring for their bread. As active diversions lose ground, those of a sedentary kind seem to prevail. Sedentary diversions are of no other use but to consume time. Instead of relieving the mind, they often require more thought than either study or business. Every thing that induces people to sit still, unless it be some necessary employment, ought to be avoided.

The diversions which afford the best exercise are hunting, shooting, playing at cricket, hand-ball, &c. These exercise the limbs, promote perspiration, and the other secretions. They likewise strengthen the lungs, and give firmness and agility to the whole body.

Such as can ought to spend two or three hours a day on horseback; those who cannot ride should employ the same time in walking. Exercise should never be continued too long. Over-fatigue prevents the benefit of exercise, and weakens instead of strengthening the body.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like all other vices, when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exercise in the early part of life become quite averse to it afterwards. This is the case of most hypochondriac and gouty people, which renders their diseases in a great measure incurable.

In some countries laws have been made obliging every man, of whatever rank, to learn some mechanical employment. Whether such laws were designed for the preservation of health, or the encouragement of manufacture, is a question of no importance. Certain it is, that if gentlemen were frequently to amuse and exercise themselves in this way, it might have many good effects. They would at least derive as much honor from a few masterly specimens of their own workmanship as from the character of having ruined most of their companions by gaming or drinking. Besides, men of leisure, by applying themselves to the mechanical arts, might improve them, to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is little better than calling him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of ideal pleasures, or impressed with the apprehension of some imaginary evil. From these sources proceed

most of the miseries of mankind. Certainly man never was intended to be idle. Inactivity frustrates the very design of his creation; whereas an active life is the best guardian of virtue, and the greatest preservative of health.

CHAPTER VI.

OF SLEEP AND CLOTHING.

Sleep, as well as diet, ought to be duly regulated. Too little sleep weakens the nerves, exhausts the spirits, and occasions diseases; and too much renders the mind dull, the body gross, and disposes it to apoplexies, lethargies, and such like. A medium ought therefore to be observed; but this is not easy to fix. Children require more sleep than grown persons, the laborious than the idle, and such as eat and drink freely than those who live abstemiously. Besides, the real quantity of sleep cannot be measured by time; as one person will be more refreshed by five or six hours' sleep than another by eight or ten.

Children may always be allowed to take as much sleep as they please; but for adults six or seven hours is certainly sufficient, and no one ought to exceed eight. Those who lie more than eight hours abed may slumber, but they can hardly be said to sleep; such generally toss and dream away the fore part of the night, sink to rest towards morning, and doze till noon. The best way to make sleep sound and refreshing is to rise betimes. The indolent custom of lolling abed for nine or ten hours not only makes the sleep less refreshing, but relaxes the nerves, and greatly weakens the constitution.

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than night-watching. It is great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly coun-

tenances of those who, as the phrase is, turn day into night, and night into day.

To make sleep refreshing, the following things are necessary. First, to take sufficient exercise in the open air through the day; next, to eat a light supper; and lastly, to lie down with a mind as cheerful and serene as possible.

It is certain that too much exercise will prevent sleep, as well as too little. We seldom however hear the active and laborious complain of restless nights. It is the indolent and slothful who generally have these complaints. Is it any wonder that a bed of down should not be refreshing to a person who lolls all day in an easy chair? A great part of the pleasure of life consists in alternate rest and motion; but they who neglect the latter can never relish the former. The laborer enjoys more true luxury in plain food and sound sleep, than is to be found in sumptuous tables and downy pillows, where exercise is wanting.

That light suppers cause sound sleep, is true even to a proverb. Many persons, if they exceed the least at that meal, are sure to have uneasy nights; and, if they fall asleep, the load and oppression on their stomach and spirits occasion frightful dreams, broken and disturbed repose, nightmares, &c. Were the same persons to go to bed with a light supper, or sit up till what they eat were pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep unless they have eaten some solid food at night, but this does not imply the necessity of a heavy supper; besides, these are generally persons who have accustomed themselves to this method, and who do not take a sufficient quantity of solid food through the day.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. That greatest of human blessings often flies the wretch who needs it most, and visits the happy, the cheerful, and the gay. This is a sufficient reason why every man should endeavor to be as easy in his mind as possible when he goes to rest. Many, by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

Sleep when taken in the fore-part of the night is generally reckoned most refreshing. Whether this may be the effect of habit or not, is hard to say; but, as most people are

accustomed to go soon to bed in the early part of life, it may be presumed that sleep at this season will prove most refreshing to them ever after. But whether the fore-part of the night be best for sleep or not, surely the fore-part of the day is fitter both for business and amusement. I hardly ever knew an early riser who did not enjoy a good state of health.

CLOTHING.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article; but no custom can ever change the nature of things so far as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion betwixt the quantity of clothes we wear and the degree of latitude which we inhabit; but, at the same time, proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, &c.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in the decline of life, when the skin becomes rigid and the humors more cool, the clothing should be increased. Many diseases in the latter period of life proceed from a defect of perspiration; these may, in some measure, be prevented by a suitable addition to the clothing, or by wearing such as are better calculated for promoting the discharge from the skin, as clothes made of cotton, flannel, &c.

Flannel indeed is now worn by almost every young fellow. This custom is extremely preposterous. It not only makes them weak and effeminate, but renders flannel less useful at a time of life when it becomes more necessary. No young person ought to wear flannel, unless the rheumatism or some other disease renders it necessary.

The clothing ought likewise to be suited to the season of the year. Clothing may be warm enough for summer, which is by no means sufficient for winter. The greatest caution, however, is necessary in making these changes. We ought neither to put off our winter clothes too soon, nor to wear our summer ones too long. In this country, the winter often sets in very early with great rigor, and we have frequently very cold weather even after the commencement of the summer

months. It would likewise be prudent not to make the change all at once, but to do it gradually; and indeed the changes of apparel in this climate ought to be very inconsiderable, especially among those who have passed the meridian of life.

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or conveniency.

Even the human shape is often attempted to be mended by dress, and those who know no better believe that mankind would be monsters without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country is that of squeezing the stomach and bowels into as narrow a compass as possible, to procure what is falsely called a fine shape. By this practice the action of the stomach and bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestions, syncopes, or fainting fits, coughs, consumptions of the lungs, &c.

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, we shall not pretend to say; but certain it is, that this notion has made many persons lame. Almost nine tenths of mankind are troubled with corns; a disease that is seldom or never occasioned but by straight shoes. Corns are not only very troublesome, but, by rendering people unable to walk, they may likwise be considered as the remote cause of other diseases.

In fixing on the clothes, due care should be taken to avoid all tight bandages. Garters, buckles, &c., when drawn too tight, not only prevent the free motion and use of the parts about which they are bound, but likewise obstruct the circulation of the blood, which prevents the equal nourishment and growth of these parts, and occasions various diseases. Tight bandages about the neck, as stocks, cravats, necklaces, &c. are extremely dangerous. They obstruct the blood in its course from the brain, by which means headaches, vertigoes, apoplexies, and other fatal diseases are often occasioned.

The perfection of dress is to be easy and clean. Nothing can be more ridiculous than for any one to make himself a slave to fine clothes. Such a one, and many such there are,

would rather remain as fixed as a statue from morning to night than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdry laces, ruffles, and ribbons, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt.

We shall only add, with regard to clothing, that it ought not only to be suited to the climate, the season of the year, and the period of life, but likewise to the temperature and constitution. Robust persons are able to endure either cold or heat better than the delicate; consequently may be less attentive to their clothing. But the precise quantity of clothes necessary for any person cannot be determined by reasoning. It is entirely a matter of experience, and every man is the best judge for himself what quantity of clothing is necessary to keep him warm.

CHAPTER VII.

OF INTEMPERANCE.

A MODERN author (Rousseau) observes, that temperance and exercise are the two best physicians in the world. He might have added that if these were duly regarded, there would be little occasion for any other. Temperance may justly be called the parent of health; but numbers of mankind act as if they thought diseases and death too slow in their progress, and, by intemperance and debauch, seem, as it were, to solicit their approach.

The danger of intemperance appears from the very construction of the human body. Health depends on that state of the solids and fluids which fits them for the due performance of the vital functions; and so long as these go regularly on, we are sound and well; but whatever disturbs them necessarily impairs health. Intemperance, however,

never fails to disorder the whole animal economy; it hurts the digestion, relaxes the nerves, renders the different secretions irregular, vitiates the humors, and occasions numberless diseases.

The analogy between the nourishment of plants and animals affords a strong proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over quantity of either will entirely prevent it. The best things become hurtful, nay destructive, when carried to excess. From hence we learn that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremes. It is that alone which entitles us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

The Author of nature hath endued us with various passions, for the propagation of the species, the preservation of the individual, &c. Intemperance is the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of nature, create artificial wants, and are perpetually in search of something that may gratify them; but imaginary wants never can be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee, seldom stop in their career till their money or their constitution fails. Then, indeed, they generally see their error when too late.

It is impossible to lay down fixed rules with regard to diet, on account of the different constitutions of mankind. The most ignorant person, however, certainly knows what is meant by excess; and it is in the power of every man, if he chooses, to avoid it.

The great rule of diet is to study simplicity. Nature delights in the most plain and simple food, and every animal, except man, follows her dictates. Man alone riots at large, and ransacks the whole creation in quest of luxuries, to his own destruction. Mr. Addison, an elegant writer of the last age, speaks thus of intemperance in diet: "For my part, when I behold a fashionable table set out in all its magnificence, I fancy that I see gouts and dropsies, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes."

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal

pleasures, or the abuse of intoxicating liquors, ruin the best constitution. Indeed these vices generally go hand in hand. Hence it is that we so often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hasting with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

Intemperance does not hurt its votaries alone; the innocent too often feel the direful effects of it. How many wretched orphans are to be seen embracing dunghills, whose parents, regardless of the future, spent in riot and debauch what might have served to bring up their offspring in a decent manner. How often do we behold the miserable mother, with her helpless infants, pining in want, while the cruel father is indulging his insatiate appetites.

Families are not only reduced to misery, but even extirpated, by means of intemperance. Nothing tends so much to prevent propagation, and to shorten the lives of children, as the intemperance of parents. The poor man who labors all day, and at night lies down contented with his humble fare, can boast of a numerous offspring, while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

Instead of mentioning the different kinds of intemperance, and pointing out their influence upon health, we shall only, by way of example, make a few observations on one particular species of that vice, viz. the abuse of intoxicating liquors.

Every act of intoxication puts nature to the expense of a fever in order to discharge the poisonous draught. When this is repeated almost every day, it is easy to foresee the consequences. That constitution must be strong indeed which is able long to hold out under a daily fever. But fevers occasioned by drinking do not always go off in a day; they frequently end in an inflammation of the breast, liver, or brain, and produce fatal effects.

Though the drunkard should not fall by an acute disease, he seldom escapes those of a chronic kind. Intoxicating liquors, when used to excess, weaken the bowels and spoil

the digestion; they destroy the power of the nerves, and occasion paralytic and convulsive disorders; they likewise heat and inflame the blood, destroy its balsamic quality, render it unfit for circulation, and the nourishment of the body. Hence obstructions, atrophies, dropsies, and consumptions of the lungs. These are the common ways in which drunkards make their exit. Diseases of this kind, when brought on by hard drinking, seldom admit of a cure.

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humors properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondriacal disorders, and other symptoms of indigestion.

Consumptions are now so common that it is thought one tenth of the inhabitants of great towns die of that disease. Hard drinking is no doubt one of the causes to which we must impute the increase of consumptions. The great quantities of viscid malt liquor drank by the common people of England cannot fail to render the blood sizy and unfit for circulation; from whence proceed obstructions and inflammations of the lungs. There are few great ale drinkers who are not phthisical. Nor is that to be wondered at, considering the glutinous and almost indigestible nature of strong ale.

Those who drink ardent spirits or strong wines run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs in pieces; yet so great is the consumption of them in this country, that one would almost be induced to think the inhabitants lived upon them.

The habit of drinking proceeds frequently from misfortunes in life. The miserable fly to it for relief. It affords them indeed a temporary ease. But, alas, this solace is shortlived, and when it is over, the spirits sink as much below their natural pitch as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at

first perhaps was taken only as a medicine. No man is so dejected as the drunkard when his debauch is gone off. Hence it is that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen or ill humor.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Were such as voluntarily deprive themselves of the use of reason to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.

Intoxication is peculiarly hurtful to young persons. It heats their blood, impairs their strength, and obstructs their growth; besides, the frequent use of strong liquors in the early part of life destroys the good effects of them afterwards. Those who make a practice of drinking generous liquors when young cannot expect to reap any benefit from them as a cordial in the decline of life.

Drunkenness is not only a most abominable vice itself, but is an inducement to almost every other vice. There is hardly any crime so horrid that the drunkard will not perpetrate for the love of liquor. We have known mothers sell their children's clothes, the food that they should have eaten, and afterwards even the children themselves, in order to purchase the accursed draught.*

CHAPTER VIII.

OF CLEANLINESS.

The want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in

* Two women, both notorious drunkards, were executed at Edinburgh some years ago, for murdering children, and afterwards selling them to the surgeons for money to buy liquor.

the power of every person to be clean. The continual discharge from our bodies by perspiration renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration is either retained in the body, or re-absorbed from dirty clothes, it often occasions cutaneous diseases, fevers, &c.

The itch, and several other diseases of the skin, are chiefly owing to want of cleanliness. They may indeed be caught by infection, or brought on by poor living, unwholesome food, &c., but they will seldom continue long where cleanliness prevails. To the same cause must we impute the various kinds of vermin which infest the human body, houses, &c. These may always be banished by cleanliness alone, and wherever they abound we have reason to believe that it is neglected.

One common cause of putrid and malignant fevers is the want of cleanliness. These fevers commonly begin among the inhabitants of close dirty houses, who breathe unwholesome air, take little exercise, and wear dirty clothes. There the infection is generally hatched, which often spreads far and wide, to the destruction of many. Hence cleanliness may be considered as an object of public attention. It is not sufficient that I be clean myself, while the want of it in my neighbor affects my health as well as his own. If dirty people cannot be removed as a common nuisance, they ought at least to be avoided as infectious. All who regard their health should keep at a distance even from their habitations.

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Every thing therefore which tends to pollute the air, or spread the infection, ought, with the utmost care, to be guarded against. For this reason, in great towns, no filth, of any kind, should be permitted to lie upon the streets. Nothing is more apt to convey infection than the excrements of the diseased. These, in many cases, are known to be highly infectious.

In many great towns the streets are little better than dunghills, being frequently covered with ashes, dung, and nastiness of every kind. Even slaughter-houses, or killing shambles, are often to be seen in the very centre of great towns. The putrid blood, excrements, &c. with which these places

are generally covered, cannot fail to taint the air and render it unwholesome. How easily might this be prevented, by active magistrates, who have it always in their power to make proper laws relative to things of this nature, and to enforce the observance of them.

We are sorry to say that the importance of general cleanliness does by no means seem to be sufficiently understood by the magistrates of most great towns in Britain; though health, pleasure, and honor, all conspire to recommend an attention to it. Nothing can be more agreeable to the senses, more to the honor of the inhabitants, or more conducive to their health, than a clean town; nor can any thing impress a stranger with a more disrespectful idea of any people than its opposite. Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that, so long as they neglect cleanliness, they are in a state of barbarity.*

In camps the strictest regard should be paid to cleanliness. By negligence in this matter infectious diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews, during their encampments in the wilderness, received particular instructions with respect to cleanliness.† The rules enjoined them ought to be observed by all in the like situation. Indeed the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever considers the nature of their climate, and the diseases to which they were liable, will see the propriety of such laws.

It is remarkable that in most eastern countries cleanliness makes a great part of their religion. The Mahometan, as well as the Jewish religion, enjoins various bathings, washings, and purifications. No doubt these were designed to represent inward purity; but they were at the same time

* In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the *cloacae*, or common gutters for the conveyance of filth and nastiness from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others who made and improved them, than on those who achieved the greatest conquests.

† Thou shalt have a place also without the camp, whither thou shalt go forth abroad; and thou shalt have a paddle upon thy weapon; and it shall be when thou shalt ease thyself abroad, thou shalt dig therewith, and shalt turn back, and cover that which cometh from thee, &c. Deut. xxiii. 12, 13.

calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them. Were every person, for example, after visiting the sick, handling a dead body, or the like, to wash before he went into company or sat down to meat, he would run less hazard either of catching the infection himself or of communicating it to others.

Frequent washing not only removes the filth and sordes which adhere to the skin, but likewise promotes the perspiration, braces the body, and enlivens the spirits. How refreshed, how cheerful, and agreeable does one feel on being shaved, washed, and shifted; especially when these offices have been neglected longer than usual.

The eastern custom of washing the feet is not only a very agreeable piece of cleanliness, but contributes greatly to the preservation of health. The sweat and dirt with which these parts are frequently covered cannot fail to obstruct the perspiration. This piece of cleanliness would often prevent colds and fevers. Were people careful to bathe their feet and legs in luke-warm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

A proper attention to cleanliness is nowhere more necessary than on shipboard. If epidemical distempers break out there, no one can be safe. The best way to prevent them is to take care that the whole company be cleanly in their clothes, bedding, &c. When infectious diseases do break out, cleanliness is the most likely means to prevent their spreading. It is likewise necessary to prevent their returning afterwards or being conveyed to other places. For this purpose, the clothes, bedding, &c., of the sick ought to be carefully washed, and fumigated with brimstone. Infection will lodge a long time in dirty clothes, and afterwards break out in the most terrible manner.

In places where great numbers of sick people are kept, cleanliness ought to be most religiously observed. The very smell in such places is often sufficient to make one sick. It is easy to imagine what effect that is likely to have upon the diseased. In a hospital or infirmary, where cleanliness is neglected, a person in perfect health has a greater chance to become sick than a sick person has to get well.

Few things are more unaccountable than that neglect, or

rather dread, of cleanliness which appears among those who have the care of the sick; they think it almost criminal to suffer any thing that is clean to come near a person in a fever, for example, and would rather allow him to wallow in all manner of filth than change the least bit of his linen, &c. If cleanliness be necessary for persons in health, it is certainly more so for the sick. Many diseases may be cured by cleanliness alone; most of them might be mitigated by it; and where it is neglected the slightest disorders are often changed into the most malignant. The same mistaken care which prompted people to prevent the least admission of fresh air to the sick seems likewise to have induced them to keep them dirty. Both these destructive prejudices will, we hope, be soon entirely exploded.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practise it ourselves. It sooner attracts our regard than even finery itself, and often gains esteem where that fails. It is an ornament to the highest as well as the lowest station, and cannot be dispensed with in either. Few virtues are of more importance to society than real cleanliness. It ought to be carefully cultivated every where, but in popular cities it should be almost revered.

We cannot conclude this article without recommending the practice of cleanliness, in the warmest manner, to persons in every situation of life. We do not indeed pretend to rank it among the *cardinal virtues;* but we would recommend it as necessary for supporting the honor and dignity of human nature, as agreeable and useful to society, and as highly conducive to the preservation of health.

CHAPTER IX.

OF INFECTION.

Most diseases are infectious. Every person ought therefore, as far as he can, to avoid all communication with the diseased. The common practice of visiting the sick, though

often well meant, has many ill consequences. Far be it from us to discourage any act of charity or benevolence, especially towards those in distress; but we cannot help blaming such as endanger their own or their neighbors' lives by a mistaken friendship or an impertinent curiosity.

The houses of the sick, especially in the country, are generally crowded from morning till night with idle visiters. It is customary in such places for servants and young people to wait upon the sick, by turns, and even to sit up with them all night. It would be a miracle indeed should such always escape. Experience teaches us the danger of this conduct. People often catch fevers in this way, and communicate them to others, till at length they become epidemic.

It would be thought highly improper for one who had not had the small pox to wait upon a patient in that disease; yet many other fevers are almost as infectious as the small pox, and not less fatal. Some imagine that fevers prove more fatal in villages than in great towns, for want of proper medical assistance. This may sometimes be the case, but we are inclined to think it oftener proceeds from the cause above mentioned.

Were a plan to be laid down for communicating infection, it could not be done more effectually than by the common method of visiting the sick. Such visiters not only endanger themselves and their connections, but likewise hurt the sick. By crowding the house, they render the air unwholesome, and by their private whispers and dismal countenances disturb the imagination of the patient, and depress his spirits. Persons who are ill, especially in fevers, ought to be kept as quiet as possible. The sight of strange faces, and every thing that disturbs the mind, hurts them.

The common practice in country places of inviting great numbers of people to funerals, and crowding them into the same apartment where the corpse lies, is another way of spreading infection. The infection does not always die with the patient. In many cases it rather grows stronger as the body becomes putrid. This is peculiarly the case of those who die of malignant fevers, or other putrid diseases. Such ought not to lie long unburied; and people should keep as much as possible at a distance from them.

It would tend greatly to prevent the spreading of infectious diseases if those in health were kept at a proper distance from the sick. The Jewish Legislator, among many other

wise institutions for preserving health, has been peculiarly attentive to the means of preventing infection, or *defilement* as it is called, either from a diseased person or a dead body. In many cases the diseased were to be separated from those in health, and it was deemed a crime even to approach their habitations. If a person only touched a diseased or dead body, he was appointed to wash himself in water, and to keep for some time at a distance from society.

Infectious diseases are often communicated by clothes. It is extremely dangerous to wear apparel which has been worn by the diseased, unless it has been well washed and fumigated, &c., as infection may lodge a long time in it, and afterwards produce very tragical effects. This shows the danger of buying at random the clothes which have been used by other people.

Infectious disorders are frequently imported. Commerce, together with the riches of foreign climes, brings us also their diseases. These do often more than counterbalance all the advantages of that trade by means of which they are introduced. It is to be regretted that so little care is commonly taken either to prevent the introduction or spreading of infectious diseases. Some attention, indeed, is generally paid to the plague ; but other diseases pass unregarded.

Infection is often spread in cities by jails, hospitals, &c. These are frequently situated in the very middle of populous towns, and when infectious diseases break out in them it is impossible for the inhabitants to escape. Did magistrates pay any regard to the health of the people, this evil might be easily remedied.

Many are the causes which tend to diffuse infection through populous cities. The whole atmosphere of a large town is one contaminated mass, abounding with every kind of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is, to choose an open situation; to avoid narrow, dirty, crowded streets; to keep their own houses and offices clean; and to be as much abroad in the open air as their time will permit.

It would tend greatly to prevent the spreading of infectious diseases, were proper nurses every where employed to take care of the sick. This might often save a family, or even a whole town, from being infected by one person. We do not mean that people should abandon their friends or relations in

distress, but only to put them on their guard against being too much in company with those who are afflicted with diseases of an infectious nature.

Such as wait upon the sick in infectious diseases run very great hazard. They ought to stuff their noses with tobacco, or some other strong smelling herb, as rue, tansy, or the like. They ought likewise to keep the patient very clean, and frequently to sprinkle the room where he lies with vinegar, or other strong acids; and to avoid the smell of his breath as much as they can. Such persons as attend the sick ought never to go into company without having changed their clothes, washed their hands and face, &c.; otherwise, if the disease be infectious, they will, in all probability, carry the contagion along with them.*

However trifling it may appear to inconsiderate persons, we will venture to affirm, that a due attention to those things which tend to diffuse infection would be of some importance in preventing diseases. There are many diseases which are in some degree infectious. For this reason, no one should continue long with the sick, except the necessary attendants. I mean not, however, by this caution, to deter those whose duty or office leads them to wait upon the sick from such a laudable and necessary employment.

Many things are in the power of the magistrate which would tend to prevent the spreading of infection; as the promoting of public cleanliness; removing jails, hospitals, church-yards, and other places where infection may be generated, at a proper distance from great towns; widening the streets, pulling down useless walls, and taking all methods to promote a free circulation of air through every part of the town, &c. Public hospitals, or proper places of reception for the sick, provided they were kept clean, well ventilated, and

* There is reason to believe that infection is often conveyed from one place to another by the carelessness of the faculty themselves. Many physicians affect a familiar way of sitting upon the patient's bedside, and holding his arm for a considerable time. If the patient has the small pox, or any other infectious disease, there is no doubt but the doctor's hands, clothes, &c., will carry away some of the infection; and if he goes directly to visit another patient, without washing his hands, changing his clothes, or being exposed to the open air, which is not seldom the case, is it any wonder that he should carry the disease along with him? Physicians not only endanger others, but also themselves, by this practice; and, indeed, sometimes they suffer for their want of care.

placed in an open situation, would likewise tend to prevent the spreading of infection. Such places of reception would prevent the poor, when sick, from being visited by their idle or officious neighbors. They would likewise render it unnecessary for sick servants to be kept in their masters' houses. Masters had better pay for having their servants taken care of in a hospital, than run the hazard of having an infectious disease diffused among a numerous family. Sick servants and poor people, when placed in hospitals, are not only less apt to diffuse infection among their neighbors, but have likewise the advantage of being well attended.

We are not, however, to learn that hospitals, instead of preventing infection, may become the means of diffusing it. When they are placed in the middle of great towns; when numbers of patients are crowded together into small apartments; and when cleanliness and ventilation are neglected, they become nests for hatching diseases, and every one who goes into them not only runs a risk of receiving infection himself, but likewise of communicating it to others. This, however, is not the fault of the hospitals, but of those who have the management of them. It were to be wished that they were both more numerous and upon a more respectable footing, as that would induce people to go into them with less reluctance. This is the more to be desired, because most of the putrid fevers and other infectious disorders break out among the poor, and are by them communicated to the better sort. Were proper attention paid to the first appearances of such disorders, and the patients early conveyed to a hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

CHAPTER X.

OF THE PASSIONS.

The passions have great influence both in the cause and cure of diseases. How mind acts upon matter, will, in all probability, ever remain a secret. It is sufficient for us to

know that there is established a reciprocal influence betwixt the mental and coporeal parts, and that whatever disorders the one likewise affects the other.

ANGER.

The passion of *anger* ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases, and sometimes even sudden death. This passion is peculiarly hurtful to the delicate and those of weak nerves. I have known a hysteric woman lose her life by a violent fit of anger. All such ought to guard against the excess of this passion with the utmost care.

It is not indeed always in our power to prevent being angry; but we may surely avoid harboring resentment in our breast. Resentment preys upon the mind, and occasions the most obstinate chronical disorders, which gradually waste the constitution. Nothing shows true greatness of mind more than to forgive injuries. It promotes the peace of society, and greatly conduces to our own ease, health, and felicity.

Such as value health should avoid violent gusts of anger, as they would the most deadly poison. Neither ought they to indulge resentment, but to endeavor at all times to keep their minds calm and serene. Nothing tends so much to the health of the body as a constant tranquillity of mind.

FEAR.

The influence of *fear*, both in occasioning and aggravating diseases, is very great. No man ought to be blamed for a decent concern about life; but too great a desire to preserve it is often the cause of losing it. Fear and anxiety, by depressing the spirits, not only dispose us to diseases, but often render those diseases fatal which an undaunted mind would overcome.

Sudden fear has generally violent effects. Epileptic fits, and other convulsive disorders, are often occasioned by it. Hence the danger of that practice, so common among young people, of frightening one another. Many have lost their lives, and others have been rendered useless ever after, by frolics of this kind. It is dangerous to tamper with the hu-

man passions. They may easily be thrown into such disorder as never again to act with regularity.

But the gradual effects of fear prove more generally hurtful. The constant dread of some future evil, by dwelling upon the mind, often occasions the very evil itself. Hence it comes to pass that so many die of these very diseases of which they long had a dread, or which had been impressed on their minds by some accident or foolish prediction. This, for example, is often the case with women in childbed. Many of those who die in that situation are impressed with the notion of their death a long time before it happens, and there is reason to believe that this impression is often the cause of it.

The methods taken to impress the minds of women with apprehensions of the great *pain* and *peril* of childbirth are very hurtful. Few women die in labor, though many lose their lives after it; which may be thus accounted for. A woman after delivery, finding herself weak and exhausted, immediately apprehends she is in danger; but this fear seldom fails to obstruct the necessary evacuations, upon which her recovery depends. Thus the sex often fall a sacrifice to their own imaginations, when there would be no danger did they apprehend none.

It seldom happens that two or three women, in a great town, die in childbed, but their death is followed by many others. Every woman of their acquaintance who is with child dreads the same fate, and the disease becomes epidemical by the mere force of imagination. This should induce pregnant women to despise fear, and by all means to avoid those tattling gossips who are continually buzzing in their ears the misfortunes of others. Every thing that may in the least alarm a pregnant or childbed woman ought with the greatest care to be guarded against.

Many women have lost their lives in childbed by the old superstitious custom, still kept up in most parts of Britain, of tolling the parish bell for every person who dies. People who think themselves in danger are very inquisitive; and if they come to know that the bell tolls for one who died in the same situation with themselves, what must be the consequence? At any rate, they are apt to suppose that this is the case, and it will often be found a very difficult task to persuade them of the contrary.

But this custom is not pernicious to childbed women only.

It is hurtful in many other cases. When low fevers, in which it is difficult to support the patient's spirits, prevail, what must be the effect of a funeral peal sounding five or six times a day in his ears? No doubt his imagination will suggest that others died of the same disease under which he labors. This apprehension will have a greater tendency to depress his spirits than all the cordials of which medicine can boast will have to raise them.

If this useless piece of ceremony cannot be abolished, we ought to keep the sick as much from hearing it as possible, and from every thing else that may tend to alarm them. So far however is this from being generally attended to, that many make it their business to visit the sick on purpose to whisper dismal stories in their ears. Such may pass for sympathizing friends, but they ought rather to be considered as enemies. All who wish well to the sick ought to keep such persons at the greatest distance from them.

A custom has long prevailed among physicians of prognosticating, as they call it, the patient's fate, or foretelling the issue of the disease. Vanity no doubt introduced this practice, and still supports it, in spite of common sense and the safety of the sick. I have known a physician barbarous enough to boast that he pronounced more *sentences* than all his majesty's judges. Would to God that such sentences were not often equally fatal! It may indeed be alleged that the doctor does not declare his opinion before the patient. So much the worse. A sensible patient had better hear what the doctor says than learn it from the disconsolate looks, the watery eyes, and the broken whispers of those about him. It seldom happens, when the doctor gives an unfavorable opinion, that it can be concealed from the patient. The very embarrassment which the friends and attendants show in disguising what he has said is generally sufficient to discover the truth.

We do not see what right any man has to announce the death of another, especially if such a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and seldom fail to importune the physician for his opinion. A doubtful answer, however, or one that may tend rather to encourage the hopes of the sick, is surely the most safe. This conduct could neither hurt the patient nor the physician. Nothing tends more to destroy the credit of physic than those bold prognosticators, who, by

the bye, are generally the most ignorant of the faculty. The mistakes which daily happen in this way are so many standing proofs of human vanity and the weakness of science.*

The vanity of foretelling the fate of the sick is not peculiar to the faculty. Others follow their example, and those who think themselves wiser than their neighbors often do much hurt in this way. Humanity surely calls upon every one to comfort the sick, and not to add to their affliction by alarming their fears. A friend, or even a physician, may often do more good by a mild and sympathizing behavior than by medicine, and should never neglect to administer that greatest of all cordials, Hope.

GRIEF.

Grief is the most destructive of all the passions. Its effects are permanent, and when it sinks deep into the mind it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but when it has gained strength all attempts to remove it are vain.

No person can prevent misfortunes in life; but it shows true greatness of mind to bear them with serenity. Many persons make a merit of indulging grief, and, when misfortunes happen, they obstinately refuse all consolation, till the mind, overwhelmed with melancholy, sinks under the load. Such conduct is not only destructive to health, but inconsistent with reason, religion, and common sense.

Change of ideas is as necessary for health as change of posture. When the mind dwells long upon one subject, es-

* Nothing can be more ridiculous, not to say absurd, than this piece of medical practice. It may often do mischief, but can seldom have any good effects; besides, it can never be reduced to any degree of certainty, unless in a few cases, which are obvious to most people. Notwithstanding this, many physicians, and some of eminence too, value themselves so much upon their skill in *prognostication*, that they seem very much disappointed, nay chagrined, when any one of their patients is so happy as to survive their sentence. Such gentlemen must excuse me for telling them that they very often, and indeed too justly, render themselves the objects of laughter to those very persons whose day and hour they had fixed many years ago.

pecially of a disagreeable nature, it hurts the whole functions of the body. Hence grief indulged destroys the appetite and spoils the digestion; by which means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humors, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasioned an excessive grief.

It is utterly impossible that any person of a dejected mind should enjoy health. Life may indeed be dragged out for a few years; but whoever would live to a good old age must be good humored and cheerful. This, indeed, is not altogether in our own power; yet our temper of mind, as well as actions, depends greatly upon ourselves. We can either associate with cheerful or melancholy companions, mingle in the amusements and offices of life, or sit still and brood over our calamities, as we choose. These, and many such things, are certainly in our power, and from these the mind generally takes its cast.

The variety of scenes which present themselves to the senses were certainly designed to prevent our attention from being too long fixed upon any one object. Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects. Examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new ideas may be kept up, till the disagreeable ones entirely disappear. Thus travelling, the study of any art or science, reading or writing on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

It has already been observed that the body cannot be healthy unless it be exercised; neither can the mind. Indolence nourishes grief. When the mind has nothing else to think of but calamities, no wonder that it dwells there. Few people who pursue business with attention are hurt by grief. Instead therefore of abstracting ourselves from the world or business when misfortunes happen, we ought to engage in it with more than usual attention, to discharge with double diligence the functions of our station, and to mix with friends of a cheerful and social temper.

Innocent amusements are by no means to be neglected.

These, by leading the mind insensibly to the contemplation of agreeable objects, help to dispel the gloom which misfortunes cast over it. They make time seem less tedious, and have many other happy effects.

Many, when overwhelmed with grief, betake themselves to drinking. This is making the cure worse than the disease. It seldom fails to end in the ruin of fortune, character, and constitution.

LOVE.

Love is perhaps the strongest of all the passions: at least, when it becomes violent, it is less subject to the control either of the understanding or will than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species itself. It was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion, it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all at once. We would therefore advise every one, before he tampers with this passion, to consider well the probability of his being able to obtain the object of his love. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to fly the company of the beloved object; to apply his mind attentively to business or study; to take every kind of amusement; and, above all, to endeavor, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

When love becomes a disease, it is not easily cured. Its consequences, in this case, are often so violent, that even the possession of the beloved object will not always remove them. It is therefore of the greatest importance early to guard against its influence; but when the passion has already taken too deep hold of the mind to admit of being eradicated, the beloved object ought if possible to be obtained; nor should this be deferred for every trifling cause. Those who have the disposal of young persons in marriage are too ready to trifle with the passion of love; such, for the most sordid considerations, frequently sacrifice the future health, peace or happiness of those committed to their care.*

* Even the conduct of parents themselves in the disposal of their children in marriage is often very blamable. An advantageous

RELIGIOUS MELANCHOLY.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even of the most innocent amusements. A perpetual gloom hangs upon their countenances, while the deepest melancholy preys upon their minds. At length the fairest prospects vanish, every thing puts on a dismal appearance, and those very objects which ought to give delight afford nothing but disgust. Life itself becomes a burden, and the unhappy wretch, persuaded that no evil can equal what he feels, often puts an end to his own miserable existence.

It is great pity that ever religion should be so far perverted as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than the *Christian Religion* to raise and support the mind of its votaries under every affliction that can befal them. It teaches them that the sufferings of this life are preparatory to the happiness of the next, and that all who persist in a course of virtue shall at length arrive at complete felicity.

Those whose business it is to recommend religion to others should beware of dwelling too much upon gloomy subjects. That peace and tranquillity of mind which true religion is calculated to inspire is a more powerful argument in its favor than all the terrors that can be uttered. Terror may indeed deter men from outward acts of wickedness; but it will never inspire them with that love of God and real goodness in which alone true religion consists.

To conclude, the best way to counteract the violence of any passion is to encourage those of an opposite nature, and to keep the mind so closely engaged in some useful pursuit as to allow it no time to reflect upon misfortunes.

match is the constant aim of parents, while their children often suffer a real martyrdom betwixt their own inclinations and the duty which they think they owe to their parents. The first thing which parents ought to consult in disposal of their children in marriage is certainly their own inclinations. Were due regard always paid to these, there would be fewer unhappy couples; and the parents would not have so often cause to repent the severity of their conduct, after a ruined constitution or a distracted mind has shown them their mistake.

CHAPTER XI.

OF THE CUSTOMARY EVACUATIONS.

The principal evacuations from the human body are those of *stool*, *urine*, and *insensible perspiration*. None of these can be long obstructed without impairing the health. When that which ought to be thrown out of the body is too long retained, it not only occasions a *plethora*, or too great fulness of the vessels, but acquires qualities which are hurtful to the health, as acrimony, putrescence, &c.

EVACUATION BY STOOL.

Few things conduce more to health than keeping the belly regular. When the *fæces* lie too long in the body they vitiate the humors, and when they are too soon discharged it is not sufficiently nourished. A medium is therefore to be desired; which can only be obtained by regularity in diet, sleep, and exercise. Whenever the belly is not regular, there is reason to suspect a fault in one or other of these.

Persons who eat and drink at irregular hours, and who eat various kinds of food, and drink of several different liquors at every meal, have no reason to expect either that their digestion will be good or their discharges regular. Irregularity in eating and drinking disturbs every part of the animal economy, and never fails to occasion diseases. Either too much or too little food will have this effect. The former indeed generally occasions looseness, and the latter costiveness; but both have a tendency to hurt the health.

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a different regimen of diet, exercise, &c. It is however generally allowed that one stool a day is sufficient for an adult, and that less is hurtful. But this, like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a week. Such a degree of costiveness however is not safe; though the person who labors under it may for some time enjoy tolerable health, yet at length it will occasion diseases.

One method for procuring a stool every day is to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavorable to regular stools, but also the warmth. This, by promoting the perspiration, lessens all the other discharges.

The method recommended for this purpose by Mr. Locke is likewise very proper, *viz. to solicit nature, by going regularly to stool every morning, whether one has a call or not.* Habits of this kind may be acquired, which will in time become natural.

Persons who have frequent recourse to medicine for preventing costiveness seldom fail to ruin their constitution. Purging medicines frequently repeated weaken the bowels, hurt the digestion, and every dose makes way for another, till at length they become as necessary as daily bread. Those who are troubled with costiveness ought rather, if possible, to remove it by diet than drugs. They ought likewise to go thinly clothed, and to avoid every thing of an astringent, or of a heating nature. The diet and other regimen necessary in this case will be found under the article *costiveness*, where this state of the bowels is treated as a disease.

Such persons as are troubled with a habitual looseness ought likewise to suit their diet, &c., to the nature of their complaint. They should use food which braces and strengthens the bowels, and which is rather of an astringent quality, as wheat bread made of the finest flour, cheese, eggs, rice boiled in milk, &c. Their drink should be red port wine, claret, brandy and water, water in which toasted bread has been boiled, and such like.

As a habitual looseness is often owing to an obstructed perspiration, persons affected with it ought to keep their feet warm, to wear flannel next their skin, and to take every method to promote the perspiration. Further directions with regard to the treatment of this complaint will be found under the article *looseness*.

URINE.

So many things tend to change both the quantity and appearances of the urine, that it is very difficult to lay down any determined rules for judging of either.* Dr. Cheyne,

* It has long been an observation among physicians, that the appearances of the urine are very uncertain and very little to be depended on. No one will be surprised at this who considers how many

says the urine ought to be equal to three fourths of the liquid part of our aliment. But suppose any one were to take the trouble of measuring both, he would find that every thing which altered the degree of perspiration would alter this proportion, and likewise that different kinds of aliment would afford very different quantities of urine. Though for these, and other reasons, no rule can be given for judging of the precise quantity of urine which ought to be discharged, yet a person of common sense will seldom be at a loss to know when it is in either extreme.

As a free discharge of urine not only prevents but actually cures many diseases, it ought by all means to be promoted, and every thing that may obstruct it should be carefully avoided. Both the secretion and discharge of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a dry and heating quality, liquors which are astringent and heating, as red port wine, claret, and such like. Those who have reason to suspect that their urine is in too small quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

When the urine is too long retained, it is not only reabsorbed, or taken up again into the mass of fluids, but by stagnating in the bladder it becomes thicker, the more watery parts flying off first, and the more gross and earthy remaining behind. By the constant tendency which these have to concrete, the formation of stones and gravel in the bladder is promoted. Hence it comes to pass that indolent and sedentary people are much more liable to these diseases than persons of a more active life.

Many persons have lost their lives, and others have brought on very disagreeable, and even incurable disorders, by retaining their urine too long, from a false delicacy. When

ways it may be affected, and consequently have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases and prescribe to patients from the bare inspection of their urine. These impostures however are very common all over Britain, and, by the amazing credulity of the populace, many of them amass considerable fortunes.

the bladder has been over-distended it often loses its power of action altogether, or becomes paralytic, by which means it is rendered unable either to retain the urine or expel it properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue; but that can never be reckoned true delicacy which induces any one to risk his health or hazard his life.

But the urine may be in too great as well as too small a quantity. This may be occasioned by drinking large quantities of weak watery liquors, by the excessive use of alkaline salts, or any thing that stimulates the kidneys, or dissolves the blood, &c. This disorder very soon weakens the body, and induces a consumption. It is difficult to cure, but may be mitigated by strengthening diet and astringent medicines, such as are recommended under the article Diabetes, or excessive discharge of urine.

PERSPIRATION.

Insensible perspiration is generally reckoned the greatest of all the discharges from the human body. It is of so great importance to health that few diseases attack us while it goes properly on; but when it is obstructed, the whole frame is generally disordered. This discharge, however, being less perceptible than any of the rest, is consequently less attended to. Hence it is that acute fevers, rheumatisms, agues, &c., often proceed from this cause before we are aware of its existence.

It is a true saying that colds kill more than plagues. On examining patients we find most of them impute their diseases either to violent colds, which they had caught, or to slight ones which had been neglected. For this reason, instead of a critical inquiry into the nature of the perspiration, its difference in different seasons, climates, constitutions, &c., we shall endeavor to point out the causes which most commonly obstruct it, and to show how far they may be either avoided or have their influence counteracted by timely care. The want of a proper attention to these costs Britain annually some thousands of useful lives.

CHANGES IN THE ATMOSPHERE.

One of the most common causes of obstructed perspiration, or catching cold, in this country, is the changeableness of the

weather, or state of the atmosphere. There is no place where such changes happen more frequently than in Great Britain. With us the degrees of heat and cold are not only very different in the different seasons in the year, but often change almost from one extreme to another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration, is obvious to every one.

The best method of fortifying the body against the changes of the weather is to be abroad every day. Those who keep most within doors are most liable to catch cold. Such persons generally render themselves so delicate as to feel even the slightest changes in the atmosphere, and by their pains, coughs, and oppressions of the breast, &c., they become a kind of living barometers.

WET CLOTHES.

Wet clothes not only, by their coldness, obstruct the perspiration, but their moisture, by being absorbed or taken up into the body, greatly increases the danger. The most robust constitution is not proof against the danger arising from wet clothes; they daily occasion fevers, rheumatisms, and other fatal disorders, even in the young and healthy.

It is impossible for people who go frequently abroad to avoid sometimes being wet. But the danger might generally be lessened, if not wholly prevented, by changing their clothes soon; when this cannot be done, they should keep in motion till they be dry. So far are many people from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently even sleep whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct ought certainly to deter others from being guilty of it.

WET FEET.

Even wet feet often occasion fatal diseases. The colic, inflammations of the breast, the iliac passion and *cholera morbus*, &c., are often occasioned by wet feet. Habit will, no doubt, render this less dangerous; but it ought, as far as possible, to be avoided. The delicate, and those who are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

NIGHT AIR.

The perspiration is often obstructed by NIGHT AIR; even in summer, this ought to be avoided. The dews, which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence, in warm countries, the evening dews are more hurtful than where the climate is more temperate.

It is very agreeable after a warm day to be abroad in the cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are great indeed, and almost imperceptible; but they are not the less to be dreaded. We would therefore advise travellers, laborers, and all who are much heated by day, carefully to avoid them. When the perspiration has been great, these become dangerous in proportion. By not attending to this in flat marshy countries, where the exhalations and dews are copious, laborers are often seized with intermitting fevers, quinsies, and other dangerous diseases.

DAMP BEDS.

Sleeping in damp beds seldom fails to obstruct the perspiration. Beds become damp either from their not being used, standing in damp houses, or in rooms without fire. Nothing is more to be dreaded by travellers than damp beds, which are very common in all places where fuel is scarce. When a traveller, cold and wet, arrives at an inn, he may, by means of a good fire, warm diluting liquor, and a dry bed, have the perspiration restored; but if he be put into a cold room, and laid on a damp bed, it will be more obstructed, and the worst consequences will ensue. Travellers should avoid inns which are noted for damp beds, as they would a house infected with the plague; as no man, however robust, is proof against the danger arising from them.

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds which are not slept in above two or three times a year should be otherwise? Nothing is more common than to hear people complain of having caught cold

by changing their bed. The reason is obvious. Were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

Nothing is more to be dreaded by a delicate person when on a visit, than being laid in a bed which is kept on purpose for strangers. That ill-judged piece of complaisance becomes a real injury. All the bad consequences from this quarter might be easily prevented in private families, by causing their servants to sleep in the spare beds, and resign them to strangers when they come. This is the custom of many families in London, and we would earnestly recommend it to all who value the health of their friends. In inns, where the beds are used almost every night, nothing else is necessary than to keep the rooms well seasoned by frequent fires, and the linen dry.

DAMP HOUSES.

Damp houses frequently produce the like consequences; for this reason those who build should be careful to choose a dry situation. A house which stands on a damp marshy soil is hurtful to the health of the inhabitants. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised. Servants and others who are obliged to live in cellars and sunk stories seldom continue long in health; masters ought surely to pay some regard to the health of their servants, as well as to their own.

Nothing is more common than for people, merely to avoid some trifling inconveniency, to hazard their lives, by inhabiting a house almost as soon as the masons, plasterers, &c., have done with it. Such houses are not only dangerous from their dampness, but likewise from the smell of lime, paints, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work in these articles, are sufficient proofs of their being unwholesome.

Houses are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing rooms immediately before company is put into them. Many people are sure to catch cold if they sit but a very short time in a room that has been lately washed; the delicate ought carefully to avoid such a situation, and even the robust would run less hazard by sitting without doors. People who are accustomed to live in dry houses ought, as far as possible, to

shun damp ones, and by all means not to continue long in rooms that have been lately washed.

SUDDEN TRANSITIONS FROM HEAT TO COLD.

But nothing so frequently obstructs the perspiration as *sudden transitions* from heat to cold. Colds are seldom caught unless when people have been too much heated. Heat rarifies the blood, quickens the circulation, and increases the perspiration; but when these are suddenly checked, the consequences must be bad. It is indeed impossible for laborers not to be too hot upon some occasions; but it is generally in their power to put on their clothes when they leave off work, to make choice of a dry place to rest themselves in, and to avoid sleeping in the open fields. These easy rules, if observed, would save many useful lives.

Nothing is more common than for people when hot to drink freely of cold small liquors. This conduct is extremely dangerous. Thirst indeed is hard to bear, and the inclination to gratify that appetite frequently gets the better of reason, and makes us do what our judgment disapproves. Every peasant knows, if his horse be permitted to drink his belly full of cold water after violent exercise, and be immediately put into the stable, or suffered to remain at rest, that it will kill him. This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

Thirst may be quenched many ways without swallowing large quantities of cold liquor. The fields afford variety of acid fruits and plants, the very chewing of which would abate thirst. Water kept in the mouth for some time, and spit out again, if frequently repeated, will have the same effect. If a bit of bread be eaten along with a few mouthfuls of water, it will both quench thirst more effectually, and make the danger less. When a person is extremely hot, a mouthful of brandy, or other spirits, ought to be preferred to any thing else, if it can be obtained. But if any one has been so foolish, when hot, as to drink freely of cold liquor, he ought to continue his exercise, at least, till what he drank be thoroughly warmed upon his stomach.

It would be tedious to enumerate all the bad effects which flow from drinking cold thin liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness,

quinsies, and fevers of various kinds, are its common consequences. Neither is it safe when warm to eat freely of raw fruits, salads, or the like. These indeed have not so sudden an effect on the body as cold liquors, but they are notwithstanding dangerous, and ought to be avoided.

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual effects of this conduct; yet nothing is more common. Many people, after having drank warm liquors for several hours, walk or ride a number of miles in the coldest nights; while others sit up all night, or ramble about in the streets.

People are very apt, when a room is hot, to throw open a window and sit near it. This is a most dangerous practice. Any person had better sit without doors than in such a situation, as the current of air is directed against one particular part of the body. Inflammatory fevers and consumptions have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest season. I have known mechanics frequently contract fatal diseases by working stript at an open window, and would advise all of them to beware of such a practice.

Nothing exposes people more to catch cold than keeping their own houses too warm. Such persons may be said to live in a sort of hot-houses; they can hardly stir abroad to visit a neighbor but at the hazard of their lives. Were there no other reason for keeping houses in a moderate degree of warmth, that alone is sufficient. But no house that is too hot can be wholesome; heat destroys the spring and elasticity of the air, and renders it less fit for expanding the lungs, and the other purposes of respiration. Hence it is that consumptions, and other diseases of the lungs, prove so fatal to people who work in forges, glass-houses, and the like.

Some are even so fool-hardy as to plunge themselves when hot in cold water. Not only fevers, but madness itself has frequently been the effect of this conduct. Indeed it looks too like the action of a madman to deserve a serious consideration.

We shall conclude these observations on the common causes of catching cold by recommending it to every one to

avoid, with the utmost attention, all sudden transitions from heat to cold, and to keep the body in as uniform a temperature as possible; or, where that cannot be done, to take care to let it cool gradually.

People may be apt to imagine that too strict an attention to these things would tend to render them delicate. So far however is this from being our design, that the very first rule proposed for preventing colds is to harden the body by inuring it daily to the open air.

PART II.

OF DISEASES.

CHAPTER XII.

GENERAL OBSERVATIONS CONCERNING THE KNOWLEDGE AND CURE OF DISEASES.

It is no doubt difficult to obtain such a knowledge of diseases as to be able to distinguish them from one another. This however does not depend so much upon scientific principles as many imagine. It is chiefly the result of experience and observation. By attending the sick, and carefully observing the various occurrences in diseases, a great degree of accuracy may be acquired, both in distinguishing their symptoms, and in the application of medicines. Hence sensible nurses, and other persons who wait upon the sick, often know diseases better than those who have been bred to physic. We do not however mean to insinuate that a medical education is of no use; it is doubtless of the greatest importance, but it never can supply the place of experience and observation.

In a former edition we endeavored, in this place, to lay down rules for distinguishing diseases; but as it is impossible for any one to retain these in his memory, we have omitted them, and, in order to supply their place, have given as full and accurate a description of each particular disease, in its order, as the nature of our plan would admit.

Diseases often resemble one another so nearly in many of their symptoms that it is no easy matter to distinguish them. When this is the case, we have always taken care to point out those peculiar or characteristic symptoms by which the disease is distinguished, and at the same time to mention those which are common to it with other diseases. By a

proper attention to these, we hope, the investigation of diseases will be found to be a less difficult matter than most persons would, at first sight, be ready to imagine.

A proper attention to the age, sex, temper of mind, constitution, &c., of the patient, will greatly assist both in the investigation and cure of diseases.

In childhood the fibres are lax and soft, the nerves extremely irritable, and the fluids thin; whereas in old age the fibres are rigid, the nerves become almost insensible, and many of the vessels imperviable. These and other peculiarities render the diseases of the young and aged very different, and of course they must require a different method of treatment.

Females are liable to many diseases which do not afflict the other sex. Besides, the nervous system being more irritable in them than in men, their diseases require to be treated with greater caution. They are less able to bear large evacuations; and all stimulating medicines ought to be administered to them with a sparing hand.

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives mostly within doors, must not be treated under any disease precisely in the same manner as one who is hardy and robust, and who is much exposed to the open air.

The temper of mind ought to be carefully attended to in diseases. Fear, anxiety, and a fretful temper, both occasion and aggravate diseases. In vain do we apply medicines to the body to remove maladies which proceed from the mind. When it is affected, the best medicine is to soothe the passions, to divert the mind from anxious thought, and to keep the patient as easy and cheerful as possible.

Attention ought likewise to be paid to the place where the patient lives, the air he breathes, his diet, occupation, &c. Such as live in low marshy situations are subject to many diseases which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities have many maladies to which the more happy rustics are entire strangers. Persons who feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious, &c.

It has already been observed, that the different occupations

and situations in life dispose men to peculiar diseases. It is therefore necessary to inquire into the patient's occupation, manner of life, &c. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary exactly in the same manner, even supposing them to labor under the same disease.

It will likewise be proper to inquire whether the disease be constitutional or accidental; whether it has been of long or short standing; whether it proceeds from any great and sud den alteration in the diet, manner of life, &c. The state of the patient's belly, and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as respiration, digestion, &c.

Lastly, it will be proper to inquire what diseases the patient has formerly been most liable to, and what medicines were most beneficial to him. It will likewise be necessary to inquire what kind of medicines are most agreeable to the patient, or if he has a strong aversion to any particular drug, &c.

It has already been observed that many of the indications of cure in diseases may be answered by diet alone. The diet is therefore the first thing to be attended to in the treatment of diseases. Those who know no better imagine that every thing which goes by the name of a medicine possesses some wonderful power or secret charm, and think if the patient swallows enough of drugs that he must do well. This mistake has many ill consequences. It makes people trust to drugs and neglect their own endeavors; besides, it discourages all attempts to relieve the sick where medicines cannot be had.

Medicines are no doubt useful in their own place, and when administered with prudence they may do much good; but when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would therefore wish to call the attention of mankind from the pursuit of secret medicines to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing hurt.

Every disease weakens the digestive powers. The diet ought therefore, in all diseases, to be light and of easy diges-

tion. It would be as prudent for a person with a broken leg to attempt to walk, as for one in a fever to eat the same kind of food, and in the same quantity, as when he was in perfect health. Even abstinence alone will often cure a fever, especially when it has been occasioned by excess in eating or drinking.

In all fevers attended with inflammation, as pleurisies, peripneumonies, &c., thin gruels, wheys, watery infusions of mucilaginous plants, roots, &c., are not only proper for the patient's food, but they are likewise the best medicines which can be administered.

In fevers of a slow, nervous, or putrid kind, where there are no symptoms of inflammation, and where the patient must be supported with cordials, that attention can always be more effectually answered by nourishing diet and generous wines, than by any medicines yet known.

Nor is a proper attention to diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondriacal affections, generally find more benefit from the use of solid food and generous liquors, than from all the cordial and carminative medicines which can be administered to them.

The scurvy, that most obstinate malady, will sooner yield to a proper vegetable diet than to all the boasted antiscorbutic remedies of the shops.

In consumptions, when the humors are vitiated, and the stomach so much weakened as to be unable to digest the solid fibres of animals, or even to assimilate the juices of vegetables, a diet consisting chiefly of *milk* will not only support the patient, but will often cure the disease after every other medicine has failed.

Nor is an attention to other things of less importance than to diet. The strange infatuation which has long induced people to shut up the sick from all communication with the external air has done great mischief. Not only in fevers, but in many other diseases, the patient will receive more benefit from having the fresh air prudently admitted into his chamber, than from all the medicines which can be given him.

Exercise may likewise in many cases be considered as a medicine. Riding on horseback, for example, will be of more service in the cure of consumptions, glandular obstructions, &c., than any medicine yet known. In diseases which proceed from a relaxed state of the solids, the cold bath and

other parts of the gymnastic regimen will be found equally beneficial.

Few things are of greater importance, even in the cure of diseases, than cleanliness. When a patient is suffered to lie in dirty clothes, whatever perspires from his body is again resorbed, or taken up into it, which serves to nourish the disease and increase the danger. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it; and in all of them it is highly agreeable both to the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine; but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are afraid to use medicines may confine themselves to it only. For others, who have more knowledge, we have recommended some of the most simple, but approved, forms of medicine in every disease. These, however, are never to be administered but by people of better sense, nor even by them without the precautions which are recommended along with them.

CHAPTER XIII.

OF FEVERS IN GENERAL.

A FEVER is the most general disease incident to mankind. It attacks every age, sex, and constitution, and affects every part of the body; nor is the mind itself free from its influence. A fever is known by a quick pulse, an increased heat, a general debility, and a difficulty in performing some of the vital or animal functions, as breathing, walking, &c.

Fevers are divided into continual, remitting, and intermitting. By a continual fever is meant that which never leaves the patient during the whole course of the disease, or which shows no remarkable increase or abatement in the symptoms. This kind of fever is likewise divided into acute, slow, and

malignant. The fever is called *acute* when its progress is quick and the symptoms violent; but when these are more gentle, it is generally denominated *slow*. When livid or petechial spots show a putrid state of the humors, the fever is called *malignant*, *putrid*, or *petechial*.

A remitting fever differs from a continual only in degree. It has frequent increases and decreases, or exacerbations and remissions, but never wholly leaves the patient during the course of the disease. Intermitting fevers, or agues, are those which, during the time that the patient may be said to be ill, have evident intervals or remissions of the symptoms.

As a fever is nothing else but an effort of nature to free herself from an offending cause, it is the business of those who have the care of the sick to observe with diligence which way nature points, and to endeavor to assist her operations. Our bodies are so framed as to have a constant tendency to expel or throw off whatever is injurious to health. This is generally done by urine, sweat, stool, expectoration, vomit, or some other evacuation.

There is reason to believe, if the efforts of nature, at the beginning of a fever, were duly attended to and promoted, it would seldom continue longer than twenty-four hours; but when her attempts are either neglected or counteracted it is no wonder if the disease be prolonged. There are daily instances of persons who, after catching cold, have all the symptoms of a beginning fever; but by keeping warm, drinking diluting liquors, bathing their feet in warm water, &c., the symptoms in a few hours disappear, and the danger is prevented. In a word, almost every fever proceeding from an obstructed perspiration might be carried off, or its danger prevented, by timely care.

Our design is not to enter into a critical inquiry into the nature, causes, &c., of fevers, but to mark their most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, warmth, &c., in the different stages of the disease. In these articles the inclinations of the patient will, in a great measure, direct our conduct.

Almost every person in a fever complains of great thirst, and calls out for drink, especially of a cooling nature. This at once points out the use of *water*, which we may venture to call the greatest febrifuge in nature. What is so likely to abate the heat, attenuate the humors, remove spasms and obstructions, promote perspiration, increase the quantity of

urine, and, in short, produce every salutary effect in an ardent or inflammatory fever, as drinking plentifully of warm water, thin gruel, or any other weak, diluting liquor of which water is the basis? The necessity of diluting liquors is pointed out by the dry tongue, the parched skin, and the burning heat, as well as by the unquenchable thirst of the patient.

Many cooling liquors, which are extremely grateful to patients in a fever, may be prepared from fruits, as decoctions of tamarinds, apple-tea, orange whey, and the like. Mucilaginous liquors might also be prepared from marsh-mallow roots, linseed, lime-tree buds, and many other vegetables. These liquors, especially when acidulated, are highly agreeable to the patient, and should never be denied him.

At the beginning of a fever the patient generally complains of great lassitude or weariness, and has no inclination to move. This evidently shows the propriety of keeping him easy, and, if possible, in bed; lying in bed relaxes the spasms, abates the violence of the circulation, and gives nature an opportunity of exerting all her force to overcome the disease. The bed alone would often remove a fever at the beginning; but when the patient struggles with the disease, instead of driving it off, he only fixes it the deeper, and renders it more dangerous. This observation is too often verified in travellers who happen when on a journey to be seized with a fever. Their anxiety to get home induces them to travel with the fever upon them, which conduct seldom fails to render it fatal.

In fevers the mind as well as the body should be kept easy. Company is seldom agreeable to the sick. Indeed every thing that disturbs the imagination increases the disease; for which reason, every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose his mind.

Though the patient in a fever has the greatest inclination for drink, yet he seldom has any appetite for solid food; hence we may learn the impropriety of loading his stomach with victuals. Much solid food in a fever is every way hurtful to the patient. It oppresses nature, and instead of nourishing the patient, serves only to feed the disease. What food the patient takes should be in small quantity, light, and easy of digestion. It ought to be chiefly of the vegetable kind, as panado, roasted apples, groat gruel, and such like.

Poor people, when any of their family are taken ill, run

directly to their rich neighbors for cordials, and pour wines, spirits, &c., into the patient, who perhaps never had been accustomed to taste such liquors when in health. If there be any degree of fever, this conduct must increase it, and if there be none, this is the ready way to raise one. Stuffing the patient with sweetmeats and other delicacies is likewise very pernicious. These are always harder to digest than common food, and cannot fail to hurt the stomach.

Nothing is more desired by a patient in a fever than fresh air. It not only removes his anxiety, but cools the blood, revives the spirits, and proves every way beneficial. Many patients are in a manner stifled to death in fevers, for want of fresh air; yet such is the unaccountable infatuation of most people, that the moment they think a person in a fever, they imagine he should be kept in a close chamber, into which not one particle of fresh air must be admitted. Instead of this, there ought to be a constant stream of fresh air into a sick person's chamber, so as to keep it moderately cool. Indeed its degree of warmth ought never to be greater than is agreeable to one in perfect health.

Nothing spoils the air of a sick person's chamber, or hurts the patient, more than a number of people breathing in it. When the blood is inflamed, or the humors in a putrid state, air that has been breathed repeatedly will greatly increase the disease. Such air not only loses its spring, and becomes unfit for the purposes of respiration, but acquires a noxious quality, which renders it in a manner poisonous to the sick.

In fevers, when the patient's spirits are low and depressed, he is not only to be supported with cordials, but every method should be taken to cheer and comfort his mind. Many, from a mistaken zeal, when they think a person in danger, instead of solacing his mind with the hopes and consolations of religion, fright him with the views of hell and damnation. It would be unsuitable here to dwell upon the impropriety and dangerous consequences of this conduct; it often hurts the body, and there is reason to believe seldom benefits the soul.

Amongst common people the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one

fever in ten where the lancet is necessary. In most low, nervous and putrid fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed.

It is likewise a common notion that it is always necessary to raise a sweat in the beginning of a fever. As fevers often proceed from an obstructed perspiration, this notion is not ill founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks freely of water gruel, or any other weak, diluting liquor, he will seldom fail to perspire freely. The warmth of the bed and the diluting drink will relax the universal spasm, which generally affects the solids at the beginning of a fever; it will open the pores and promote the perspiration, by means of which the fever may be often carried off. But instead of this, the common practice is to heap clothes upon the patient, and to give him things of a hot nature, as spirits, spiceries, &c., which fire his blood, increase the spasms, and render the disease more dangerous.

In all fevers a proper attention should be paid to the patient's longings. These are the calls of nature, and often point out what may be of real use. Patients are not indeed to be wantonly indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for his stomach will generally digest; and such things have sometimes a very happy effect.

When a patient is recovering from a fever, great care is necessary to prevent a relapse. Many persons, by too soon imagining themselves well, have relapsed, or contracted some other disease of an obstinate nature. As the body after a fever is weak and delicate, it is necessary to guard against catching cold. Moderate exercise in the open air will be of use; agreeable company will also have a good effect. The diet must be light but nourishing. It should be taken frequently, but in small quantities. It is dangerous at such a time to eat as much as the stomach may crave.

CHAPTER XIV.

OF INTERMITTING FEVERS OR AGUES.

Intermitting fevers afford the best opportunity both of observing the nature of a fever, and also the effects of medicine. No person can be at a loss to distinguish an intermitting fever from any other; and the proper medicine for it is now almost universally known.

The several kinds of intermitting fevers take their names from the period in which the fit returns, as quotidian, tertian, quartan, &c.

Causes.—Agues are occasioned by moist air. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland, the fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone fruit, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, &c. When the inhabitants of a high country remove to a low one, they seldom fail to catch an intermitting fever, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

Symptoms.—An intermitting fever generally begins with a pain of the head and loins, weariness of the limbs, coldness of the extremities, stretching, yawning, with sometimes great sickness and vomiting; to which succeed shivering and violent shaking. Afterwards the skin becomes moist, and a profuse sweat breaks out, which generally terminates the fit or paroxysm. Sometimes indeed the disease comes on suddenly, when the person thinks himself in perfect health; but it is more commonly preceded by listlessness, loss of appetite, and the symptoms mentioned above.

Regimen.—While the fit continues, the patient ought to drink freely of water gruel, orange whey, weak camomile tea; or, if his spirits be low, small wine whey, sharpened with the juice of lemon. All his drink should be warm, as that will assist in bringing on the sweat, and consequently shorten the paroxysm.

Between the paroxysms the patient must be supported with food that is nourishing, but light and easy of digestion, as

veal or chicken broths, sago gruel with a little wine, light puddings, &c. His drink may be small negas, acidulated with the juice of lemons or oranges, and sometimes a little weak punch. He ought likewise to drink infusions of bitter herbs, as camomile, wormwood, or water-trefoil, and may now and then take a glass of small wine, in which gentian root, centaury, or some other bitter, has been infused.

As the chief intentions of cure in an ague are to brace the solids and promote perspiration, the patient ought to take as much exercise between the fits as he can bear. If he be able to go abroad, riding on horseback, or in a machine, will be of great service. But if he cannot bear that kind of exercise, he ought to take such as his strength will permit. Nothing tends more to prolong an intermitting fever than indulging a lazy, indolent disposition.

Intermitting fevers, under a proper regimen, will often go off without medicine; and when the disease is mild, in an open dry country, there is seldom any danger from allowing it to take its course; but when the patient's strength seems to decline, or the paroxysms are so violent that his life is in danger, medicine ought immediately to be administered. This however should never be done till the disease be properly formed, that is to say, till the patient has had several fits of shaking and sweating.

Medicine.—The first thing to be done in the cure of an intermitting fever, is to cleanse the first passages. This not only renders the application of other medicines more safe, but likewise more efficacious. In this disease the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. A dose of ipecacuanha will generally answer this purpose very well. Half a dram of the powder will be sufficient for an adult, and for a younger person the dose must be less in proportion. After the vomit begins to operate the patient ought to drink plentifully of weak camomile tea. The vomit should be taken two or three hours before the return of the fit, and may be repeated at the distance of three or four days. Vomits not only cleanse the stomach, but increase the perspiration, and all the other secretions, which render them of such importance, that they often cure intermitting fevers without the assistance of any other medicine.

Of this I have seen many instances, and remember to have been completely cured myself of a regular tertian by taking two vomits of ipecacuanha, and observing a proper regimen.

Purging medicines are likewise useful, and often necessary, in intermitting fevers. A smart purge has been known to cure an obstinate ague, after the Peruvian bark and other medicines had been used in vain. Vomits however are more suitable in this disease, and render purging less necessary; but if the patient be afraid to take a vomit, he ought in this case to cleanse the bowels by a dose or two of glauber salts, jalap, or rhubarb.

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c., give reason to suspect an inflammation; but as the blood is very seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary.

After proper evacuations, the patient may safely use the Peruvian bark, which may be taken in any way that is most agreeable to him. No preparation of the bark seems to answer better than the most simple form in which it can be given, viz. in powder.

Two ounces of the best Jesuits' bark, finely powdered, may be divided into twenty-four doses. These may either be made into boluses as they are used, with a little syrup of lemon, or mixed in a glass of red wine, a cup of camomile tea, water gruel, or the like.

In an ague which returns every day, one of the above doses may be taken every two hours during the interval of the fits. By this method the patient will be able to take five or six doses between each paroxysm. In a tertian, or third-day ague, it will be sufficient to take a dose every third hour during the interval, and in a quartan every fourth. If the patient cannot take so large a dose of the bark, he may divide each of the powders into two parts, and take one every hour, &c. For a young person, a smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution, &c.

The above will seldom fail to stop an ague. The patient however ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till such time as there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients' not continuing to use the medi-

cine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented by the patient's continuing to take small doses of the medicine for some time after the symptoms disappear. This is both the most safe and effectual method of cure.

An ounce of gentian root, calamus aromaticus and orange peel of each half an ounce, with three or four handfuls of camomile flowers, and a handful of coriander-seed, all bruised together in a mortar, may be used in form of infusion or tea. About half a handful of these ingredients may be put into a teapot, and an English pint of boiling water poured on them. A cup of this infusion drank three or four times a day will strengthen the stomach, and greatly promote the cure. Such patients as cannot drink the watery infusion may put two handfuls of the same ingredients into a bottle of white wine, and take a glass of it twice or thrice a day. If patients drink freely of the above, or any other proper infusion of bitters, a smaller quantity of bark than is generally used will be sufficient to cure an ague.

There is reason to believe that sundry of our own plants or barks, which are very bitter and astringent, would succeed in the cure of intermitting fevers, especially when assisted by aromatics. But as the Peruvian bark has been long approved in the cure of this disease, and is now to be obtained at a very reasonable rate, it is of less importance to search after new medicines. We cannot however omit taking notice, that the Peruvian bark is very often adulterated, and that it requires considerable skill to distinguish between the genuine and the false. This ought to make people very cautious of whom they purchase it.

Those who cannot swallow the bark in substance may take it in decoction or infusion. An ounce of bark in powder may be infused in a bottle of white wine for four or five days, frequently shaking the bottle, afterwards let the powder subside, and pour off the clear liquor. A wine glass may be drank three or four times a day, or oftener, as there is occasion. If a decoction be more agreeable, an ounce of the bark, and two drams of snakeroot bruised, with a dram of salt of wormwood, may be boiled in a proper quantity of water, into half an English pint. To the strained liquor may be added

an equal quantity of red wine, and a glass of it taken frequently.

In obstinate agues the bark will be found much more efficacious when assisted by warm cordials than taken alone. This I have had frequently occasion to observe in a country where intermitting fevers were endemical. The bark seldom succeeded unless assisted by snakeroot, ginger, canella alba, or some other warm aromatic. When the fits are very frequent and violent, in which case the fever often approaches towards an inflammatory nature, it will be safer to leave out the ginger, and to add salt of tartar in its stead. But in an obstinate tertian or quartan in the end of autumn or beginning of winter, warm and cordial medicines are absolutely necessary.*

As autumnal and winter agues generally prove much more obstinate than those which attack the patient in spring or summer, it will be necessary to continue the use of medicines longer in the former than in the latter. A person who is seized with an intermitting fever in the beginning of winter, ought frequently, if the season proves rainy, to take a little medicine, although the disease may seem to be cured, to prevent a relapse, till the return of the warm season. He ought likewise to take care not to be much abroad in wet weather, especially in cold easterly winds.

When agues are not properly cured, they often degenerate into obstinate chronical diseases, as the dropsy, jaundice, &c. For this reason all possible care should be taken to have them radically cured, before the humors be vitiated and the constitution spoiled.

Though nothing is more rational than the method of treating intermitting fevers, yet, by some strange infatuation, more charms and whimsical remedies are daily used for removing this than any other disease. There is hardly an old woman who is not possessed of a nostrum for stopping an ague; and it is amazing with what readiness their pretensions are believed. Those in distress eagerly grasp at any thing that

* In obstinate agues, when the patient is old, the habit phlegmatic, the season rainy, the situation damp, or the like, it will be necessary to mix with two ounces of the bark half an ounce of Virginian snakeroot and a quarter of an ounce of ginger, or some other warm aromatic; but when the symptoms are of an inflammatory nature, half an ounce of salt of wormwood, or salt of tartar, may be added to the above quantity of bark.

promises sudden relief; but the shortest way is not always the safest in the treatment of diseases. The only method to obtain a safe and lasting cure is gradually to assist nature in removing the cause of the disease.

Some indeed try bold, or rather fool-hardy, experiments to cure agues, as drinking strong liquors, jumping into a river, &c. These may sometimes have the desired effect, but must always be attended with danger. When there is any degree of inflammation, or the least tendency to it, such experiments may prove fatal. The only patient whom I remember to have lost in an intermitting fever evidently killed himself by drinking strong liquor, which some person had persuaded him would prove an infallible remedy.

Many dirty things are extolled for the cure of intermitting fevers, as cobwebs, snuffings of candles, &c. Though these may sometimes succeed, yet their very nastiness is sufficient to set them aside, especially when cleanly medicines will answer the purpose better. The only medicine that can be depended upon for thoroughly curing an intermitting fever is the Peruvian bark. It may always be used with safety; and I can honestly declare, that in all my practice I never knew it fail, when properly applied and duly persisted in.

Where agues are endemical, even children are often afflicted with that disease. Such patients are very difficult to cure, as they can seldom be prevailed upon to take the bark, or any other disagreeable medicine. One method of rendering this medicine more palatable is to make it into a mixture with distilled waters and syrup, and afterward to give it an agreeable sharpness with the elixir or spirit of vitriol. This both improves the medicine and takes off the nauseous taste. The bark may be administered to children in form of clyster when they will not take it by the mouth.

Wine whey is a very proper drink for a child in an ague; to half an English pint of which may be put a tea-spoonful of the spirit of hartshorn. Exercise is likewise of considerable service; and when the disease proves obstinate, the child ought, if possible, to be removed to a warm dry air. The food ought to be nourishing, and sometimes a little generous wine should be allowed.*

* I have known children, who would not take the Peruvian bark, cured of an intermittent by the following medicine. Let two drams of salt of wormwood, or salt of tartar, be dissolved in three ounces of fresh lemon juice; to which may be added two ounces of mint

We have been more full upon this disease because it is very common, and because few patients in an ague apply to physicians unless in extremities. There are, however, many cases in which the disease is very irregular, being complicated with other diseases, or attended with symptoms which are both very dangerous and very difficult to understand. All these we have purposely passed over, as they would only bewilder the generality of readers. When the disease is very irregular, or the symptoms dangerous, the patient ought immediately to apply to a physician, and strictly to follow his advice.

To prevent agues, people must endeavor to avoid their causes. These have been already pointed out in the beginning of this section. We shall therefore add only one preventive medicine, which may be of use to such as are obliged to live in low marshy countries, or who are liable to frequent attacks of this disease.

Take an ounce of the best Jesuits' bark, Virginian snakeroot and orange peel of each half an ounce, bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or any good spirit; afterwards pour off the clear liquor, and take a wine glass of it twice or thrice a day. This indeed is recommending a dram; but the bitter ingredients in a great measure take off the ill effects of the spirits. Those who do not choose it in brandy may infuse it in wine; and such as can bring themselves to chew the bark will find that method succeed very well. Gentian root, or calamus aromaticus, may also be chewed by turns for the same purpose. All bitters seem to be antidotes to agues, especially those that are warm and astringent.

CHAPTER XV.

OF AN ACUTE CONTINUAL FEVER.

This fever is denominated acute, ardent, or inflammatory. It most commonly attacks the young, or those about the prime

water, or simple cinnamon water, and the same quantity of common syrup. Two table-spoonfuls of this may be given three or four times a day; and the medicine may be repeated as there is occasion.

or vigor of life, especially such as live full, abound with blood, and whose fibres are strong and elastic. It seizes people at all seasons of the year, but is most frequent in the spring and beginning of summer.

Causes.—An ardent fever may be occasioned by any thing that overheats the body, as violent exercise, sleeping in the sun, drinking strong liquors, eating spiceries, &c. It may likewise be occasioned by whatever obstructs the perspiration, as lying on the damp ground, drinking cold liquor when the body is hot, night-watching, or the like.

Symptoms.—A rigor or chillness generally ushers in this fever, which is soon succeeded by great heat, a frequent and full pulse, a pain of the head, dry skin, redness of the eyes, a florid countenance, pains in the back, loins, &c. To these succeed difficulty of breathing, sickness, with an inclination to vomit. The patient complains of great thirst, has no appetite for solid food, is restless, and his tongue generally appears black and rough.

A delirium, excessive restlessness, great oppression of the breast, with laborious respiration, starting of the tendons, hiccough, cold, clammy sweats, and an involuntary discharge of urine, are very dangerous symptoms.

As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterward. Nothing can be more unaccountable than the conduct of those who have it in their power, at the beginning of a fever, to procure the best medical assistance, yet put it off till things come to an extremity. When the disease, by delay or wrong treatment, has become incurable, and has exhausted the strength of the patient, it is in vain to hope for relief from medicine. Physicians may indeed assist nature; but their attempts must ever prove fruitless when she is no longer able to co-operate with their endeavors.

Regimen.—From the symptoms of this disease it is evident, that the humors must be too viscid and acrimonious; that the perspiration, urine, saliva, and all the other secretions, are in too small quantity; that the vessels are too rigid, and the heat of the whole body too great. All these clearly point out the necessity of a regimen calculated to dilute the blood, destroy the acrimony of the humors, allay the excessive heat,

remove the spasmodic stricture of the vessels, and promote the secretions.

These important purposes may be greatly promoted by drinking plentifully of diluting liquors, as thin water grue or oatmeal tea, clear whey, barley water, balm tea, apple tea, &c. These may be sharpened with juice of orange, jelly of currants, raspberries, and such like. Orange whey is likewise an excellent cooling drink. It is made by boiling among milk and water a bitter orange sliced till the curd separates. If no orange can be had, a lemon, a little cream of tartar, or a few spoonfuls of vinegar, will have the same effect. Two or three spoonfuls of white wine may occasionally be added to the liquor when boiling.

If the patient be costive, an ounce of tamarinds, with two ounces of stoned raisins of the sun, and a couple of figs, may be boiled in three English pints of water to a quart. This makes a very pleasant drink, and may be used at discretion. The common pectoral decoction is likewise a very proper drink in this disease. A tea-cupful of it may be taken every two hours, or oftener, if the patient's heat and thirst be very great.*

The above liquors must all be drank a little warm. They may be used in smaller quantities at the beginning of a fever, but more freely afterwards, in order to assist in carrying off the morbid matter by the different excretions. We have mentioned a variety of liquors, that the patient may have it in his power to choose those which are most agreeable, and that when tired of one he may have recourse to another.

The patient's diet must be very spare and light. All sorts of flesh meats, and even chicken broths, are to be avoided. He may be allowed groat gruel, panado, or light bread boiled in water, to which may be added a few grains of common salt, and a little sugar, which will render it more palatable. He may eat roasted apples with a little sugar, toasted bread with jelly of currants, boiled prunes, &c.

It will greatly relieve the patient, especially in a hot season,

* The pectoral decoction is made by boiling pearl barley, stoned raisins, and figs, of each two ounces, liquorice root sliced half an ounce, in two English quarts, or one Scots pint, of water, till one half be consumed. The barley should be boiled for some time before the other ingredients are put in. If to this decoction two or three drams of purified nitre be occasionally added, it will not only be an agreeable drink, but prove an exceeding good medicine.

to have fresh air frequently let into his chamber. This however must always be done in such a manner as not to endanger his catching cold.

It is a common practice in fevers to load the patient with bed-clothes, under the pretence of making him sweat, or defending him from the cold. This custom has many ill effects. It increases the heat of the body, fatigues the patient, and retards instead of promoting the perspiration.

Sitting upright in bed, if the patient be able to bear it, will often have a good effect. It relieves the head, by retarding the motion of the blood to the brain. But this posture ought never to be continued too long. And if the patient be inclined to sweat, it will be more safe to let him lie still, only raising his head with pillows.

Sprinkling the chamber with vinegar, juice of lemon, or vinegar and rosewater, with a little nitre dissolved in it, will greatly refresh the patient. This ought to be done frequently, especially if the weather be hot.

The patient's mouth should be often washed with a mixture of water and honey, to which a little vinegar may be added, or with a decoction of figs in barley water. His feet and hands ought likewise frequently to be bathed in lukewarm water, especially if the head be affected.

The patient should be kept as quiet and easy as possible. Company, noise, and every thing that disturbs the mind, is hurtful. Even too much light, or any thing that affects the senses, ought to be avoided. His attendants should be as few as possible, and they ought not to be too often changed. His inclinations ought rather to be soothed than contradicted; even the promise of what he craves will often satisfy him as much as its reality.

Medicine.—In this and all other fevers arising from an increased motion and viscidity of the blood, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be let, however, must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever seems to rise, and the pulse feels hard, there will be a necessity for repeating it a second, and perhaps a third or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, or longer, as the symptoms require. If the pulse continues soft and the patient is

tolerably easy after the first bleeding, it ought not to be repeated.

If the heat and fever be very great, forty or fifty drops of the dulcified or sweet spirit of vitriol may be made into a draught, with an ounce of rosewater, two ounces of common water, and half an ounce of simple syrup, or a bit of loaf sugar. This draught may be given to the patient every three or four hours while the fever is violent; afterwards once in five or six hours will be sufficient.

If the patient be afflicted with retching, or an inclination to vomit, it will be right to assist nature's attempts, by giving him weak camomile tea or lukewarm water to drink.

If the belly be bound, the patient ought daily to receive a clyster of milk and water, with a little salt and a spoonful of sweet oil or fresh butter. Should this not have the desired effect, a tea-spoonful of magnesia alba, or cream of tartar, may he frequently put into his drink. He may likewise eat tamarinds, boiled prunes, roasted apples, and the like.

If about the tenth, eleventh, or twelfth day the pulse becomes more soft, the tongue moister, and the urine begins to let fall a reddish sediment, there is reason to expect a favorable issue to the disease. But if, instead of these symptoms, the patient's spirits grow languid, his pulse sinks, and his breathing becomes difficult, with a stupor, trembling of the nerves, starting of the tendons, &c., there is reason to fear that the consequences will be fatal. In this case blistering plasters must be applied to the head, ankles, inside of the legs or thighs, as there may be occasion; poultices of wheat bread, mustard, and vinegar, may likewise be applied to the soles of the feet; and the patient must be supported with cordials, as strong wine whey, negas, sago gruel with wine in it, and such like.

A proper regimen is not only necessary during the fever, but likewise after the patient begins to recover. By neglecting this, many relapse, or fall into other diseases, and continue valetudinary for life. Though the body be weak after a fever, yet the food for some time ought to be rather cleansing than of too nourishing a nature. The person should take great care not to exceed in any thing. Too much food, drink, exercise, company, &c., are carefully to be avoided. The mind ought likewise to be kept easy, and the person should not attempt to pursue study, or any business that requires intense thinking.

If the digestion be bad, or the person be troubled at times with feverish heats, an infusion of Peruvian bark in cold water will be of use. It will strengthen the stomach, and help to subdue the remains of the fever.

When the patient's strength is pretty well recovered, he ought to take some gentle laxative. An ounce of tamarinds and a dram of senna may be boiled for a few minutes in an English pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a tea-cupful drank every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening betwixt each dose.

Those who follow laborious employments ought not to return too soon to their labor after a fever, but should keep easy till their strength and spirits be recruited.

CHAPTER XVI.

OF THE PLEURISY.

The true pleurisy is an inflammation of that membrane, called *the pleura*, which lines the inside of the breast. It is distinguished into the moist and dry. In the former, the patient spits freely; but in the latter, little or none at all. There is likewise a species of this disease, which is called the *spurious* or *bastard pleurisy*, in which the pain is more external, and chiefly affects the muscles between the ribs. The pleurisy prevails among laboring people, especially such as work without doors and are of a sanguine constitution. It is most frequent in the spring season.

Causes.—The pleurisy may be occasioned by whatever obstructs the perspiration; as cold northerly winds; drinking cold liquors when the body is hot; sleeping without doors on the damp ground; wet clothes; plunging the body into cold water, or exposing it to the cold air, when covered with sweat, &c. It may likewise be occasioned by drinking strong liquors; by the stoppage of usual evacuations, as old ulcers, issues, sweating of the feet or hands, &c.; the sudden striking

in of any eruption, as the itch, the measles, or the small-pox. Those who have been accustomed to bleed at a certain season of the year are apt if they neglect it to be seized with a pleurisy. Keeping the body too warm by means of fire, clothes, &c., renders it more liable to this disease. A pleurisy may likewise be occasioned by violent exercise, as running, wrestling, leaping, or by supporting great weights, blows on the breast, &c. The very make of the body sometimes renders persons more liable to this disease, as a narrow chest, a straitness of the arteries of the pleura, &c.

Symptoms.—This, like most other fevers, generally begins with chilliness and shivering, which are followed by heat, thirst, and restlessness. To these succeed a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the back-bone, sometimes towards the fore-part of the breast, and at other times towards the shoulder-blades. The pain is generally most violent when the patient draws in his breath.

The pulse in this disease is generally quick and hard, the urine high colored; and if blood be let, it is covered with a tough crust, or buffy coat. The patient's spittle is at first thin, but afterwards it becomes grosser, and is often streaked with blood.

Regimen.—Nature generally endeavors to carry off this disease by a critical discharge of blood from some part of the body, by expectoration, sweat, loose stools, thick urine, or the like. We ought therefore to second her intentions by lessening the force of the circulation, relaxing the vessels, diluting the humors, and promoting expectoration.

For these purposes the diet, as in the former disease, must be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment, as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink must be sweet whey, or decoctions and infusions of the pectoral and balsamic vegetables.*

* Take two table-spoonfuls of linseed, a quarter of an ounce of liquorice root sliced, and half an ounce of the leaves of colts-foot. Put these ingredients in a close vessel, pour on them an English quart of boiling water, and let them stand near a fire for eight or ten hours; afterwards strain off the liquor; of which the patient may take a teacupful frequently for his ordinary drink. This may be sharpened to the patient's taste by the addition of a little jelly of currants or juice of bitter oranges, &c.

Barley water, with a little honey or jelly of currants mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl barley in three English pints of water to two; must afterwards be strained. The decoction of figs, raisins, and barley, &c., recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time, but the patient ought, in a manner, to keep continually sipping them, so as to render his mouth and throat always moist. All his food and drink must be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in warm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

Medicine.—Almost every person knows when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms appear, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient be able to bear it. A large quantity of blood let at once, in the beginning of a pleurisy, has a much better effect than several repeated small bleedings. An adult may lose ten or twelve ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If, after the first bleeding, the stitch, with the other violent symptoms, should still continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shows a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abates, the pulse becomes softer, or the patient begins to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without letting it off. There are likewise many things that may be done to ease the pain of the side besides bleeding. Thus, after the first or second bleeding emollient fomentations may be applied to the part affected. These may be made by boiling a hand-

ful of the flowers of elder, camomile and common mallows, or any other soft vegetables, in a proper quantity of water. The herbs may be either put into a flannel bag and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected, with as much warmth as the patient can easily bear. As the cloths grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm milk and water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humors. The side may likewise be frequently rubbed with a little of the volatile liniment.*

Some recommend dry applications to the affected side, as burnt oats, toasted bread, &c.; but these, though they may be useful, are not so proper as moist ones. Could it be conducted with safety, we would recommend putting the patient into a bath of warm milk and water, in which emollient vegetables had been boiled; but as this cannot always be obtained, and might sometimes endanger the patient's catching cold, we shall recommend what is in every person's power, viz. to apply soft poultices, or cataplasms, to the part affected. These may be made of wheat bread and milk, softened with oil or fresh butter.

Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering plasters; which, however, when other things fail, must be applied.

If the stitch continues after repeated bleedings, fomentations, &c., a blistering plaster must be laid upon the part affected and suffered to remain for two days. This not only procures a discharge from the side, but attenuates the humors, and by that means assists in removing the cause of the disease. To prevent a strangury when the blistering

* The *volatile liniment* may be made by shaking together in a bottle two ounces of the oil of almonds, or olives, and one ounce of spirit of hartshorn, till they be perfectly united. About a tea-spoonful of this may be rubbed upon the side, with a warm hand, three or four times a day.

plaster is on, the patient may drink freely of the Arabic emulsion.*

If the patient be costive, a clyster of thin water gruel, or of barley water, in which a handful of mallows, or any other emollient vegetable, has been boiled, may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation from the breast.

The expectoration, or spitting, may be promoted by sharp, oily, and mucilaginous medicines. For this purpose, an ounce of the oxymel, or the vinegar of squills, may be added to six ounces of the pectoral decoction, and two table-spoonfuls of it taken every two hours.

Should the squills disagree with the stomach, two ounces of the oil of sweet almonds, or oil of olives, and two ounces of the syrup of violets, may be mixed with as much sugar candy powdered as will make an electuary of the consistence of honey. The patient may take a tea-spoonful of this frequently, when the cough is troublesome. Should oily medicines happen to prove nauseous, which is sometimes the case, a solution of gum ammoniac in barley water may be administered.†

If the patient does not perspire, but has a burning heat upon the skin, and passes very little water, some small doses of purified nitre and camphor will be of use. Two drams of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses, one of which may be taken every five or six hours, in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some

* The Arabic emulsion is prepared in the following manner. Take an ounce of sweet almonds blanched, and beat them well in a mortar, with an equal quantity of fine sugar. Then dissolve half an ounce of gum arabic in an English quart of barley water warm; let it stand till cool, and afterwards pour it by little and little upon the almonds and sugar, continually rubbing them till the liquor becomes uniformly white or milky. Afterwards strain it, and let the patient use it for ordinary drink.

† The solution of gum ammoniac is made in the following manner. Let two drams of gum ammoniac be well rubbed in a mortar, and an English pint of barley water gradually poured upon it till it be quite dissolved. Three or four ounces of simple pennyroyal water may be added to the above quantity, and two table-spoonfuls of it taken three or four times a day.

indeed reckon almost a specific in the pleurisy, viz. the decoction of the seneka rattle-snakeroot.* After bleeding and other evacuations have been premised, the patient may take two, three or four table-spoonfuls of this decoction, according as his stomach will bear it, three or four times a day. If it should occasion vomiting, two or three ounces of simple cinnamon water may be mixed with the quantity of decoction here directed, or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the belly easy, it bids fair for answering many of the intentions of cure in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things on purpose that people may have it in their power to choose, and likewise that when one cannot be obtained they may make use of another. Different medicines are no doubt necessary in the different periods of a disorder; and where one fails of success, or disagrees with the patient, it will be proper to try another.

What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to fright the attendants, and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like. But they are only the struggles of nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength however be much exhausted by the disease, it may be necessary at this time to support him with frequent small draughts of wine whey, small negas, or the like.

When the pain and fever are gone it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of the acute continual fever. He ought likewise to use a light diet of easy digestion, and his drink should be buttermilk, whey, and other things of a cleansing nature.

* This decoction is made by boiling an ounce of seneka rattle-snakeroot in an English pint and a half water, till one third part of the water be consumed; afterwards let it be strained.

BASTARD PLEURISY.

That species of pleurisy which is called the *bastard* or *spurious* generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a proper regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side, which last does not always happen in the true pleurisy. Sometimes indeed this disease proves obstinate, and requires bleeding, with cupping, and scarifications of the part affected. These, together with the use of nitrous and other cooling medicines, seldom fail to effect a cure.

PARAPHRENITIS.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarce necessary to consider it as a separate disease.

It is attended with a very acute fever, and an extreme pain of the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccough, and often a delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this disease.

Every method must be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease emollient clysters are peculiarly useful, as they relax the bowels, and by that means draw the humors from the part affected.

CHAPTER XVII.

OF A PERIPNEUMONY, OR INFLAMMATION OF THE LUNGS.

As this disease affects an organ which is absolutely necessary to life, it must always be attended with danger. Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment, and drink strong viscid liquors, are most liable to this disease. It is generally fatal to those who have a flat breast or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of that organ is affected; in which case the disease can hardly fail to prove fatal.

When the disease proceeds from a viscid pituitous matter, obstructing the vessels of the lungs, it is called a *spurious* or *bastard peripneumony*. When it arises from a thin acrid defluction on the lungs, it is denominated a *catarrhal peripneumony*, &c.

Causes.—An inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsy, a pleurisy, &c. It arises from the same causes as the pleurisy, viz. an obstructed perspiration from cold, wet clothes, &c., or from an increased circulation of the blood by violent exercise, the use of spiceries, ardent spirits, and such like. The pleurisy and peripneumony are often complicated; in which case the disease is called a *pleuroperipneumony*.

Symptoms.—Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

Regimen.—As the regimen and medicine are in all respects the same in the true peripneumony as in the pleurisy, we shall not here repeat them, but refer the reader to the treatment of that disease. It may not however be improper to add, that the aliment ought to be more slender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts that even common whey is sufficient to support the patient, and that decoctions of barley, and in-

fusions of fennel-roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humors. If the patient has loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emollient clysters.

It has already been observed, that the *spurious* or *bastard* peripneumony is occasioned by a viscid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter or wet seasons.

The patient at the beginning is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is commonly pale, and his color very little changed.

The diet in this, as well as in the true peripneumony, must be very slender, as weak broths sharpened with the juice of orange or lemon, &c. His drink may be thin water gruel sweetened with honey, or a decoction of the roots of fennel, liquorice, and quick grass. An ounce of these may be boiled in three English pints of water to a quart, and sharpened with a little currant jelly, or the like.

Bleeding and purging are generally proper at the beginning of this disease; but if the patient's spittle be pretty thick, or well connected, neither of them are necessary. It will be sufficient to assist the expectoration by some of the soft balsamic medicines recommended for that purpose in the pleurisy. Blistering plasters have generally a good effect, and ought to be applied pretty early. They may either be applied to the neck or ankles, or both, if necessary.

If the patient does not spit, he must be bled according as his strength will permit, and have a gentle purge administered. Afterwards his belly may be kept open by clysters, and the expectoration promoted, by taking every four hours two tablespoonfuls of the solution of gum ammoniac, recommended in the pleurisy.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, which is more or less dangerous, according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs.

If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst and want of appetite; there is reason to fear a suppuration, and that a phthisis or consumption of the lungs will ensue. We shall therefore next proceed to consider the proper treatment of that disease.

CHAPTER XVIII.

OF CONSUMPTIONS.

A CONSUMPTION is a wasting or decay of the whole body from an ulcer, tubercles, or concretion of the lungs, an empyema, a nervous atrophy, &c.

Dr. Arbuthnot observes that in his time consumptions made up above one tenth part of the bills of mortality in and about London. There is reason to believe they have rather increased since; and we know for certain that they are not less fatal in some other towns in England than in London.

Young persons betwixt the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing perhaps to the great use of animal food and strong liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt; to which we may add the perpetual changes in the atmosphere, or variableness of the weather.

CAUSES.—It has already been observed, that an inflammation of the breast often ends in an imposthume; consequently

whatever disposes people to this disease must likewise be considered as a cause of consumptions.

Other diseases, by vitiating the humors, may likewise occasion consumptions; as the scurvy, the scrofula or king's evil, the venereal disease, the asthma, small-pox, measles &c.

As this disease is seldom cured, we shall endeavor to point out its causes the more particularly, in order that people may be enabled to avoid it. These are:—

Want of exercise. Hence it comes to pass, that this disease is so common amongst the inhabitants of great towns, who follow sedentary employments, and likewise amongst the rich, who are not under the necessity of laboring for their bread.

Confined or unwholesome air. Air which stagnates, or is impregnated with the fumes of metals or minerals, is extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences, &c.

Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long, &c.

The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

Frequent and excessive debaucheries. Late watching and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the *bon companion* often falls a sacrifice to this disease.

Infection. Consumptions are often caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoemakers, &c. often die of consumptions.

Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes and such like, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint; in which case it is generally incurable.

Symptoms.—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion; his spittle is of a saltish taste, and sometimes mixed with blood. He is apt to be sad; his appetite is bad, and his thirst great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish, white, or bloody matter. His body is extenuated by the hectic fever and colliquative sweats which mutually succeed one another, viz. the one towards night and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hairs fall off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, show the immediate approach of death, which however the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

Regimen.—On the first appearance of a consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the country, where the air is pure, dry, and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion without much fatigue. Such as cannot bear this kind of exercise must make use of a machine. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the

same ground over and over. Care however must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good. At any rate, the patient must ride; his life depends upon it; and it is almost an infallible remedy, if begun in time, and duly persisted in.

It is pity those who attend the sick seldom recommend riding in this disease till the patient is either unable to bear it or the malady is become incurable. Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage may expect great advantage from it. This, to my knowledge, has frequently cured a consumption after the patient was, to all appearance, in the last stage of that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude that if a voyage were undertaken in due time it would seldom fail to perform a cure.

Such as try this method of cure ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea. As milk is not to be obtained in this situation, they ought to live on fruits and the broth of chickens, or other young animals which can be kept alive on board. It is scarce necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and, if they find the air of these countries agrees with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise we would recommend a due attention to the diet. The patient must eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. All the diet must be calculated to lessen the acrimony of the humors, and to nourish and support the patient. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole *materia medica*.

Ass's milk is generally reckoned preferable to any other; but it cannot always be obtained; besides, it is generally taken in a small quantity; whereas, to produce any considerable effects, it ought in a manner to make the principal part of the patient's food. It is hardly to be expected that a gill or two of ass's milk drank in the space of twenty-four hours should be able to produce any considerable change in the humors of an adult; and when people do not perceive its effects soon they lose hope, and so leave it off. Hence it comes to pass that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from ass's milk in obstinate coughs, which threatened a consumption of the lungs, and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Ass's milk ought to be drank, if possible, in its natural warmth, and by a grown person in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice, a day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with old conserve of roses. When that cannot be obtained, the powder of crabs' claws may be used in its stead. Ass's milk is usually ordered to be drank warm in bed; but as it generally throws the patient into a sweat when taken in this way, it would perhaps be better to give it after he rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in sufficient quantity, we would recommend it preferably to any other. It is better if the patient can suck it from the breast than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption as not to be able to turn himself in bed. His wife was at that time giving suck, and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefitted by it, he continued to suck her till he became perfectly well, and was subsequently a strong and healthy man.

Some prefer buttermilk to any other, and it certainly is a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first, and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased, until it comes to be almost the sole food. I never knew it succeed unless where the patient almost entirely lived upon it.

Cow's milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter by adding to it an equal quantity of barley water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should notwithstanding prove heavy on the stomach, a table-spoonful of rum or brandy, and a bit of loaf sugar, may be put into half an English pint.

It is not to be wondered that milk should, for some time, disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not, however, advise those who have been accustomed to animal food and strong liquors to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negas, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet consisting chiefly of milk and vegetables, which the sooner the patient can be brought to bear the better. Rice and milk, or barley and milk boiled, with a little sugar, is very proper food. Ripe fruits roasted, baked, or boiled, are likewise proper, as goose or currant-berry tarts, apples roasted or boiled in milk, &c. The jellies, conserves, and preserves, &c. of ripe subacid fruits ought to be eaten plentifully, as the jelly of currants, conserve of roses, preserved plums, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In Sheffield, a populous town in England, where consumptions are very common, I have frequently seen consumptive

patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary or far advanced; but it was the only method in which success was to be expected. Where it failed I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, &c. Some recommend shellfish in this disorder, and with some reason, as they are very nourishing and restorative. I have often known consumptive patients, where the symptoms were not violent, reap great benefit from the use of oysters. They generally ate them raw, and drank the juice along with them. They likewise ate a little bread and drank a glass of wine or draught of warm porter after them. They should be eaten an hour or two before dinner, but may be taken at any other time of the day if it be more convenient. All the food and drink ought however to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned and always aggravated by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render them worse.

Medicine.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavors, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of a consumption the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass proves too hard for pills a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a day, according as the patient's stomach will bear them.

The lac ammoniacum, or milk of gum ammoniac, as it is called, is likewise a proper medicine in this stage of the dis-

ease. It may be prepared and used as directed in the pleurisy.

A syrup made of equal parts of lemon juice, fine honey, and sugar candy, may likewise be used. Four ounces of each of these may be simmered together in a saucepan over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it, by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c.*

For the patient's drink we would recommend infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile flowers, or water-trefoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, rectify the blood, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious or sweet. But if the patient spits blood, be ought to use for his ordinary drink infusions or decoctions of the vulnerary roots, plants, &c.†

There are many other mucilaginous plants and seeds of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The conserve of roses is here peculiarly proper. It may

* Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, lemons, &c., appear to be the most proper. We have known patients suck the juice of several lemons every day with manifest advantage, and would, for this reason, recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

† Take an ounce of comfrey-root, of liquorice and marsh-mallow roots each half an ounce. Boil them in two English quarts of water to one. A tea-spoonful of the acid elixir of vitriol may be added to this decoction when cold, and a tea-cupful of it taken four or five times a day.

either be put into the decoction above prescribed or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service unless where three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very extraordinary effects, and would recommend it wherever there is a discharge of blood from the lungs.

When the spitting up of gross matter, oppression of the breast, and the hectic symptoms, show that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humors then have to putrefaction.

An ounce of the bark in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of the patient's ordinary drink.

If the bark should happen to purge, it may be made into an electuary with the conserve of roses, thus: Take old conserve of roses a quarter of a pound, Peruvian bark in powder an ounce, syrup of orange or lemon as much as will make it of the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance may infuse it in cold water. This seems to be the best menstruum for extracting the virtues of that drug. Half an ounce of bark in powder may be infused for twenty-four hours in half an English pint of water. Afterwards let it be passed through a fine strainer, and an ordinary tea-cupful of it taken three or four times a day.

We would not recommend the bark while there are any symptoms of an inflammation of the breast; but when it is certainly known that matter is collected there, it is surely one of the best medicines which can be used. Few patients indeed have resolution enough to give the bark a fair trial at this period of the disease, otherwise we have reason to believe that great benefit might be reapt from it.

When it is evident that there is an imposthume in the breast, and the matter can neither be spit up nor carried off by absorption, the patient must endeavor to make it break inwardly, by drawing in the steams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs the matter may

be discharged by the mouth. Sometimes indeed the bursting of the vomica occasions immediate death, by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is apt to happen. At any rate, the patient is ready to fall into a swoon, and should have volatile spirits or salts held to his nose.

If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light but restorative, as small chicken broths, sago gruel, rice-milk, &c.; the drink, buttermilk, or whey sweetened with honey. This is likewise a proper time for using the Peruvian bark, which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast betwixt the pleura and the lungs, there is no way of getting the matter out but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only observe, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

A NERVOUS CONSUMPTION

is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend for the cure of a nervous consumption a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach, as the Peruvian bark, gentian root, camomile, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take twice a day twenty or thirty drops of the elixir of vitriol in a glass of wine or water. The chalybeate wine is likewise an excellent medicine in this case. It strengthens the solids, and powerfully assists nature in the preparation of good blood.*

* The chalybeate wine is made by putting three ounces of the filings of steel or iron into a bottle of Rhenish wine, and allowing it to digest

Agreeable amusements, cheerful company, and riding about, are, however, preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption* cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrofula or king's evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials, &c. Young and delicate mothers often fall into consumptions by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all who wish to avoid consumptions to take as much exercise without doors as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of hot punch or a bottle of wine. These liquors, when too freely used, not only hurt the digestion and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

CHAPTER XIX.

OF THE SLOW OR NERVOUS FEVER.

Nervous fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and

for three weeks, frequently shaking the bottle; afterwards the wine must be filtered for use. A table-spoonful of it may be taken twice or thrice a day.

the increase of sedentary employments; as they commonly attack persons of a weak relaxed habit, who neglect exercise, eat little solid food, study hard, or indulge in spirituous liquors.

Causes.—Nervous diseases may be occasioned by whatever depresses the spirits or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty, low houses, crowded streets, hospitals, jails, or such like places.

Persons whose constitutions have been broken by excessive venery, frequent salivations, too free a use of purgative medicines, or any other excessive evacuation, are very liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall only add frequent and great irregularities in diet. Too great abstinence, as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind than its contrary.

Symptoms.—Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing, and dejection of mind, are generally the forerunners of this disease. These are succeeded by a quick low pulse, a dry tongue without any considerable thirst, chillness and flushing in turns, &c.

After some time the patient complains of a giddiness and pain of his head, has a nausea, with retchings and vomiting; his pulse is quick, and sometimes intermitting; his urine pale, resembling dead small beer; and his breathing is difficult, with oppression of the breast, and slight alienations of mind.

If towards the ninth, tenth, or twelfth day, the tongue becomes more moist, with a plentiful spitting, a gentle purging, or a moisture upon the skin; or if a suppuration happens in one or both ears, or large pustules break out about the lips and nose, there is reason to hope for a favorable crisis.

But if there be an excessive looseness, or wasting sweats, with frequent fainting fits; if the tongue, when put out, trembles excessively, and the extremities feel cold, with a fluttering or slow creeping pulse; if there be a starting of the tendons, an almost total loss of sight and hearing, and an involuntary dis-

charge by stool and urine, there is great reason to fear that death is approaching.

Regimen.—It is highly necessary in this disease to keep the patient cool and easy. The least motion will fatigue him, and will be apt to occasion weariness, and even faintings. His mind ought not only to be kept easy, but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind than presenting to the patient's imagination gloomy or frightful ideas. These often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and generous cordials. For this purpose his gruel, panado, or whatever food he takes, must be mixed with wine according as the symptoms may require. Pretty strong wine whey, or small negas sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Mustard whey is likewise a very proper drink in this fever.*

Wine in this disease, if it could be obtained genuine, would be almost the only medicine that would be necessary. Good wine possesses all the virtues of the cordial medicines, while it is free from many of their bad qualities. I say *good* wine; for however common this article of luxury is now become, it is rarely to be obtained genuine, especially by the poor, who are obliged to purchase it in small quantities.

I have often seen patients in low nervous fevers, where the pulse could hardly be felt, with a constant delirium, coldness of the extremities, and almost every other mortal symptom, recover by using, in whey, gruel, and negas, a bottle of strong wine every day. Good wine is not only the most proper cordial, but seems also to be an excellent antispasmodic medicine; consequently must be highly proper in all diseases arising from a poor vapid state of the blood and a spasmodic stricture of the solids.

In a word, the great aim in this disease is to support the patient's spirits, by giving him frequently small quantities of the

* Mustard whey is made by boiling two or three table-spoonfuls of powdered mustard in an English pint of milk, mixed with an equal quantity of water. After it has boiled some time a few spoonfuls of wine may be added to it. This will both make the curd separate more perfectly and render the whey more cordial. It must be strained, and a tea-cupful of it given frequently for the patient's ordinary drink. This is not only a very proper drink, but also an excellent medicine.

above, or other drinks of a warm and cordial nature. He is not however to be over-heated either with liquor or clothes; and his food ought to be light, and given in small quantities.

Medicine.—Where a nausea, load, and sickness at stomach prevail at the beginning of the fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but, by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit may clean the bowels by a small dose of Turkey rhubarb, or an infusion of senna and manna.

In all fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But where nature flags, where the blood is vapid and poor, and the solids relaxed, there the lancet is to be avoided. Hence bleeding is never to be permitted in nervous fevers unless there be evident signs of inflammation, which is very seldom the case.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning a universal stricture upon the vessels, which even to the patient himself often gives the idea of a plethora, or too great a quantity of blood. I have known even some of the profession deceived by their own feelings in this respect so far as to insist upon being bled, when it was evident the operation was improper.

Though bleeding be improper in this disease, yet blistering is highly necessary. Blistering plasters may be applied at all times of the fever with great advantage; we would however advise people not to make too free with them at the beginning, lest there should be more occasion for them afterwards. If the patient be delirious, he ought to be blistered on the neck, and it will be the safest course, while the fever continues, as soon as the discharge occasioned by one blistering plaster abates, to apply another somewhere else, and by that means keep up a continual succession of them till the patient be out of danger.

I have been more sensible of the advantage of blistering in this than in any other disease. It not only promotes the circulation by stimulating the solids, but likewise occasions a continual discharge, which may in some measure supply the want of critical evacuations, which seldom happen in this kind of fever.

If the patient be costive through the course of the disease, it will be necessary to procure a stool, by giving him every other day a clyster of milk and water, with a little sugar, to which may be added a spoonful of common salt, if the above does not operate.

Should a violent looseness come on, it may be checked, by giving the patient frequently a small quantity of Venice treacle, or any thing that will promote perspiration.

A miliary eruption sometimes breaks out about the ninth or tenth day of this fever. As this eruption is often critical, great care should be taken not to retard nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine whey, small negas, sago gruel with a little wine, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the only things to be depended on in this kind of fever, yet, for those who may choose to use them, we shall mention one or two of the forms of medicine which are commonly prescribed in it.*

In desperate cases, where the hiccough and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently exhibited. This is, doubtless, a great antispasmodic, and may be given to the quantity of a scruple three or four times a day. Sometimes it may be proper to add to the musk a few grains

* When the patient is low, ten grains of Virginian snakeroot, and the same quantity of contrayerva root, with five grains of Russian castor, all in fine powder, may be made into a bolus with a little of the cordial confection or syrup of saffron. One of these may be taken every four or five hours.

The following powder may be used for the same intention. Take wild valerian root in powder one scruple, saffron and castor each four grains. Mix these by rubbing them together in a mortar, and give one in a cup of wine whey three or four times a day.

of camphire and salt of hartshorn, as these tend to promote perspiration and urine. Thus fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup and given as above.

If the fever should happen to intermit, which it frequently does towards the decline, or if the patient's strength should be wasted with colliquative sweats, &c., it will be necessary to give him the Peruvian bark. Half a dram, or a whole dram, if the patient's stomach will bear it, of the bark in fine powder, may be given four or five times a day, in a glass of red port or claret wine. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days, afterwards it may be strained, and a glass of it taken frequently.*

Some give the bark in this and other fevers, where there are no symptoms of inflammation, without any regard to the remission or intermission of the fever. How far future observations may tend to establish this practice we cannot pretend to say; but we have reason to believe that the bark is a very universal febrifuge, and that it may be administered with advantage in most fevers where bleeding is not necessary, or where there are no symptoms of topical inflammation.

CHAPTER XX

OF THE MALIGNANT, PUTRID, OR SPOTTED FEVER.

This may be called the *pestilential fever* of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague.

* The bark may likewise be very properly administered along with other cordials, in the following manner: Take an ounce of Peruvian bark, orange peel half an ounce, Virginian snakeroot two drams, saffron one dram. Let all of them be powdered, and infused in an English pint of the best brandy for three or four days. Afterwards the liquor may be strained, and two tea-spoonfuls of it given three or four times a day in a glass of small wine or negas.

Persons of a lax habit, a melancholy disposition, and those whose vigor has been wasted by long fasting, watching, hard labor, excessive venery, frequent salivations, &c., are most liable to this disease.

Causes.—This fever is occasioned by an unwholesome, putrid, or stagnating air. Hence it prevails in jails, hospitals, and infirmaries, especially where such places are too much crowded and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. Hence they often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons or long keeping, and water which has become putrid by stagnation, &c., may likewise occasion putrid fevers.

Dead carcasses tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in camps, and such countries as are the scenes of war and bloodshed. This shows the propriety of removing church-yards, slaughter-houses, &c., at a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail amongst the poor inhabitants of great towns, who breathe a confined unwholesome air, neglect cleanliness, and are forced to live upon spoiled or unwholesome provisions. Such mechanics as carry on dirty employments, and are constantly confined within doors, are likewise very liable to putrid fevers.

We shall only add, that putrid, malignant, or spotted fevers are very infectious; and are therefore often communicated in this way. For which reason all persons ought to keep at a distance from such as are affected with those diseases, unless those whose attendance is absolutely necessary.

Symptoms.—The malignant fever is generally preceded by a remarkable weakness, or loss of strength, without any apparent cause. This is sometimes so great that the patient can scarce walk, or even sit upright, without being in danger

of fainting away. His mind too is greatly dejected; he sighs, and is full of dreadful apprehensions.

There is a nausea, and sometimes a vomiting of bile; a violent pain of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears; the breathing is laborious, and often interrupted with a sigh; the patient complains of pain about the region of the stomach and in his back and loins; his tongue is at first white, but afterwards it appears black and chapped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremors or shaking, and often becomes delirious.

If blood be let, it appears dissolved, or with a very small degree of cohesion, and sometimes becomes putrid; the stools smell extremely fetid, and are sometimes of a greenish, black, or reddish cast. Spots of a pale, purple, dun or black color often appear upon the skin. Sometimes there are violent hemorrhages, or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory by the smallness of the pulse, the great dejection of the mind, the dissolved state of the blood, the petechiæ, or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever by the heat and thirst being greater, the urine of a higher color, and all the other symptoms more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms are so blended together as to render it very difficult to determine to which class the fever belongs. In this case the greatest caution and skill are requisite. All endeavors must be used to relieve the most urgent symptoms; and the efforts of nature ought carefully to be watched, in order that we may give her what assistance we can in expelling the cause of the disease in her own way.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen, or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate betwixt the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient and the manner of treating the disease.

The most favorable symptoms are a gentle looseness after the fourth or fifth day, with a warm, mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small miliary pustules appearing between the petechiæ, or purple spots, are likewise favorable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever is likewise often a favorable symptom, and so are abscesses in the groin, or parotid glands.

Amongst the unfavorable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; apthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild staring of the eyes; difficulty of swallowing; an inability to put out the tongue; and a constant inclination to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposites a black sooty sediment, the patient is in great danger. Starting of the tendons, and fetid, ichorous, involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

Regimen.—In the management of this disease we ought to endeavor, as far as possible, to counteract the putrid tendency of the humors; to support the patient's strength and spirits; and to assist nature in expelling the cause of the disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care must therefore be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humors are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh

skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong scented herbs, as rue, tansy, rosemary, wormwood, &c., may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint away.

Few things are of greater importance in this disease than acids, especially those of an astringent nature, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar whey, are all very proper, and may be drank by turns, according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low, he may drink negas, with only one half water, and sharpened with the juice of orange or lemon. In some cases a glass of clear wine may now and then be allowed. The most proper wine is Rhenish; but if the belly be loose, red port or claret is to be preferred.

When the belly is bound, a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion; or he may eat a few tamarinds, which will both quench his thirst and promote a discharge by stool.

If camomile tea will sit upon the stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of the tea ten or fifteen drops of the elixir of vitriol.

The food must be light, as panado, groat gruel, and such like; to these a little wine may be added if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, either baked, roasted or raw, as roasted apples, currant or gooseberry tarts, preserved cherries, plums, and such like.

The patient ought never to be long without nourishment. Taking a little food or drink frequently not only supports the spirits, but counteracts the putrid tendency of the humors; for which reason he ought frequently to be sipping small

quantities of some of the acid liquors mentioned above, or any that may be more agreeable to the palate, or more readily obtained.

If the patient be delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This, or an infusion of the bark, to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed, and taken into the blood, they may by their antiseptic qualities assist in preventing the putrescency of the humors.

If the patient be not able to put his feet and hands into the decoction, cloths dipped in it may be applied to them.

Medicine.—If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body, however, is always to be kept gently open by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms, come on, blistering may be permitted. In this case the blistering plasters are to be applied to the head and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms or poultices of mustard and vinegar, to be applied to the feet, having recourse to blisters only in the utmost extremities.

A very ridiculous notion has long prevailed, of expelling the poisonous matter of malignant diseases by trifling doses of cordial or alexipharmic medicines. In consequence of this notion the contrayerva root, the cordial confection, the mithridate, &c., have been extolled as infallible remedies. There is reason, however, to believe that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it as the safest and best. Wine, with acids and antiseptics, are the only things to be relied on in the cure of malignant fevers.

In the most dangerous species of this disease, when it is

attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, almost perform wonders, even in cases where the petechiæ had the most threatening aspect. But to answer this purpose, it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with half an English pint of water, and the same quantity of red wine, and sharpened with the elixir or the spirit of vitriol, which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added, and two table-spoonfuls of the mixture taken every two hours, or oftener, if the stomach will bear it.

Those who cannot take the bark in substance may infuse it in wine, as recommended in the preceding disease.

If there be a violent looseness, the bark must be boiled in red wine, with a little cinnamon, and sharpened with the elixir of vitriol, as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a dram of the salt of wormwood dissolved in an ounce and a half of fresh lemon-juice, and made into a draught with an ounce of simple cinnamon-water, and a bit of sugar, may be given, and repeated as often as it is necessary.

If swellings of the glands appear, their suppuration is to be promoted by the application of poultices, ripening cataplasms, &c.; and as soon as there is any appearance of matter in them they ought to be laid open, and the poultices continued.

I have known large ulcerous sores break out in various parts of the body, in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by the plentiful use of Peruvian bark and wine, sharpened with the spirits of vitriol.

For preventing putrid fevers we would recommend a strict regard to cleanliness, a dry situation, sufficient exercise in the open air, wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever by only making a single visit to a patient in it; others have caught it by going through a town where

it prevailed; and some by attending the funerals of such as died of it.

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have fresh air frequently let into his chamber; whatever comes from him should be immediately removed, his linen should be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection ought immediately to take a vomit, and to work it off by drinking plentifully of camomile tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavorable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negas, or a few glasses of generous wine. I have been frequently obliged to follow this course, when malignant fevers prevailed; and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infection; but these are so far from securing them, that they often increase the danger.

Those who attend the sick in putrid fevers ought always to have a piece of sponge or a handkerchief dipped in vinegar, or juice of lemon, to hold at their nose. They ought likewise to wash their hands, and, if possible, to change their clothes before they go into company.

CHAPTER XXI.

OF THE MILIARY FEVER.

This fever takes its name from the small pustules or bladders which appear on the skin resembling, in shape and size,

the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicines.

The miliary fever chiefly attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigor and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak, watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

Causes.—The miliary fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too freely of cold, watery, unripe fruits, as plums, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c., may likewise cause miliary fevers. They may also be occasioned by the stoppage of any customary evacuations, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women, &c.

This disease in childbed women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green unripe fruits, and other unwholesome things, in which pregnant women are apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in childbed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for almost the whole of their time. But among women

who are active and laborious, who live in the country and take enough of exercise without doors, this disease is very little known.

Symptoms.—When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in childbed women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or white color begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fetid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but when symptomatical they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger; but when they go in all of a sudden and do not appear again, the danger is very great.

In childbed women the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red color. When these only appear, the disease goes by the name of a *rash*.

Regimen.—In all eruptive fevers, of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose the patient must be kept in such a temperature as neither to push out the eruption too fast, nor to cause it to retreat prematurely. The diet and drink ought therefore to be in a moderate degree nourishing and cordial, but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with

clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly makes an eruption go in as fear, or the apprehension of danger.

The food must be weak chicken broth with bread, panado, sago, or groat gruel, &c., to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt and a little sugar.

Good apples roasted or boiled, with other ripe fruits of an opening, cooling nature, may be eaten.

The drink must be suited to the state of the patient's strength and spirits. If these be pretty high, the drink ought to be weak; as water-gruel, balm tea, or the following decoction: Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla, boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

When the patient's spirits are low, and the eruption does not rise sufficiently, his drink must be a little more generous; as wine whey, or small negas, sharpened with the juice of orange or lemon, and made stronger or weaker as circumstances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials, joined with acids; and if the degree of putrescency be great, the Peruvian bark must be administered. If the head be much affected, the belly must be kept open by emollient clysters.

Medicine.—If the food and drink be properly regulated, there will be little occasion for medicine in this disease. Should the eruption however not rise, or the spirits flag, it will not only be necessary to support the patient with cordials, but likewise to apply blisters. The most proper cordial in this case is good wine, which may either be taken in the patient's food or drink; and if there be any signs of putrescence, which frequently happens, the bark and acids may be mixed with wine, as directed in the putrid fever.

Some recommend blisters through the whole course of this disease; and where nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blisters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall in, and the head be affected, it will

be necessary to apply several blistering plasters to the most sensible parts, as the inside of the legs and thighs, &c.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this because it has been customary to treat this disease in childbed women by plentiful bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unsafe. Patients in this situation bear evacuations very ill. And indeed the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever be often occasioned in childbed women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen and large evacuations. We have reason to believe that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease prove tedious or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine or water, as the patient inclines.

The miliary fever, like other eruptive diseases, requires gentle purging, which should not be neglected as soon as the fever is gone off, and the patient's strength will permit.

To avoid this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green trashy fruits, and other unwholesome things; and when in childbed, they ought strictly to observe a cool regimen.

CHAPTER XXII.

OF THE REMITTING FEVER.

This fever takes its name from a remission of the symptoms, which happens sometimes sooner and sometimes later,

but generally before the eighth day. The remission is commonly preceded by a gentle sweat, after which the patient seems greatly relieved; but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter duration; the nearer however the fever approaches to a regular intermittent, the danger is the less.

Causes.—Remitting fevers prevail in low marshy countries, abounding with wood and stagnating water; but they prove most fatal in places where great heat and moisture are combined, as in some parts of Africa, the province of Bengal in the East Indies, &c., where remitting fevers are generally of a putrid kind, and prove very fatal. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution is exempted from the attack of this fever; but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

Symptoms.—The first symptoms of this fever are generally yawning, stretching, pain, and giddiness in the head, with alternate fits of heat and cold. Sometimes the patient is affected with a delirium at the very first attack. There is a pain, and sometimes a swelling, about the region of the stomach, the tongue white, the eyes and skin frequently appear yellow, and the patient is often afflicted with bilious vomitings. The pulse is sometimes a little hard, but seldom full, and the blood when let rarely shows any signs of inflammation. Some patients are exceedingly costive, and others are afflicted with a very troublesome looseness.

It is impossible to describe all the symptoms of this disease, as they vary according to the situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment, and by many other circumstances, too tedious to mention. Sometimes the bilious symptoms predominate, sometimes the nervous, and at other times the putrid. Nor is it at all uncommon to find a succession of each of these, or even a complication of them at the same time, in the same person.

Regimen.—The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when nervous or putrid symptoms occur, it will be necessary

to support the patient with food and liquors of a more generous nature, such as are recommended in the immediately preceding fevers. We must however be very cautious in the use of things of a heating quality, as this fever is frequently changed into a continual by a hot regimen and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large, and frequently ventilated by letting in fresh air at the doors or windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, bedclothes, &c., ought to be frequently changed, and all his excrements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are of more importance to the sick than all the boasted powers of medicine.

Medicine.—In order to cure this fever, we must endeavor to bring it to a regular intermission. This intention may be promoted by bleeding if there be any signs of inflammation; but when that is not the case, bleeding ought by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit however will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but, where it can be obtained, we would rather recommend one or two grains of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues.

The body ought to be kept open either by clysters or gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all strong or drastic purgatives are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure. It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is to use a wholesome and nourishing diet, to pay the most scrupulous regard to cleanliness, to keep the body warm, and to take sufficient exercise. In countries where it is endemical, the best pre-

ventive medicine which we can recommend is the Peruvian bark, which may either be chewed or infused in brandy or wine, &c. Some recommend smoking tobacco as very beneficial in marshy countries, both for the prevention of this and intermitting fevers.

CHAPTER XXIII.

OF THE SMALL-POX.

This disease is so general that very few escape it at one time of life or another. It is the most contagious malady in these parts, and has for many years proved the scourge of Europe.

The small-pox generally appear towards the spring. They are very frequent in summer, less so in autumn, and least of all in winter. Children are most liable to this disease; and those whose food is unwholesome, who want proper exercise, and abound with gross humors, run the greatest hazard from it.

The disease is distinguished into the distinct and confluent kind; the latter of which is always attended with danger. There are likewise other distinctions of the small-pox; as the crystalline, the bloody, &c.

Causes.—The small-pox are commonly caught by infection. Since the disease was first brought into Europe, the infection has never been wholly extinguished; nor have any proper methods, so far as we know, ever been taken for that purpose; so that now it has become in a manner constitutional. Children who have overheated themselves by running, wrestling, &c., or adults after a debauch, are very apt to be seized with the small-pox.

Symptoms.—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, seem listless and drowsy, for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and upon

taking exercise are apt to sweat. These are succeeded by slight fits of cold and heat in turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion fits in very young children.

About the third or fourth day from the time of sickening, the small-pox generally begin to appear; sometimes, indeed, they appear sooner, but that is no favorable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms, and breast.

The most favorable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish and afterwards of a yellowish color, are the best.

A livid brown color of the pustules is an unfavorable symptom; as also when they are small and flat, with black specks in the middle. Pustules which contain a thin watery ichor are very bad. A great number of pox on the face is always attended with danger. It is likewise a very bad sign when they are confluent, or run into one another.

It is a most unfavorable symptom when petechiæ, or purple, brown and black spots, are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and show the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms, as also a continual strangury. When the urine is very pale, and there is a violent throbbing of the arteries of the neck, it portends a delirium or convulsion fits. When the face does not swell, or falls before the pox come to maturity, it is very unfavorable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but when these do not succeed each other, there is reason to apprehend danger. When the tongue is covered with a brown crust, it is an unfavorable symptom. Cold shivering fits coming on at the height of the disease are like-

wise unfavorable. Grinding the teeth, when it proceeds from an affection of the nervous system, is a bad sign; but sometimes is occasioned by worms, or a disordered stomach.

Regimen.—When the first symptoms of the small-pox appear, people are ready to be alarmed, and often fly to the use of medicine, to the great danger of the patient's life. I have known children, to appease the anxiety of their parents, bled, blistered and purged, during the fever which preceded the eruption of the small-pox, to such a degree that nature was not only disturbed in her operation, but rendered unable to support the pustules after they were out; so that the patient, exhausted by mere evacuations, sunk under the disease.

When convulsions appear, they give a dreadful alarm. Immediately some nostrum is applied, as if this were a primary disease; whereas it is only a symptom, and far from being an unfavorable one, of the approaching eruption. As the fits generally go off before the actual appearance of the small-pox, it is attributed to the medicine, which by this means acquires a reputation without any merit.

All that is, generally speaking, necessary during the eruptive fever, is to keep the patient cool and easy, allowing him to drink freely of some weak diluting liquors; as balm tea, barley water, clear whey, gruels, &c. He should not be confined to bed; but should sit up as much as he is able, and should have his feet and legs frequently bathed in lukewarm water. His food ought to be very light; and he should be as little disturbed with company as possible.

Much mischief is done at this period by confining the patient too soon to his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great violence they generally fall in before they come to maturity.

The good women, as soon as they see the small-pox begin to appear, commonly ply their tender charge with cordials, saffron and marigold teas, wine, punch, and even brandy itself. All these are given with a view, as they term it, to throw out the eruption from the heart. This, like most other popular mistakes, is the abuse of a very just observation, *that when there is a moisture on the skin the pox rise better, and the pa-*

tient is easier, than when it continues dry and parched. But that is no reason for forcing the patient into a sweat. Sweating never relieves unless where it comes spontaneously, or is the effect of drinking weak diluting liquors.

Children are often so peevish that they will not lie abed without a nurse constantly by them. Indulging them in this, we have reason to believe, has many bad effects both upon the nurse and child. Even the natural heat of the nurse cannot fail to augment the fever of the child; but if she too proves feverish, which is often the case, the danger must be increased.*

Laying several children who have the small-pox in the same bed has many ill consequences. They ought, if possible, never to be in the same chamber, as the perspiration, the heat, the smell, &c., all tend to augment the fever, and heighten the disease. It is common among the poor to see two or three children lying in the same bed, with such a load of pustules that even their skins stick together. One can hardly view a scene of this kind without being sickened by the sight. But how must the effluvia affect the poor patients, many of whom perish by this usage.

A very dirty custom prevails amongst the lower class of people, of allowing children in the small-pox to keep on the same linen during the whole period of that loathsome disease. This is done lest they should catch cold, but it has many ill consequences. The linen becomes hard by the moisture which it absorbs, and frets the tender skin. It likewise occasions a bad smell, which is very pernicious both to the patient and those about him; besides, the filth and sordes which adhere to the linen, being re-absorbed, or taken up again into the body, greatly augment the disease.

A patient should not be suffered to be dirty in an internal disease, far less in the small-pox. Cutaneous disorders are often occasioned by nastiness alone, and are always increased by it. Were the patient's linen to be changed every day, it would greatly refresh him. Care indeed is to be taken that

* I have known a nurse, who had had the small-pox before, so infected by lying constantly abed with a child in a bad kind of small-pox, that she had not only a great number of pustules, which broke out all over her body, but afterwards a malignant fever, which terminated in a number of imposthumes or boils, and from which she narrowly escaped with her life. We mention this to put others on their guard against the danger of this virulent infection.

the linen be thoroughly dry. It ought likewise to be warmed, and put on when the patient is most cool.

So strong is the vulgar prejudice in this country, notwithstanding all that has been said against the hot regimen in the small-pox, that numbers still fall a sacrifice to that error. I have seen poor women travelling in the depth of winter, and carrying their children along with them in the small-pox, and have frequently observed others begging by the wayside, with infants in their arms, covered with the pustules; yet I could never learn that one of these children died by this treatment. We would not however propose this as an example worthy of imitation; we only mention it to show that the danger of exposing children to the open air in this disease is not so great as people are apt to imagine.

Strong prejudices however, when got over, often produce the opposite extremes. We would therefore advise people, when they avoid one error, not to run into another. Some celebrated inoculators order their patients to walk about all the time they are under the disease, as if they ailed nothing. We should think it advisable to keep them within doors, at least during the eruption, as very cold air is apt to check the perspiration, and to prevent the pox from rising or filling with matter. I do not remember ever to have seen large well-filled pustules where the patient was too much exposed to the external air. In winter the air of this country is abundantly cool within doors, and in summer a patient may be kept more uniformly cool in the house than he can be out of it. For these and other reasons, we should think it right to confine the patient to the house while the eruption is out, but never to allow the heat of his chamber to be so great as to increase the fever, or occasion a difficulty of breathing, &c.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweetened with a little sugar, or such like.

The drink may be equal parts of milk and water, clear sweet whey, barley water, or thin gruel, &c. After the pox are full, buttermilk, being of an opening and cleansing nature, is a very proper drink.

Medicine.—This disease is generally divided into four different periods, viz. the fever which precedes the eruption, the eruption itself, the suppuration, or maturation of the pustules, and the secondary fever.

It has already been observed, that little more is necessary during the primary fever than to keep the patient cool and quiet, allowing him to drink diluting liquors, and bathing his feet frequently in warm water. Though this be generally the safest course that can be taken with infants, yet adults of a strong constitution and plethoric habit sometimes require bleeding. When a full pulse, a dry skin, and other symptoms of an inflammation, render this operation necessary, it ought to be performed; but unless these symptoms are urgent, it is safer to let it alone. If the belly be bound, emollient clysters may be thrown in.

If there be a great nausea or inclination to vomit, weak camomile tea or lukewarm water may be drank, in order to clean the stomach. At the beginning of a fever, nature generally attempts a discharge, either upwards or downwards, which, if promoted by gentle means, would tend greatly to abate the violence of the disease.

Though every method is to be taken during the primary fever, by a cool regimen, &c., to prevent too great an eruption; yet, after the pustules have made their appearance, our business is to promote the suppuration, by diluting drink, light food, and, if nature seems to flag, by generous cordials. When a low creeping pulse, faintishness, and great loss of strength, render cordials necessary, we would recommend good wine, which may be made into negas, with an equal quantity of water, and sharpened with the juice of orange, the jelly of currants, or the like. Wine whey sharpened as above is likewise a proper drink in this case. Great care however must be taken not to overheat the patient by any of these things. This, instead of promoting, would retard the eruption.

Sometimes the rising of the small-pox is prevented by the violence of the fever; in this case the cool regimen is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of bed, and to be lightly covered with clothes while in it.

Excessive restlessness often prevents the rising and filling of the small-pox. When that happens, gentle opiates are necessary. These however ought always to be administered with a sparing hand. To an infant, a tea-spoonful of the syrup of poppies may be given every five or six hours, till it has the desired effect. An adult will require a table-spoonful in order to answer the same purpose.

If the patient be troubled with a strangury, or suppression of urine, which often happens in the small-pox, he should be frequently taken out of bed, and, if he be able, should walk across the room with his feet bare. When he cannot do this, he may be frequently set on his knees in bed, and should endeavor to pass his urine as often as he can. When these do not succeed, a tea-spoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought to be frequently washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant jelly.

During the rising of the small-pox, it frequently happens that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, become acrid and even putrid, from whence bad consequences must ensue. It will therefore be proper, when the belly is bound, to throw in an emollient clyster every second or third day, through the whole course of the disease. This will greatly cool and relieve the patient.

When petechiæ, or purple, black, or livid spots, appear among the small-pox, the Peruvian bark must immediately be administered in as large doses as the patient's stomach can bear. For a child, two drams of the bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon water, and two ounces of the syrup of orange or lemon. This may be sharpened with the spirits of vitriol, and a table-spoonful of it given every hour. If it be given to an adult in the same form, he may take at least three or four spoonfuls every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it, in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatening aspect, rise and fill with laudable matter, by the use of the bark and acids.

The patient's drink ought likewise in this case to be generous, as wine or strong negas acidulated with spirits of vitriol, vinegar, the juice of lemon, jelly of currants, or such like.

His food must consist of apples roasted or boiled, preserved cherries, plums, and other fruits of an acid nature.

The bark and acids are not only necessary when the petechiæ or putrid symptoms appear, but likewise in the lymphatic or crystalline small-pox, where the matter is thin, and not duly prepared. The Peruvian bark seems to possess a singular power of assisting nature in preparing laudable pus, or what is called good matter; consequently it must be beneficial, both in this and other diseases, where the crisis depends on a suppuration. I have often observed where the small-pox were flat, and the matter contained in them quite clear and transparent, and where at first they had the appearance of running into one another, that the use of a few drams of the Peruvian bark, acidulated as above, changed the color and consistence of the matter, and produced the most happy effects.

When the eruption subsides suddenly, or, as the good women term it, when the small-pox *strike in*, before they have arrived at maturity, the danger is very great. This is often the effect of a hot regimen, or medicines which, at the beginning, push out the matter before it has been properly prepared. When this happens, blistering plasters must be immediately applied to the wrists and ankles, and the patient's spirits supported with cordials.

Sometimes bleeding has a surprising effect in raising the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it. Sharp cataplasms however may be applied to the feet and hands, as they tend to promote the swelling of these parts, and by that means to draw the humors towards the extremities.

The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the small-pox begin to blacken, or turn on the face, and most of those who die of the small-pox are carried off by this fever.

Nature generally attempts at the turn of the small-pox to relieve the patient by loose stools. Her endeavors this way are by no means to be counteracted, but promoted, and the patient at the same time supported by food and drink of a nourishing and cordial nature.

If at the approach of the secondary fever the pulse be very quick, hard, and strong, the heat intense, and the breathing

laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled, otherwise a fatal peripneumony will ensue. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering plasters must be applied, and the patient must be supported with generous cordials. Wine and even spirits have sometimes been given in such cases with amazing success.

As the secondary fever is in great measure, if not wholly, owing to the absorption of the matter, it would seem highly consonant to reason that the pustules, as soon as they come to maturity, should be opened. This is every day practised in other phlegmons which tend to suppuration; and there seems no reason why it should be less proper here. On the contrary, we have reason to believe that by this means the secondary fever might always be lessened, and often wholly prevented.

The pustules should be opened when they begin to turn of a yellow color. Very little art is necessary for this operation. They may either be opened with a pair of scissors or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face, it will be proper to begin with opening these, and the others in course as they become ripe. The pustules generally fill again a second or even a third time; for which cause the operation must be repeated, or rather continued, so long as there is any considerable appearance of matter in the pustules.

We have reason to believe that this operation, rational as it is, has been neglected from a piece of mistaken tenderness in parents. They believe that it must give great pain to the poor child; and therefore would rather see it die than have it thus tortured. This notion however is entirely without foundation. I have frequently opened the pustules, when the patient did not see me, without his being the least sensible of it. But suppose it were attended with a little pain, that is nothing in comparison to the advantages which arise from it.

Opening the pustules not only prevents the resorption of the matter into the blood, but likewise takes off the tension of the skin, and by that means greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of

no small importance. Acrid matter, by lodging long in the pustules, cannot fail to corrode the tender skin; by which many a handsome face becomes so deformed as hardly to bear a resemblance to the human figure.*

It is generally necessary, after the small-pox are gone off, to purge the patient. If however the belly has been open through the whole course of the disease, or if buttermilk and other things of an opening nature have been drank freely after the height of the small-pox, purging becomes less necessary; but it ought never wholly to be neglected.

For very young children, an infusion of senna and prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder over night, and the same quantity of jalap in powder next morning. This may be wrought off with fresh broth or water gruel, and may be repeated three or four times, five or six days intervening betwixt each dose. For children farther advanced, and adults, the dose must be increased in proportion to the age and constitution.

When imposthumes happen after the small-pox, which is not seldom the case, they must be brought to suppuration as soon as possible, by means of ripening poultices; and, when they have been opened, or break of their own accord, the patient must be purged. The Peruvian bark and a milk diet will likewise be useful in this case.

When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of ass's milk, with such exercise as he can bear. For further directions in this case, see the article Consumptions.

INOCULATION.

Though no disease, after it is formed, baffles the powers of medicine more than the small-pox, yet more may be done

* Though this operation can never do harm, yet it is only necessary when the patient has a great load of small-pox, or when the matter which they contain is of so thin and acrid a nature that there is reason to apprehend bad consequences from its being too quickly resorbed, or taken up again into the mass of circulating humors.

beforehand to render this disease favorable than any one we know, as almost all the danger from it may be prevented by inoculation. This salutary invention has been known in Europe above half a century, but, like most other useful discoveries, it has till of late made but slow progress. It must however be acknowledged, to the honor of this country, that inoculation has met with a more favorable reception here than among any of our neighbors. It is still however far from being general, which we have some reason to fear will ever be the case, so long as the practice continues in the hands of the faculty.

No discovery can ever be of general utility while the practice of it is kept in the hands of a few. Had the inoculation of the small-pox been introduced as a fashion, and not as a medical discovery, or had it been practised by the same kind of operators here as it is in those countries from whence we had it, it had long ago been universal. The fears, the jealousies, the prejudices, and the opposite interests of the faculty, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation never became, in any measure, general, even in England, till taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe, and, by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the want of care, but from the excess of it.

They know very little of the matter who impute the success of modern inoculators to any superior skill, either in preparing the patient or communicating the disease. Some of them indeed, from a sordid desire of engrossing the whole practice to themselves, pretend to have extraordinary secrets or nostrums for preparing persons for inoculation, which never fail of success. But this is only a pretence calculated to blind the ignorant and inattentive. Common sense and prudence alone are sufficient both in the choice of the subject and management of the operation. Whoever is possessed of these may perform this office for his children whenever he finds it convenient, provided they be in a good state of health.

This sentiment is not the result of theory, but of observation. Though few physicians have had more opportunities of trying inoculation in all its different forms, so little appears

to me to depend on these generally reckoned important circumstances of preparing the body, communicating the infection by this or the other method, &c., that for several years past I have caused the parents or nurses to perform the whole themselves, and have found that method followed with equal success, while it is free from many inconveniences that attend the other.

A critical situation, too often to be met with, first put me upon trying this method. A gentleman who had lost all his children, except one son, by the natural small-pox, was determined to have him inoculated. He told me his intention, and desired I would persuade the mother and grandmother, &c., of its propriety. But that was impossible. They were not to be persuaded, and either could not get the better of their fears, or were determined against conviction. It was always a point with me not to perform the operation without the consent of parties concerned. I therefore advised the father, after giving his son a dose or two of rhubarb, to go to a patient who had the small-pox of a good kind, to open two or three of the pustules, taking up the matter with a little cotton, and as soon as he came home to take his son apart, and give his arm a slight scratch with a pin, afterwards to rub the place well with the cotton, and to take no further notice of it. All this he punctually performed; and at the usual period, the small-pox made their appearance, which were of an exceeding good kind, and so mild as not to confine the boy an hour to his bed. None of the other relations knew but that the disease had come in the natural way till the patient was well.

We do not propose this as the only method in which the small-pox can be communicated. Experience teaches us that it may be done various ways with equal success. In Turkey, from whence we learned the practice, the women communicate the disease to children, by opening a bit of skin with a needle, and putting into the wound a little matter taken from a ripe pustule. On the coast of Barbary they pass a thread wet with the matter through the skin between the thumb and fore-finger; and in Europe inoculation is generally performed by making a small incision through the cuticle of the arm or leg with a lancet, and laying a bit of thread wet with the matter upon the wound, which is covered with a piece of sticking plaster, and kept on for two or three days.

Some of the people in England who make a trade of ino-

culation only open one of the ripe pustules with a lancet, and while it is wet with the matter make a slight incision in the arm of the person to whom they want to communicate the disease; afterwards they close up the wound and leave it without any other dressing. It is likewise done with a lancet covered with the dry matter; but this is less certain. It frequently fails, and ought never to be depended upon unless where fresh matter cannot be had.

Indeed, if fresh matter be applied long enough to the skin, there is no occasion for any wound at all. Let a bit of thread, about half an inch long, wet with the matter, be immediately applied to the arm, midway between the shoulder and elbow, and covered with a piece of the common sticking plaster, and kept on for eight or ten days. This will seldom fail to communicate the disease. We mention this method because many people are afraid of a wound; and doubtless the more easily the operation can be performed, it has the greater chance to become general. Some people imagine that the discharge from a wound lessens the eruption; but there is no great stress to be laid upon this notion. Besides, deep wounds often ulcerate and become troublesome.

We do not find that inoculation is at all considered as a medical operation in those countries from whence we learned it. In Turkey it is performed by the women, and in the East Indies by the Brahmins or priests. In this country the custom is still in its infancy; we make no doubt however but it will soon become so familiar, that parents will think no more of inoculating their children, than at present they do of giving them a dose of physic.

No set of men have it so much in their power to render the practice of inoculation general as the clergy, the greatest opposition to it still arising from some scruples of conscience, which they alone can remove. We would recommend it to them not only to endeavor to remove the religious objections which weak minds may have to this salutary practice, but to enjoin it as a duty, and to point out the danger of neglecting to make use of a means which Providence has put in our power for saving the lives of our offspring. Surely such parents as wilfully neglect the means of saving their children's lives are as guilty as those who put them to death. We wish this matter were duly weighed. No one is more ready to make allowance for human weakness and religious prejudices, yet I cannot help recommending it, in the warmest manner,

to parents to consider how great an injury they do their children, by neglecting to give them this disease in the early period of life.

The numerous advantages arising from the inoculation of the small-pox have been pretty fully pointed out by the learned Dr. M'Kenzie in his History of Health.* To these we shall only add, that such as have not had the small-pox in the early period of life are not only rendered unhappy, but likewise, in a great measure, unfit for sustaining many of the most useful and important offices. Few people would choose even to hire a servant who had not had the small-pox, far less to purchase a slave who had the chance of dying of this disease. How could a physician or a surgeon who had never had the

* "Many and great," says this humane author, "are the dangers attending the natural infection, from all which the inoculation is quite secure. The natural infection may invade weak or distempered bodies, by no means disposed for its kindly reception. It may attack them at a season of the year either violently hot or intensely cold. It may be communicated from a sort of small-pox impregnated with the utmost virulence. It may lay hold upon people unexpectedly, when a dangerous sort is imprudently imported into a maritime place. It may surprise us soon after excesses committed in luxury, intemperance, or lewdness. It may likewise seize on the innocent after indispensable watchings, hard labor, or necessary journeys. And is it a trivial advantage that all these unhappy circumstances can be prevented by inoculation? By inoculation numbers are saved from deformity as well as from death. In the natural small-pox, how often are the finest features and the most beautiful complexions miserably disfigured; whereas inoculation rarely leaves any ugly marks or scars, even where the number of pustules on the face have been very considerable, and the symptoms by no means favorable. And many other grievous complaints, that are frequently subsequent to the natural sort, seldom follow the artificial. Does not inoculation also prevent those inexpressible terrors that perpetually harass persons who never had this disease, insomuch that when the small-pox is epidemical entire villages are depopulated, markets ruined, and the face of distress spread over the whole country? From this terror it arises that justice is frequently postponed or discouraged at sessions or assizes where the small-pox rages. Witnesses and juries dare not appear. Does not inoculation in like manner prevent our brave sailors from being seized with this distemper on shipboard, where they must quickly spread the infection among such of the crew who never had it before, and where they have scarce any chance to escape, being half stifled with the closeness of their cabins, and but very indifferently nursed? Lastly, with regard to the soldiery, the miseries attending these poor creatures, when attacked by the small-pox on a march, is inconceivable; without attendance, without lodgings, without any accommodation; so that one of three commonly perishes."

small-pox himself attend others under that malady? How deplorable is the situation of females who arrive at mature age without having had the small-pox. A woman with child seldom survives this disease. And if an infant happens to be seized with the small-pox upon the mother's breast, who has not had the disease herself, the scene must be distressing. If she continues to suckle the child, it is at the peril of her own life; and if she weans it, in all probability it will perish. How often is the affectionate mother forced to leave her house, and abandon her children, at the very time when her care is most necessary. Yet should parental affection get the better of her fears, the consequences would often prove fatal. I have known the affectionate mother and her sucking infant laid in the same grave, both untimely victims to this dreadful malady. But these are scenes too shocking even to mention. Let parents who run away with their children to avoid the small-pox, or who refuse to inoculate them in infancy, consider to what deplorable situations they may be reduced by this mistaken tenderness.

As the small-pox has now become a constitutional disease in most parts of the known world, no other choice remains but to render the malady as mild as possible. This is the only manner of extirpation now left in our power. And though it may seem paradoxical, the artificial method of communicating the disease, could it be rendered universal, would amount to nearly the same thing as rooting it out. It is a matter of small consequence whether a disease be entirely extirpated or rendered so mild as neither to destroy life nor hurt the constitution; but that this may be done by inoculation does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies; but by inoculation not one of a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient.

I have often wished to see some plan established for rendering this salutary practice universal, but am afraid I shall never be so happy. The difficulties indeed are many, yet the thing is by no means impracticable. The aim is great,—no less than saving the lives of one-fourth part of mankind. What ought not to be attempted in order to accomplish so desirable an end?

The first step towards rendering the practice universal must be to remove the religious prejudices against it. This,

as already observed, can only be done by the clergy. They must not only recommend it as a duty to others, but likewise practise it on their own children. Example will ever have more influence than precept.

The next thing requisite is to put it in the power of all. For this purpose we would recommend it to the faculty to inoculate the children of the poor gratis. It is hard that so useful a part of mankind should, by their poverty, be excluded from such a benefit.

Should this fail, it is surely in the power of any state to render the practice general, at least as far as their dominion extends. We do not mean that it ought to be enforced by a law. The best way to promote it would be to employ a sufficent number of operators, at the public expense, to inoculate the children of the poor. This would only be necessary till the practice became general; afterwards custom, the strongest of all laws, would oblige every individual to inoculate his children to prevent reflections.

It may be objected to this scheme that the poor would refuse to employ the inoculators. This difficulty is easily removed. A small premium, to enable mothers to attend their children while under the disease, would be a sufficient inducement. Besides, the success attending the operation would soon banish all objections to it. Even considerations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be useful they are snatched away by this malady, to the great loss of their parents and detriment of the public.

The British legislature has, of late years, shown great attention to the preservation of infant lives, by supporting the foundling hospital, &c. But we will venture to say, if one-tenth part of the sums laid out in supporting that institution had been bestowed towards promoting the practice of inoculation of the small-pox among the poor, that not only more useful lives had been saved, but the practice ere now rendered quite universal in this island. It is not to be imagined what effect example and a little money will have upon the poor; yet, if left to themselves, they would go on forever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public-spirited. Should such a scheme be approved, a proper plan might easily be laid down for the execution of it.

But as public plans are very difficult to bring about, and often, by the selfish views or misconduct of those intrusted with the execution of them, fail of answering the noble purposes for which they were designed;—we shall therefore point out some other methods by which the benefits of inoculation may be extended to the poor.

There is no doubt but inoculators will daily become more numerous. We would therefore have every parish in Britain to allow one of them a small annual salary for inoculating all the children of the parish at a proper age. This might be done at a very trifling expense, and it would put it in the power of all to enjoy the benefit of this salutary invention.

Two things chiefly operate to prevent the progress of inoculation. The one is a wish to put the evil day as far off as possible. This is a principle in our nature; and as inoculation seems rather to be anticipating a future evil, it is no wonder mankind are so averse to it. But this objection is sufficiently answered by the success. Who in his senses would not prefer a lesser evil to-day to a greater to-morrow, provided they were equally certain?

The other obstacle is the fear of reflections. This has very great weight with the bulk of mankind. Should the child die, they think the world would blame them. This they cannot bear. Here lies the difficulty which pinches, and till that be removed inoculation will make but small progress. Nothing however can remove it but custom. Make the practice fashionable, and all objections will soon vanish. It is fashion alone that has led the multitude since the beginning of the world, and will lead them to the end. We must therefore call upon the more enlightened part of mankind to set a pattern to the rest. Their example, though it may for some time meet with opposition, will at length prevail.

I am aware of an objection to this practice from the expense with which it may be attended; this is easily obviated. We do not mean that every parish ought to employ a Sutton or a Dimsdale as inoculators. These have by their success already recommended themselves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to succeed? They certainly have. Let them make the same trial, and the difficulties will soon vanish. There is not a parish, and hardly a village, in Britain destitute of some person who can bleed. But this is a far more difficult operation, and requires both more skill and dexterity, than inoculation.

The persons to whom we would chiefly recommend the performance of this operation are the clergy. Most of them know something of medicine. Almost all of them bleed, and can order a purge, which are all the qualifications necessary for the practice of inoculation. The priests among the less enlightened Indians perform this office, and why should a Christian teacher think himself above it? Surely the bodies of men, as well as their souls, merit a part of the pastor's care; at least the greatest Teacher who ever appeared among men seems to have thought so.

Should all other methods fail, we would recommend it to parents to perform the operation themselves. Let them take any method of communicating the disease they please, provided the subject be healthy and of a proper age, they will seldom fail to succeed to their wish. I have known many instances of parents performing the operation, and never so much as heard of one bad consequence. A planter in one of the West-India islands is said to have inoculated with his own hand, in one year, three hundred of his slaves, who, notwithstanding the warmth of the climate, and other unfavorable circumstances, all did well. Common mechanics have often, to my knowledge, performed the operation with as good success as physicians. We do not however mean to discourage those who have it in their power from employing people of skill to inoculate their children, and attend them while under the disease, but only to show that where such cannot be had the operation ought not upon that account to be neglected.

Instead of multiplying arguments to recommend this practice, I shall just beg leave to mention the method which I took with my own son, then an only child. After giving him two gentle purges, I ordered the nurse to take a bit of thread which had been previously wet with fresh matter from a pock, and to lay it upon his arm, covering it with a piece of sticking plaster. This staid on six or seven days, till it was rubbed off by accident. At the usual time the small-pox made their appearance, and were exceedingly favorable. Surely this, which is all that is generally necessary, may be done without any skill in medicine.

The spring and autumn have been usually reckoned the most proper seasons for inoculation, on account of the weather being then most temperate; but it ought to be considered that these are generally the most unhealthy seasons of the

whole year. Undoubtedly the best preparation for the disease is a previous good state of health. I have always observed that children in particular are more sickly towards the end of spring and beginning of summer than at any other time of the year. On this account, I would propose the beginning of winter as the most proper for inoculation; though on every other consideration the spring or autumn would seem to be preferable.

The most proper age for inoculation is betwixt three and five. Many disagreeable circumstances attend inoculating children sooner, which we have not time to enumerate. Neither should the operation be too long delayed. When the fibres begin to grow rigid, and children make use of grosser food, the small-pox become more dangerous.

Children who have constitutional diseases must nevertheless be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, water-pap, weak broths, bread, light pudding, mild roots, and white meats.

But children who have been accustomed to a hotter diet, who are of a gross habit, or abound with bad humors, ought to be put upon a spare diet before they be inoculated. Their food should be of a light cooling nature, and their drink whey, buttermilk, and such like.

We would recommend no other medical preparation but two or three mild purges, which ought to be suited to the age and strength of the patient. It is no doubt possible by purgative and mercurial medicines, and a very cool regimen, to lessen the eruption; but it seldom happens that the eruption by inoculation proves too great; and we have always observed that those children who had a pretty free eruption, and where the pox filled well, enjoyed the best health afterwards.

The regimen during the disease must be the same as under the natural small-pox. The patient must be kept cool, his diet must be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case,

they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary after the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

CHAPTER XXIV.

OF THE MEASLES.

The measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the east, are both infectious, and seldom attack people more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal; but its consequences are often very troublesome.

Cause.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous according to the constitution of the patient, the season of the year, the climate, &c.

Symptoms.—The measles, like other fevers, are preceded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes indeed the cough does not come before the eruption has appeared. The eyelids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common both before and in the progress of the disease.

About the fourth day, small spots resembling flea-bites appear first upon the face, then upon the breast, and afterwards on the extremities. These may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed

by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases.

About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever however and difficulty of breathing often continue, especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favorable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale color, it is an unfavorable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavorable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist nature, by proper cordials, in throwing out the morbific matter, if her efforts be too languid; but when they are too violent, they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavor to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

Regimen.—The cool regimen is necessary here as well as in the small-pox. The food too must be light and the drink diluting. Acids however do not answer so well here as in the small-pox, as they tend to exasperate the cough. Small beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice with marsh-mallow roots and sarsaparilla, infusions of linseed or of the flowers of elder, balm tea, clarified whey, barley water, and such like. These, if the belly be bound, may be sweetened with honey; or, if that disagree with the stomach, a little manna may occasionally be added to them.

Medicine.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox,

bleeding is commonly necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. But if the disease be of a mild kind, bleeding may be omitted.

Bathing the feet and legs frequently in lukewarm water both tends to abate the violence of the fever and to promote the eruption.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought not to be stopped, but encouraged, by drinking lukewarm water, or weak camomile tea.

When the cough is very troublesome, with dryness of the throat and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar candy pounded together, or take now and then a spoonful of the oil of sweet almonds with sugar candy dissolved in it. These will soften the throat and relieve the tickling cough.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the putrid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given, according to the patient's age, or the violence of the symptoms.

After the measles are gone off, it is generally proper to give the patient a dose or two of physic. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeeds the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be very careful what they eat or drink. Their food for some time ought to be light and in small quantities, and their drink diluting, and rather of an opening nature, as buttermilk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asthma, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink ass's milk, to remove to a free air if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and if these do not succeed, let him remove to a warmer climate.

SCARLET FEVER.

The scarlet fever is so called from the color of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of summer; at which time it often seizes whole families, especially children.

It begins, like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle or scarf-skin falls off.

There is seldom any occasion for medicine in this disease. The patient ought however to keep within doors, to abstain from flesh, strong liquors and cordials, and to take plenty of cool diluting drink. If the fever runs high, the belly must be kept gently open by emollient clysters, or small doses of nitre and rhubarb. A scruple of the former, with five grains of the latter, may be taken thrice a day, or oftener if necessary.

Children and young persons are sometimes seized, at the beginning of this disease, with a kind of stupor and epileptic fits. In this case the feet and legs should be bathed with warm water, a large blistering plaster applied to the neck, and a dose of the syrup of poppies given every night till the patient recovers.*

* Sydenham.

After the fever is gone off the patient ought to be purged once or twice.

BILIOUS FEVER.

When a continual, remitting, or intermitting fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in camps, or who are exposed to the night air, are most liable to this kind of fever.

If there be symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever. The saline draught, recommended page 156, may likewise be frequently administered, and the patient's body may be kept open by clysters or mild purgatives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken broth, jellies of hartshorn, and the like; and he may use the *white decoction* for his ordinary drink.* If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article Dysentery.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him three or four times a day a table-spoonful of Mindererus's spirit † mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant,

* The white decoction is made by boiling two ounces of calcined hartshorn prepared, and two or three drams of gum Arabic, in three English pints of water till only two remain, afterwards straining the liquor.

† Spirit of Mindererus is made by taking any quantity of the volatile sal ammoniac and gradually pouring upon it distilled vinegar till the effervescence ceases. The mixture may be occasionally stirred to promote the solution of the salt.

or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He ought likewise to abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

CHAPTER XXV.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

This disease, which in some parts of Britain is called the *rose*, attacks persons at any period of life, but is most common between the ages of thirty and forty. Persons of a sanguine or plethoric habit are most liable to it. It often attacks young people and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequently seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

Causes.—The erysipelas is frequently occasioned by violent passions or affections of the mind; as fear, anger, &c. It is likewise occasioned by cold. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue. It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like.

Symptoms.—The erysipelas attacks with shivering, thirst, loss of strength, pain in the head and back, heat, restlessness

and a quick pulse; to which may be added vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous swell, the skin shines, and, if the pain be violent, it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with the swelling, and there is a difficulty of breathing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells, and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the armpit on the side affected, where an abscess is often formed.

The event of this disease depends greatly upon the constitution of the patient. It is seldom dangerous; yet I have known it prove fatal to people in the decline of life, who were of a scorbutic habit, or whose humors had been vitiated by irregular living or unwholesome diet.

If in a day or two the swelling subsides, the heat and pain abate, the color of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red color changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangrene, or mortification often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

Regimen.—In the erysipelas the patient must neither be kept too hot nor cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality; as groat gruel, panado, chicken or

barley broth, with cooling herbs and fruits, &c., avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood; the drink may be barley water, an infusion of elder flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negas, and other things of a cordial nature. His food may be sago gruel with a little wine, and nourishing broths, taken in small quantities, and often repeated. Great care however must be taken not to overheat him.

Medicine.—In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel than promote any discharge from the part. At the beginning of this disease it is neither safe to promote a suppuration, nor to repress the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool or very soft flannel are the safest applications to the part. These not only defend it from the external air, but likewise promote the perspiration, which has a great tendency to carry off the disease. In Scotland, the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is a common thing to bleed in the erysipelas; but this likewise requires caution. If however the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated or not as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet for the same purpose.

In cases where bleeding is requisite, it is likewise neces-

sary to keep the belly gently open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in this case; but nitre seldom sits easy on the stomach when taken in large doses. It is however one of the best medicines in this case, and when the fever and inflammation run high half a dram of it, with five or six grains of rhubarb, may be taken in the patient's ordinary drink three or four times a day.

When the erysipelas leaves the extremities and seizes the head, so as to occasion a delirium or stupor, it is absolutely necessary to open the belly. If clysters and mild purgatives fail to have this effect, stronger ones must be given. Blistering plasters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices, with saffron, warm fomentations, and such like.

When the *black, livid,* or *blue color* of the part shows a tendency to mortification, the Peruvian bark must be administered. It may be taken along with acids, as recommended in the small-pox, or in any other form more agreeable to the patient. It must not however be trifled with, as the patient's life is at stake. A dram may be given every two hours, if the symptoms be threatening, and cloths dipped in warm camphorated spirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, a decoction of the sudorific woods, as sassafras and guiacum, with liquorice-root, may be drank; afterwards a course of bitters will be proper.*

* The decoction of woods is made by boiling of guiacum wood rasped three ounces, raisins of the sun stoned two ounces, sassafras wood shaved one ounce, liquorice-root sliced half an ounce, in an English gallon of water. The guiacum and raisins may be boiled over a gentle fire till about one half of the water be consumed, adding towards the end the sassafras and liquorice. The liquor must be

Such as are liable to frequent attacks of the erysipelas ought carefully to guard against all violent passions, to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots as are of a cooling quality; and their drink ought to be small beer, whey, buttermilk, and such like. They should never suffer themselves to be too long costive. If that cannot be prevented by diet alone, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

CHAPTER XXVI.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

This is sometimes a primary disease, but oftener only a symptom of some other malady; as the inflammatory, eruptive, or spotted fever, &c. It is very common however as a primary disease in warm climates, and is most incident to persons about the prime or vigor of life. The passionate, the studious, and those whose system is weak, are most liable to it.

Causes.—This disease is often occasioned by night-watching, especially when joined with hard study. It may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations, as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

strained, and suffered to remain for some time, that the fæces may subside. An English pint of it may be drank daily.

Symptoms.—The symptoms which usually precede a true inflammation of the brain are pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep or a total want of it, great dryness of the skin, costiveness, a retention of the urine, a small dropping of blood from the nose, singing in the ears, and extreme sensibility of the nervous system.

When the inflammation is formed the symptoms in general are similar to those of the inflammatory fever. The pulse indeed is often weak, irregular, and trembling, but sometimes it is hard and contracted. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia mater, it is hard. A remarkable quickness of hearing is a common symptom of this disease, but that seldom continues long. Another usual symptom is a great throbbing or pulsation of the arteries in the neck and temples. The tongue is often black and dry; yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes from a sullen silence the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavorable symptom, as are also a suppression of urine, a total want of sleep, a constant spitting, a grinding of the teeth, which last may be considered as a kind of convulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c., it is owing to a transition of the disease from these parts to the brain, and generally proves fatal. Hence we learn the necessity of proper evacuations, and the danger of repellents, in all inflammatory diseases.

The favorable symptoms are a free perspiration or sweating, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine which lets fall a copious sediment. Sometimes the disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged or improperly treated, it sometimes ends in madness or a kind of stupidity which continues for life.

In the cure two things are chiefly to be attended to, viz., to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

Regimen.—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses or disturbs the imagination, increase the disease. Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened; and he should neither be kept too hot nor cold. It is not however necessary to exclude the company of an agreeable friend, as this has a tendency to soothe and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is too often the consequence of this disease.

The patient must, as far as possible, be soothed and humored in every thing. Contradiction will ruffle his mind and increase his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be obtained, or some other excuse. A little of any thing that the mind is set upon, though not quite proper, will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to soothe the passions and compose the mind. Boerhave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a basin, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances, as panado, and water gruel sharpened with jelly of currants or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c.; the drink small, diluting, and cooling, as whey, barley water, or decoctions of barley and tamarinds, which latter not only renders the liquor more palatable, but likewise more beneficial, as they are of an opening nature.

Medicines.—In an inflammation of the brain nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked by putting a straw, or any other sharp body, up the nostril.

Bleeding in the temporal arteries greatly relieves the head;

but as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular veins. When the patient's pulse and spirits are so low that he cannot bear bleeding with a lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but, by being applied nearer to the part affected, generally give more immediate relief.

A discharge of blood from the hemorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steams of warm water, sharp clysters or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations, either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them as soon as possible, or to substitute others in their stead.

If the patient be costive, his belly must be kept open by emollient clysters, or gentle purgatives, as manna, rhubarb, cream of tartar, or such like. These may either be given separately or together in small doses, and repeated as there may be occasion.

Small quantities of nitre ought frequently to be mixed with the patient's drink. Two or three drams, or more, if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaven, and frequently rubbed with vinegar and rosewater a little warm. Cloths dipped in it may likewise be applied to the temples. The feet ought frequently to be bathed in lukewarm water, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering plaster to the whole head.

CHAPTER XXVII.

OF THE OPHTHALMY, OR INFLAMMATION OF THE EYES.

This disease may be occasioned by external injuries, as strokes, dust thrown into the eyes, &c. It is often caused by the stoppage of customary evacuations, as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats or the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes. Viewing snow or other white bodies for a long time, or looking steadfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candlelight. Drinking spirituous liquors and excess of venery are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflammation of the eyes proceeds from a venereal taint, and often from a scrofulous or gouty habit. It may likewise be occasioned by hairs in the eyelids turning inwards and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient. It may be occasioned by moist air, or living in low, damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrofulous habit.

Symptoms.—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding

rheum, which rushes forth in great quantities whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighboring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent, and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes total blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no unfavorable symptom. But when the disease is accompanied with a violent pain of the head, and continues long, the patient is in danger of losing his sight.

Regimen.—The diet, unless in scrofulous cases, can hardly be too spare, especially at the beginning. The patient must abstain from every thing of a heating nature. His food must consist chiefly of mild vegetables, weak broths and gruels. His drink may be barley water, balm tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover, so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts either of body or mind, and encouraging sleep as much as possible.

Medicine.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters, ointments, with other external applications, which do mischief twenty times for once they do good. People ought therefore to be very cautious how they use such things, as the very pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same

quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon it may be promoted by the application of cloths dipped in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of Glauber's salts and cream of tartar every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will answer the same end. The patient at the same time must drink freely of water gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take at bedtime a large draught of very weak wine whey, in order to promote perspiration. His feet and legs must frequently be bathed in lukewarm water, and his head shaved twice or thrice a week, and afterwards washed in cold water. This has often a remarkably good effect.

If the inflammation does not yield to these evacuations, blistering plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering ointment. I never knew these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but, for this purpose, it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or betwixt the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder-blades. It may be dressed twice a day with yellow basilicon. I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

When the heat and pain of the eyes is very great, a poultice of bread and milk, softened with plenty of sweet oil or

fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water every morning.

If the patient cannot sleep, which is sometimes the case, he must take fifteen or twenty drops of laudanum, or two spoonfuls of the syrup of poppies, over night, more or less, according to his age or the violence of the symptoms.

After the inflammation is gone off, if the eyes still remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived by which the eye can be quite immersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scrofulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negas, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may either be given in substance, or prepared in the following manner:—

Take an ounce of bark, in powder, with two drams of Winter's bark, and boil them in an English quart of water to a pint; when it has boiled nearly long enough, add half an ounce of liquorice-root sliced. Let the liquor be strained. Two, three, or four table-spoonfuls, according to the age of the patient, may be taken three or four times a day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than others; but in general it requires a considerable time to produce any lasting effects.

Dr. Cheyne says "that æthiops mineral never fails in obstinate inflammations of the eyes, even scrofulous ones, if given in a sufficient dose, and duly persisted in." There is no doubt but this and other preparations of mercury may be of singular service in ophthalmies of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards, or pressing upon them, in order that they may be cut off without delay.

Such as are liable to frequent returns of this disease ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor and every thing of a heating quality. Above all, let them avoid the night air and late studies.*

CHAPTER XXVIII.

OF THE QUINSY, OR INFLAMMATION OF THE THROAT.

This disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperament.

Causes.—In general it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats or inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat and parts adjacent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

Singing, speaking aloud and long, or whatever strains the throat, may likewise cause an inflammation of that organ.

* As most people are fond of making use of eye-waters in this disease, we shall recommend the following as one of the best which has fallen under our observation. Take of bolearmenic finely powdered three ounces, of white vitriol an ounce and a half, of white sugar candy three ounces. Mix them in a bottle of soft water, and let them stand for three or four days, frequently shaking them. Afterwards the water must be filtered, and a little of it dropped into the eye twice or thrice a day. A cloth wet with it must likewise be constantly kept on the eye

I have often known the quinsy prove fatal to jovial companions, who, after sitting long in a warm room, drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat and occasion a quinsy. It may also proceed from bones, pins, or other sharp substances sticking in the throat, or from the caustic fumes of metals and minerals, as arsenic, antimony, &c., taken in by the breath. This disease is sometimes epidemic and infectious.

Symptoms.—The inflammation of the throat is evident from inspection, the parts appearing red and swelled; besides, the patient complains of pain in swallowing any thing. His pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish color, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult; the pain affects the ears; the eyes generally appear red; and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea, or inclination to vomit, and the drink, instead of passing into the stomach, is often returned by the nose. The patient is frequently starved at last, merely from an inability of swallowing any kind of food.

When the breathing is laborious, with straitness of the breast and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the patient breathes easy there is not so much danger. An external swelling is no unfavorable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsy is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale, ghastly countenance, and coldness of the extremities, are fatal symptoms.

Regimen.—The regimen in this disease is in all respects

the same as in the pleurisy or peripneumony. The food must be light, and in small quantity, and the drink plentiful, weak and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapped round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants of this country. When they feel any uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies. The custom however is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief, or a piece of flannel, kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of considerable efficacy. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

Gargles for the throat are likewise very beneficial. They may be made by adding to half an English pint of the pectoral decoction, mentioned page 123, two or three spoonfuls of honey, and the same quantity of currant jelly. This may be used three or four times a day; and if the patient be troubled with tough viscid phlegm, the gargle may be made more sharp and cleansing, by adding to it a tea-spoonful of the spirit of sal ammoniac. Some recommend gargles made of a decoction of the leaves or bark of the blackberry bush; but where the jelly can be had these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in lukewarm water is more apparent. That practice ought therefore never to be neglected. If people were careful

to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

Medicine.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The belly should likewise be kept gently open. This may either be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of *sal prunel*, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of saliva, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jew's ears, album grecum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no further notice of them.

Some recommend the gum guaiacum as a specific in this disease. Half a dram of the gum in powder may be made into an electuary with the root of elder for a dose, and repeated occasionally.

Blistering upon the neck or behind the ears, in violent inflammations of the throat, is very beneficial. After the plasters are taken off, the parts ought to be kept running, by the

application of sharp ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This however is sometimes the case in spite of all our endeavors to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel, or the like. Soft poultices ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

It sometimes happens, before the tumor breaks, that the swelling is so great as entirely to prevent any thing from getting down into the stomach. In this case the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel with milk, &c. Patients have often been supported by these for several days, till the tumor has broke; and afterwards they have recovered.

Not only the swallowing, but the breathing, is often prevented by the tumor. In this case nothing can save the patient's life but opening the *trachea* or windpipe. As that has been often done with success, no person in such desperate circumstances ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey, to which may be added a little mustard or a small quantity of spirits. But this kind of gargle is never to be used where there are signs of an inflammation. This species of *angina* has various names among the common people, as the *pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift the patient up by the hair of the head, and thrust their fingers under his jaws, &c., all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperate. Such as

do not choose to observe this rule must have frequent recourse to purging and other evacuations, to discharge the superfluous humors. They ought likewise to beware of catching cold, and should abstain from aliment and medicines of an astringent or stimulating nature.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any thing that may strain the throat or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional coverings about their necks, &c.

I have often known persons who had been subject to sore throats entirely freed from that complaint by only wearing a ribbon, or a bit of flannel, constantly about their necks, or by wearing thicker shoes, a flannel waistcoat, or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconveniency of using such things for life is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong, stimulating, and styptic medicines. The best method is to keep it warm, and to gargle it twice a day with a decoction of figs sharpened a little with a few drops of the elixir or spirit of vitriol.

THE MALIGNANT QUINSY, OR PUTRID, ULCEROUS SORE THROAT.

This kind of quinsy is but little known in the northern parts of Britain, though, for some time past, it has been very fatal in the more southern counties. Children are more subject to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails most in autumn, or after a long course of damp or sultry weather.

Causes.—This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one per-

son. This ought to put people upon their guard against going near such patients as labor under the disorder; as by that means they endanger not only their own lives, but likewise those of their friends and connections. Whatever tends to produce putrid or malignant fevers may likewise occasion the putrid, ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c.

Symptoms.—It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast; his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude; but, as the disease advances, it turns more of a yellowish color. The tongue is white and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat it appears swelled, and of a florid red color. Pale or ash-colored spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white color, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An efflorescence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The putrid, ulcerous throat may be distinguished from the inflammatory by the vomiting and looseness with which it is generally ushered in; by the foul ulcers in the throat, covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

Unfavorable symptoms are, an obstinate purging, extreme weakness, dimness of the sight, a livid or black color of the spots, and frequent shiverings, with a weak fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid color, with a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat breaks out about the third or fourth day, and continues, with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing be soft and free, with a lively color of the eyes, there is reason to hope for a salutary crisis.

Regimen.—The patient must be kept quiet, and, for the most part, in bed, as he will be apt to faint when taken out of it. His food must be nourishing and restorative; as sago gruel with red wine, jellies, strong broths, &c. His drink ought to be generous, and of an antiseptic quality; as red wine negas, white wine whey, and such like.

Medicine.—The medicine in this kind of quinsy is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c., which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected.

If, at the beginning, there be a great nausea, or inclination to vomit, the patient must drink an infusion of green tea, camomile flowers, or *carduus benedictus*, in order to cleanse the stomach. If these be not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit.

If the disease be mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of which may be added a spoonful or two of honey, and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following gargle may be used.*

It will be of great benefit if the patient frequently receives into his mouth, through an inverted tunnel, the steams of warm vinegar, myrrh and honey.

But when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be de-

* Take six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva root; let it boil for some time, and afterwards strain the liquor; to which add two ounces of white wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe, to clean the mouth, before the patient takes any meat or drink. This method is peculiarly necessary for children, who cannot use a gargle.

pended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it; if not, an ounce of bark grossly powdered, with two drams of Virginian snake-root, may be boiled in an English pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blistering plasters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table-spoonfuls of the saline julep, page 120, every hour. Tea made of mint and a little cinnamon will likewise be a proper drink, especially if an equal quantity of red wine be mixed with it.

In case of a violent looseness, the size of a nutmeg of *diascordium*, or the japonic confection, may be taken two or three times a day, or oftener if necessary; and the patient's drink must be red wine negas.

If a discharge of blood from the nose happens, the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol or tincture of roses.

In case of a strangury, the belly must be fomented with warm water, and emollient clysters given three or four times a day.

After the violence of the disease is over, the belly should still be kept open with mild purgatives; as manna, senna, rhubarb, or the like.

If great weakness and dejection of spirits, or night sweats, with other symptoms of a consumption, should remain after this disease, we would advise the patient to continue the use of the Peruvian bark, with the elixir of vitriol, and take frequently a glass of generous wine. These, together with a milk diet, and riding on horseback, are the most likely means for recovering his strength.

CHAPTER XXIX.

OF COLDS AND COUGHS.

It has already been observed that colds are the effect of an obstructed perspiration; the common causes of which we have likewise endeavored to point out, and shall not here repeat them. Neither shall we spend time in enumerating all the various symptoms of colds, as they are pretty generally known. It may not however be amiss to observe, that almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of.

No age, sex, or constitution is exempted from this disease; neither is it in the power of medicine to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in a uniform degree of warmth, such a thing as catching cold would be impossible; but as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes, however, when small, do not affect the health; but when great they must prove hurtful. Hence the chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold.

When oppression of the breast, a stuffing of the nose, unusual weariness, or a pain of the head, &c., give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Instead of flesh, fish, eggs, milk, and other nourishing diet, he may eat light bread pudding, veal or chicken broth, panado, gruels, and such like. His drink may be water gruel sweetened with a little honey, an infusion of balm or linseed sharpened with the juice of orange or lemon, a decoction of barley and liquorice with tamarinds, or any other cool, diluting acid liquor.

Above all, his supper should be light, as small posset, or water gruel sweetened with honey, and a little toasted bread in it. If honey should disagree with the stomach, the gruel may be sweetened with treacle or coarse sugar, and sharpened with the jelly of currants. Those who have been accustomed

to generous liquors may take white wine whey instead of gruel, which may be sweetened as above.

The patient ought to lie longer than usual abed, and to encourage a gentle sweat, which is easily brought on towards morning, by drinking tea, or any kind of warm diluting liquor. I have often known this practice carry off a cold in one day, which, in all probability, had it been neglected, would have cost the patient his life, or have confined him for some months to his bed. Would people sacrifice a little time to ease and warmth, and practise a moderate degree of abstinence when the first symptoms of cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration might be prevented. But after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are the common effects of colds which have either been totally neglected or treated improperly.

Many attempt to cure a cold by getting drunk; but this, to say no worse of it, is a very hazardous and fool-hardy experiment. No doubt it may sometimes succeed, by suddenly restoring the perspiration; but when there is any degree of inflammation, which is frequently the case, strong liquors, instead of removing the malady, will increase it. By this means a common cold may be converted into an inflammatory fever.

When those who labor for their daily bread have the misfortune to catch cold, they cannot afford to lose a day or two, in order to keep themselves warm and take a little medicine, by which means the disorder is often so aggravated as to confine them for a long time, or even to render them ever after unable to sustain hard labor. But even such of the laboring poor as can afford to take care of themselves are often too hardy to do it; they affect to despise colds, and as long as they can crawl about scorn to be confined by what they call a *common cold*. Hence it comes to pass that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till, at length, they become invincible. We often see this verified in travellers, who, rather than lose a day in the prosecution of their business, throw away their lives by pursuing their journey with this disease upon them, even in the coldest season.

It is certain, however, that colds may be too much indulged. When a person for every slight cold shuts himself up in a

warm room, and drinks great quantities of warm liquor, it may bring on such a general relaxation of the solids as will not be easily removed. It will therefore be proper, when the disease will permit and the weather is mild, to join to the regimen mentioned above gentle exercise, as walking, riding on horseback, or in a machine, &c. An obstinate cold, which no medicine can remove, will yield to a proper course of exercise when duly persisted in.

Bathing the feet and legs every night in warm water has a great tendency to restore the perspiration; but care must be taken that the water be not too warm, otherwise it will do hurt. It should never be much warmer than new milk, and the patient should go immediately to bed after using it. Bathing the feet in warm water, lying in bed, and drinking warm water gruel, or other weak liquors, will sooner take off a spasm and restore the perspiration than all the hot sudorific medicines in the apothecary's shop. This is all that is necessary for removing a common cold, and if this course be taken at the beginning it well seldom fail.

But when the symptoms do not yield to abstinence, warmth, and diluting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, &c. If the pulse therefore be hard and frequent, the skin hot and dry, and the patient complains of his head or breast, it will be necessary to bleed, and to give the cooling opening powders recommended in the scarlet fever, every three or four hours, till they give a stool.

It will likewise be proper to put a blistering plaster on the back, to give two table-spoonfuls of the saline mixture ordered page 121 every two hours, and, in short, to treat the patient in all respects as for a slight fever. I have often seen this course, when observed at the beginning, remove the complaint in two or three days, when the patient had all the symptoms of an approaching ardent fever or an inflammation of the breast.

COMMON COUGH.

A cough is generally the effect of a cold, which has either been improperly treated or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shows a weak state of the lungs, and is often the forerunner of a consumption.

If the cough be violent, and the patient young and strong with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered; as gum ammoniac, squills, &c. The solution of gum ammoniac may be prepared as directed page 130, and two table-spoonfuls of it taken three or four times a day, more or less, according to the age and constitution of the patient. Squills may be given various ways. Two ounces of the vinegar, the oxymel, or the syrup, may be mixed with the same quantity of simple cinnamon water, and an ounce of balsamic syrup. Two table-spoonfuls of this mixture may be taken three or four times a day.

A syrup made of equal parts of lemon juice, honey, and sugar candy, is likewise very proper in this kind of cough. A table-spoonful of it may be taken at pleasure.

But when the defluxion is sharp and thin, these medicines rather do hurt. In this case gentle opiates, oils, and mucilages are more proper. A cup of an infusion of wild poppy leaves and marsh-mallow root, or the flowers of colts-foot, may be taken frequently; or a tea-spoonful of the paregoric elixir may be put into the patient's drink twice a day. Fuller's Spanish infusion is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful three or four times a day.*

When a cough is occasioned by acrid humors tickling the throat and *fauces*, the patient should keep some soft pectoral lozenges almost constantly in his mouth; as the Pontefract liquorice cakes, barley sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humors, and by taking off their stimulating quality help to appease the cough.

In obstinate coughs, proceeding from a flux of humors upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other

* The Spanish infusion is made by infusing in an English quart of boiling water two drams of the salt of tartar, half a dram of saffron cut into small pieces, and an ounce of Spanish juice, likewise cut small. These must stand in a close vessel for twenty-four hours in a gentle heat; afterwards let the infusion be strained.

drain. In this case I have often observed the most happy effects from a Burgundy pitch plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it fail to give relief, unless where there were evident signs of an ulcer in the lungs. About the bulk of a nutmeg of Burgundy pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but if kept on for some time, it will succeed where most other medicines fail.

The only inconveniency attending this plaster is the itching which it occasions in the part to which it is applied; but surely this may be dispensed with, considering the advantage which the patient may expect to reap from the application; besides, when the itching becomes very uneasy, the plaster may be taken off and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary in discontinuing the use of such a plaster; this however may be safely done by making it smaller by degrees, and at length quitting it altogether in a warm season.*

But coughs proceed from many other causes besides defluxions upon the lungs. In these cases the cure is not to be attempted by pectoral medicines. Thus in a cough proceeding from a foulness and debility of the stomach, syrups, oils mucilages, and all kind of balsamic medicines, do hurt. The *stomach cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires or draws in his breath fully, but in the former that does not happen.

* Some complain that the pitch plaster adheres too fast, so that they find it difficult to remove it, while others find difficulty in keeping it on. This proceeds from the different kinds of pitch made use of, and likewise from the manner of spreading it. I generally find it answer best when mixed with a little beeswax and spread as cool as possible. The clear, hard, transparent pitch answers the purpose best.

The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time, in the dose of one or two table-spoonfuls twice a day, or as often as it is found necessary to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra** in an English pint of white wine, letting it stand a few days, and then straining it off for use.

In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters.

A *nervous cough* can only be removed by change of air and proper exercise; to which may be added the use of gentle opiates. Instead of the saponaceous pill, the paregoric elixir, &c., which are only opium disguised, ten, fifteen, twenty, or twenty-five drops of liquid laudanum, more or less, as circumstances require, may be taken at bedtime, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus when a cough is occasioned by *teething*, keeping the belly open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner, when *worms* occasion a cough, such medicines as remove these will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding and keeping the belly open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. This cough is

* The powder called *hiera picra* is made by pounding together of Socotrine aloes four ounces, Virginian snakeroot and ginger each half an ounce.

generally removed by a paroxysm of the gout, which should therefore be promoted by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in lukewarm water.

HOOPING-COUGH, OR CHIN-COUGH.

This cough seldom affects adults, but proves often fatal to children. Such children as live upon thin watery diet, who breathe unwholesome air, and have too little exercise, are most liable to this disease, and generally suffer most from it.

The chin-cough is so well known, even to nurses, that a description of it is unnecessary. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration and the different secretions.

The diet must be light and of easy digestion; for children, good bread made into pap or pudding, chicken broth, with other light spoon-meats, are proper; but those who are farther advanced may be allowed sago gruel, and if the fever be not high a little boiled chicken, or other white meats. The drink may be pennyroyal tea, sweetened with honey or sugar candy, small wine whey; or, if the patient be weak, he may sometimes be allowed a little negas.

One of the most effectual remedies in the chin-cough is change of air. This often removes the malady even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another at a very small distance is quite free from it. But whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient at some distance from the place where he caught the disease, and if possible into a more pure and warm air.

When the disease proves violent and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief intention of bleeding is to prevent a rupture of the blood-vessels of the lungs, and to render it more safe to give

vomits, it will seldom be necessary to repeat the operation yet if there be symptoms of an inflammation of the lungs, a second, or even a third bleeding may be requisite.

It is generally reckoned a favorable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge, either by camomile tea or lukewarm water; and when these are not sufficient, small doses of ipecacuanha may be given. A child of three or four years of age may take five or six grains; and to others less or more must be given, according to their age and strength.

It is very difficult to make children drink after a vomit. I have often seen them happily deceived by infusing a scruple or half a dram of the powder of ipecacuanha in a teapot, with half an English pint of boiling water. If this be disguised with a few drops of milk and a little sugar, they will imagine it tea and drink it very greedily. A small tea-cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operates. When they begin to puke there will be no occasion for drinking any more, as the water already on their stomach will be sufficient.

Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions; and ought therefore to be repeated according to the obstinacy of the disease. They should not however be too strong; gentle vomits frequently repeated are both less dangerous and more beneficial than strong ones.

As the patient is generally costive, it will be proper to keep his belly gently open. The best medicines for this purpose are rhubarb and its preparations, as the syrup, tincture, &c. Of these a tea-spoonful or two may be given to an infant twice or thrice a day, as there is occasion. To such as are farther advanced the dose must be proportionally increased, and repeated till it has the desired effect. Those who cannot be brought to take the bitter tincture may have an infusion of senna and prunes, sweetened with manna, coarse sugar, or honey; or a few grains of rhubarb mixed with a tea-spoonful or two of syrup, or currant jelly, so as to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse even a disagreeable medicine when mixed with them.

Many people believe that oily, pectoral, and balsamic medicines possess wonderful virtues for the cure of the chin-cough,

and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder.

The *millepedes*, or woodlice, are greatly recommended for the cure of a chin-cough. Those who choose to make use of these insects may infuse two ounces of them bruised in an English pint of small white wine for one night. Afterwards the liquor may be strained through a cloth, and a table-spoonful of it given to the patient three or four times a day.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven drops of laudanum, according to the age and constitution of the patient, may be taken in a cup of hyssop or pennyroyal tea, and repeated occasionally.

The garlic ointment is a well-known remedy in North Britain for the chin-cough. It is made by beating in a mortar garlic with an equal quantity of hog's lard. With this the soles of the feet may be rubbed twice or thrice a day; but the best method is to spread it upon a rag, and apply it in the form of plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtue. This is an exceeding good medicine, both in the chin-cough and in most other coughs of an obstinate nature. It ought not however to be used when the patient is very hot or feverish, lest it increase these symptoms.

The feet should be bathed once every two or three days in lukewarm water, and a Burgundy pitch plaster kept constantly betwixt the shoulders. But when the disease proves very violent, it will be necessary, instead of it, to apply a blistering plaster, and to keep the part open for some time with issue ointment.

When the disease is prolonged and the patient is free from a fever, the Peruvian bark and other bitters are the most proper medicines. The bark may be either taken in substance, or in a decoction or infusion, as is most agreeable to the patient. For a child, ten, fifteen, or twenty grains, according to the age of the patient, may be given three or four times a day; for an adult, half a dram or two scruples will be proper. Some give the extract of the bark with cantharides; but to manage this requires some skill and attention. It is more safe to give a few grains of castor along with the bark. A child of six or seven years of age may take seven or eight

grains of castor, with fifteen grains of powdered bark, for a dose. This may be made into a mixture with two or three ounces of any simple distilled water and a little syrup, and taken three or four times a day.

CHAPTER XXX.

INFLAMMATION OF THE STOMACH AND OTHER VISCERA.

All inflammations of the bowels are dangerous, and require the most speedy assistance; as they frequently end in a suppuration, and sometimes in a mortification, which is certain death.

Causes.—An inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drank while the body is warm, obstructed perspiration, the sudden striking in of any eruption, &c. It may likewise proceed from the acrimony of the bile, or from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions an inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the shells of nuts, &c., may likewise have that effect.

Symptoms.—It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or at least a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease is the sense of pain which the patient feels upon taking any kind of food or drink, especially if it be either too hot or cold.

When the patient vomits every thing he eats or drinks, is extremely restless, has a hiccough, with an intermitting pulse and frequent fainting fits, the danger is very great.

Regimen.—All acrimonious, heating, and irritating food and drink are carefully to be avoided. The weakness of the patient may deceive the by-standers, and induce them to give him wines, spirits, or other cordials; but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should neither be quite cold nor too hot. Thin gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken broth, are the most proper. The drink should be clear whey, barley water, water in which toasted bread has been boiled, or decoctions of emollient vegetables; as liquorice and marsh-mallow roots, sarsaparilla, &c.

Medicine.—Bleeding in this disease is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and so long as that is the case this operation is safe.

Frequent fomentations with lukewarm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor suffered to continue till they become quite cold, as either of these extremes would aggravate the disease.

The feet and legs ought likewise to be frequently bathed in lukewarm water, and warm bricks or poultices may be applied to the soles of the feet.

In this and all other inflammations of the bowels, an epispastic, or blistering plaster, applied over the part affected, is one of the best remedies I know. I have often used it, and do not recollect one instance wherein it did not give relief to the patient.

The only internal medicines which we shall venture to recommend in this disease are mild clysters. These may be made of warm water, or thin water gruel, and, if the patient be costive, a little sweet oil, honey, or manna may be added. Clysters answer the purpose of an internal fomentation, while

they keep the belly open, and at the same time nourish the patient, who is often, in this disease, unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES.

This is one of the most painful and dangerous diseases that mankind is liable to. It generally proceeds from the same *causes* as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, cider, &c. It may likewise be occasioned by a rupture, by scirrhous tumors of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is generally divided into the *Iliac passion*, the *Enteritis*, &c., according to the name of the parts affected. The treatment however is nearly the same, whatever part of the intestinal canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease; only the pain, if possible, is more acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters and suppositories, are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine.

While the pain shifts and the vomiting only returns at certain intervals, and while the clysters pass downwards, there is ground to hope; but when the clysters and *fæces* are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweats, black fetid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of approaching death.

Regimen.—The regimen in this disease is in general the same as in an inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting, as clear whey, barley water, and such like.

Medicine.—Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the strength of the patient and the violence of the symptoms.

A blistering plaster is here likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

Fomentations and laxative clysters are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water, and cloths dipped in it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley water or thin gruel with salt, and softened with sweet oil or fresh butter. These may be administered every two or three hours, or oftener if the patient continues costive.

If common clysters have not the desired effect, we would recommend the smoke of tobacco. It may be blown into the bowels through an inverted pipe. This may be repeated in a short time, unless the effect of the first renders it unnecessary.

If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives; but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which, by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case.

What answers the purpose of opening the belly very well is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water or thin gruel, and two or three table-spoonfuls given every half hour till it operates. At the same time fifteen, twenty, or twenty-five drops of laudanum may be given in a glass of peppermint or simple cinnamon water, to appease the irritation and prevent the vomiting, &c.

Acids have often a very happy effect in staying the vomiting, and appeasing the other violent symptoms of this disease. It will therefore be of use to sharpen the patient's drink with

cream of tartar, juice of lemon, or, when these cannot be obtained, with vinegar.

But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well. Take jalap in powder and vitriolated tartar of each half a dram, opium one grain, Castile soap as much as will make the mass fit for pills. These must be taken at one dose, and if they do not operate in a few hours the dose may be repeated.

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting, and if one immersion has not the desired effect it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath than to continue too long at a time; and it is often necessary to repeat it several times before it has the desired effect. Great care must be taken that the water be not too warm.

It has sometimes happened, after all other means of procuring a stool had been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk upon a wet pavement, and dashing his legs and thighs with the cold water. This method, when others fail, at least merits a trial. It is indeed attended with some danger, but a doubtful remedy is better than none.

In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound, but should not exceed that.* When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered; as it is the fittest body we know for making its way through the intestinal canal.

* When quicksilver is given in too large quantities it defeats its own intention, as it pulls down the bottom of the stomach by its great weight, which prevents its getting over the pylorus. In this case I have sometimes been obliged to hang up the patient by the heels, in order that it might be discharged by his mouth.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with the hand. If this, with fomentations and clysters, should not succeed, recourse must be had to a surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease must take care never to be too long without a stool. Some who have died of it have had several pounds of hard, dry *fœces* taken out of their guts. They should likewise beware of eating too freely of sour or unripe fruits, or drinking stale, windy liquors, &c. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, &c., but especially from wet feet.

COLIC.

The colic has great affinity, both in its symptoms and method of cure, with the two preceding diseases. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variously denominated, according to their causes, as the *flatulent*, the *bilious*, the *hysteric*, the *nervous*, &c. As each of these requires a particular method of treatment, we shall point out their most general symptoms, and the means to be used for their relief.

The *flatulent*, or wind-colic, is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from an obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his guts, and is generally relieved by a discharge of wind either upwards or downwards. The pain is seldom confined to any particular part, as the vapor wanders from one division of the bowels to another till it finds a vent.

When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptoms is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a

warm hearth-stone, or apply warm bricks to them; and warm cloths may be applied to his stomach and bowels.

This is the only colic wherein ardent spirits, spiceries, or any thing of a hot nature, may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before there be any symptoms of inflammation. We have reason to believe that a colic occasioned by wind or flatulent food might always be cured by spirits and warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear an inflammation of the bowels is already begun, all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for the inflammation of the intestines.

Several kinds of food, as honey, eggs, &c., occasion colics in some particular constitutions. I have generally found the best method of cure for these was to drink plentifully of small diluting liquors, as water gruel, small posset, water with toasted bread soaked in it, &c.

Colics which proceed from excess and indigestion generally cure themselves, by occasioning vomiting or purging. These discharges are by no means to be stopped, but promoted, by drinking plentifully of warm water or weak posset. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning by bathing the feet and legs in warm water, and drinking such warm diluting liquors as will promote the perspiration, as weak wine whey, or water gruel with a small quantity of spirits in it.

These flatulent colics, which prevail so much among country people, might generally be prevented were they careful to change their clothes when they get wet. They ought likewise to take a dram, or to drink some warm liquor, after eating any kind of green trash. We do not mean to recommend the practice of dram-drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered. A glass of good peppermint water will have nearly the same effect as a glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the navel. The patient complains of great thirst.

and is generally costive. He vomits a hot, bitter, yellow-colored bile, which being discharged seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted that there are all the symptoms of an impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon or cream of tartar, must be drank freely. Small chicken broth, with a little manna dissolved in it, or a slight decoction of tamarinds, are likewise very proper, or any other thin, acid, opening liquor.

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water, and if this should not succeed the patient must be immersed up to the breast in warm water.

Mild purgatives are here likewise necessary, as the lenitive electuary, manna, cream of tartar, or the bitter purging salts, which will answer very well. These may be dissolved in water, and given in the same manner as directed in the inflammation of the intestines. If these medicines will not stay on the stomach, it will be necessary to join an opiate with them.

Such as are liable to frequent returns of the bilious colic should use flesh sparingly, and live chiefly upon a light vegetable diet. They should likewise take frequently a dose of cream of tartar with tamarinds, or any other cool acid purge.

The *hysteric* colic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. But what the patient vomits in this case is commonly of a greenish color. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic all evacuations, as bleeding, purging, vomiting, &c., do hurt. Every thing that weakens the patient or sinks the spirits is to be avoided. If, however, the vomiting should prove violent, lukewarm water, or small posset, may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a

glass of cinnamon water. This may be repeated every ten or twelve hours till the symptoms abate.

The patient may likewise take four or five of the fetid pills every six hours, and drink a cup of pennyroyal tea after them. If assafœtida should disagree with the patient, which is sometimes the case, a tea-spoonful of the tincture of castor in a cup of pennyroyal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of loaf sugar, may be taken in its stead. The anti-hysteric plaster may also be used, which has often a good effect.*

The *nervous* colic prevails chiefly among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cider counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor.

No disease of the bowels is attended with more excruciating pain than this; nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the belly all the while continuing bound in spite of medicine, yet at length yield, and the patient recover. It generally, however, leaves the patient weak, and often ends in a palsy.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the guts, that we shall not insist upon it. The belly is to be opened by mild purgatives given in small doses and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c.

The Barbadoes tar is said to be an efficacious medicine in this disease. It may be taken to the quantity of two drams three times a day, or oftener if the stomach will bear it. This tar, mixed with an equal quantity of strong rum, is likewise proper for rubbing the spine, in case any tingling or other symptoms of a palsy are felt. When the tar cannot be obtained, the back may be rubbed with strong spirits, or a little oil of nutmegs or of rosemary.

If the patient remains weak and languid after this disease, he must take exercise on horseback, and use an infusion of the

* The anti-hysteric plaster is made by melting together of galbanum three ounces, tacamahaca in powder and yellow wax each an ounce and a half, Venice turpentine, cummin seeds in powder, and assafœtida each one ounce. A sufficient quantity of this may be spread upon a piece of soft leather and applied to the region of the stomach. I have generally found it have the best effect when thirty or forty drops of laudanum were rubbed upon the surface of the plaster

Peruvian bark in wine. When the disease ends in a palsy, the Bath waters are found to be extremely proper.

To avoid this kind of colic people must shun all sour fruits, acid and austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad oil with a little brandy or rum every morning, but should never take spirits alone. Liquid aliment is best for them, as fat broths, &c., but low living is bad. They should frequently go a little out of the tainted air, and should never suffer themselves to be costive.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. These already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind, by only observing the following general rules, viz.: To bathe the feet and legs in warm water; to apply bladders filled with warm water, or cloths dipped in it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and, lastly, to give him an emollient clyster every two or three hours.

INFLAMMATION OF THE KIDNEYS.

Causes.—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion this malady. It may likewise proceed from lying too soft, too much on the back, involuntary contractions or spasms in the urinary vessels, &c.

Symptoms.—There is a sharp pain about the region of the kidneys, with some degree of fever, and a stupor, or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish color; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The pa-

tient feels great uneasiness when he endeavors to walk or sit upright. He lies with more ease on the affected side than on the sound, and has generally a nausea or vomiting, resembling that which happens in the colic.

This disease however may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine, which is a constant symptom of the former, but does not always happen in the latter.

Regimen.—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation, and expels the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, so long as any symptoms of inflammation appear.

Medicine.—Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet, and if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hemorrhoidal veins, as a discharge from these will greatly relieve the patient.

Cloths dipped in warm water, or bladders filled with it, must be applied to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial.

Emollient clysters ought frequently to be administered; and if these do not open the belly, a little salt and honey or manna may be added to them.

The same course is to be followed where gravel or a stone is lodged in the kidney; but when the gravel or stone is separated from the kidney, and lodges in the ureter,* it will be

* The ureters are two long and small canals, one on each side, which carry the urine from the basin of the kidneys to the bladder. They are sometimes obstructed by small stones or gravel falling down from the kidneys and lodging in them.

proper, besides the fomentations, to rub the part with a little sweet oil, and to give gentle diuretics; as juniper water sweetened with the syrup of marsh-mallows, or a tea-spoonful of the sweet spirits of nitre, now and then, in a cup of the patient's drink. He ought likewise to take exercise on horse-back, or in a coach, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chillness, shivering, &c., there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shows that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour, and salted provisions; and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley and common pot-herbs, &c. His drink may be whey, and buttermilk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character, however, it must be drank for a considerable time. Chalybeate waters have likewise been found beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great Britain. It must likewise be used for a considerable time, in order to produce any salutary effects.

Those who are liable to frequent returns of inflammation or obstruction of the kidneys must abstain from wines, especially such as abound with tartar, and their food ought to be light and of easy digestion. They should use moderate exercise, and should not lie too hot nor too much on their back.

INFLAMMATION OF THE BLADDER.

The inflammation of the bladder proceeds, in a great measure, from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty in passing urine, with some degree of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease must be treated on the same principles as the one immediately preceding. The diet must be light and thin, and the drink cooling and diluting. Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it. The lower part of the belly should be

frequently fomented with warm water or a decoction of mild vegetables, and emollient clysters ought frequently to be administered, &c.

The patient should abstain from every thing that is of a hot, acrid, and stimulating nature, and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hemorrhoidal veins, hard *fæces* lodged in the *rectum*, a stone in the bladder, excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. Each of these requires a particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them a mild and gentle treatment is the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder by using strong diuretics, as oil of turpentine, &c., for that purpose.

INFLAMMATION OF THE LIVER.

The liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or scirrhus.

Causes.—Besides the common causes of inflammation, we may here reckon the following, viz., excessive fatness, a scirrhus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust or atrabilarian state of the blood, any thing that suddenly cools the liver after it has been greatly heated, stones obstructing the course of the bile, drinking strong wines and spirituous liquors, using hot spicy aliment, obstinate hypochondriacal distempers, &c.

Symptoms.—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish color of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of

the liver where the inflammation happens. Sometimes the pain is so inconsiderable that an inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hiccough, and a pain extending to the shoulder, with difficulty of lying on the left side, &c.

This disease may be distinguished from the pleurisy by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriac disorders by the degree of fever with which it is always attended.

This disease, if properly treated, is seldom mortal. A constant hiccoughing, violent fever, and excessive thirst, are very bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When a scirrhus of the liver ensues, the patient, if he observes a proper regimen, may live a number of years tolerably easy; but if he indulges in animal food and strong liquors, or takes medicines of an acrid or irritating nature, the scirrhus will be converted into a cancer, which must infallibly prove fatal.

Regimen.—The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided, and cool diluting liquors, as whey, barley water, &c., drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

Medicine.—Bleeding is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided. The belly, however, must be kept gently open; a decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be frequently fomented with warm water, in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered; and if the pain should notwithstanding continue violent, a blistering plaster may be applied over the part affected.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a dram of purified nitre, or half a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a day.

When there is an inclination to sweat, it ought to be promoted, but not by warm sudorifics. The only thing to be used for that purpose is plenty of diluting liquors, drank about the warmth of the human blood. Indeed the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, nothing must be given to stop them unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If the disorder, in spite of all endeavors to the contrary, should end in a scirrhus, the patient must be careful to regulate his diet, &c., in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions; but should, for the most part, live on mild vegetables, as fruits and roots, taking gentle exercise, and drinking whey, barley water, or buttermilk. If he takes any thing stronger, it should be fine mild ale, which is less heating than wines or spirits.

We shall take no notice of inflammations of the other viscera; they must in general be treated upon the same principles as those already mentioned. The chief rule with respect to all of them is to avoid every thing that is strong or of a heating nature, to apply warm fomentations to the part affected, and to let the patient drink a sufficient quantity of weak, warm, diluting liquors.

CHAPTER XXXI.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

The *cholera morbus* is a violent purging and vomiting, attended with gripes, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it.

Causes.—It is occasioned by a redundancy and putrid acri-

mony of the bile, cold, food that easily turns rancid or sour on the stomach, as butter, fat pork, sweetmeats, cucumbers, melons, cherries, &c. It is sometimes the effect of strong acrid purges or vomits, or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind, as fear, anger, &c.

Symptoms.—It is generally preceded by a *cardialgy*, or heart-burn, sour belchings and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting, and purging of green, yellow, or blackish-colored bile, with a distention of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold or cramped, and are often covered with a clammy sweat, the urine is obstructed, and there is a palpitation of the heart. Violent hiccoughing, fainting, and convulsions, are the signs of approaching death.

Medicine.—At the beginning of this disease the efforts of nature to expel the offending cause must be assisted by promoting the purging and vomiting. For this purpose, the patient must drink freely of diluting liquors; as whey, buttermilk, warm water, thin water gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken broth. This should not only be drank plentifully to promote the vomiting, but a clyster of it given every hour, in order to promote the purging.

After these evacuations have been continued for some time, a decoction of toasted oat bread may be drank to stop the vomiting. The bread should be toasted till it is of a brown color, and afterwards boiled in spring-water. If oat bread cannot be had, wheat bread, or oatmeal well toasted, may be used in its stead. If this does not put a stop to the vomiting, two table-spoonfuls of the saline julep, with ten drops of laudanum, may be taken every hour till it ceases.

The vomiting and purging, however, ought never to be stopped too soon. So long as these discharges do not weaken the patient they are salutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is weakened by the evacuations, which may be known from the sinking of his pulse, &c., recourse must immediately be had to opiates, as recommended above; to which may be added

strong wines with spirituous cinnamon waters, and other generous cordials. Warm negas, or strong wine whey, will likewise be necessary to support the patient's spirits and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his fect.

When the violence of the disease is over, to prevent a relapse, it will be necessary, for some time, to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or other bitters, in small wine, may be drank for some time.

Though physicians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking instance in an old man and his son, who had been both seized with it about the middle of the night. I did not see them till next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid; the countenance was ghastly, and the strength almost exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

A DIARRHŒA, OR LOOSENESS.

A looseness, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped unless when it continues too long or evidently weakens the patient. As this, however, sometimes happens, we shall point out the most common causes of a looseness, with the method of treatment proper in each case.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs frequently in lukewarm water, to wear flannel next the skin, and to take every other method to restore the perspiration.

In a looseness which proceeds from excess or repletion, a vomit is the proper medicine. Vomits not only cleanse the

stomach, but promote all the secretions, which renders them of great importance in carrying off a debauch. Half a dram of ipecacuanha in powder will answer this purpose very well. A day or two after the vomit, the same quantity of rhubarb may be taken, and repeated two or three times, if the looseness continues. The patient ought to live upon light vegetable food of easy digestion, and to drink whey, thin gruel, or barley water.

A looseness occasioned by the obstruction of any customary evacuation generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed. At the same time, every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life, may depend on this.

A periodical looseness ought never to be stopped. It is always an effort of nature to carry off some offending matter, which, if retained in the body, might have fatal effects. Children are very liable to this kind of looseness, especially while teething. It is, however, so far from being hurtful to them, that such children generally get their teeth with least trouble. If these loose stools should at any time prove sour or griping, a tea-spoonful of magnesia alba, with four or five grains of rhubarb, may be given to the child in a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools.

A diarrhœa or looseness which proceeds from violent passions or affections of the mind must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other antispasmodic medicines, are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or pennyroyal tea, every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind, are here of the greatest importance.

When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove the irritation on the bowels.

When the gout, repelled from the extremities, occasions a looseness, it ought to be promoted by gentle doses of rhubarb,

or other mild purgatives. The gouty matter is likewise to be drawn towards the extremities by warm fomentations, cataplasms, &c. The perspiration ought at the same time to be promoted by warm diluting liquors, as wine whey with spirits of hartshorn, or a few drops of liquid laudanum, in it.

When a looseness proceeds from worms, such medicines ought to be used as kill or carry off these vermin, as powder of tin, with purges of rhubarb and calomel, &c. The proper doses of these medicines will be pointed out when we come to treat of diseases occasioned by worms.

A looseness is often occasioned by drinking bad water. When this is the case, the disease generally proves epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected by mixing with it quicklime, chalk, or the like.

In people whose stomachs are weak, violent exercise immediately after eating will occasion a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent medicines, in white wine. Such persons ought likewise to take frequently a glass or two of old red port or good claret.

Persons who from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome food, and meats of hard digestion. They ought likewise to beware of cold, moisture, or whatever may obstruct the perspiration, and should wear flannel next their skin. All violent passions, as fear, anger, &c., are likewise carefully to be guarded against.

VOMITING.

Vomiting may proceed from various causes; as excess in eating or drinking, foulness of the stomach, the acrimony of the aliments, a translation of the morbific matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped, or from the stoppage of any customary evacuation, as the bleeding piles, the *menses*, &c. Vomiting may proceed from a weakness of the stomach, the colic, the iliac

passion, a rupture, a fit of the gravel, worms, or any kind of poison taken into the stomach. It is a usual symptom of injuries done to the brain, as contusions, compressions, &c. It is likewise a symptom of wounds, or inflammations of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unusual motions, as falling, being drawn backwards in a cart or coach, &c. It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting. Sometimes it proceeds from a regurgitation of the bile into the stomach; in this case, what the patient vomits is generally of a yellow or greenish color, and has a bitter taste. Persons who are subject to nervous affections are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a common symptom of pregnancy. In this case it generally comes on about two weeks after the stoppage of the *menses*, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile tea.

When the retrocession of the gout, or the obstruction of customary evacuations, occasion vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding and keeping the belly gently open. The bleeding however ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna or senna. Pregnant women are most apt to vomit in the morning, immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented by taking a dish of tea, or some light breakfast, in bed. Pregnant women who are afflicted with vomiting ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if

the stomach be weak, a little brandy may be added to it. If the spirits be low, and the person apt to faint, a spoonful of cinnamon water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service, as the gentian root, camomile and snake-root, infused in brandy or wine. To these may be added as much rhubarb as will keep the belly gently open. The Peruvian bark is likewise an excellent medicine for bracing and strengthening the stomach. It may be drank in form of tea, or infused in wine or brandy, &c. The elixir of vitriol is also a good medicine in this case. It may be taken in the dose of fifteen or twenty drops, twice or thrice a day, in a glass of wine or water.

A vomiting which proceeds from acidities in the stomach is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a dish of tea or a little milk, three or four times a day, or oftener if necessary, to keep the belly open.

When vomiting proceeds from violent passions or affections of the mind, all evacuations must be carefully avoided, especially vomits. These are exceeding dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negas, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines, are of use. Aromatic plasters have likewise a good effect. The stomach plaster of the London or Edinburgh dispensatory may be applied to the pit of the stomach, or rather a little towards the left side, so as to cover a part of the false ribs. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint tea, wine with spiceries boiled in it, &c. The region of the stomach may be rubbed with ether, or, if that cannot be had, with strong brandy, or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vomiting, from whatever cause it proceeded. These may be prepared by dissolving a dram of the salt of tartar in an ounce and a half of fresh lemon juice, and adding to it an ounce of peppermint

water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swallowed before the effervescence be quite over, and may be repeated every two hours, or oftener, if the vomiting be violent.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. His diet must be so regulated as to sit easy upon the stomach, and he should take nothing that is hard of digestion. We do not however mean that he should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAPTER XXXII.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

The diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people, but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

Causes.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c., where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journeys upon a hard-trotting horse, carrying heavy burdens, running, &c. It may be brought on by the use of strong, stimulating, diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mineral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it happens that they often occasion worse diseases than those they were intended to cure. In a word, this disease may either proceed from too great a laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

Symptoms.—In a diabetes the urine generally exceeds in

quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever, his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away, till the patient is reduced to skin and bone. There is a heat of the bowels, and frequently the loins, testicles, and feet are swelled.

This disease may generally be cured at the beginning, but after it has continued long the cure becomes very difficult. In drunkards and very old people, a perfect cure is not to be expected.

Regimen.—Every thing that stimulates the urinary passages or tends to relax the habit must be avoided. For this reason the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salep, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred, as oysters, crabs, &c.

His drink may be Bristol water. When that cannot be obtained, lime-water with milk may be used. This will be better if an ounce of gum Arabic be dissolved in every pound of it. The white decoction with isinglass dissolved in it is likewise very proper drink.*

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattrass; nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh-brush, and every thing that promotes perspiration, is of service; for this reason the patient ought to wear flannel next his skin. A large strengthening plaster may be applied to the back, or, what will answer the same purpose, a broad girdle may be worn about the loins.

Medicine.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seeds, or any other spiceries, infused in wine, and may be taken in such quantity as to keep the belly gently open.

The patient must next have recourse to astringents and

* The white decoction may be made by boiling two ounces of calcined hartshorn, and half an ounce of gum Arabic, in three English pints of water to two, and afterwards straining it.

corroborants. Half a dram of powder made of equal parts of alum and the gum called *dragon's blood* may be taken four times a day, or oftener if the stomach will bear it. The alum must first be melted in a crucible, afterwards they may both be pounded together. Along with every dose of this powder the patient may take a tea-cupful of the tincture of roses.*

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of three or four ounces three times a day. The alum whey is prepared by boiling two English quarts of milk over a slow fire, with three drams of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink two or three times a day.

The best corroborants which we know are the Peruvian bark and wine. A dram of bark may be taken in a glass of red port or claret three times a day. The medicine will be both more efficacious and less disagreeable if fifteen or twenty drops of the acid elixir of vitriol be added to every dose. Such as cannot take the bark in substance may use the decoction, mixed with an equal quantity of red wine, and sharpened as above.

There is a disease pretty incident to laboring people in the decline of life, called *an incontinency of urine*. But this is entirely different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts, or injuries occasioned by blows, bruises, preternatural labors, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and

* The tincture of roses is made by infusing an ounce of the dried leaves of red roses, and a dram of the spirit of vitriol, in two English pints of boiling water, in a stone-ware vessel, for four hours; afterwards the tincture must be filtered, and four or five ounces of white sugar may be added to it.

corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.

A SUPPRESSION OF URINE.

It has already been observed, that a suppression of urine may proceed from various causes; as an inflammation of the kidneys or bladder, small stones or gravel lodging in the urinary passages, hard *fæces* lying in the *rectum*, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hemorrhoidal veins, &c.

Some of these cases require the catheter, both to remove the obstructing matter and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use.

We would chiefly recommend in all obstructions of urine fomentations and evacuations. Bleeding, as far as the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever by lessening the force of the circulation, but, by relaxing the solids, takes off the spasm or stricture upon the vessels which occasioned the obstruction.

After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables, as mallows, camomile flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply them to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of urine the body ought to be kept open. This is not however to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the belly, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be weak broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A tea-spoonful of the sweet spirits of nitre, or a dram of Castile soap, may be frequently put into the patient's

drink; and if there be no inflammation, he may drink small gin punch without acid.

Persons subject to a suppression of urine ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acids and strong wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

THE GRAVEL AND STONE.

When small stones are lodged in the kidneys, or discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happens to make a lodgment in the bladder for some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

Causes.—The stone and gravel may be occasioned by high living, the use of strong astringent wines, a sedentary life, lying too hot, soft, or too much upon the back, the constant use of water impregnated with earthy or stony particles, aliments of an astringent or windy nature, &c. It may likewise proceed from a hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatism, are most subject to it.

Symptoms.—Small stones or gravel in the kidneys occasion pain in the loins, sickness, vomiting, and sometimes bloody urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased, the pain extends towards the bladder, the thigh and leg of the affected side are benumbed, the testicles are drawn upwards, and the urine is obstructed.

A stone in the bladder is known from a pain at the time, as well as before and after making water; from the urine coming away by drops, or stopping suddenly when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a coach in a rough road; from a white, thick, copious, stinking, mucous sediment in the urine; from an itching in the top of the *penis;* from an inclination to go to stool during the discharge of urine; from the patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and, lastly, from sounding or searching with the catheter.

Regimen.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly to consist of such things as tend to promote the secretion of urine and to keep the belly open. Artichokes, asparagus, spinnage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes may be safely eaten. Onions, leeks, and celery are, in this case, reckoned medicinal. The most proper drinks are whey, milk and water, barley water, decoctions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, &c. If the patient has been accustomed to generous liquors, he may drink small gin punch without acid.

Gentle exercise is proper, but violent exercise is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons afflicted with gravel often pass a great number of stones after riding on horseback or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is a hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease be persisted in, it cannot fail to aggravate it.

Medicine.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the *ureter* or some part of the urinary passages, the patient must be bled, warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the article *Inflammation of the Kidneys and Bladder*, to which therefore we refer.

Dr. Whytt advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The doctor very justly observes, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the doctor recom-

mends Alicant soap, and oyster or cockle-shell lime-water,* to be taken in the following manner. The patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water. The soap is to be divided into three doses; the largest to be taken fasting in the morning early, the second at noon, and the third at seven in the evening, drinking above each dose a large draught of the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former and three drams of the latter may be taken daily. This quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months, nay, if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but, if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

The only other medicine which we shall mention is the *uva ursi*. It has been greatly extolled of late both for the gravel and stone. It seems, however, to be in all respects inferior to the soap and lime-water, but as it is less disagreeable, and has frequently, to my knowledge, relieved gravelly complaints, it deserves a trial. It is generally taken in powder from half a dram to a whole dram, two or three times a day. It may, however, be taken to the quantity of seven or eight drams a day with great safety and good effect.

* Oyster-shell lime-water is prepared by pouring an English gallon and a half of boiling water upon a pound of oyster-shells reduced to a quicklime by being burnt. Where oyster or cockle-shells cannot be had, common quicklime may be used in their stead. After the clear liquor has been poured off, the same quantity of lime will make a second or third quantity of water of nearly the same strength as the first.

CHAPTER XXXIII.

INVOLUNTARY DISCHARGES OF BLOOD.

Spontaneous or involuntary discharges of blood often happen from various parts of the body. These, however, are so far from being always dangerous, that they prove often salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor indeed is it proper at any time to stop them unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had the discharge been allowed to go on, might have been prevented.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of nature to relieve herself, and fatal diseases have often been the consequence of obstructing them. It may indeed be sometimes necessary to check the violence of such discharges, but even this requires the greatest caution. Instances might be given where the stopping of a small periodical flux of blood from one of the fingers has proved fatal.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to a hæmoptœ or discharge of blood from the lungs. After the middle period of life, hemorrhoidal fluxes are most common, and in the decline of life discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different and often from quite opposite causes. Sometimes they are owing to a particular construction of the body, as a sanguine temperament, a laxity of the vessels, a plethoric habit, &c. At other times they proceed from a determination of the blood towards one particular part, as the head, the hemorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever; this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hemorrhages. Thus, in putrid fevers, the dysentery, the scurvy, the malignant small-pox, &c., there are often very great discharges of blood from different parts of the body. They may likewise be brought on by too liberal a use of medicines which tend to dissolve the blood, as cantharides, the volatile alkaline salts, &c. Food of an acrid or irritating quality may likewise occasion hemorrhages; as also strong purges and vomits, or any thing that greatly stimulates the bowels.

Violent passions or agitations of the mind will likewise occasion hemorrhages. These often cause bleeding at the nose, and I have known them sometimes occasion a hemorrhage in the brain. Violent efforts of the body, by overstraining or hurting the vessels, may have the same effect, especially when the body is long kept in an unnatural posture, as hanging the head very low, &c.

The cure of a hemorrhage must be adapted to its cause. When it proceeds from too much blood or a tendency to inflammation, bleeding, with gentle purges and other evacuations, will be necessary. It will likewise be proper for the patient in this case to live chiefly upon a vegetable diet, to avoid all strong liquors, and food that is of an acrid, hot, or stimulating quality. The body should be kept cool and the mind easy.

When a hemorrhage is owing to a putrid or dissolved state of the blood, the patient ought to live chiefly upon acid fruits with milk, and vegetables of a nourishing nature, as sago, salep, &c. His drink may be wine diluted with water, and sharpened with the juice of lemon, vinegar, or spirits of vitriol. The best medicine in this case is the Peruvian bark, which may be taken according to the urgency of the symptoms.

When a flux of blood is the effect of acrid food, or o. strong stimulating medicines, the cure is to be effected by soft and mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam or the same quantity of spermaceti.

When an obstructed perspiration or a stricture upon any part of the system is the cause of a hemorrhage, it may be removed by drinking warm diluting liquors, lying abed, bathing the extremities in warm water, &c.

BLEEDING AT THE NOSE.

Bleeding at the nose is commonly preceded by some degree of quickness of the pulse, a flushing in the face, pulsation of the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound with blood this discharge is very salutary. It often cures a vertigo, the headache, a frenzy, and even an epilepsy. In fevers where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lancet.

In a discharge of blood from the nose, the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease or the cure of the disease. This conduct proceeds from fear; but it has often bad, and sometimes even fatal, consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary; and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped; especially if the symptoms of a plethora, mentioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head inclining a little backwards, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may like-

wise be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint, dipped in strong spirits of wine, may be put up the nostrils, or, if that cannot be had, they may be dipped in brandy. Blue vitriol dissolved in water may likewise be used for this purpose, or a tent, dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white sugar, burnt alum, and white vitriol, and put up the nostril from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not however be amiss to give the patient half an ounce of Glauber's salt, and the same quantity of manna, dissolved in four or five ounces of barley water. This may be taken at a draught, and repeated if it does not operate in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener if the stomach will bear it. If a stronger medicine be necessary, a tea-cupful of the tincture of roses, with twenty or thirty drops of the small spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may drink water, with a little common salt in it, or equal parts of water and vinegar.

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have seldom known this fail.

Sometimes, when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very apt to do after losing a great quantity of blood.*

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose

* When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils and bringing them out at the mouth, then fastening pledgets or small rolls of linen cloth to their extremities, afterwards drawing them back and tying them on the outside with a sufficient degree of tightness.

nor take away the tents or clotted blood till they fall off of their own accord, and should not lie with his head low.

Those who are affected with frequent bleeding at the nose ought to bathe their feet often in warm water, and to keep them warm and dry. They ought to wear nothing tight about their necks, to keep their body as much in an erect posture as possible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a dose of physic, is the safest way to lessen it.

But when the disease proceeds from a thin dissolved state of the blood, the diet should be rich and nourishing; as strong broths and jellies, sago gruel with wine and sugar, &c. Infusions of the Peruvian bark in wine ought likewise to be taken and persisted in for a considerable time.

BLEEDING AND BLIND PILES.

A discharge of blood from the hemorrhoidal vessels is called the *bleeding piles*. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the *blind piles*.

Persons of a loose spongy fibre, of a bulky size, who live high and lead a sedentary and inactive life, are most subject to this disease. It is often owing to a hereditary disposition. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine, plethoric habit or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wines, the neglect of bleeding or other customary evacuations, much riding, great costiveness, or any thing that occasions hard or difficult stools. Anger, grief, and other violent passions, will likewise occasion the piles. I have often known them brought on by cold, especially about the *anus*. A pair of thin breeches will occasion the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with the piles.

A flux of blood from the *anus* is not always to be reckoned a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondri-

acal complaints, and often proves critical in colics and inflammatory fevers.

In the treatment of this disease regard must be had to the patient's habit of body, his age, strength, and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate and even salutary to another. That only is to be esteemed dangerous which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other secretions necessary to life.

When this is the case, the discharge must be checked by a proper regimen and astringent medicines. The diet must be cool but nourishing, consisting chiefly of bread, milk, cooling vegetables, and broths. The drink may be chalybeate water, orange whey, dococtions or infusions of the astringent and mucilaginous plants, as the tormentil root, bistort, the marshmallow roots, &c.

Old conserve of roses is a very good medicine in this case. It may be mixed with new milk, and taken in the quantity of an ounce three or four times a day. This medicine is in no great repute, owing to its being seldom taken in such quantity as to produce any effects; but when taken as here directed, and duly persisted in, I have known it perform very extraordinary cures in violent hemorrhages, especially when assisted by the tincture of roses; a tea-cupful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case, both as a strengthener and astringent. It may be taken in red wine, sharpened with the spirit of vitriol.

The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hemorrhoidal veins.

In the *blind piles* bleeding is generally of use. The diet must be light and thin, and the drink cool or diluting. It is likewise necessary that the belly be kept gently open. This may be done by small doses of the flowers of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a day, or as often as is necessary to keep the belly easy. Or an ounce of the flowers of brimstone and half an ounce of purified nitre may

be mixed with three or four ounces of the lenitive electuary, and a tea-spoonful of it taken three or four times a day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the *anus* that they cannot be thrown up. In this case I have known a vomit have an exceedingly good effect.

When the piles are exceedingly painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or if they will fix upon the piles themselves so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger.

Various ointments and other external applications are recommended in the piles, but I do not remember ever to have seen any effects from these worth mentioning. Their principal use is to keep the part moist, which may be done as well by a soft poultice or an emollient cataplasm. When the pain however is very great, a liniment made of two ounces of emollient ointment and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

SPITTING OF BLOOD.

We mean here to treat of that discharge of blood from the lungs only which commonly goes by the name of an *hæmoptœ*, or *spitting of blood*. Persons of a slender make and a lax fibre, who have long necks and straight breasts, are most liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young are afterwards most liable to an hæmoptœ.

Causes.—An hæmoptœ may proceed from excess of blood, from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against vio-

lent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs. These may either be received from without, or they may be occasioned by hard bodies getting into the windpipe, and so falling down upon the lungs, and hurting that tender organ. The obstructing of any customary evacuation may occasion a spitting of blood; as the neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, scirrhous concretions, or any thing that obstructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough; in which case it is generally the forerunner of a consumption. A violent degree of cold suddenly applied to the external parts of the body will occasion an hæmoptœ. It may likewise be occasioned by breathing air which is too much rarefied to be able properly to expand the lungs. This is often the case with those who work in hot places, as furnaces, glass-houses, &c. It may likewise happen to such as ascend to the top of very high mountains, as the Peak of Teneriff, &c.

Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some cases not an unfavorable one. This is the case in pleurisies, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shows that the lungs are ulcerated.

Symptoms.—Spitting of blood is generally preceded by a sense of weight and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pains of the back and loins, &c. As these show a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means these may always be distinguished from an hæmoptœ. Sometimes the blood that is spit up is thin, and of a florid red color, and at other times it is thick, and of a dark or blackish color; nothing however can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the breast before it was discharged.

Spitting of blood, in a strong healthy person, of a sound constitution, is not very dangerous; but when it attacks the tender and delicate, or persons of a weak lax fibre, it is with difficulty removed. When it proceeds from a scirrhus or polypus of the lungs, it is bad. The danger is greater when the discharge proceeds from the rupture of a large vessel than of a small one. When the extravasated blood is not spit up, but lodges in the breast, it corrupts, and greatly increases the danger. When the blood proceeds from an ulcer in the lungs, it is generally fatal.

Regimen.—The patient ought to be kept cool and easy. Every thing that heats the body or quickens the circulation increases the danger. The mind ought likewise to be soothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender, as rice boiled with milk, small broths, barley gruels, panado, &c. The diet, in this case, can scarce be too low. Even water gruel is sufficient to support the patient for some days. All strong liquors must be avoided. The patient may drink milk and water, barley water, whey, buttermilk, and such like. Every thing however should be drank cold, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

Medicine.—This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines. More mischief is often done by these than if it were suffered to go on. It may however proceed so far as to weaken the patient, and even to endanger his life, in which case proper means must be used for restraining it.

The belly should be kept gently open by laxative diet, as roasted apples, stewed prunes, &c. If these should not have the effect, a tea-spoonful of the lenitive electuary may be taken twice or thrice a day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for bleeding at the nose.

If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple or half a dram of nitre may be taken in a cup of his ordinary drink twice or thrice a day. His drink may likewise be sharpened with acids, as juice of lemon, or a few drops of the spirit of vitriol; or he may take frequently a cup of the tincture of roses.

Bathing the feet and legs in lukewarm water has likewise a very good effect in this disease. Opiates too are sometimes

beneficial; but these must be administered with caution. Ten or twelve drops of laudanum may be given in a cup of barley water twice a day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity and long enough persisted in. It may be taken to the quantity of three or four ounces a day; and if the patient be troubled with a cough, it should be made into an electuary with balsamic syrup and a little of the syrup of poppies.

If stronger astringents be necessary, fifteen or twenty drops of the acid elixir of vitriol may be given in a glass of water three or four times a day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body and violent agitations of the mind.

VOMITING OF BLOOD.

This is not so common as the other discharges of blood which have already been mentioned, but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pains in the stomach, sickness and nausea, and is accompanied with great anxiety and frequent fainting fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women, and sometimes from the stoppage of the hemorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poisons, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation.

A great part of the danger in this disease arises from the extravasated blood lodged in the bowels and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this is to keep the belly gently open by frequently exhibiting emollient clysters. Pur-

ges must not be given till the discharge is stopped, otherwise they will irritate the stomach and increase the disorder. All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy. When there are signs of an inflammation, bleeding may be necessary; but the patient's weakness will seldom permit it. Astringents can seldom be used, as they stimulate the stomach, and of course increase the disease. Opiates may be of use, but they must be given in very small doses, as four or five drops of liquid laudanum twice or thrice a day. After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodged in the intestines, gentle purges will be necessary.

BLOODY URINE.

This is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark color, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the ureters, it is attended with a pain in the back and difficulty of making water. If the coats of the bladder are hurt by a stone and bloody urine follows, it is attended with the most acute pain and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may also proceed from ulcers or erosions of the bladder, from a stone lodged in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger, but it is peculiarly so when mixed with purulent matter, as this shows an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge, however, be very great,

it may waste the patient's strength and occasion an ill habit of body, a dropsy, or a consumption, &c.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure depends upon an operation, a description of which would be foreign to our purpose.

If it be attended with a plethora, and symptoms of inflammation, bleeding will be necessary. The belly must likewise be kept open by emollient clysters, or cooling purgative medicines, as crystals of tartar, rhubarb, manna, or small doses of lenitive electuary.

When bloody urine proceeds from a dissolved state of the blood, it is commonly the symptom of some malignant disease, as the small-pox, a putrid fever, or the like. In this case, the patient's life depends on the liberal use of the Peruvian bark and acids, as has already been shown.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft, healing, balsamic quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum Arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum Arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a day.

The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If, however, the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water,* with half an ounce of the tincture of Peruvian bark, three times a day.

DYSENTERY, OR BLOODY FLUX.

This disease prevails in the spring and autumn. It is very infectious, and often epidemical. Persons are most liable to

* Lime-water is prepared by pouring two English gallons of water gradually upon a pound of quicklime; when the ebullition is over, let the whole stand to settle for two days, then filter the liquor through paper. It should be kept in vessels closely stopped.

it who are much exposed to the night air, or who live in places where the air is confined and unwholesome. Hence it often proves fatal in camps, on shipboard, in jails, hospitals, and such like places.

Causes.—This disease may be occasioned by any thing that obstructs the perspiration or renders the humors putrid, as damp beds, wet clothes, unwholesome diet, air, &c. But it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labor under the disease. Even the smell of the patient's excrements has been known to communicate the infection.

Symptoms.—It is known by a flux of the belly, attended with violent pain of the bowels, a constant inclination to go to stool, and generally less or more blood in the stools. It begins, like other fevers, with chillness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy or frothy, afterwards they are streaked with blood, and at last have frequently the appearance of pure blood, mixed with small filaments resembling bits of skin. Sometimes, however, there is no blood in the stools through the whole course of the disease. When the patient goes to stool, he feels a bearing down, as if the whole bowels were falling out, and sometimes a part of the intestine is actually protruded, which proves exceeding troublesome, especially in children.

This disease may be distinguished from a diarrhœa or looseness by the acute pain of the bowels, and the blood which generally appears in the stools. It may be distinguished from the *cholera morbus* by its not being attended with such violent and frequent fits of vomiting, &c.

When the dysentery attacks the old, the delicate, or such as have been wasted by scorbutic, consumptive, or other lingering diseases, it generally proves fatal. Vomiting and hiccoughing are bad signs, as they show an inflammation of the stomach. When the stools have an exceeding disagreeable smell, are green, black, or mixed with small glandular substances or bits of skin, the danger is great. It is an unfavorable symptom when clysters are immediately returned, but still more so when the passage is so obstinately shut that they cannot be injected. A weak pulse, coldness of the extremities, with difficulty of swallowing, and convulsions, are signs of approaching death.

Regimen.—Nothing is of more importance in this disease

than cleanliness; it contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread, by the neglect of cleanliness, but in none more than this. Every thing about the patient should be frequently changed; the excrements should never be suffered to continue in his chamber, but removed immediately and buried under ground. A constant stream of fresh air should be admitted into the chamber, and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal than the fears and apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill, it cannot fail to have the worst effects.

A flannel waistcoat worn next the skin has often a very good effect in a dysentery; this promotes the perspiration without overheating the body. Great caution, however, is necessary in leaving it off. I have often known a dysentery brought on by imprudently throwing off a flannel waistcoat before the season was sufficiently warm. For whatever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet. Flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may be eaten. Gelatinous broth not only answers the purpose of food, but likewise of medicine. I have often known dysenteries cured by it, after pompous medicines had proved ineffectual.

Another kind of food very proper in the dysentery, which may be used by such as cannot take the broth mentioned above, is made by boiling a few handfuls of fine flour, tied in a cloth, for six or seven hours, till it becomes as hard as starch. Two or three table-spoonfuls of this may be grated down, and boiled in such a quantity of new milk and water as to be of the thickness of pap; this may be sweetened to the patient's taste, and taken for his ordinary food.

The patient may likewise be allowed to eat freely of most

kinds of good ripe fruit, as apples, grapes, currant-berries strawberries, &c. These may either be eaten raw or boiled, with or without milk, as the patient chooses. The prejudice against fruit in this disease is so great that many believe it to be the common cause of dysenteries. This, however, is an egregious mistake; both reason and experience show that good fruit is one of the best medicines both for the prevention and cure of the most dangerous kind of dysentery. In a dysentery arising from a putrid state of the humors, fruit is in every respect calculated to counteract that tendency to putrefaction from whence all the danger proceeds. The patient in such a case ought therefore to be allowed to eat as much fruit as he pleases, provided it be good.*

The most proper drink in this disorder is whey; the dysentery has often been cured by the use of clear whey alone. It may be taken both for drink and in form of clyster. When whey cannot be had, barley water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two English quarts of water to one. Warm water, water gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile tea, if the stomach will bear it, is an exceeding proper drink. It both strengthens the stomach, and by its antiseptic quality tends to prevent a mortification of the bowels.

Medicine.—At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile tea. Strong vomits are seldom necessary here.

* I lately saw a young man who had been seized with a dysentery in North America. Many things had been tried there for his relief, but to no purpose. At length, tired out with disappointments from medicine, and reduced to skin and bone, he came over to Britain, rather with a view to die among his relations than with any hopes of a cure. After taking sundry medicines here with no better success than abroad, I advised him to leave off the use of drugs, and to trust entirely to a diet of milk and fruits, with gentle exercise. Strawberries was the only fruit he could procure at that season. These he ate with milk twice and sometimes thrice a day. The consequence was, that in a short time his stools were reduced from upwards of twenty in a day to three or four, and sometimes not so many. He used the other fruits as they came in, and was in a few weeks so well as to leave that part of the country where I was, with a view to return to America.

A scruple, or at most half a dram, of ipecacuanha is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a dram or two scruples of rhubarb must be taken. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a day.

These evacuations, and the regimen prescribed above, will often be sufficient to effect a cure. Should it, however, happen otherwise, the following astringent medicines may be used.

A clyster of starch or fat mutton-broth, with twenty or thirty drops of liquid laudanum in it, may be administered twice a day. At the same time an ounce of gum Arabic, and half an ounce of gum tragacanth, may be dissolved in an English pint of barley water, over a slow fire, and a table-spoonful of it taken every hour.

If these have not the desired effect, the patient may take, four times a day, about the bulk of a nutmeg of the *Japonic confection*, drinking after it a tea-cupful of the decoction of logwood.*

Persons who have been cured of this disease are very liable to suffer a relapse; to prevent which, great circumspection with respect to the diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt liquor. He must likewise abstain from animal food, as fish and flesh, and must live principally upon milk and vegetables.

Gentle exercise and wholesome air are likewise of importance. The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback or in a carriage. He may likewise use bitters infused in wine or brandy, and may drink twice a day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food and the free use of sound ripe fruits and other vegetables. The night

* The decoction of logwood is made by boiling three or four ounces of the shavings of that wood in two English quarts of water till one half be consumed, adding towards the end two drams of cinnamon bark. This decoction gives the stools a reddish color, but the patient need not be alarmed at that appearance.

air is to be carefully avoided, and all communication with the sick. Bad smells are likewise to be shunned, especially those which arise from putrid animal substances. The office-houses where the sick go are carefully to be avoided.

When the first symptoms of the dysentery appear, the patient ought immediately to take a vomit, to go to bed, and drink plentifully of weak warm liquor, to promote a sweat. This, with a dose or two of rhubarb at the beginning, would often carry off the disease. In countries where dysenteries prevail, we would advise such as are liable to them to take either a vomit or a dose of physic every spring and autumn, as a preventive.

There are sundry other fluxes of the belly, as the Lientery and Cœliac Passion, which, though less dangerous than the dysentery, yet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great that the food passes through them without almost any sensible alteration; and the patient dies merely from the want of nourishment.

When the lientery or cœliac passion succeed a dysentery, they often prove fatal. They are always dangerous in old age, especially when the constitution has been broken by excess or acute diseases. If the stools be very frequent and quite crude, the thirst great, with little urine, the mouth ulcerated, and the face marked with spots of different colors, the danger is very great.

The treatment of the patient is in general the same as in the dysentery. In all obstinate fluxes of the belly, the cure must be attempted by first cleansing the stomach and bowels with gentle vomits and purges. Afterwards, such a diet as has a tendency to brace and strengthen the bowels, with opiates and astringent medicines, will generally perfect the cure.

The same observation holds with respect to a Tenesmus, or frequent desire of going to stool. This disease resembles the dysentery so much, both in its symptoms and method of cure, that we think it needless to insist upon it.

CHAPTER XXXIV.

HEADACHE.

ACHES and pains proceed from very different causes, and may affect any part of the body; but we shall point out those only which occur most frequently and are attended with the greatest danger.

When the headache is slight, and affects a particular part of the head only, it is called *cephalalgia;* when the whole head is affected, *cephalæa;* and when one side only, *hemicrania.* A fixed pain in the forehead, which may be covered with the end of the thumb, is called the *clavis hystericus.*

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the headache proceeds from a hot bilious habit, the pain is very acute and throbbing, with a considerable heat of the part affected; when from a cold phlegmatic habit, the patient complains of a dull heavy pain, and has a sense of coldness in the part. This kind of headache is sometimes attended with a degree of stupidity or folly.

Whatever obstructs the free circulation of the blood through the vessels of the head may occasion a headache. In persons of a full habit, who abound with blood or other humors, the headache often proceeds from the suppression of customary evacuations, as bleeding at the nose, sweating of the feet, &c. It may likewise proceed from any cause that determines a greater flux of blood towards the head, as coldness of the extremities, hanging of the head, &c. Whatever prevents the return of the blood from the head will likewise occasion the headache, as looking long obliquely at any object, wearing any thing tight about the neck, &c.

When a headache proceeds from the stoppage of a running at the nose, there is a heavy, obtuse, pressing pain in the fore part of the head, in which there seems to be such a weight that the patient can scarce hold it up. When it is occasioned by the caustic matter of the venereal disease, it generally affects the skull, and often produces a *caries* of the bones.

Sometimes the headache proceeds from the repulsion or retrocession of the gout, the erysipelas, the small-pox, measles, itch, or other eruptive diseases. What is called a *hemi-*

crania generally proceeds from crudities or indigestion. Inanition or emptiness will also occasion headaches. I have often seen instances of this in nurses who gave suck too long, or who did not take a sufficient quantity of solid food.

There is likewise a most violent, fixed, constant, and almost intolerable headache, which occasions great debility both of body and mind, prevents sleep, destroys the appetite, causes a vertigo, dimness of sight, a noise in the ears, convulsions, epileptic fits, and sometimes vomiting, costiveness, coldness of the extremities, &c.

The headache is often symptomatic in continual and intermitting fevers, especially quartans. It is likewise a very common symptom in hysteric and hypochondriac complaints.

When a headache attends an acute fever, with pale urine, it is an unfavorable symptom. In excessive headaches, coldness of the extremities is a bad sign. When the disease continues long and is very violent, it often terminates in blindness, an apoplexy, deafness, a vertigo, the palsy, epilepsy, &c.

In this disease the cool regimen in general is to be observed. The diet ought to consist of such emollient substances as will correct the acrimony of the humors and keep the belly open, as apples boiled in milk, spinage, turnips, and such like. The drink ought to be diluting, as barley water, infusions of mild mucilaginous vegetables, decoctions of the sudorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in lukewarm water; the head should be shaved and bathed with water and vinegar. The patient ought, as much as possible, to keep in an erect posture, and not to lie with his head too low.

When the headache is owing to excess of blood, or a hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples and behind the ears, will be of service. Afterwards a blistering plaster may be applied to the neck, behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues or perpetual blisters will be of service. The belly ought likewise to be kept open by gentle lenitives.

But when the headache proceeds from a copious vitiated serum stagnating in the membranes, either within or without the skull, with a dull, heavy, continual pain, which will nei-

ther yield to bleeding nor gentle laxatives, then more powerful purgatives are necessary, as pills made of aloes, resin of jalap, or the like. It will also be necessary in this case to blister the whole head, and to keep the back part of the neck open for a considerable time by a perpetual blister.

When the headache is occasioned by a stoppage of a running at the nose, the patient should frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it, as the herb mastich, ground ivy, &c.

A *hemicrania*, especially a periodical one, is generally owing to a foulness of the stomach, for which gentle vomits must be administered, as also purges of rhubarb. After the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be necessary.

When the headache arises from a vitiated state of the humors, as in the scurvy and venereal disease, the patient, after proper evacuations, must drink freely of the decoction of woods, or the decoction of sarsaparilla with raisins and liquorice.* These promote perspiration, sweeten the humors, and, if duly persisted in, will produce very happy effects. When a collection of matter is felt under the skin, it must be discharged by an incision, otherwise it well render the bone carious.

When the headache is so intolerable as to endanger the patient's life, or is attended with continual watching, delirium, &c., recourse must be had to opiates. These, after proper evacuation by clysters or mild purgatives, may be applied both externally and internally. The affected part may be rubbed with Bate's anodyne balsam, or a cloth dipped in it may be applied to the part. The patient may, at the same time, take twenty drops of laudanum, in a cup of valerian or pennyroyal tea, twice or thrice a day. This is only to be done in case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.

When the patient cannot bear the loss of blood, his feet ought frequently to be bathed in lukewarm water and well rubbed with a coarse cloth. Cataplasms with mustard or horseradish ought likewise to be applied to them. This

* This is made by boiling three ounces of fresh sarsaparilla, an ounce of raisins, and half an ounce of liquorice, in three English quarts of water to one. The liquor must be strained, and an English pint of it drank daily.

course is peculiarly necessary when the pain proceeds from a gouty humor affecting the head.

When the headache is occasioned by great heat, hard labor, or violent exercise of any kind, it may be allayed by cooling medicines, as the saline draughts with nitre, and the like.

TOOTHACHE.

This disease is so well known that it needs no description. It has great affinity with the rheumatism, and often succeeds pains of the shoulders and other parts of the body.

It may proceed from obstructed perspiration, or any of the other causes of inflammation. I have often known the toothache occasioned by neglecting some part of the usual coverings of the head, by sitting with the head bare near an open window, or exposing it any how to a draught of cold air. Food or drink taken either too hot or too cold is very hurtful to the teeth. Great quantities of sugar, or other sweetmeats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts or chewing any kind of hard substances. Picking the teeth with pins, needles, or with any thing that may hurt the enamel with which they are covered, does great mischief, as the tooth is sure to be spoilt whenever the air gets into it. Pregnant women are very subject to the toothache, especially during the first three or four months of pregnancy. The toothache often proceeds from scorbutic humors affecting the gums. In this case the teeth are sometimes wasted, and fall out without any considerable degree of pain. The more immediate cause of the toothache is a rotten or carious tooth.

In order to relieve the toothache, we must first endeavor to draw off the humors from the part affected. This may be done by mild purgatives, bleeding, and bathing the feet frequently in warm water. The perspiration ought likewise to be promoted, by drinking freely of weak wine whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the toothache. It is seldom safe to administer opiates, or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premised, and these alone will often effect the cure.

Next to evacuations we would recommend fomenting the part with warm water or decoctions of emollient vegetables.

Bags filled with boiled camomile flowers, flowers of elder, or the like, may be applied to the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cool. The patient may likewise receive the steams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water, &c.

Gargles are likewise of use to make a discharge from the part. Rob of elder dissolved in small beer makes a very proper gargle, or an infusion of sage or mulberry leaves.

Such things as promote the discharge of saliva, or cause the patient to spit, are always proper. For this purpose bitter, hot, or pungent vegetables may be chewed, as gentian, calamus aromaticus, or pellitory of Spain. Allen recommends the root of yellow water flower-de-luce in this case. This root may either be rubbed upon the tooth or a little of it chewed. Brookes says he hardly ever knew it fail to ease the toothache.

Many other herbs, roots, and seeds, are recommended for curing the toothache, as the leaves or roots of milfoil or yarrow chewed, tobacco smoked or chewed, stavesacre, or the seeds of mustard chewed, &c. These bitter, hot, and pungent things, by occasioning a great flow of saliva, frequently give ease in the toothache.

Opiates often relieve the toothache. For this purpose a little cotton wet with laudanum may be held between the teeth; or a piece of sticking plaster, about the bigness of a sixpence, with a bit of opium in the middle of it, of a size not to prevent the sticking of the other, may be laid on the temporal artery, where the pulsation is most sensible. De la Motte affirms that there are few cases wherein this will not give relief. If there be a hollow tooth, a small pill made of equal parts of camphire and opium, put into the hollow, is often beneficial. When this cannot be had, the hollow tooth may be filled with gum mastich, wax, lead, or any substance that will stick in it and keep out the external air.

Few applications give more relief in the toothache than blistering plasters. These may be applied betwixt the shoulders, but they have the best effect when put behind the ears and made so large as to cover a part of the lower jaw.

After all, when a tooth is carious, it is often impossible to remove the pain without extracting it; and, as a spoilt tooth never becomes sound again, it is prudent to draw it soon, lest

it should affect the rest. Tooth-drawing, like bleeding, is very much practised by mechanics, as well as persons of the medical profession. The operation however is not without danger, and ought always to be performed with care. A person unacquainted with the structure of the parts will be in danger of breaking the jaw-bone, or of drawing a sound tooth instead of a rotten one.

When the toothache returns periodically and the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the toothache from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation, but if found to answer, though only in particular cases, it certainly deserves a trial, as it is attended with no expense and cannot do any harm.

Persons who have returns of the toothache at certain seasons, as spring and autumn, might often prevent it by taking a dose of physic at these times.

Keeping the teeth clean has no doubt a tendency to prevent the toothache. The best method of doing this is to wash them daily with salt and water, or with cold water alone. All brushing and scraping of the teeth is dangerous, and unless it is performed with great care does mischief.

EARACHE.

This disorder chiefly affects the membrane which lines the inner cavity of the ear, called the *meatus auditorius*. It is often so violent as to occasion great restlessness and anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The earache may proceed from any of the causes which produce inflammation. It often proceeds from a sudden suppression of perspiration, or from the head being exposed to cold when covered with sweat. It may also be occasioned by worms or other insects getting into the ear or being bred there, or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occasions deafness, which is generally reckoned a favorable symptom.

When the earache proceeds from insects, or any hard body

sticking in the ear, every method must be taken to remove them as soon as possible. The membranes may be relaxed by dropping into the ear oil of sweet almonds or olive oil. Afterwards the patient should be made to sneeze, by taking snuff or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have seen insects, which had got into the ear, come out of their own accord upon pouring in oil, which is a thing they cannot bear.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck, will be proper. The ear may likewise be fomented with steams of warm water, or flannel bags filled with boiled mallows and camomile flowers may be applied to it warm, or bladders filled with warm milk and water. An exceedingly good method of fomenting the ear is to apply it close to the mouth of a jug filled with warm water or a strong decoction of camomile flowers.

The patient's feet should be frequently bathed in lukewarm water, and he ought to take small doses of nitre and rhubarb, viz. a scruple of the former and ten grains of the latter, three times a day. His drink may be whey, or decoctions of barley and liquorice with figs or raisins. The parts behind the ear ought frequently to be rubbed with camphorated oil or a little of the volatile liniment.

When the inflammation cannot be discussed, a poultice of bread and milk or roasted onions may be applied to the ear, and frequently renewed, till the abscess breaks or can be opened. Afterwards the humors may be diverted from the part by gentle laxatives, blisters, or issues; but the discharge must not be suddenly dried up by any external application.

PAIN OF THE STOMACH.

This may proceed from various causes, as indigestion, wind, the acrimony of the bile, sharp, acrid, or poisonous substances taken into the stomach, &c. It may likewise proceed from worms, the stoppage of customary evacuations, a translation of gouty matter to the stomach, or the like.

Women in the decline of life are very liable to this disease, especially such as are afflicted with hysteric complaints. It

is likewise very common to hypochondriac men of a sedentary and luxurious life. In such persons it often proves so extremely obstinate as to baffle all the powers of medicine.

When the pain of the stomach is most violent after eating, there is reason to suspect that it proceeds from some fault either in the digestion or the food. In this case the patient ought to change his diet till he finds what kind of food agrees best with his stomach, and should continue chiefly to use that. If a change of diet does not remove the complaint, the patient may take a gentle vomit, and afterwards a dose or two of rhubarb. He ought likewise to take an infusion of camomile flowers, or some other stomachic bitter, either in wine or water. I have often known exercise remove this complaint, especially sailing, or a long journey on horseback or in a machine.

When a pain of the stomach proceeds from flatulency, the patient is constantly belching up wind, and feels an uneasy distension of the stomach after meals. This is a most deplorable disease, and is seldom cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule however admits of some exceptions. There are many instances of persons very much troubled with wind, who received great benefit from eating parched pease, though that grain is generally supposed to be of a windy nature.* This complaint may likewise be greatly relieved by exercise, especially digging,† walking, or riding. I have found the elixir of vitriol answer very well in flatulencies. Fifteen or twenty drops of it may be taken in a glass of wine, or a cup of camomile tea, twice or thrice a day.

When a pain of the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit; this may be excited by butter, oils, or other soft things, which sheath and defend the stomach from the acrimony of its contents.

When pain of the stomach proceeds from a translation

* These are prepared by steeping or soaking pease in water, and afterwards drying them in a pot or kiln till they be quite hard. They may be used at pleasure.

† One of the most obstinate cases of this kind I ever met with was in a shoemaker. After trying numberless medicines to no purpose, I advised him to turn gardener, which he did, and has ever since enjoyed very good health.

of gouty matter, warm cordials are necessary, as generous wines, French brandy, &c. Some have drank a whole bottle of brandy or rum, in this case, in a few hours, without being in the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantities necessary upon these occasions. This must be left to the feelings and discretion of the patient. The safer way however is not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile flowers or *carduus benedictus*.

If a pain of the stomach proceeds from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the belly gently open by mild purgatives, as rhubarb or senna, &c. When this disease affects women in the decline of life, after the stoppage of the *menses*, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must be destroyed or expelled, by such means as are recommended in the following section.

CHAPTER XXXV.

OF WORMS.

These are chiefly of three kinds, viz. the *tænia*, or tape-worm, the *teres*, or round and long worm, and the *ascarides*, or round and short worm. There are many other kinds of worms found in the human body; but as they proceed in a great measure from similar causes, have nearly the same symptoms, and require almost the same method of treatment, we shall not spend time in enumerating them.

The tape-worm is white, very long, and all over-jointed. It is generally bred either in the stomach or small intestines. The round and long worm is likewise bred in the small guts, and sometimes in the stomach. The round and short worms commonly lodge in the *rectum*, or what is called the end-gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says the following symptoms particularly attend the *solium*, which is a species of the tape-worm, viz., swoonings, privation of speech, and a voracious appetite. The round worms called *ascarides*, besides an itching of the *anus*, cause swoonings, and tenesmus, or an inclination to go to stool.

Causes.—Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. They are often a symptom of fevers and other acute diseases. There seems to be a hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family, nursed by one woman, have often worms, when those nursed by another have none.

Children are more liable to this disease than adults; though infants on the breast are seldom troubled with it. To this however there are several exceptions. I have seen a child who passed worms before it was three months old. They were indeed of a very particular kind, being real caterpillars. Some of them were above an inch long; they had red heads, and were so brisk as to jump about; they lived several days after the child had passed them. Another child suckled by the same woman passed the same kind of worms when upon the breast, and both children suffered extremely before the worms came away.

Symptoms.—The common symptoms of worms are paleness of the countenance, and at other times a universal flushing of the face; itching of the nose—this however is doubtful, as children pick their noses in all diseases; starting and grinding of the teeth in sleep; swelling of the upper lip; the ap-

petite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish color; griping or colic pains; an involuntary discharge of saliva, especially when asleep; frequent pains of the side, with a dry cough and an unequal pulse; palpitations of the heart; swoonings, drowsiness, cold sweats, palsy, epileptic fits; with many other unaccountable nervous symptoms, which were formerly attributed to witchcraft or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seeds are symptoms of the tape-worm.

I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and upon opening her body a number of the *teres*, or long round worms, were found in her guts, which were considerably inflamed; and what anatomists call an *intussusceptio*, or involving of one part of the gut within another, had taken place in no less than four different parts of the intestinal canal.

Medicines.—Though numberless medicines are extolled for killing and expelling worms, yet no disease more frequently baffles the physician's skill. In general the most proper medicines for their expulsion are strong purgatives; and to prevent their breeding, stomachic bitters, with now and then a glass of good wine.

The best purge for an adult is jalap and calomel. Five and twenty or thirty grains of the former, with six or seven of the latter, mixed in syrup, may be taken early in the morning for a dose. It will be proper that the patient keep the house all day and drink nothing cold. The dose may be repeated once or twice a week, for a fortnight or three weeks. On the intermediate days the patient may take a dram of the powder of tin, twice or thrice a day, mixed with syrup, honey, or treacle.

Those who do not choose to take calomel may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of salad oil and a table-spoonful of common salt may be taken in a glass of red port wine thrice a day, or oftener if the stomach will bear it. But the more common form of using oil is in clysters. Oily clysters, sweetened with sugar or honey, are very efficacious in bring-

ing away the short round worms called *ascarides*, and likewise the *teres*.

The Harrowgate water is an excellent medicine for expelling worms, especially the *ascarides*. As this water evidently abounds with sulphur, we may hence infer that sulphur alone must be a good medicine in this case, which is found to be a fact. Many practitioners give flour of sulphur in very large doses, and with great success. It should be made into an electuary with honey or treacle, and taken in such quantity as to purge the patient.

Where Harrowgate water cannot be obtained, sea-water may be used, which is far from being a contemptible medicine in this case. If sea-water cannot be had, common salt dissolved in water may be drank. I have often seen this used by country nurses with very good effect.

But worms, though expelled, will soon breed again, if the stomach remains weak and relaxed; to prevent which we would recommend the Peruvian bark. Half a dram of bark in powder may be taken in a glass of red port wine, three or four times a day, after the above medicines have been used. Lime-water is likewise good for this purpose, or a table-spoonful of the chalybeate wine taken twice or thrice a day. Infusions or decoctions of bitter herbs may likewise be drank; as the infusion of tansy, water trefoil, camomile flowers, tops of wormwood, the lesser centaury, &c.

The above directions are calculated for adults; but for children, the medicines must be more agreeable, and given in smaller doses.

For a child of four or five years old, ten grains of rhubarb, five of jalap, and two of calomel, may be mixed in a spoonful of syrup or honey, and given in the morning. The child should keep the house all day and take nothing cold. This dose may be repeated twice a week for three or four weeks. On the intermediate days the child may take a scruple of powdered tin and ten grains of æthiops mineral in a spoonful of treacle twice a day. These doses must be increased or diminished according to the age of the patient.

Bisset says the great bastard black hellebore, or *bear's foot*, is a most powerful vermifuge for the long round worms. He orders the decoction of about a dram of the green leaves, or about fifteen grains of the dried leaves in powder, for a dose to a child betwixt four and seven years of age. This dose is to be repeated two or three times. He adds, that the green

leaves made into a syrup with coarse sugar is almost the only medicine he has used for round worms for three years past. Before pressing out the juice, he moistens the bruised leaves with vinegar, which corrects the medicine. The dose is a tea-spoonful at bedtime, and one or two next morning.

I have frequently known those big bellies, which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, but think the powder of tin with æthiops mineral, and the purges of rhubarb and calomel, are more to be depended on.*

Parents who would preserve their children from worms ought to allow them plenty of exercise in the open air; to take care that their food be wholesome and sufficiently solid; and, as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms a glass of red wine after meals, as every thing that braces and strengthens the stomach is good both for preventing and expelling these vermin.†

CHAPTER XXXVI.

OF THE JAUNDICE.

This disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a

* Ball's purging vermifuge powder is a very powerful medicine. It is made of equal parts of rhubarb, scammony, and calomel, with as much double-refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to a fine powder. The dose for a child is from ten grains to twenty, once or twice a week. An adult may take a dram for a dose.

† We think it necessary here to warn people of their danger, who buy cakes, powders, and other worm medicines, at random from quacks, and give them to their children without proper care. The principal ingredient in most of these medicines is mercury, which is never to be trifled with. I lately saw a shocking instance of the

yellow appearance. The urine too is of a saffron hue, and dies a white cloth of the same color. There is another species of this disease, called the Black Jaundice.

Causes.—The immediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c.; the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants it is often occasioned by the *meconium* not being sufficiently purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fevers. Catching cold, or the stoppage of customary evacuations, as the *menses*, the bleeding piles, issues, &c., will occasion the jaundice.

Symptoms.—The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish or clay color, and the urine, as was observed above, is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression on his breast. There is a heat in the nostrils, a bitter taste in the mouth, loathing of food, sickness at the stomach, vomiting, flatulency, and frequently all objects appear to the eye of a yellow color.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

Regimen.—The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables, as apples boiled or roasted, stewed prunes, preserved plums, boiled spinage, &c. Veal or chicken broth, with light bread, are likewise very proper. The drink should be buttermilk, whey

danger of this conduct. A girl who had taken a dose of worm-powder, bought of a travelling quack, went out, and perhaps was so imprudent as to drink cold water, during its operation. She immediately swelled, and died that very day, with all the symptoms of having been poisoned.

sweetened with honey, or decoctions of cool opening vegetables, as marsh-mallow roots, with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback or in a machine; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull melancholy disposition; whatever therefore tends to promote the circulation and to cheer the spirits must have a good effect, as dancing, laughing, singing, &c.

Medicine.—If the patient be young, of a full sanguine habit, and complains of pain in the right side, about the region of the liver, bleeding will be necessary. After this a vomit must be administered, and if the disease prove obstinate it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a dram of ipecacuanha in powder will be a sufficient dose for an adult. It may be wrought off with weak camomile tea or lukewarm water.

The belly must likewise be kept open by mild purgatives. Castile soap, if taken in sufficient quantities, answers this purpose very well. It may be taken from half an ounce to an ounce daily, for a considerable time. As few people have resolution to swallow such large quantities of soap, I generally give pills made of soap, aloes, and rhubarb, which answer the same intention in a smaller dose. They may be prepared and taken as under.*

Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-brush, are likewise beneficial; but it is still more so for the patient to sit in a vessel of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit.

* Take socotrine aloes and Turkey rhubarb in powder of each two drams, Castile soap an ounce. Beat them all together, with a little syrup, into a proper consistence for pills. Let them be formed into pills of an ordinary size, and five or six of them taken twice or thrice a day. They must be continued for some time, and the quantity regulated by the patient's stools, of which he ought to have at least two every day.

Many dirty things are recommended for the cure of the jaundice, as lice, millepedes, &c. But these do more harm than good, as people trust to them and neglect more valuable medicines; besides, they are seldom taken in sufficient quantity to produce any effects. People always expect that such *things* should act as charms, and consequently seldom persist in the use of them. Vomits, purges, fomentations, and exercise, will seldom fail to cure the jaundice when it is a simple disease; and when complicated with the dropsy, a scirrhous liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the *Medicina Britannica* mentions near a hundred, all famous for curing the jaundice. The fact is, this disease often goes off of its own accord; in which case the last medicine is always said to have performed the cure. I have sometimes seen considerable benefit, in a very obstinate jaundice, from a decoction of hemp-seed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have known Harrowgate sulphur-water cure a jaundice of very long standing. It should be used for some time, and the patient must both drink and bathe.

The soluble tartar is likewise a very proper medicine in the jaundice. A dram of it may be taken every night and morning in a cup of tea or water gruel. If it does not open the belly, the dose may be increased.

Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments.

CHAPTER XXXVII.

OF THE DROPSY.

The dropsy is a preternatural swelling of the whole body, or some part of it, occasioned by a collection of watery humor.

It is distinguished by different names, according to the part affected, as the *anasarca*, or a collection of water under the skin; the *ascites*, or a collection of water in the belly; the *hydrops pectoris*, or a dropsy of the breast; the *hydrocephalus*, or dropsy of the brain, &c.

Causes.—A very common cause of the dropsy is a hereditary disposition. It may likewise proceed from drinking ardent spirits or other strong liquors. It is true, almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleedings, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the *menses*, the hemorrhoids, fluxes of the belly, &c., may likewise cause a dropsy.

I have often known the dropsy occasioned by drinking large quantities of cold, weak, watery liquor, when the body was heated by violent exercise. A low, damp, or marshy situation is likewise a frequent cause of it; hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of viscous aliment that is hard of digestion. It is often the effect of other diseases, as the jaundice, a scirrhus of the liver, a violent ague of long continuance, a diarrhœa, a dysentery, an empyema, or a consumption of the lungs. In short, whatever obstructs the circulation of the blood, or prevents its being duly prepared, may occasion a dropsy.

Symptoms.—This disease generally begins with a swelling of the feet and ankles towards night, which, for some time, disappears in the morning. In the evening, the parts, if pressed with the finger, will pit. The swelling gradually ascends towards the belly, which at length grows big. When it is struck with the hand, a fluctuation may be felt, and sometimes heard. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the belly is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shows that the lungs are affected.

When the disease comes suddenly on, and the patient is young and strong, there is reason to hope for a cure, especially if medicine be given early. But if the patient be old,

has led an irregular or a sedentary life, or if there be reason to suspect that the liver, lungs, or any of the viscera are unsound, there is great ground to fear that the consequences will prove fatal.

Regimen.—The patient must abstain as much as possible from all drink, especially weak and watery liquors, and must quench his thirst with mustard whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a heating and diuretic quality, as toasted bread, the flesh of birds, or other wild animals, roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horseradish, rocambole, shallot, &c. He may also eat sea-biscuit dipt in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must have drink, the Spaw-water, or Rhenish wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dance, or run about, he ought to continue these exercises as long as he can. If he be not able to walk or run, he must ride on horseback or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his apartments warm and dry. If he lives in a damp country, he ought to be removed into a dry one, and, if possible, into a warmer climate. In a word, every method must be taken to promote the perspiration and to brace the solids. For this purpose it will likewise be proper to rub the patient's body, two or three times a day, with a hard cloth or the flesh-brush, and he ought constantly to wear flannel next his skin.

Medicine.—If the patient be young, his constitution good, and the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge of sweat and urine. For an adult half a dram of ipecacuanha in powder, and half an ounce of oxymel of squills, will be a proper vomit. This may be repeated three or four times if necessary, three or four days intervening betwixt each dose. The patient must not drink much after the vomit, otherwise he destroys its effect; a cup or two of camomile tea will be sufficient to work it off.

Betwixt each vomit, on one of the intermediate days, the patient may take the following purge: jalap in powder half a

dram, cream of tartar two drams, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped he may take now and then a cup of chicken broth.

The patient may likewise take every night at bedtime the following bolus. To four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine whey, while a tea-spoonful of the following diuretic infusion may likewise be taken every four or five hours through the day.*

As this disease is very apt to return, after the water has been drained off, to prevent its collecting again, the patient must continue to take exercise, to use a dry diet, and such medicines as strengthen and brace the solids, as wine with steel or bark infused in it. Warm and aromatic bitters infused in wine or brandy are likewise proper, as the Virginian snake-root, *canella alba*, orange-peel, &c. The patient must avoid all great evacuations, and ought, if he can, to make choice of a dry and warm situation.

The above course will often cure an incidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by nitre. Brookes says he knew a young woman who was cured of a dropsy, by taking a dram of nitre every morning in a draught of ale, after she had been given over as incurable. The powder of squills is likewise a good diuretic; six or eight grains of it, with a scruple of nitre, may be given twice a day in a glass of strong cinnamon water. Ball says a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half an English pint of the decoction of the tops

* Take juniper-berries, mustard-seed, and horseradish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion may use the decoction of seneca root, which is both diuretic and sudorific.

of green broom after it, has performed a cure, after other powerful medicines had proved ineffectual.

I have seen extraordinary effects from cream of tartar in this disease. It promotes the discharges by stool and urine, and will often perform a cure when duly persisted in. The patient may begin by taking an ounce every second or third day, and may increase the quantity to two or even to three ounces, if the stomach will bear it. This quantity is not, however, to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the decoction of seneca root, as directed above; or he may take two spoonfuls of Mindererus's spirit in a cup of wine whey three or four times a day. The diuretic infusion of the London hospitals is likewise a very proper medicine in this disease.* When other means fail, recourse must be had to tapping and scarifications. These often give ease, though they seldom produce a radical cure.

CHAPTER XXXVIII.

OF THE GOUT.

There is no disease which shows the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than this. Few who pay a proper regard to these are troubled with the gout. This points out the true source from whence that malady originally sprung, viz. *excess* and *idleness*. It likewise shows us that the only safe and efficacious method of cure, or rather of prevention, must depend, not upon medicine, but on *temperance* and *activity*.

Though idleness and intemperance are the principal causes of the gout, yet many other things may contribute to bring on the disorder in those who are not, and to induce a paroxysm

* Take of zedoary root two drams; dried squills, rhubarb, and juniper-berries bruised, of each a dram; cinnamon in powder three drams; salt of wormwood a dram and a half; infuse in an English pint and a half of old hock wine, and when fit for use filter the liquor. A wine-glass of it may be taken three or four times a day.

in those who are subject to it, as intense study, too free a use of acid liquors, night-watching, grief or uneasiness of mind, an obstruction or defect of any of the customary discharges, as the menses, sweating of the feet, perspiration, &c.

Symptoms.—A fit of the gout is generally preceded by indigestion, drowsiness, wind, a slight headache, sickness, and sometimes vomiting. The patient complains of weariness and dejection of spirits, and has often a pain in the limbs, with a sensation as if wind or cold water were passing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and sometimes an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and some observe, that as the fever which ushers in the gout is, so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long, and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The regular gout generally makes its attack in the spring or beginning of winter, in the following manner. About two or three in the morning, the patient is seized with a pain in his great toe, sometimes in the heel, and at other times in the ankle or calf of the leg. This pain is accompanied with a sensation as if cold water were poured upon the part, which is succeeded by a shivering, with some degree of fever. Afterwards the pain increases, and fixing among the small bones of the foot, the patient feels all the different kinds of torture, as if the part were stretched, burnt, squeezed, gnawed, or torn in pieces, &c. The part at length becomes so exquisitely sensitive that the patient cannot bear to have it touched, or even suffer any person to walk across the room.

The patient is generally in exquisite torture for twenty-four hours, from the time of the coming on of the fit; he then becomes easier, the part begins to swell, appears red, and is covered with a little moisture. Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of which constitutes a fit of the gout; which is longer or shorter, according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards night and easier in the morning. The paroxysms however generally grow milder

every day, till at length the disease is carried off by perspiration, urine, and the other evacuations. In some patients this happens in a few days; in others it requires weeks, and in some months, to finish the fit. Those whom age and frequent fits of the gout have greatly debilitated, seldom get free of it before the approach of summer, and sometimes not till it be pretty far advanced.

Regimen.—As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negas or a glass of generous wine. Wine whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sal volatile oleosum*, or spirits of hartshorn, be put into a cup of it twice a day. It will likewise be proper to give at bedtime a tea-spoonful of the volatile tincture of *guaiacum* in a large draught of warm wine whey. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharging the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapped in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eight or ten days, and sometimes for a fortnight or three weeks, or longer if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it, in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had, and seldom or never remove it till the fit be entirely gone off.

The patient ought likewise to be kept quiet and easy du-

ring the fit. Every thing that affects the mind disturbs the paroxysm, and tends to throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is rather to be considered as nature's method of curing a disease than the disease itself, and all that we can do with safety is to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuations by bleeding, stool, &c., are likewise to be used with caution; they do not remove the cause of the disease, and sometimes by weakening the patient prolong the fit. But where the constitution is able to bear it, it will be of use to keep the belly gently open by diet, or very mild laxative medicines.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as prudent to stop the small-pox from rising, and to drive them into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted.

When the pain however is very great, and the patient is restless, thirty or forty drops of laudanum, more or less, according to the violence of the symptoms, may be taken at bedtime. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over, the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other warm stomachic purge. He should also drink a weak infusion of stomachic bitters in small wine or ale, as gentian, or bark with cinnamon, Virginian snakeroot, and orange-peel. The diet at this time should be light but nourishing, and gentle exercise ought to be taken on horseback or in a carriage.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This however is not to

be attempted by medicine. I have frequently known the gout kept off for several years by the Peruvian bark and other medicines; but in all the cases where I had occasion to see this tried, the persons died suddenly, and to all appearance for want of a regular fit of the gout. One would be apt from hence to conclude that a fit of the gout, to some constitutions, in the decline of life, is rather salutary than hurtful.

Though it may be dangerous to stop a fit of the gout by medicine, yet if the constitution can be so changed by diet and exercise as to lessen or totally prevent its return, there certainly can be no danger following such a course. It is well known that the whole habit may be so altered by a proper regimen as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout is as follows. In the first place, *universal temperance;* in the next place, *sufficient exercise.* By this we do not mean sauntering about in an indolent manner, but labor, sweat, and toil. These only can render the humors wholesome and keep them so. Going early to bed, and rising betimes, are also of great importance. It is likewise proper to avoid night studies, and all intense thought. The supper should be light, and taken early. All strong liquors, especially generous wines and sour punch, are to be avoided.

We would likewise recommend some doses of *magnesia alba* and rhubarb to be taken every spring and autumn; and afterwards a course of stomachic bitters, as tansy or water-trefoil tea, an infusion of gentian and camomile flowers, or a decoction of burdock-root, &c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank two or three weeks in March and October twice a day. An issue or perpetual blister has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only often prevent the gout, but also other chronic maladies. Shch as can afford to go to Bath will find great benefit from bathing and drinking the water. It both promotes digestion and invigorates the habit.

When the gout attacks the head or lungs, every method must be taken to draw it towards the feet. They must be frequently bathed in warm water, and acrid cataplasms ap-

plied to the soles. Blistering plasters ought likewise to be applied to the ankles or calves of the legs. Bleeding in the feet or ankles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it attacks the stomach with a sense of cold, the most warm cordials are necessary; as strong wine, cinnamon water, peppermint water, and even brandy or rum. The patient should keep his bed, and endeavor to promote a sweat by drinking warm liquors; and if he should be troubled with a nausea or inclination to vomit, he may drink camomile tea, or any thing that will make him vomit freely.

When the gout attacks the kidneys, and imitates gravel-pains, the patient ought to drink freely of a decoction of marsh-mallows, and to have the parts fomented with warm water. An emollient clyster ought likewise to be given, and afterwards an opiate. If the pain be very violent, twenty or thirty drops of laudanum may be taken in a cup of the decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be ever afterwards tormented with headaches, coughs, pains of the stomach and intestines, and to fall at last a victim to its attack upon some of the more noble parts.

THE RHEUMATISM.

This disease has great affinity to the gout. It generally attacks the joints with exquisite pain, and is sometimes attended with inflammation and swelling. It is most common in the spring and towards the end of autumn. It is usually

distinguished into acute and chronic, or the rheumatism with and without a fever.

Causes.—The causes of a rheumatism are frequently the same as those of an inflammatory fever, viz., an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distorted, was in a man who used to work one part of the day by the fire and the other part of it in the water. Very obstinate rheumatisms have likewise been brought on by persons, not accustomed to it, allowing their feet to continue long wet. The same effects are often produced by wet clothes, damp beds, or lying on the ground, especially in the night.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of usual discharges. It is often the effect of chronic diseases, which vitiate the humors; as the scurvy, the *lues venerea*, obstinate autumnal agues, &c.

The rheumatism prevails most in low, damp, marshy countries. It is likewise very common amongst the poorer sort of peasants, who are ill clothed, live in low, cold houses, and eat coarse unwholesome food, which contains but little nourishment, and is not easily digested.

Symptoms.—The *acute* rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and other symptoms of a fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy.

In this kind of rheumatism the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The belly ought to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tartar whey, senna tea, and the like. The diet should be light, and in small quantity, consisting chiefly of roasted apples, groat gruel, or weak chicken broth. After the feverish symptoms have abated, if the pain still continues, the patient must keep his bed, and take such things as promote perspiration; as wine whey, with *spiritus Mindereri*, &c. The patient may

likewise take for a few nights, at bedtime, in a cup of wine whey, a dram of the cream of tartar, and half a dram of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing.

The *chronic* rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet, consisting chiefly of vegetable substances, as stewed prunes, codled apples, currants or gooseberries boiled in milk, is most proper. Arbuthnot says, "If there be a specific in aliment for the rheumatism, it is certainly whey;" and adds, "that he knew a person subject to this disease, who could never be cured by any other method but a diet of whey and bread." He likewise says "that cream of tartar in water gruel, taken for several days, will ease rheumatic pains considerably." This I have often experienced, but found it always more efficacious when joined with gum guaiacum, as already directed. In this case the patient may take the dose formerly mentioned twice a day, and likewise a tea-spoonful of the volatile tincture of gum guaiacum, at bedtime, in wine whey.

This course may be continued for a week, or longer, if the case proves obstinate and the patient's strength will permit. It ought then to be omitted for a few days and repeated again. At the same time leeches or a blistering plaster may be applied to the part affected. What I have generally found answer better than either of these, in obstinate, fixed, rheumatic pains, in the *warm plaster*.* I have likewise known a plaster of Burgundy pitch worn for some time on the part affected give

* The warm plaster is made by melting over a gentle fire an ounce of gum plaster and two drams of blistering plaster. A proper quantity of this may be spread upon soft leather and applied to the part affected. It should be taken off and wiped once in three or four days, and may be renewed once a fortnight.

great relief in obstinate rheumatic pains. My ingenious friend Dr. Alexander, of Edinburgh, says he has frequently cured very obstinate rheumatic pains by rubbing the part affected with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected is likewise often very beneficial, and is greatly preferable to the application of leeches.

Though this disease may not seem in the least to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it is when the patient is most free from it.

To those who can afford the expense, we would recommend the warm baths of Buxton or Matlock, in Derbyshire. These have often cured very obstinate rheumatisms, and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrowgate waters and those of Moffat are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white *mustard*. A table-spoonful of the seed of this plant may be taken twice or thrice a day, in a glass of water or small wine. The water trefoil is likewise of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these unless they be used for a considerable time. Excellent medicines are often despised in this case, because they do not perform a cure instantaneously; whereas nothing would be more certain than their effect, were they used for a sufficient length of time. The want of perseverance in the use of medicines is one of the principal reasons why chronic diseases are so seldom cured.

Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback and wearing flannel next the skin. Issues are likewise very proper, especially in the chronic rheumatism. If the pain affects the shoulders, an issue may be made in the arm; but

if it affects the loins, it should be put in the leg or thigh. Rheumatic persons ought to make choice of a dry warm air, to avoid getting wet as much as possible, and to make frequent use of the flesh-brush.

CHAPTER XXXIX.

OF THE SCURVY.

This disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition, are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

Causes.—The scurvy is occasioned by cold moist air; by the long use of salted or smoke-dried provisions, or of any kind of food that is hard of digestion and affords little nourishment. It may also proceed from the suppression of customary evacuations, as the *menses*, the hemorrhoidal flux, &c. It is sometimes owing to a hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. It may likewise proceed from neglect of cleanliness, bad clothing, the want of proper exercise, confined air, unwholesome food, or from any disease which greatly weakens the body or vitiates the humors.

Symptoms.—This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling and sometimes a falling away of the legs, on which there are livid, yellow, or violet-colored spots; the face is generally of a pale or leaden color. As the disease advances, other symptoms come; as rottenness of the teeth, hemorrhages or discharges of blood from different parts of the body, foul

obstinate ulcers, pains in various parts, especially about the breast, dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

Cure.—We know no method of curing this disease but by pursuing a course directly opposite to that which brought it on. It proceeds from a vitiated state of the humors, occasioned by errors in diet, air, or exercise; and this can be removed no other way than by a proper attention to those important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed as soon as possible to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressing passions, as grief, fear, &c., the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease than constant cheerfulness and good-humor. But this, alas, is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish, sour, morose, and dull.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables, as apples, oranges, lemons, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cider, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but to have this effect they must be persisted in for a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and when these are wanting, recourse must be had to the chemical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, vinegar, or the spirit of sea-salt, &c.

These things, however, will more certainly prevent than cure the scurvy; for which reason seafaring people, especially on long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time by *pickling*, *preserving*, *&c.*, and when these fail, the chemical acids, recommended above, which will keep for

any length of time, may be used. We have reason to believe if ships were well ventilated, had good store of fruits, greens, cider, &c., laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and would seldom suffer either from the scurvy or putrid fevers, which are so fatal to that useful set of men; but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow.

It must indeed be owned that many of them have it not in their power to make the provision we are speaking of; but in this case it is the duty of their employers to make it for them, and no man ought to engage in a long voyage without having these articles secured.

I have often seen very extraordinary effects in the scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humors which seems to constitute the very essence of the scurvy and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is only deemed fit for their hogs.

The most proper drink in the scurvy is whey or buttermilk. When these cannot be had, sound cider or perry may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce-fir is likewise proper. It may be drank in the quantity of an English pint twice a day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables, as sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground ivy, the lesser centaury, marsh trefoil, &c., are likewise beneficial. I have seen the peasants in some parts of Britain express the juice of the last-mentioned plant, and drink it with good effects in those foul scorbutic eruptions with which they are often troubled in the spring season.

The Harrowgate water is certainly an excellent medicine in the scurvy. I have often seen patients, who had been reduced to the most deplorable condition by that disease, greatly relieved by drinking the sulphur-water and bathing in it. The chalybeate-water may also be used with advantage, espe-

cially with a view to brace the stomach after drinking the sulphur-water, which, though it sharpens the appetite, never fails to weaken the powers of digestion.

A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or a lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would, however, recommend the bitter orange as greatly preferable to lemon; it seems to be as good a medicine, and is not near so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinage, lettuce, parsley, celery, endive, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantity for a sufficient length of time.

The leprosy, which was so common in this country long ago, seems to have been near akin to the scurvy. Perhaps its appearing so seldom now may be owing to the inhabitants of Britain eating more vegetable food than formerly, living more upon tea and other diluting diet, using less salted meat, being more cleanly, better lodged and clothed, &c. For the cure of this disease we would recommend the same course of diet and medicine as in the scurvy.

SCROFULA, OR KING'S EVIL.

This disease chiefly affects the glands, especially those of the neck. Children and young persons of a sedentary life are very subject to it. It is one of those diseases that may be removed by proper regimen, but seldom yields to medicine. The inhabitants of cold, damp, marshy countries are most liable to the scrofula.

Causes.—This disease may proceed from a hereditary taint, infection from a scrofulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the French pox or other chronic diseases, are apt to be affected with the scrofula. It may likewise proceed from such diseases as weaken the

habit or vitiate the humors, as the small-pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrofulous ulcers; but we have reason to believe, when this happens, that there has been a predisposition in the habit to this disease. In short, whatever tends to vitiate the humors or relax the solids, paves the way to the scrofula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to induce this disease in children than allowing them to continue long wet.

Symptoms.—At first small knots appear under the chin or behind the ears, which gradually increase in number and size, till they form one large hard tumor. This often continues for a long time without breaking, and when it does break it only discharges a thin *sanies* or watery humor. Other parts of the body are likewise liable to attack, as the armpits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or spleen, and I have frequently seen the glands of the mesentery greatly enlarged by it.

These obstinate ulcers which break out upon the feet and hands with swelling, and little or no redness, are of the scrofulous kind. They seldom discharge good matter, and are exceeding difficult to cure. The *white swellings* of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and when opened they only discharge a thin ichor. There is not a more general symptom of the scrofula than a swelling of the upper lip and nose.

Regimen.—As this disease proceeds in a great measure from relaxation, the diet ought to be generous and nourishing, but at the same time light and easy of digestion; as well-fermented bread, made of sound grain, the flesh and broth of young animals, with now and then a glass of generous wine or good ale. The air ought to be open, dry, and not too cold, and the patient should take as much exercise as he can bear. This is of the utmost importance. Children who have enough of exercise are seldom troubled with the scrofula.

Medicine.—The vulgar are remarkably credulous with regard to the cure of the scrofula, many of them believing in the virtue of the royal touch, that of the seventh son, &c. The truth is, we know but little either of the nature or cure of this disease, and where reason or medicines fail supersti-

tion always comes in their place. Hence it is, that in diseases which are the most difficult to understand, we generally hear of the greatest number of miraculous cures being performed Here, however, the deception is easily accounted for. The scrofula, at a certain period of life, often cures of itself; and if the patient happens to be touched about this time, the cure is imputed to the touch, and not to nature, who is really the physician. In the same way the insignificant nostrums of quacks and old women often gain applause when they deserve none.

There is nothing more pernicious than the custom of plying children in the scrofula with strong purgative medicines. People imagine it proceeds from humors which must be purged off, without considering that these purgatives increase the relaxation and aggravate the disease. It has indeed been found that keeping the belly gently open for some time, especially with sea-water, has a good effect; but this should only be given in such quantity as to procure one, or at most two stools every day. Bathing in the salt water has likewise a very good effect, especially in the warm season. I have often known a course of bathing in salt water, and drinking it in such quantities as to keep the belly gently open, cure a scrofula, after many medicines had been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his belly kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing and drinking the salt water, we would recommend the Peruvian bark. The cold bath may be used in summer, and the bark in winter. To an adult half a dram of the bark in powder may be given, in a glass of red wine, four or five times a day. Children, and such as cannot take it in substance, may use the decoction.*

The Moffat and Harrowgate waters, especially the latter, are likewise very proper medicines in the scrofula. They ought not, however, to be drank in large quantities, but should

* The decoction may be made by boiling an ounce of Peruvian bark and a dram of Winter's bark, both grossly powdered, in an English quart of water to a pint. Towards the end half an ounce of sliced liquorice-root and a handful of raisins may be added, which will both render the decoction less disagreeable and make it take up more of the bark. The liquor must be strained, and two, three, or four table-spoonfuls, according to the age of the patient, given three times a day.

be taken so as to keep the belly gently open, and must be used for a considerable time.

External applications are of little use. Before the tumor breaks, nothing ought to be applied to it, unless a piece of flannel, or something to keep it warm. After it breaks, the sore may be dressed with some digestive ointment. What I have always found to answer best was the yellow basilicon mixed with about a sixth or eighth part of its weight of red precipitate of mercury. The sore may be dressed with this twice a day; and if it be very fungous, and does not digest well, a larger portion of the precipitate may be added.

Medicines which mitigate this disease, though they do not cure it, are not to be despised. If the patient can be kept alive by any means till he arrives at the age of puberty, he has a great chance to get well; but if he does not recover at this time, in all probability he never will.

There is no malady which parents are so apt to communicate to their offspring as the scrofula, for which reason people ought to beware of marrying into families affected with this disease.

For the means of preventing the scrofula, we must refer the reader to the observations on nursing, at the beginning of the book.

THE ITCH.

Though this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air, and wholesome diet. It generally appears in form of small watery pustules, first about the wrists or between the fingers, afterwards it affects the arms, legs, and thighs, &c. These pustules are attended with an intolerable itching, especially when the patient is warm abed or sits by the fire. Sometimes indeed the skin is covered with large blotches or scabs, and at other times with a white scurf or scaly eruption. This last is called the dry itch, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humors; and if it be suddenly drove in, without proper evacuation, it may occasion fevers, inflammation of the viscera, or other internal disorders.

The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed with an ointment made of the flowers of sulphur two ounces, crude sal ammoniac finely powdered two drams, hog's lard or butter four ounces. If a scruple or half a dram of the essence of lemon be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities, at bedtime, twice or thrice a week. It is seldom necessary to rub the whole body, but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed and take a purge or two. It will likewise be proper, during the use of it, to take every night and morning as much of the flower of brimstone and cream of tartar, in a little treacle or new milk, as will keep the belly gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease are not to be used again, unless they have been fumigated with brimstone and thoroughly cleansed, otherwise they will communicate the infection anew.

I never knew brimstone, if used as directed above, fail to cure the itch, and I have reason to believe that if duly persisted in it never will fail; but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but if any symptoms of the disease should appear again, the medicine may be repeated. It is both more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once.

People ought to be extremely cautious lest they take other eruptions for the itch, as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable have a near resemblance to this disease, and I have often known infants killed by being rubbed with greasy ointments that made these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool-hardy as to wash the parts affected with a strong solution of the corrosive sublimate. Others use the mercurial ointment, without taking the least care either to avoid cold, keep the belly open, or observe a proper regimen. The consequences of such conduct may be easily guessed. I have known even the mercurial girdles produce tragical effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the blood.

As sulphur is both the most safe and efficacious medicine for the itch, we shall not recommend any other. Other medicines may be used by persons of skill, but are not to be ventured upon by the ignorant.

Those who would avoid this detestable disease ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.

CHAPTER XL.

OF THE ASTHMA.

The asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing.

Causes.—The asthma is sometimes hereditary. It may likewise proceed from a bad formation of the breast; the fumes of metals or minerals taken into the lungs; violent exercise, especially running; the obstruction of customary evacuations, as the menses, hemorrhoids, &c.; the sudden retrocession of the gout, or striking in of eruptions, as the small-pox, measles, &c.; violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either

impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

Symptoms.—An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or the like.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak and sometimes intermitting pulse, an involuntary flow of tears, bilious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

Regimen.—The food ought to be light, and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled or roasted, are proper. Strong liquor of all kinds, especially malt liquor, is hurtful. The patient should eat a very light supper, or rather none at all. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm and promoting the perspiration, a flannel shirt or waistcoat and thick shoes will be of singular service.

But nothing is of so great importance in the asthma as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the sharp, keen atmosphere of a bleak hilly country; a medium between these is therefore to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in town all day, ought, at least, to sleep out of it. Even this will often

prove of great service. Those who can afford it ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion, circulation of the blood, &c. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

Medicine.—Almost all that can be done by medicine in this disease is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In the paroxysm or fit the body is generally bound; a clyster ought therefore to be administered, and if there be occasion it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand or dry cloth. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and saffron mixed together, in a cup of valerian tea, twice or thrice a day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This however will be more safe after other evacuations have been premised.

In the moist asthma, such things as promote expectoration or spitting ought to be used, as the syrup of squills, gum ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, mixed with an equal quantity of cinnamon water, may be taken three or four times a day; and four or five pills, made of equal parts of assafœtida and gum ammoniac, may be taken every night at bedtime.

For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a day. The Peruvian bark is likewise proper in this case. It may be taken in substance or infused in wine. In short, every thing that braces the nerves or takes off the spasm may be of use in a nervous asthma. It is often relieved by the use of ass's milk.

I have likewise known cow's milk drank warm in the morning have a very good effect in this case.

In every species of asthma, setons and issues have a good effect. They may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.

CHAPTER XLI.

OF THE APOPLEXY.

The apoplexy is a sudden loss of sense and motion, wherein the patient is to all appearance dead; the heart and lungs however still continue to move. This disease, by a little care, might often be prevented, but can seldom be cured. It chiefly attacks sedentary persons of a gross habit, who use a rich and plentiful diet and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in winter, especially in long rainy seasons and very low states of the barometer.

Causes.—The immediate cause of an apoplexy is a compression of the brain, occasioned by an effusion of blood or a collection of watery humors. The former is called a *sanguine* and the latter a *serous apoplexy*. It may be occasioned by any thing that increases the circulation towards the brain or prevents the return of the blood from the head, as intense study, violent passions,* viewing objects for a long time

* I knew a woman who in a violent fit of anger was seized with a sanguine apoplexy. She at first complained of extreme pain, as if daggers had been thrust through her head, as she expressed it. Afterwards she became comatose, her pulse sunk very low, and was exceedingly slow. By bleeding, blistering, and other evacuations, she was kept alive for about a fortnight. When her head was opened, a large quantity of extravasated blood was found in the left ventricle of the brain.

obliquely, wearing any thing too tight about the neck, a rich and luxurious diet, suppression of urine, suffering the body to cool suddenly after having been very hot, continuing long in a warm bath, the excessive use of spiceries or high-seasoned food, excess of venery, the sudden striking in of any eruption, suffering issues, setons, &c., suddenly to dry up, or the stoppage of any customary evacuation, a mercurial salivation pushed too far or suddenly checked by cold, wounds or bruises on the head, long exposure to excessive cold, poisonous exhalations, &c.

Symptoms and Method of Cure.—The usual forerunners of an apoplexy are giddiness, pain and swimming of the head, loss of memory, drowsiness, noise in the ears, the nightmare, a spontaneous flux of tears, and laborious respiration. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavor to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood-vessels, especially about the neck and temples, are turgid, the pulse beats strong, the eyes are prominent and fixed, and the breathing is difficult and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with a vomiting.

In this species of apoplexy, every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled pretty freely in the neck or arm, and if there be occasion the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil or fresh butter, and a large spoonful of common salt in it, may be administered every two hours, and blistering plasters applied betwixt the shoulders and to the calves of the legs.

As soon as the symptoms are a little abated and the patient is able to swallow, he ought to drink freely of some diluting

opening liquor, as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar dissolved in it; or he may take any cooling purge, as Glauber's salts, or manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, nor any thing that may increase the motion of the blood towards the head.

In the serous apoplexy the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case. It may however generally be performed once with safety and advantage, but should not be repeated. The patient should be placed in the same posture as directed above, and should have blistering plasters applied, and receive opening clysters in the same manner. Purges are here likewise necessary, and the patient may drink strong balm tea. If he be inclined to sweat, it ought to be promoted by drinking small wine whey or an infusion of *carduus benedictus*. A plentiful sweat, kept up for a considerable time, has often carried off a serous apoplexy.

When apoplectic symptoms proceed from opium or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of an apoplectic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spiceries, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be kept warm, and never suffered to continue long wet. The belly must by all means be kept open either by food or medicine, and a little blood may be let every spring and fall. Exercise should by no means be neglected, but it ought to be taken in moderation. Nothing has a more happy effect in preventing an apoplexy than issues or perpetual blisters; great care however must be taken not to suffer them to dry up without opening others in their stead. Apoplectic persons ought never to go to rest with a full stomach, or to lie with their heads low, or wear any thing too tight about their necks.

CHAPTER XLII

OF COSTIVENESS.

We do not here mean to treat of those astrictions of the bowels which are the symptoms of diseases, as of the colic, the iliac passion, &c., but only to take notice of that infrequency of stools which sometimes happens, and which in some particular constitutions may occasion diseases.

Costiveness may proceed from an excessive heat of the liver; drinking rough red wines or other astringent liquors; too much exercise, especially on horseback. It may likewise proceed from a long use of cold insipid food, which does not sufficiently stimulate the intestines. Sometimes it is owing to the bile not descending to the intestines, as in the jaundice; and at other times it proceeds from diseases of the intestines themselves, as a palsy, spasms, tumors, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, &c. It is peculiarly hurtful to hypochondriac and hysteric persons, as it generates wind and other grievous symptoms.

Persons who are generally costive should live upon a moistening and laxative diet, as roasted or boiled apples, pears, stewed prunes, raisins, gruels with currants, butter, honey, and sugar, &c. Broths with spinage, leeks, and other soft pot-herbs, are likewise proper. Rye bread, or that which is made of a mixture of wheat and rye together, ought to be eaten. No person troubled with costiveness should eat wheat bread alone, especially that which is made of fine flour. The best bread for keeping the belly soluble is what in some parts of England they call *meslin*. It is made of equal parts of wheat and rye, or more commonly of two parts of the former to one of the latter.

Costiveness is increased by keeping the body too warm, and by every thing that promotes the perspiration, as wearing flannel, lying too long abed, &c. Intense thought and a sedentary life are likewise hurtful. All the secretions and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c., ought

to be avoided. Malt liquor that is fine, and of a moderate strength, is very proper. Buttermilk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness ought if possible to remedy it by diet, as the constant use of medicines for that purpose is attended with many inconveniences, and often with bad consequences.* I never knew any one get into a habit of taking medicine for keeping the belly open who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the belly cannot be kept open without medicine, we would recommend gentle doses of rhubarb to be taken twice or thrice a week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of soluble tartar dissolved in water gruel. About the size of a nutmeg of lenitive electuary taken twice or thrice a day generally answers the purpose very well.

* The learned Dr. Arbuthnot advises those who are troubled with costiveness to use animal oils, as fresh butter, cream, marrow, fat broths, especially those made of the internal parts of animals, as the liver, heart, midriff, &c. He likewise recommends the expressed oils of mild vegetables, as olives, almonds, pastaches, and the fruits themselves; all oily and mild fruits, as figs; decoctions of mealy vegetables—these lubricate the intestines; some saponaceous substances, which stimulate gently, as honey, hydromel, or boiled honey and water, unrefined sugar, &c.

The doctor observes that such lenitive substances are proper for persons of dry atrabilarian constitutions, who are subject to astriction of the belly and the piles, and will operate when stronger medicinal substances are sometimes ineffectual; but that such lenitive diet hurts those whose bowels are weak and lax. He likewise observes that all watery substances are lenitive, and that even common water, whey, sour milk, and buttermilk, have that effect; that new milk, especially ass's milk, stimulates still more when it sours on the stomach, and that whey turned sour will purge strongly; that most garden fruits are likewise laxative, and that some of them, as grapes, will throw such as take them immoderately into a cholera morbus or incurable diarrhœa.

WANT OF APPETITE.

This may proceed from a foul stomach; indigestion; the want of free air and exercise; grief, fear, anxiety, or any of the depressing passions; excessive heat; the use of strong broths, fat meats, or any thing that palls the appetite or is hard of digestion; the immoderate use of strong liquors, tea, tobacco, opium, &c.

The patient ought if possible to make choice of an open dry air, to take exercise daily on horseback or in a carriage, to rise betimes, and to avoid all intense thought. He should use a diet of easy digestion, and should avoid excessive heat and great fatigue.

If want of appetite proceeds from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nausea and retchings show that the stomach is loaded with crudities, a vomit will be of service. After this a gentle purge or two of rhubarb, or any of the bitter purging salts, may be taken. The patient ought next to use an infusion in wine of some of the stomachic bitters, as gentian root, Peruvian bark, or orange-peel. He may also eat orange-peel or ginger candied.

Though gentle evacuations be necessary, all strong purges and vomits are to be avoided, as they weaken the stomach and hurt digestion. After proper evacuations, bitter elixirs and tinctures with aromatics may be used. The patient may take, twice a day, a common spoonful of the stomachic tincture, or if he be costive the same quantity of the bitter tincture of rhubarb. Elixir of vitriol is an excellent medicine in most cases of indigestion, weakness of the stomach, or want of appetite. Twenty or thirty drops of it may be taken twice or thrice a day in a glass of wine or water. It may likewise be mixed with the tincture of the bark, two drams of the former to an ounce of the latter, and a tea-spoonful of it taken in wine or water, as above.

The chalybeate waters, if drank in moderation, are generally of considerable service in this case. The salt water has likewise good effects, but it must not be used too freely. The waters of Harrowgate, Scarborough, Moffat, and most other spaws in Britain, may be used with advantage. We would advise all who are afflicted with indigestion and want of appetite to repair to these places of public rendezvous. The

very change of air and the cheerful company will be of service, not to mention the exercise, dissipation, amusements, &c.

THE HEART-BURN.

What is commonly called the *heart-burn* is not a disease of that organ, but an uneasy sensation of heat or acrimony about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting.

It may proceed from debility of the stomach, indigestion, bile, the abounding of an acid in the stomach, &c. Persons who are liable to this complaint ought to avoid stale liquors, acids, windy or greasy aliments, and should never use violent exercise soon after a plentiful meal. I know many persons who never fail to have the heart-burn if they ride soon after dinner, provided they have drank ale, wine, or any fermented liquor, but are never troubled with it when they have drank rum or brandy and water without any sugar or acid.

When the heart-burn proceeds from debility of the stomach or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any other of the stomachic bitters, in wine or brandy. Exercise in the open air will likewise be of use, and every thing that promotes digestion.

When bilious humors occasion the heart-burn, a tea-spoonful of the sweet spirits of nitre in a glass of water or a cup of tea will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum Arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not choose chalk may take a tea-spoonful of prepared oyster-shells, or of the powder called crabs-eyes, in a glass of cinnamon or peppermint water. But the safest and best absorbent is *magnesia alba*. This not only acts as an absorbent, but likewise as a purgative; whereas chalk and other absorbents of that kind are apt to lie in the intestines and occasion obstructions. This powder is not disagreeable, and may be taken in a cup of tea or a glass of mint-water. A large tea-spoonful is the usual dose, but it

may be taken in a much larger quantity when there is occasion.

If wind be the cause of this complaint, the most proper medicines are those called carminatives; as aniseeds, juniper berries, ginger, cannella alba, cardamum seeds, &c. These may either be chewed or infused in spirits or wine. One of the safest medicines of this kind is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamum seeds, in an English pint of brandy. After this has digested for two or three days, it must be strained, and four ounces of white sugar candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful of it may be taken constantly for a dose.

I have frequently known the heart-burn cured, especially in pregnant women, by chewing green tea.

CHAPTER XLIII.

NERVOUS DISEASES.

Of all diseases incident to mankind, those of the nervous kind are the most complicated and difficult to cure. A volume would not be sufficient to point out their various symptoms. They imitate almost every disease, and are seldom alike in two different persons, or even in the same person at different times. Proteus-like, they are continually changing shape, and upon every fresh attack the patient thinks he feels symptoms which he never experienced before. Nor do they only affect the body; the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timorousness, melancholy, and fickleness of temper, which generally attend nervous disorders, induce many people to believe that they are entirely diseases of the mind; but this change of temper is rather a consequence than the cause of nervous diseases.

Causes.—Every thing that tends to relax or weaken the body disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea or other weak watery liquors,

frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or prevents the proper assimilation of the aliment, has likewise this effect; as long fasting, excess in eating or drinking, the use of windy, crude or unwholesome aliments, an unfavorable posture of the body, &c.

Nervous disorders often proceed from affections of the mind; as grief, disappointments, anxiety, intense study, &c. Indeed few studious persons are entirely free from them. Nor is this at all to be wondered at; intense thinking not only preys upon the spirits, but prevents the person from taking proper exercise, by which means the digestion is impaired, the nourishment prevented, the solids relaxed, and the whole mass of humors vitiated. Grief and disappointment likewise produce the same effects. I have known more nervous patients who dated the commencement of their disorders from the loss of a husband, a favorite child, or from some disappointment in life, than from any other cause. In a word, whatever weakens the body or depresses the spirits may occasion nervous disorders, as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, vexation, &c.

Symptoms.—We shall only mention some of the most general symptoms of these disorders, as it would be both a useless and impracticable task to point out the whole. They generally begin with windy inflations or distensions of the stomach and intestines; the appetite and digestion are usually bad, yet sometimes there is an uncommon craving for food and a quick digestion. The food often turns sour on the stomach, and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish-colored liquor resembling the grounds of coffee. Excruciating pains are often felt about the navel, attended with a rumbling or murmuring noise in the bowels; the belly is sometimes loose, but more commonly bound, which occasions a retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times very copious and quite clear. There is a great straitness of the breast, with difficulty of breathing, violent palpitations of the heart, sudden flushings of heat in various parts of the body; at other times a sense of cold, as if water were poured on them, flying pains in the arms and limbs, pains in the back and belly resembling those occasioned by gravel, the pulse very variable, sometimes uncommonly slow and at other times very quick; yawning, the hiccough, frequent sighings, and a sense of suffocation, as if from a ball or lump in the throat;

alternate fits of crying and convulsive laughing; the sleep is unsound and seldom refreshing, and the patient is often troubled with the nightmare.

As the disease increases, the patient is molested with headaches, cramps, and fixed pains in various parts of the body, the eyes are clouded and often affected with pain and dryness, there is a noise in the ears and often a dulness of hearing; in short, the whole animal functions are impaired. The mind is disturbed on the most trivial occasions, and is hurried into the most perverse commotions, inquietudes, terror, sadness, anger, diffidence, &c. The patient is apt to entertain wild imaginations and extravagant fancies, the memory becomes weak, and the reason fails.

Nothing is more characteristic of this disease than a constant dread of death. This renders those unhappy persons who labor under it peevish, fickle, impatient, and apt to run from one physician to another, which is one reason why they seldom reap any benefit from medicine, as they have not sufficient resolution to persist in any one course till it has time to produce its proper effects. They are likewise apt to imagine that they labor under diseases from which they are quite free, and are very angry if any one attempts to set them right or laugh them out of their ridiculous notions.

Regimen.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats and heavy sauces are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but if they feel themselves weak and faint between meals, they ought to eat a bit of bread and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body and impairs the faculties of the mind, yet taken in moderation it strengthens the stomach and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find a temporary relief in the use of these, but they always increase the malady, as they weaken the stomach and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and

prove certain poisons at last. These cautions are the more necessary, as most nervous people are peculiarly fond of tea and ardent spirits; to the use of which many of them fall a victim.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea-voyages have an excellent effect; and to those who can afford to take them, and have sufficient resolution, we would by all means recommend this course. Even change of place and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason, a long journey or a voyage is of much more advantage than riding short journeys near home.

A cool and dry air is proper, as it braces and invigorates the whole body. Nothing tends more to relax and enervate than hot air, especially that which is rendered so by great fires or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and defend the alimentary canal from many impressions, to which it would otherwise be subject, upon every sudden change from warm to cold weather. Rubbing the body frequently with a flesh-brush or a coarse linen cloth is likewise beneficial, as it promotes the circulation, perspiration, &c. Persons who have weak nerves ought to rise early and take exercise before breakfast, as lying too long abed cannot fail to relax the solids. They ought likewise to be diverted, and to be kept as easy and cheerful as possible, as nothing hurts the nervous system or weakens the digestive powers more than fear, grief, or anxiety.

Medicines.—Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered, at least, more comfortable, by proper medicines.

When the patient is costive, he ought to take a little rhubarb, or some other mild purgative, and should never suffer his belly to be long bound. All strong and violent purgatives are, however, to be avoided, as aloes, jalap, &c. I have generally seen

an infusion of senna and rhubarb in brandy answer very well. This may be made of any strength, and taken in such quantity as the patient finds necessary. When digestion is bad or the stomach relaxed and weak, an infusion of the Peruvian bark and other bitters may be used with advantage.*

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects. But when the liver or other viscera are obstructed, or otherwise unsound, the cold bath is improper. The most proper seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always observed the greatest benefit from the acid elixir of vitriol. It may be taken in the quantity of fifteen, twenty, or thirty drops, twice or thrice a day, in a glass of water. This both expels wind, strengthens the stomach, and promotes digestion.

Opiates are greatly extolled in these maladies; but as they only palliate the symptoms, and generally afterwards increase the disease, we would advise people to be extremely sparing in the use of them, lest habit render them at last absolutely necessary.

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorders; but whoever wishes for a thorough cure must expect it from regimen alone. We shall therefore omit mentioning more medicines, and again recommend the strictest attention to DIET, AIR, EXERCISE, and AMUSEMENTS.

MELANCHOLY.

Melancholy is that state of alienation or weakness of mind which renders people incapable of enjoying the pleasures or performing the duties of life. It is a degree of insanity, and often terminates in absolute madness.

* Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander-seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or whisky for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water an hour before breakfast, dinner, and supper.

Causes.—It may proceed from a hereditary disposition; intense thinking, especially where the mind is long occupied about one object; violent passions or affections of the mind, as love, fear, joy, grief, overweening pride, and such like. It may also be occasioned by excessive venery, narcotic or stupefactive poisons, a sedentary life, solitude, the suppression of customary evacuations, acute fevers, or other diseases. Violent anger will change melancholy into madness; and excessive cold, especially of the lower extremities, will force the blood into the brain, and produce all the symptoms of madness. It may likewise proceed from the use of aliment that is hard of digestion, or which cannot be easily assimilated; from a callous state of the integuments of the brain, or a dryness of the brain itself. To all which we may add gloomy or mistaken notions of religion.

Symptoms.—When persons begin to be melancholy, they are timorous, watchful, fond of solitude, fretful, fickle, captious and inquisitive, solicitous about trifles, sometimes niggardly, and at other times prodigal. The belly is generally bound, the urine thin and in small quantity, the stomach and bowels inflated with wind, the complexion pale, the pulse slow and weak. The functions of the mind are also greatly perverted, insomuch that the patient often imagines himself dead or changed into some other animal. Some have imagined their bodies were made of glass or other brittle substances, and were afraid to move lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to an obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind or a hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the *menses*, sometimes carry off this disease.

Regimen.—The diet ought to consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell-fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kind of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient who, by a long use of whey, water, and garden fruits, recovered, after having evacuated a great quantity of black-colored matter.

Strong liquors of every kind ought to be avoided as poison. The most proper drink is water, whey, or very small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely, or his drink may be sweetened with it. Infusions of balm leaves, pennyroyal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themselves or sweetened with honey, as the patient shall choose.

The patient ought to take as much exercise in the open air as he can bear. This helps to dissolve the viscid humors, it removes obstructions, promotes the perspiration and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would tend greatly to alleviate his disorder; but it would have still a better effect if he were obliged to labor a piece of ground. By digging, hoeing, planting, sowing, &c., both the body and mind would be exercised. A long journey, or a voyage, especially into a warmer climate, with agreeable companions, has often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure than confining the patient within doors and plying him with medicines.

Medicine.—In the cure of this disease great regard must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of king Saul; and indeed it is a very rational one. Nothing can remove diseases of the mind so effectually as applications to the mind itself, the most efficacious of which is music. The patient's company ought likewise to consist of such persons as are agreeable to him. People in this case are apt to conceive unaccountable aversions against particular persons, and the very sight of such persons is sufficient to distract their minds and throw them into the utmost perturbation.

When the patient is high, evacuations are necessary. In this case he must be bled, and have his belly kept open by purging medicines, as manna, rhubarb, cream of tartar, or the

soluble tartar. I have seen the last have very happy effects. It may be taken in the dose of half an ounce, dissolved in water gruel, every day, for sundry weeks, or even for months if necessary. More or less may be given, according as it operates. Vomits have likewise a good effect, but they must be pretty strong, otherwise they will not operate.

Camphire and musk have likewise been used in this case with advantage. Ten or twelve grains of camphire may be rubbed in a mortar with half a dram of nitre, and taken twice a day, or oftener, if the stomach will bear it. If it will not sit upon the stomach in this form, it may be made into pills with gum assafœtida and Russian castor, and taken in the quantity above directed. If musk is to be administered, a scruple or twenty-five grains of it may be made into a bolus with a little honey or common syrup, and taken twice or thrice a day. We do not mean that all these medicines should be administered at once; but whichever of them is given must be duly persisted in, otherwise no benefit can be expected.

As it is very difficult to induce patients in this disease to take medicines, we shall mention some outward applications which sometimes do good. The principal of these are issues, setons, and warm bathing. Issues may be made in any part of the body, but they generally have the best effect near the spine. The discharge from these may be greatly promoted by dressing them with the mild blistering ointment, and keeping what are commonly called the orrice peas in them. The most proper place for a seton is between the shoulder-blades; and it ought to be placed upwards and downwards, or in the direction of the spine.

THE PALSY.

The palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. It is more or less dangerous, according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary for life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected, the case is bad, as it shows that the disease proceeds from the brain. When the part affected feels cold, is insensible, or wastes away, or when the judgment and memory begin to fail, there is small hopes of a cure.

Causes.—The immediate cause of the palsy is whatever prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness, wounds of the brain or spinal marrow, pressure upon the brain or nerves, very cold or damp air, the suppression of customary evacuations, sudden fear, want of exercise, or whatever greatly relaxes the system, as drinking much tea* or coffee, &c. The palsy may likewise proceed from wounds of the nerves themselves, from the poisonous fumes of metals or minerals, as mercury, lead, arsenic, &c.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his belly kept open by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and attenuating, consisting chiefly of spicy and aromatic vegetables, as mustard, horseradish, &c. The drink may be generous wine, mustard whey, or brandy and water. Friction with the flesh-brush or a warm hand is extremely proper, especially on the parts affected. Blistering plasters may likewise be applied to the affected parts with advantage. When this cannot be done, they may be rubbed with the volatile liniment or the nerve ointment of the Edinburgh dispensatory. One of the best external applications is electricity. The shocks should be received on the part affected, and they ought daily to be repeated for several weeks.

Vomits are very beneficial in this kind of palsy, and ought to be frequently administered. Cephalic snuff, or any thing that makes the patient sneeze, is likewise useful. Some pretend to have found great benefit from rubbing the parts affected with nettles, but this does not seem to be anywise preferable to blistering. If the tongue be affected, the patient may gargle his mouth frequently with brandy and mustard, or he may hold a bit of sugar in his mouth wet with the palsy-drops or compound spirits of lavender. The wild vale-

* Many people imagine that tea has no tendency to hurt the nerves, and that drinking the same quantity of warm water would be equally pernicious. This however seems to be a mistake. Many persons drink three or four cups of warm milk and water daily without feeling any bad consequences, yet the same quantity of tea will make their hand shake for twenty-four hours.

rian root is a very proper medicine in this case. It may either be taken in an infusion of sage leaves, or half a dram of it in powder may be given in a glass of wine three times a day. If the patient cannot use the valerian, he may take of *sal volatile oleosum*, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine, three or four times a day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamon bark, ginger, or other warm spiceries.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skin, and if possible should remove into a warmer climate.

EPILEPSY, OR FALLING SICKNESS.

The epilepsy is a sudden deprivation of all the senses, wherein the patient falls suddenly down and is affected with violent convulsive motions. Children, especially those who are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off about the time of puberty; when it attacks any person after twenty years of age, the cure is difficult; but when after forty, a cure is hardly to be expected. If the fit continues only for a short space and returns seldom, there is reason to hope; but if it continues long and returns frequently, the prospect is bad. It is a very unfavorable symptom when the patient is seized with the fits in his sleep.

Causes.—The epilepsy is sometimes hereditary. It may likewise proceed from frights of the mother when with child; from blows, bruises, or wounds on the head; a collection of water, blood, or serous humors in the brain; a polypus; tumors or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c.; hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

Symptoms.—An epileptic fit is generally preceded by unusual weariness, pain of the head, dulness, giddiness, noise in the ears, dimness of sight, palpitation of the heart, disturbed

sleep, difficult breathing; the bowels are inflated with wind, the urine is in great quantity but thin, the complexion is pale, the extremities are cold, and the patient often feels as it were a stream of cold air ascending towards his head.

In the fit, the patient generally makes an unusual noise; his thumbs are drawn in towards the palms of the hands; his eyes are distorted; he starts and foams at the mouth; his extremities are bent and twisted various ways; he often discharges his seed, urine, and fœces involuntarily; and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head, but has no remembrance of what happened to him during the fit.

The fits are sometimes excited by violent affections of the mind, a debauch of liquor, excessive heat, cold, or the like.

This disease, from the difficulty of investigating its causes and its strange symptoms, was formerly attributed to the wrath of the gods or the agency of evil spirits. In modern times it has often, by the vulgar, been imputed to witchcraft or fascination. It depends however as much upon natural causes as any other malady; and its cure may often be effected by persisting in the use of proper means.

Regimen.—Epileptic patients ought, if possible, to breathe a pure and free air. Their diet should be light but nourishing. They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, &c.

Exercise is likewise of great use; but the patient must be careful to avoid all extremes either of heat or cold, all dangerous situations, as standing upon precipices, riding deep waters, and such like; as any thing that makes him giddy is apt to occasion a fit.

Medicine.—The intentions of cure must vary according to the cause of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons, in this case, have often a very good effect. When there is reason to believe that the disease proceeds from worms,

proper medicines must be used to kill or carry off these vermin. When the disease proceeds from teething, the belly should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blistering plaster may be put betwixt the shoulders. The same method is to be followed when epileptic fits precede the eruption of the small-pox or measles, &c.

When the disease is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be expected. When it is owing to a debility, or too great an irritability of the nervous system, such medicines as tend to brace and strengthen the nerves may be used, as the Peruvian bark, preparations of steel, &c.*

Colebatch says that the misletoe cures an epilepsy as certainly as the Peruvian bark does an intermittent fever. The dose to an adult is half a dram of the powder, four times a day, drinking after it a strong infusion of the same plant. Though this medicine has not been found to answer the high encomiums which have been passed upon it, yet in obstinate epileptic cases it deserves a trial. It must however be used for a considerable time, in order to produce any salutary effects.

Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of factitious cinnabar, may be made up into a bolus and taken every night and morning.

Sometimes the epilepsy has been cured by electricity.

* Fuller recommends the following electuary as a most excellent *anti-epileptic*. Take Jesuits' bark in powder three ounces, Virginian snakeroot powdered one ounce, as much syrup of pæony or cloves as is sufficient to form it into a soft electuary. The dose to an adult is a dram, or about the size of a nutmeg, morning and evening. It must be continued for three or four months, and afterwards repeated, three or four days before the new and full moon, for some time.

Mead likewise recommends an electuary of a similar nature for the epilepsy, only he uses valerian-root in place of the snakeroot. It must be taken in the same manner as the above. The patient ought always to be bled, and to take a purge or two, before he begins to use these medicines. They will likewise have a better effect if the patient drinks a tea-cupful of the decoction of guaiacum after each dose. It may be made by boiling two ounces of guaiacum shavings, and one ounce of raisins of the sun stoned, in two English quarts of water to one. Strain the liquor, and afterwards let it stand to settle, then pour off the clear from the fœces.

Convulsion fits proceed from the same causes, and must be treated in the same manner, as the epilepsy.

There is one particular species of convulsion fits which commonly goes by the name of St. Vitus's dance, wherein the patient is agitated with strange motions and gesticulations, which by the common people are generally believed to be the effects of witchcraft. This disease may be cured by repeated bleedings and purges, and afterwards using the medicines prescribed above for the epilepsy, viz., the Peruvian bark, and the snake-root, &c. Chalybeate waters are found to be beneficial in this case. The cold bath is likewise of singular service, and ought never to be neglected when the patient can bear it.

THE HICCOUGH.

The hiccough is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from a hurt of the stomach; poisons; inflammations or scirrhous tumors of the stomach, intestines, bladder, midriff, or the rest of the viscera. In gangrenes, acute and malignant fevers, a hiccough is often the forerunner of death.

When the hiccough proceeds from the use of aliment that is flatulent or hard of digestion, a draught of generous wine, or a dram of any spirituous liquor, will generally remove it. If poison be the cause, plenty of milk and oil must be drank, as has been formerly recommended. When it proceeds from an inflammation of the stomach, &c., it is very dangerous. In this case the cooling regimen must be observed. The patient must be bled, and take frequently a few drops of the sweet spirits of nitre in a cup of wine whey. His stomach must likewise be fomented with cloths dipped in warm water, or bladders filled with warm milk and water applied to it.

When the hiccough proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. If the hiccough be a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humor, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminative medicines directed for the heart-burn must be used.

When the hiccough proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service; but they must be used with caution. A bit of sugar dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach plaster, or a cataplasm of the Venice treacle of the Edinburgh or London dispensatory, applied to the region of the stomach.

I lately attended a patient who had almost a constant hiccough for above nine weeks. It was frequently stopped by the use of musk, opium, wine, and other cordial and antispasmodic medicines, but always returned. Nothing however gave the patient so much ease as brisk small beer. By drinking freely of this, the hiccough was often kept off for several days, which was more than could be done by the most powerful medicines. The patient was at length seized with a vomiting of blood, which soon put an end to his life. Upon opening the body, a large scirrhous tumor was found near the pylorus or right orifice of the stomach.

CRAMP OF THE STOMACH.

This disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the gouty, hysteric, and hypochondriac.

If the patient has any inclination to vomit, he ought to take some draughts of warm water, or weak camomile tea, to clean his stomach. After this, if he has been costive, a laxative clyster must be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of liquid laudanum may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyster are over, another, with an equal or larger quantity of opium, may be given, and every four or five hours a bolus with ten or twelve grains of musk and half a dram of the Venice treacle.

In the mean time, the stomach ought to be fomented with cloths dipped in warm water, or bladders filled with warm milk and water should be constantly applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected, and an antihysteric plaster worn upon it, for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient makes it improper. When the pain or cramps proceed from a suppression of the *menses*, bleeding is of use. If they be owing to the gout, recourse must be had to spirits or some of the warm cordial waters. Blistering plasters ought likewise, in this case, to be applied to the ankles. I have often seen violent cramps and pains of the stomach removed by covering it with a plaster of Venice treacle.

OF THE NIGHTMARE.

In this disease the patient, in time of sleep, imagines he feels an uncommon oppression or weight about his breast or stomach, which he can by no means shake off. He groans, and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and, in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him.

This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life and live full, are most commonly afflicted with the nightmare. Nothing tends more to produce it than heavy suppers, especially when eaten late or the patient goes to bed soon after. Wind is likewise a very frequent cause of this disease; for which reason those who are afflicted with it ought to avoid all flatulent food. Deep thought, anxiety, or any thing that oppresses the mind, ought also to be avoided.

As persons afflicted with the nightmare generally moan

or make some noise in the fit, they should be waked or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake. Dr. Whytt says he generally found a dram of brandy, taken at bedtime, prevent this disease. That, however, is a bad custom, and in time loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint-water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak digestion however has eaten flatulent food, a dram may be necessary; in this case we would recommend it as the most proper medicine.

Persons who are young and full of blood, if troubled with the nightmare, ought to take a purge frequently and use a spare diet.

SWOONINGS.

People of weak nerves or delicate constitutions are very liable to swoonings or fainting fits. These indeed are seldom dangerous when duly attended to; but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swooning are, sudden transitions from cold to heat; breathing air that is deprived of its proper spring or elasticity; great fatigue; excessive weakness; loss of blood; long fasting; fear, grief, and other violent passions or affections of the mind.

It is well known that persons who have been long exposed to cold often faint or fall into a swoon upon coming into the house, especially if they drink hot liquor or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face sprinkled with vinegar. He should likewise be made to smell to vinegar, and should have a spoonful or two of water, if he can

swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it will be necessary to bleed the patient, and afterwards to give him a clyster.

As air that is breathed frequently loses its elasticity or spring, it is no wonder if persons who respire in it often fall into a swoon or fainting fit. They are, in this case, deprived of the very principle of life. Hence it is that fainting fits are so frequent in all crowded assemblies, especially in hot seasons. Such fits however must be considered as a kind of temporary death; and, to the weak and delicate, they sometimes prove fatal. They ought therefore with the utmost care to be guarded against. The method of doing this is obvious. Let assembly rooms, and all other places of public resort, be large and well ventilated; and let the weak and delicate avoid such places, particularly in warm seasons.

A person who faints in such a situation ought immediately to be carried into the open air; his temples should be rubbed with strong vinegar or brandy, and volatile spirits or salts held to his nose. He should be laid upon his back with his head low, and have a little wine, or some other cordial, poured into his mouth, as soon as he is able to swallow it. If the person has been subject to hysteric fits, castor or assafœtida should be applied to the nose, or burnt feathers, horn, or leather, &c.

When fainting fits proceed from mere weakness or exhaustion, which is often the case after great fatigue, long fasting, loss of blood, or the like, the patient must be supported with generous cordials, as jellies, wines, spirituous liquors, &c. These however must be given at first in very small quantities, and increased gradually as the patient is able to bear them. He ought to be allowed to lie quite still and easy upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago gruel with wine, new milk, and other things of a light and cordial nature. These things are to be given out of the fit. All that can be done in the fit is to let him smell to a bottle of Hungary water, *eau de luce*, or spirits of hartshorn, and to rub his temples with warm brandy, or to lay a compress dipped in it to the pit of the stomach.

In fainting fits that proceed from fear, grief, or other violent passions or affections of the mind, the patient must be very cautiously managed. He should be suffered to remain at rest,

and only made to smell to some vinegar. After he is come to himself he may drink freely of warm lemonade or balm tea, with some orange or lemon peel in it. It will likewise be proper, if the fainting fits have been long and severe, to cleanse the bowels by throwing in an emollient clyster.

It is common in fainting fits, from whatever cause they proceed, to bleed the patient. This practice may be very proper in strong persons of a full habit; but in those who are weak and delicate, or subject to nervous disorders, it is dangerous. The proper method with such people is to expose them to the free air, and to use cordial and stimulating medicines, as volatile salts, Hungary-water, spirits of lavender, tincture of castor, &c.

HYSTERIC AND HYPOCHONDRIAC AFFECTIONS.

These likewise belong to the numerous tribe of nervous disorders, which may justly be reckoned the reproach of medicine. We would have treated of them at greater length, but for this reason, that they are diseases which nobody chooses to own; and indeed it would be better if their names were never mentioned. One cannot tell a lady she is hysteric without affronting her, nor say that a gentleman is hypochondriac without in some measure insinuating that he is mad or at least whimsical. But although these names were liable to no such unfavorable acceptation, they are by no means proper, and for that reason ought to be discontinued.

Physicians are not more at a loss to account for the symptoms of these disorders than to prescribe medicines for removing them. There are indeed so many nervous antidotes daily puffed away, that one would be apt to think no person could long labor under any disease of this nature. But, alas! whoever trusts to these will be sure to meet with a disappointment. Nervous diseases proceed either from disagreeable affections of the mind or from errors in the regimen, and can only be cured by removing the one or rectifying the other.

Though this truth is well known to physicians, yet they are often obliged to disguise it. Patients who labor under nervous diseases are generally very fond of medicine, and when they are not swallowing drugs they think themselves neglected. For this reason the doctor must either give medi-

cine or lay his account with being dismissed. Nothing indeed is more characteristic of the disease than an inclination to consult new physicians. Hence few persons of fortune who are nervous fail to consult every physician they meet with. Nor do they stop here, but generally they take the advice of every quack and old woman, however ignorant or contemptible; but, though fond of advice, seldom follow it so long as to reap any benefit from it. Fickle and unsteady, they fly from one thing to another, till at length, tired out with disappointments, and despairing of relief, they sink under a load of calamities.

Would such persons, instead of hunting after medicines, and flying from one physician to another, persist steadily in a proper plan of regimen, they might often render life tolerably easy, and sometimes even agreeable.* This however requires more resolution than most people are masters of. They will swallow a drug because it is soon over, and they expect immediate relief from it; but can by no means think of pursuing a plan that requires patience and perseverance, and which perhaps strikes at the root of some of their most darling enjoyments.

The general causes and symptoms of these diseases having been pretty fully pointed out in the beginning of this chapter, under the general title of nervous disorders, we shall not repeat them. It may not however be improper to add, that from whatever source these disorders may spring, their principal seat seems to be the alimentary canal; at least most of their symptoms arise from thence; as flatulence, indigestion, nausea and vomiting, the hysteric globe, cramps of the stomach, &c. All these show a weak and relaxed state of the stomach and intestines; to which, if we add an over-degree of sensibility of the nervous system, we shall be able to account for most of the symptoms denominated *nervous*, *hysteric*, or *hypochondriac*.

* It were to be wished, in diseases where the cure depends chiefly upon the patient's own endeavors, that no medicines were prescribed at all. Wherever physicians order medicine patients will trust to it, and when that is the case it is ten to one but their own endeavors are neglected. The physician, therefore, who has so much hardiness and honesty as to give advice without medicine, is, in many cases, the most likely to perform a cure, as it puts the patient upon exerting his own powers, which he will never do so long as he has any faith in medicine.

This view of nervous diseases plainly points out the intentions of cure, viz., to strengthen the nerves and promote the digestion. But as this can only be done by *labor, simple food*, and *free air*, we must again beg leave to recommend an attention to these. The lazy, the indolent, and the luxurious, will despise this advice; but such are incurable, and deserve to suffer. I have known the most obstinate nervous diseases cured by labor, but never knew them yield to medicine. Some of their symptoms may indeed for a time be mitigated by it, but that is all it can do.

The persons most liable to these disorders are the lazy, the luxurious, the unfortunate, and the sedentary. For the two first of these classes we shall prescribe nothing, as the cure is in their own power; and to the third we can only recommend hope, amusement, &c. The fourth, however, merits our further attention, both because it comprehends a great number of the useful part of mankind, and likewise because it is often out of their power to alter their situation. Many of them might however do a great deal, if they would. For example, the clergy are almost to a man hypochondriac, and often poor, yet think it much below them to labor. I have been able to persuade some of them to thresh, &c., others to dig; nor did such ever fail to get well. Let the rest follow their example, or take exercise in what way they please.* As to indolent girls who are eat up with hysteric fits merely because they will not work, I see no reason why they should not be sent to the workhouse, and put upon hard labor. This would be both a benefit to themselves and the society to which they belong.

Those, however, who are willing to take exercise, but whose occupations confine them to the house, and perhaps to an unfavorable posture, really deserve our pity. We have in a former part of the book endeavored to lay down some rules for their conduct; and shall only add, that where these

* Some people will think it strange that we should recommend labor to the clergy; but they ought to consider that the regulations of society can never alter the laws of our nature; and if a man must either labor or be sick, surely no set of men have any title to an exemption from the general rule. The monkish notion that a clergyman ought rather to beg than dig, has more bad consequences than we choose to name. It must however be acknowledged, that a clergyman who has the charge of a parish may find sufficient exercise, if he chooses to take it, without either threshing, digging, or ploughing.

cannot be complied with or fail of having the desired effect, their intentions may in some measure be answered by the following medicines, viz., the Peruvian bark with other bitters, preparations of steel, assafœtida, elixir of vitriol, infusions of valerian root, pennyroyal, &c. The various ways of preparing and using these have already been pointed out.

CHAPTER XLIV.

OF POISONS.

Every person ought in some measure to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent as not to admit of delay or allow time to procure the assistance of physicians. Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand or easily obtained, and nothing but common prudence needful in the application of them.

The vulgar notion that every poison is cured by some counter poison, as a specific, has done much hurt. People believe they can do nothing for the patient unless they know the particular antidote to that kind of poison which he has taken; whereas the cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible.

There is no case wherein the indications of cure are more obvious than in this. Poison is seldom long in the stomach before it occasions sickness, with an inclination to vomit. This shows plainly what ought to be done. Indeed common sense dictates to every man, that, if any thing has been taken into the stomach which endangers life, it ought immediately to be discharged. Were this duly regarded, the danger arising from poisons might generally be avoided. The method of prevention is obvious, and the means are in the hands of every man.

We shall not take up the reader's time with a detail of the ridiculous notions which have prevailed among ignorant people in different ages with regard to poisons; neither shall we mention the boasted antidotes which have been recommended either for preventing or obviating their effects; but shall content ourselves with pointing out the poisons most common in this country, and the means of avoiding their dangerous consequences.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, cobalt, the corrosive sublimate of mercury, &c.

Those of the vegetable kind are generally of a narcotic or stupefactive quality, as poppy, hemlock, henbane, berries of the deadly nightshade, &c.

Poisonous animals communicate their infection either by the bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

Mineral Poisons.—Arsenic is the most common of this class; and, as the whole of them are pretty similar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has taken arsenic, he soon perceives a burning heat and a violent pricking pain in his stomach and bowels, an intolerable thirst, and an inclination to vomit. The tongue and throat feel rough and dry; and, if proper help be not soon administered, the patient is seized with great anxiety, hiccoughing, faintings, and coldness of the extremities. To these succeed black vomits, fetid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms, the patient should drink large quantities of new milk and salad oil till he vomits, or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the

vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of the poison, and prevent its wounding the bowels; but if they should not make the person vomit, half a dram or two scruples of the powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather. Should these methods however fail, half a dram of white vitriol, or five or six grains of emetic tartar, must be administered.

If tormenting pains are felt in the lower belly, and there is reason to fear that the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of Glauber's salts, or some other purgative.

After the poison has been evacuated, the patient ought for some time to live upon such things as are of a healing and cooling quality; to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon meats of easy digestion. His drink should be barley water, linseed tea, or infusions of any of the mild mucilaginous vegetables.

Vegetable Poisons, besides heat and pain of the stomach, commonly occasion some degree of giddiness, and often a kind of stupidity or folly. Persons who have taken these poisons must be treated in the same manner as for the mineral or corrosive.

Though the vegetable poisons, when allowed to remain in the stomach, often prove fatal, yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound and inflame the bowels than mineral substances; no time, however, ought to be lost in having them expelled the stomach.

Opium, being frequently taken by mistake, merits particular attention. It is used as a medicine both in a solid and liquid form, which latter commonly goes by the name of laudanum. It is indeed a valuable medicine when taken in proper quantity, but as an over-dose proves a strong poison, we shall point out its common effects, together with the method of cure.

Too great a quantity of opium generally occasions great drowsiness, with stupor and other apoplectic symptoms. Sometimes the person has so great an inclination to sleep that it is almost impossible to keep him awake. Every method must, however, be tried for this purpose. He should be tossed, shook, and moved about; sharp blistering plasters should be applied to his legs or arms, and stimulating medicines, as salts of hartshorn, &c., held under his nose. It will also be proper to let blood. At the same time every method must be taken to make him discharge the poison. This may be done in the manner directed above, viz., by the use of strong vomits, drinking plenty of warm water with oil, &c.

Mead, besides vomits, in this case, recommends acid medicines with lixivial salts. He says that he has often given salt of wormwood mixed with juice of lemon, in repeated doses, with great success.

If the body should remain weak and languid after the poison has been discharged, nourishing diet and cordials will be proper; but when there is reason to fear that the stomach or bowels are inflamed, the greatest circumspection is necessary both with regard to food and medicine.

THE BITES OF POISONOUS ANIMALS.

We shall begin with the bite of a mad dog, as it is both the most common and dangerous animal poison in this country.

The creatures naturally liable to contract this disease are, so far as we yet know, all of the dog kind, viz., foxes, dogs, and wolves. Hence it is called the *rabies canina*, or dog-madness. Of the last we have none in this island; and it so seldom happens that any person is bit by the first, that they scarce deserve to be taken notice of. If such a thing should happen, the method of treatment is precisely the same as for the bite of a mad dog.

The symptoms of madness in a dog are as follow: At first he looks dull, shows an aversion to food and company; he does not bark as usual, but seems to murmur, is peevish, and apt to bite strangers; his ears and tail droop more than usual, and he appears drowsy. After he begins to loll out his tongue and froth at the mouth, his eyes seeming heavy and watery. He now, if not confined, takes off, runs panting along with a kind of dejected air, and endeavors to bite every one he meets.

Other dogs are said to fly from him. Some think this a certain sign of madness, supposing that they know him by the smell; but it is not to be depended on. If he escapes being killed, he seldom runs above two or three days, till he dies, exhausted with heat, hunger, and fatigue.

This disease is most frequent after long, dry, hot seasons; and such dogs as live upon putrid stinking carrion, without having enough of fresh water, are most liable to it.

When any person is bit by a dog, the strictest inquiry ought to be made whether the animal be really mad. Many disagreeable consequences arise from neglecting to ascertain this point. Some people have lived in continual anxiety for many years, because they had been bit by a dog which they believed to be mad; but as he had been killed on the spot, it was impossible to ascertain the fact. This should induce us, instead of killing a dog the moment he has bit any person, to do all in our power to keep him alive, at least till we can be certain whether he be mad or not.

Many circumstances may contribute to make people imagine a dog mad. He loses his master, runs about in quest of him, is set upon by other dogs, and perhaps by men. The creature, thus frightened, beat, and abused, looks wild, and lolls out his tongue as he runs along. Immediately a crowd is after him; while he, finding himself closely pursued, and taking every one he meets for an enemy, naturally attempts to bite him in self-defence. He soon gets knocked on the head, and it passes currently that he was mad, and it is then impossible to prove the contrary.

This being the true history of by far the greater part of those dogs which pass for mad, is it any wonder that numberless whimsical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almost every family. Though not one in a thousand has any claim to merit, yet they are all supported by numberless vouchers. No wonder that imaginary diseases should be cured by imaginary remedies. In this way, credulous people first impose upon themselves, and then deceive others. The same medicine that was supposed to prevent the effects of the bite, when the dog was not mad, is recommended to a person who has had the misfortune to be bit by a dog that was really mad; he takes it, trusts to it, and is undone.

To these mistakes we must impute the frequent ill success of the medicines used for preventing the effects of the bite of a mad dog. It is not owing so much to a defect in medicine as to wrong applications. I am persuaded if proper medicines were administered immediately after the bite is received, and continued for a sufficient length of time, we should not lose one in a thousand of those who have the misfortune to be bit by a mad dog.

This poison is generally communicated by a wound, which, nevertheless, heals as soon as a common wound; but afterwards it begins to feel painful, and as the pain spreads towards the neighboring parts the person becomes heavy and listless, his sleep is unquiet with frightful dreams, he sighs, looks dull, and loves solitude. These are the forerunners, or rather the first symptoms, of that dreadful disease occasioned by the bite of a mad dog. But as we do not propose to treat the disease itself, but to point out the method of preventing it, we shall not take up time in showing its progress from the first invasion to its commonly fatal end.

The common notion that this poison may lie in the body for many years, and afterwards prove fatal, is both hurtful and ridiculous. It must render such persons as have had the misfortune to be bit very unhappy, and can have no good effects. If the person takes proper medicines for forty days after the time of his being bit, and feels no symptoms of the disease, there is reason to believe him out of danger. Some indeed have gone mad ten or twelve months after they were bit, but I never knew it happen later; and of this I only remember to have seen one instance.

The medicines recommended for preventing the effects of the bite of a mad dog are chiefly such as promote the different secretions, and antispasmodics.

Dr. Mead recommends a preventive medicine, which he says he never knew fail, though in the space of thirty years he had used it a thousand times.

The doctor's prescription is as follows:

"Take ash-colored ground liverwort, cleaned, dried, and powdered, half an ounce, of black pepper powdered a quarter of an ounce; mix these well together, and divide the powder into four doses, one of which must be taken every morning fasting, for four mornings successively, in half an English pint of cow's milk warm.

"After these four doses are taken, the patient must go into

the cold bath, or a cold spring or river, every morning fasting, for a month; he must be dipped all over, but not stay in (with his head above water) longer than half a minute, if the water be very cold. After this he must go in three times a week for a fortnight longer.

"The person must be bled before he begins to use the medicine."

We shall next mention the famous East India specific, as it is called. This medicine is composed of cinnabar and musk. It is esteemed a great antispasmodic, and by many extolled as an infallible remedy for preventing the effects of the bite of a mad dog.

"Take native and factitious cinnabar of each twenty-four grains, musk sixteen grains; let these be made into a fine powder, and taken in a glass of arrack or brandy."

This single dose is said to secure the person for thirty days, at the end of which it must be repeated; but if he has any symptoms of the disease, it must be repeated in three hours.

The following is likewise reckoned a good antispasmodic medicine:

Take of Virginian snakeroot in powder half a dram, gum assafœtida twelve grains, gum camphire seven grains; make these into a bolus with a little syrup of saffron.

Camphire may also be given in the following manner:

Take purified nitre half an ounce, Virginian snakeroot in powder two drams, camphire one dram; rub them together in a mortar, and divide the whole into ten doses.

Mercury is another medicine of great efficacy, both in the prevention and cure of this kind of madness. When used as a preventive, it will be sufficient to rub daily a dram of the ointment into the parts about the wound.

Vinegar is likewise of considerable service, and should be taken freely, either in the patient's food or drink.

These are the principal medicines recommended for preventing the effects of the bite of a mad dog. We would not, however, advise people to trust to any one of them; but from a proper combination of their different powers there is the greatest reason to hope for success.

The great error in the use of these medicines lies in not taking them for a sufficient length of time. They are used more like charms than medicines intended to produce any change in the body. To this, and not to the insufficiency of the medicines, must we impute their frequent want of success.

Dr. Mead says that the virtue of his medicine consists in promoting urine. But how a poison should be expelled by urine, with only three or four doses of any medicine, however powerful, is not easy to conceive. More time is certainly necessary; and here the defect of the doctor's prescription seems to lie.

The East India specific is still more exceptionable on this account.

As these and most other medicines, taken singly, have frequently been found to fail, we shall recommend the following course.

If a person be bit in a fleshy part, where there is no hazard of hurting any large blood-vessel, the parts adjacent to the wound may be cut away. But if this be not done soon after the bite has been received, it will be better to omit it.

The wound may be washed with salt and water or a pickle made of vinegar and salt, and afterwards dressed twice a day with yellow basilicon mixed with some red precipitate of mercury.

The patient should begin to use either Dr. Mead's medicine or some of the others mentioned above. If he takes Mead's medicine, he may use it as the doctor directs for four days successively. Let him then omit it for two or three days, and again repeat the same number of doses as before.

During this course, he must rub into the parts about the wound, daily, one dram of the mercurial ointment. This may be done for ten or twelve days at least.

When this course is over, he may take some doses of physic, and wait a few days, till the effects of the mercury be quite gone off. He must then begin to use the cold bath, into which he must go every morning for five or six weeks. But if the patient should feel cold and chilly for a long time after coming out of the cold bath, it will be better to use a tepid one, or to have the water a little warmed.

In the mean time, we would advise him not to leave off all internal medicines, but to take either one of the boluses of snakeroot, assafœtida and camphire, or one of the powders of nitre, camphire and snakeroot, twice a day. These may be continued for a fortnight or three weeks longer.

If the person has gone through the above course of medicine, and no symptoms of madness appear, he may be reckoned out of danger. It will nevertheless be advisable, for the greater

safety, to take a dose or two of Dr. Mead's medicine, once a fortnight, for the three or four succeeding months.

During the use of the mercurial ointment, the patient must keep within doors, and take nothing cold.

A proper regimen must be observed during the whole course. The patient should abstain from flesh, and all salted and high-seasoned provisions. He must avoid strong liquors, and live mostly upon a light and rather spare diet. His mind should be kept as easy and cheerful as possible, and all excessive heat and violent passions avoided with the utmost care.

I have never seen this course of medicine, with proper regimen, fail to prevent the hydrophobia, and cannot help again observing, that the want of success must generally be owing either to the application of improper medicines, or not using proper ones for a sufficient length of time.

Mankind are extremely fond of every thing that promises a sudden or miraculous cure. By trusting to these they often lose their lives, when a regular course of medicine would have rendered them absolutely safe. This holds remarkably in the present case: numbers of people, for example, believe if they or their cattle be once dipped in the sea, it is sufficient; as if the salt water were a charm against the effects of the bite. This, and such like whims, have proved fatal to many.

It is a common notion, if a person be bit by a dog which is not mad, that if he should go mad afterwards the person would be affected with the disorder at the same time; but this notion is too ridiculous to deserve a serious consideration. It is a good rule, however, to avoid dogs as much as possible, as the disease is often upon them for some time before its violent symptoms appear. The hydrophobia has been occasioned by the bite of a dog which showed no other symptoms of the disease but listlessness and a sullen disposition. It is somewhat surprising that no proper inquiry has ever been made into the truth of the common opinion, that a dog which has been wormed cannot bite after he goes mad. If the fact could be ascertained, and the practice rendered general, it would save both the lives and properties of many.

Though we do not mean to treat fully of the cure of the hydrophobia, yet we are far from reckoning it incurable. The notion that this disease could not be cured has been productive of the most horrid consequences. It was usual either to abandon the unhappy persons, as soon as they were seized with the disease, to their fate, to bleed them to death, or to

suffocate them between mattrasses or feather beds, &c. This conduct certainly deserves the severest punishment. We hope, for the honor of human nature, it will never be heard of again.

I have never had an opportunity of treating this disease, and therefore can say nothing of it from my own experience; but the learned Dr. Tissot says it may be cured in the following manner.

1. The patient must be bled to a considerable quantity; and this may be repeated twice, thrice, or even a fourth time, if circumstances require it.

2. The patient should be put, if possible, into a warm bath, and this should be used twice a day.

3. He should every day receive two or even three emollient clysters.

4. The wound, and the parts adjoining to it, should be rubbed with the mercurial ointment twice a day.

5. The whole limb which contains the wound should be rubbed with oil, and be wrapped up in an oily flannel.

6. Every three hours, a dose of Cob's powder should be taken in a cup of the infusion of lime-tree and elder flowers. This powder is made by rubbing together in a mortar, to a very fine powder, of native and factitious cinnabar each twenty-four grains, of musk sixteen grains.

7. The following bolus is to be given every night, and to be repeated in the morning if the patient is not easy, washing it down with the infusion mentioned above. Take one dram of Virginian snakeroot in powder, of camphire and assafœtida ten grains each, of opium one grain, and, with a sufficient quantity of conserve or rob of elder, make a bolus.

8. If there be a great nausea at stomach, with a bitterness in the mouth, thirty-five or forty grains of ipecacuanha, in powder, may be taken for a vomit.

9. The patient's food, if he takes any, must be light, as panado, soups made of farinaceous or mealy vegetables, &c.

10. If the patient should long continue weak, and subject to terrors, he may take half a dram of the Peruvian bark thrice a day.

The next poisonous animal which we shall mention is the Viper. The grease of this animal rubbed into the wound is said to cure the bite. Though that is all the viper-catchers generally do when bit, we should not think it sufficient for the bite of an enraged viper. It would surely be more safe

to have the wound well sucked,* and afterwards rubbed with warm salad oil. A poultice of bread and milk, softened with salad oil, should likewise be applied to the wound; and the patient ought to drink freely of vinegar whey, or water gruel with vinegar in it, to make him sweat. Vinegar is one of the best medicines which can be used in any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country.

With regard to poisonous insects, as the bee, the wasp, the hornet, &c., their stings are seldom attended with danger, unless when a person happens to be stung by a great number of them at the same time; in which case something should be done to abate the inflammation and swelling. Some, for this purpose, apply honey; others lay pounded parsley to the part. A mixture of vinegar and Venice treacle is likewise recommended; but I have always found rubbing the part with warm salad oil succeed very well. Indeed, when the stings are so numerous as to endanger the patient's life, which is sometimes the case, he must not only have oily poultices applied to the part, but must likewise be bled, and take some cooling medicines, as nitre or cream of tartar, and should drink plentifully of diluting liquors.

It is the happiness of this island to have very few poisonous animals, and those which we have are by no means of the most virulent kind. Nine-tenths of the effects attributed to poison or venom, in this country, are really other diseases, and proceed from quite different causes.

We cannot, however, make the same observation with regard to poisonous vegetables. These abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or ber-

* The practice of sucking out poisons is very ancient; and indeed nothing can be more rational. Where the bite cannot be cut out, this is the most likely way for extracting the poison. There can be no danger in performing this office, as the poison does no harm unless it be taken into the body by a wound. The person who sucks the wound ought however to wash his mouth frequently with salad oil, which will secure him from even the least inconveniency. The Psylli in Africa, and the Marsi in Italy, were famed for curing the bites of poisonous animals by sucking the wound; and we are told that the Indians of North America practise the same at this day.

ries, which they do not know; and all poisonous plants to which they can have access ought, as far as possible, to be destroyed. This would not be so difficult a task as some people may imagine. Poisonous plants have no doubt their use, and ought to be propagated in proper places; but, as they prove often destructive to cattle, they should be rooted out of all pasture-grounds. They ought likewise, for the safety of the human species, to be destroyed in the neighborhood of all towns and villages; which, by the by, are the places where they most commonly abound. I have seen the poisonous hemlock, henbane, wolfs-bane, thorn-apple, and the deadly nightshade, all growing within the environs of a small town, where, though several persons, within the memory of those living in it, had lost their lives by one or other of these plants, yet no method, that I could hear of, had ever been taken to root them out, though this might be done at a very trifling expense.

Seldom a year passes but we have accounts of several persons poisoned by eating hemlock-roots instead of parsnips, or some kinds of fungus which they had gathered for mushrooms. These examples ought to put people upon their guard with respect to the former, and to put the latter entirely out of use. Mushrooms may be a delicate dish, but they are a dangerous one, as they are generally gathered by persons who do not know one kind of fungus from another, and take every thing for a mushroom which has that appearance.

We might here mention many other plants and animals of a poisonous nature which are found in foreign countries, but, as our observations are chiefly intended for this island, we shall pass these over. It may not, however, be amiss to observe, for the behoof of such of our countrymen as go to America, that an effectual remedy is now said to be found for the bite of the rattlesnake. The prescription is as follows: Take of the roots of plantain and hoarhound, in summer roots and branches together, a sufficient quantity; bruise them in a mortar and squeeze out the juice, of which give, as soon as possible, one large spoonful; if the patient be swelled, you must force it down his throat. This generally will cure; but if he finds no relief in an hour after, you may give another spoonful, which never fails. If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum.

We give this upon the faith of Dr. Brookes, who says it

was the invention of a negro; for the discovery of which he had his freedom purchased, and a hundred pounds *per annum* settled upon him during life, by the General Assembly of Carolina.

It is possible that there may be in nature specific remedies for every kind of poison; but as we have very little faith in any one of those which have yet been discovered, we shall beg leave again to recommend the most strict attention to the following rules, viz.: That when any poisonous substance has been taken into the stomach, it ought, as soon as possible, to be discharged by vomits, clysters, and purges; and, when poison has been received into the body by a wound, that it be expelled by medicines which promote the different secretions, especially those of sweat, urine, and insensible perspiration; to which may be joined antispasmodics, or such medicines as take off tension and irritation; the chief of which are opium, musk, camphire, assafœtida, and such like.

CHAPTER XLV.

DISORDERS OF THE SENSES.

We do not mean to treat of the nature of our sensations, nor to give a minute description of the various organs by which they are performed; but to point out some of the diseases to which these organs are most liable, and to show how they may be prevented or remedied.

THE EYE.

No organ of the body is more subject to diseases than the eye, nor is there any one of which the diseases are more difficult to cure. More ignorant persons however pretend to cure these than any other class of diseases; but a very superficial acquaintance with the structure of the eye and the nature of vision will be sufficient to convince any one of the danger of trusting to them. These diseases often exceed the skill of the most learned physicians; hence we may easily infer the

danger of trusting them to ignorant quacks, who, without all peradventure, put out more eyes than they cure. But though the diseases of the eye can seldom be cured, they might often, by due care, be prevented; and even where the sight is totally lost, many things might be done, which are generally neglected, to render the unhappy person both more useful to himself and to society.

The eyes are hurt by viewing bright or luminous objects; keeping the head too long in a hanging posture; violent headaches; excessive venery; the long use of bitters; the effluvia from acrid or volatile substances; various diseases, as the small-pox, measles, &c.; but above all from night-watching and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are very pernicious. The eyes are often hurt by the stoppage of customary evacuations, as morning sweats, sweating of the feet, the menses in women, and the bleeding piles in men, &c. All kinds of excess are likewise hurtful to the sight, particularly the immoderate use of ardent spirits and other strong liquors.

In all diseases of the eyes, especially those attended with inflammation, the cool regimen ought to be observed. The patient must abstain from all spirituous liquors. The smoke of tobacco, smoky rooms, the vapors of onions and garlic, and all vivid lights and glaring colors, are carefully to be avoided. The drink may be water, whey, or small beer, and the aliment must be light of digestion.

For preventing disorders of the eyes, issues and setons are of prime use. Every person whose eyes are tender ought to have one or more of these in some part of the body. It will likewise be of use to keep the body gently open, and either to purge or bleed every spring and fall. All excess and night-studies are carefully to be avoided. Such as do not choose a seton or an issue will find great benefit from wearing a small Burgundy pitch plaster between their shoulders.

A *gutta serena*, or *amaurosis*, is an abolition of the sight, without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from a compression of the nerves by redundant humors, these may be in some measure drained off and the patient relieved. For this purpose, the belly must be kept open with the laxative mercurial pills. If the patient be young and of a sanguine habit, he may be bled. Cupping, with scarifications on the back part of the

head, may likewise be of use. A running at the nose may be promoted by volatile salts, stimulating powders, &c. But the most likely means for relieving the patient are issues or blisters kept open for a long time on the back part of the head, behind the ears, or on the neck. I have known these restore sight even after it had been for a considerable time lost.

Should these fail, recourse must be had to a mercurial salivation; or, what will perhaps answer the purpose better, twelve grains of the corrosive sublimate of mercury may be dissolved in an English pint and a half of brandy, and a tablespoonful of it taken twice a day, drinking half a pint of the decoction of sarsaparilla after it.

A *cataract* is an obstruction of the pupil, by the interposition of some opaque substance which either diminishes or extinguishes the sight. It is generally an opacity of the crystalline humor. In a recent or beginning cataract, the same medicines are to be used as in the gutta serena; and they will sometimes succeed. But when this does not happen, and the cataract becomes firm, it must be couched, or rather extracted. I have resolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly upon the eye, and a perpetual blister on the neck.

The *myopia*, or *short-sightedness*, and the *presbytopia*, or *seeing only at too great a distance*, are disorders which depend on the original structure or figure of the eye, and therefore admit of no cure. The inconveniences arising from them may, however, be in some measure remedied by the help of proper glasses. The former requires the aid of a concave and the latter of a convex glass.

A *strabismus*, or *squinting*, depends upon an irregular contraction of the muscles of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder by having one of their eyes too much exposed to the light. They may likewise acquire it by imitation from a squinting nurse or playfellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it is to contrive a mask for the child to wear, which will only permit him to see in a straight direction.

Spots or *specks* on the eyes are generally the effect of inflammation, and often appear after the small-pox, the measles, or violent ophthalmies. They are very difficult to cure, and

often occasion total blindness. If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients, as vitriol, the juice of celandine, &c. When these do not succeed, a surgical operation may be tried. The success of this however is always very doubtful.

The *bloodshot eye* may be occasioned by a stroke, a fall, retching, vomiting, violent coughing, &c. I have frequently known it happen to children in the hooping-cough. It appears at first like a bit of scarlet, and is afterwards of a livid or blackish color. This disorder generally goes off without medicine. Should it prove obstinate, the patient may be bled, and have his eyes fomented with a decoction of comfrey roots and elder flowers. A soft poultice may be applied to the eyes; and the body should be kept open by gentle purgatives.

The *watery* or *weeping eye* is generally occasioned by a relaxation or weakness of the glandular parts of the eye. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rosewater with white vitriol dissolved in it, &c. Medicines which make a revulsion are likewise proper, as mild purgatives, perpetual blisters on the neck, bathing the feet frequently in lukewarm water, &c.

When this disease proceeds from an obstruction of the lachrymal duct or natural passage of the tears, it is called a *fistula lachrymalis*, and can only be cured by a surgical operation.

THE EAR.

The functions of the ear may be injured by wounds, ulcers, or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise, violent colds in the head, fevers, hard wax or other substances sticking in the cavity of the ear, too great a degree of moisture or dryness of the ear. Deafness is very often the effect of old age, and is incident to most people in the decline of life. Sometimes it is owing to an original fault in the structure or formation of the ear itself. When this is the case, it admits of no cure, and the unhappy person not only continues deaf, but generally likewise dumb, for life.

When deafness is the effect of wounds or ulcers of the ears, or of old age, it is not easily removed. When it proceeds from cold of the head, the patient must be careful to keep his head warm, especially in the night; he should likewise take

some gentle purges, and keep his feet warm, and bathe them frequently in lukewarm water at bedtime. When deafness is the effect of a fever, it generally goes off after the patient recovers. If it proceeds from dry wax sticking in the ears, it may be softened by dropping oil into them; afterwards they must be syringed with warm milk and water.

If deafness proceeds from dryness of the ears, which may be known by looking into them, half an ounce of the oil of sweet almonds, and the same quantity of liquid opodeldoc or tincture of assafœtida, may be mixed together, and a few drops of it put into the ear every night at bedtime, stopping them afterwards with a little wool or cotton. Some, instead of oil, put a small slice of the fat of bacon into each ear, which is said to answer the purpose very well. When the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel, mixed with the spirit of wine, to be dropped into the ear; others, equal parts of Hungary-water and spirit of lavender. Etmuler extols amber and musk; and Brookes says he has often known hardness of hearing cured by putting a grain or two of musk into the ear with cotton wool. But these and other applications must be varied according to the cause of the disorder.

Though such applications may sometimes be of service, yet they much oftener fail, and frequently they do hurt. Neither the eyes nor ears ought to be tampered with; they are tender organs, and require a very delicate touch. For this reason, what we would chiefly recommend in deafness is to keep the head warm. From whatever cause the disorder proceeds, this is always proper; and I have known more benefit from it alone, in the most obstinate cases of deafness, than from all the medicines I ever used.

TASTE AND SMELL.

Though these senses are not of so great importance to man in a state of society as the sight and hearing, yet, as the loss of them is attended with some inconveniency, they deserve our notice. They are seldom to be restored when lost, which ought to make us very attentive to their preservation, by carefully avoiding whatever may in the least prove injurious to

them. As there is a very great affinity betwixt the organs of tasting and smelling, whatever hurts the one generally affects the other.

Luxury is highly injurious to these organs. When the nose and palate are frequently stimulated by fragrant and poignant dishes, they soon lose the power of distinguishing tastes and odors with any degree of nicety. Man, in a state of nature, may perhaps have these faculties as acute as any other animal.

The sense of smelling may be diminished or destroyed by diseases; as the moisture, dryness, inflammation, or suppuration of that membrane which lines the inside of the nose, commonly called the olfactory membrane; the compression of the nerves which supply this membrane, or some fault in the brain itself at their origin. A defect, or too great a degree of solidity, of the small spongy bones of the upper jaw, the caverns of the forehead, &c., may likewise impair the sense of smelling. It may likewise be injured by a collection of fetid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation and coagulate the thin sharp serum may be applied, as the oil of anise mixed with fine flour, camphire dissolved in oil of almonds, &c. The vapors of amber, frankincense, gum mastic and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with oil of amber, marjoram, and aniseed; or a sternutatory of calcined white vitriol, twelve grains of which may be mixed with two ounces of marjoram water and filtrated. The steam or vapor of vinegar upon hot iron received up the nostrils is likewise of use for softening the mucus, opening obstructions, &c.

If there be an ulcer in the nose, it must be dressed with some emollient ointment, to which, if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, it is not to be cured without mercury. In that case, the solution of the corrosive sublimate in brandy may be taken, as directed in the *gutta serena*. The ulcer ought likewise to be washed with it; and the fumes of cinnabar may be received up the nostrils.

If there be reason to suspect that the nerves which supply

the organs of smelling are inert or want stimulating, volatile salts, strong snuffs, and other things which occasion sneezing, may be applied to the nose. The forehead may likewise be anointed with balsam of Peru, to which may be added a little of the oil of amber.

The taste may be diminished by crusts, filth, mucus, apthæ, pellicles, warts, &c., covering the tongue; it may be depraved by a fault of the saliva, which, being discharged into the mouth, gives the same sensation as if the food which the person takes had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of tasting or smelling than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c., the tongue ought to be scraped and frequently washed with a mixture of water, vinegar, and honey, or some other detergent. When the saliva is vitiated, which seldom happens, unless in fevers or other diseases, the curing of the disorder is the cure of this symptom. To relieve it however in the mean time, the following things may be of use: If there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile; what is called a nidorous taste, arising from putrid humors, is corrected by the juice of citrons, oranges, and other acids; a salt taste is cured by plentiful dilution with watery liquors; an acid taste is destroyed by absorbents and alkaline salts, as powder of oyster-shells, salt of wormwood, &c.

When the sensibility of the nerves which supply the organs of taste seems to be diminished, the chewing of horseradish, or other stimulating substances, will help to recover it.

TOUCH.

The sense of touching may be hurt by any thing that obstructs the nervous influence or prevents its being regularly conveyed to the organs of touching; as pressure, extreme cold, &c. It may likewise be hurt by too great a degree of sensibility, when the nerve is not sufficiently covered by the cuticle or scarfskin, or where there is too great a tension of it or it is too delicate. Whatever disorders the functions of the brain and nerves hurts the sense of touching. Hence it appears to proceed from the same general causes as palsy and

apoplexy, and requires nearly the same method of treatment.

In a *stupor*, or defect of touching, which arises from an obstruction of the cutaneous nerves, the patient must first be purged; afterwards such medicines as excite the action of the nerves or stimulate the system may be used. For this purpose, the spirit of hartshorn, *sal volatile oleosum*, horseradish, &c., may be taken inwardly; the disordered parts, at the same time, may be frequently rubbed with fresh nettles or spirit of sal ammoniac. Blistering plasters and sinapisms applied to the parts will likewise be of use, as also warm bathing, especially in the natural hot baths.

CHAPTER XLVI.

OF A SCIRRHUS AND CANCER.

A SCIRRHUS is a hard indolent tumor, seated in some of the glands, as the breasts, the armpits, &c. If the tumor becomes large, unequal, of a livid, blackish, or leaden color, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken, and a *sanies* or ichorous matter of an abominably fetid smell is discharged from the sore, it is called an *open* or *ulcerated cancer*. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

CAUSES.—This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive grief, fear, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, the choleric, and those persons who devote themselves to a religious life in convents and monasteries, are often afflicted with it. It may also be occasioned by the long-continued use of food that is too hard of digestion or of an acrid nature, by barrenness, celibacy, indolence, cold, blows, friction, pressure, or the like. Women often suffer from the last of these by

means of their stays, which squeeze and compress their breasts so as to occasion great mischief. Sometimes the disease is owing to an hereditary disposition.

Symptoms.—This disorder seems often very trifling at the beginning. A hard tumor about the size of a hazlenut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase or giving the patient great uneasiness; but if the constitution be hurt, or the tumor irritated by pressure or improper treatment of any kind, it begins to extend itself towards the neighboring parts, by pushing out a kind of roots or limbs. It then gets the name of *cancer*, from a fancied resemblance betwixt these limbs and the claws of a crab. The color of the skin begins to change, which is first red, afterwards purple, then bluish, livid, and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumor is very hard, rough, and unequal, with a protuberance or rising in the middle; its size increases daily, and the neighboring veins become thick, knotty, and of a blackish color.

The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighboring parts till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighboring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last, a violent hemorrhage, or discharge of blood, from some part of the body, with faintings or convulsion fits, generally put an end to the miserable patient's life.

Regimen.—The diet ought to be light but nourishing. All strong liquors, high-seasoned and salted provisions, are to be avoided. The patient may take as much exercise as he can easily bear, and should use every method to divert thought and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

Medicine.—This is one of those diseases for which no certain remedy is yet known. Its progress however may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a

cancer might often be cured; but after the disorder has arrived at a certain height, it generally sets all medicine at defiance.

When a scirrhous tumor is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a week a dose of the common purging mercurial pill. He may likewise be bled; and the part affected may be gently rubbed twice a day with a little of the mercurial ointment, and kept warm with fur or flannel. His food must be light, and he may drink daily an English pint of the decoction of woods or sarsaparilla. I have sometimes discussed hard tumors, which had the appearance of beginning cancers, by a course of this kind.

Should the tumor however not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humors corrupted by it. This however is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient would be in no danger of losing his life by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate or relieve the most urgent symptoms may be used. Dr. Home says that half a grain of the corrosive sublimate of mercury, dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the *solanum*, or nightshade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hemlock. Dr. Stork, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The doctor says he has given some hundred weights of it without ever hurting any body, and often with manifest advantage. He advises the patient, however, to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the doctor says he has increased

the dose to two, three, or four drams a day, and finds that such doses may be continued for several weeks without any bad consequences.

The regimen which the doctor recommends during the use of the medicine is to avoid farinaceous substances not fermented, and too acrid aromatics. He says good wine will not be hurtful to those who are accustomed to it, nor a moderate use of acids; and adds, that the patient should live in a pure free air, and keep his mind as quiet and cheerful as possible.

The doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says he has given it for above two years in large doses without any apparent benefit; nevertheless, the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. Though we are far from thinking the hemlock merits those extravagant encomiums which the doctor has bestowed upon it, yet, in a disease which has so long baffled the boasted powers of medicine, we think it ought always to be tried.

The powder of hemlock is by some preferred to the extract. They are both made of the fresh leaves, and may be used nearly in the same manner. Dr. Nicholson, of Berwick, says he gradually increased the dose of the powder from a few grains to half a dram, and gave near four drams of it in the day, with remarkably good effects. The hemlock may also be used externally either as a poultice or fermentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it.

Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder.*

Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine, in this

* London Medical Essays.

disease. It must be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four English pints of it may be drank every day for a considerable time. No benefit can be expected from any medicine in this disease unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighborhood of the cancer have sometimes good effects.

When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure the disease, but it will ease the patient's agony, and render life more tolerable while it continues.

To avoid this dreadful disorder, people ought to use wholesome food, to take sufficient exercise in the open air, to be as easy and cheerful as possible, and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts or other glandular parts.*

CHAPTER XLVII.

OF THE VENEREAL DISEASE.

In a former edition of this book, the venereal disease was omitted. The reasons however which at that time induced me to leave it out have, upon more mature consideration, vanished. Bad consequences, no doubt, may arise from ignorant persons tampering with medicine in this disorder; but the danger from that quarter seems to be more than balanced by the great and solid advantages which must arise to the patient from an early knowledge of his case, and an attention

* As hemlock is the principal medicine recommended in this disease, we would have given some directions for the gathering and preparing of that plant; but as its different preparations are now kept in the shops, we think it much safer for people to get them there, with proper directions for using them.

to a plan of regimen, which, if it does not cure the disease, will be sure to render it more mild and less hurtful to the constitution.

It is peculiarly unfortunate for the unhappy persons who contract this disease that it still lies under a sort of disgrace. This renders disguise necessary, and makes the patient either conceal his disorder altogether, or apply to those who promise a sudden and secret cure, but who in fact only remove the symptoms for a time, while they fix the disease deeper in the habit. By this means a slight infection, which might have been cured by regimen alone, is often converted into an obstinate and sometimes incurable malady.

Another unfavorable circumstance attending this disease is, that it assumes a variety of different shapes, and may with more propriety be called an assemblage of diseases than a single one. No two diseases can require a more different method of treatment than the venereal disease does in its different stages. Hence the folly and danger of trusting to any particular nostrum for the cure of this disease must be obvious to all. Such nostrums are however generally administered in the same manner to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances which are of the utmost importance.

Though the venereal disease is generally the fruit of unlawful love, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives by not being aware of their danger in due time. The unhappy condition of such persons will certainly plead our excuse, if any excuse be necessary, for endeavoring to point out the symptoms and cure of this too common disease.

To enumerate all its different symptoms, however, and to trace the disease minutely through its various stages, would require a much larger space than we have allotted to this part of our subject; we shall therefore confine our observations chiefly to circumstances of importance, omitting such as are either trifling or which occur but seldom. We shall likewise pass over the history of the disease, with the different methods of treatment which it has undergone since it was first introduced into Europe, and many other circumstances of a simi-

lar nature; all of which, though they might tend to amuse the reader, yet could afford him little or no useful knowledge.

VIRULENT GONORRHŒA.

The virulent gonorrhœa is an involuntary discharge of infectious matter from the parts of generation in either sex. It generally makes its appearance within eight or ten days after the infection has been received; sometimes indeed it appears in two or three days, and at other times not before the end of four or five weeks. Previous to the discharge, the patient feels an itching, with a small degree of pain, in the genitals. Afterwards a thin glary matter begins to distil from the urinary passage, which stains the linen, and occasions a small degree of titillation, particularly in the time of making water. This, gradually increasing, arises at length to a degree of heat and pain which are chiefly perceived about the extremity of the urinary passage, where a slight degree of redness and inflammation likewise begin to appear.

As the disorder advances, the pain, heat of urine, and running increase, while fresh symptoms daily ensue. In men the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is most troublesome when the patient is warm in bed. The pain, which was at first only perceived towards the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the color of seed, grows yellow, and at length puts on the appearance of matter.

When the disorder is arrived at its height, all the symptoms are more intense; the heat of urine is so great that the patient dreads the making of it, and though he feels a constant inclination this way, yet it is rendered with the greatest difficulty and often only by drops; the involuntary erections now become extremely painful and frequent; there is also a pain, heat, and sense of fulness about the seat, and the running is plentiful and sharp, of a brown, greenish, and sometimes of a bloody color.

By a proper regimen and medicines, the violence of the symptoms gradually abates; the heat of urine goes off; the involuntary and painful erections, and the heat and pain about the seat, become easier; the running also gradually decreases, grows whiter and thicker, till at last it entirely disappears.

By attending to these symptoms, the gonorrhœa may be pretty readily distinguished from any other disease. There are however some few disorders for which it may be mistaken, as an ulcer in the kidneys or bladder, the *fluor albus* or whites in women, &c. But in the former of these the matter comes away only with the urine, or when the sphincter of the bladder is open; whereas in a gonorrhœa the discharge is constant. The latter is more difficult to distinguish, and must be known chiefly from its effects, as pain, communicating the infection, &c.

Regimen.—When a person has reason to suspect that he has caught the venereal infection, he ought most strictly to observe a cooling regimen, to avoid every thing of a heating nature, as wines, spirituous liquors, rich sauces, spiced, salted, high-seasoned, and smoke-dried provisions, &c., as also all aromatic and stimulating vegetables, as onions, garlic, shallot, nutmeg, cinnamon, mace, ginger, and such like. His food ought chiefly to consist of mild vegetables, milk, broths, light puddings, panado, gruels, &c. His drink may be barley water, milk and water, decoctions of marsh-mallows and liquorice, linseed tea, or, if the patient has been accustomed to live high, small beer or weak negas. Venereal pleasures and violent exercises of all kinds, especially riding on horseback, are to be avoided. The patient must beware of catching cold, and when the inflammation is violent he ought to keep his bed.

Medicine.—A virulent gonorrhœa can seldom be cured speedily and effectually at the same time. The patient ought therefore not to expect nor the physician to promise it. It will often continue for two or three months, and sometimes for five or six, even where the treatment has been very proper. Sometimes, indeed, a gonorrhœa may be cured at the beginning by astringent injections. These may be prepared by dissolving half a dram of sugar of lead in six ounces of rose-water. Of this the fill of a small syringe may be thrown up the urethra five or six times a day a little warm, and continued till the running stops.

Purges are of very great importance in the gonorrhœa. They ought not however to be of the strong or drastic kind. Whatever raises a violent commotion in the body increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second, will generally be sufficient to re-

move the inflammatory symptoms, to diminish the running, and to change the color and consistence of the matter, which gradually becomes more clear and ropy as the virulence abates.*

When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient and the vehemence and urgency of the symptoms.

Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For this purpose an ounce of nitre and two ounces of gum Arabic, pounded together, may be divided into twenty-four doses, one of which may be taken frequently in a cup of the patient's drink. If these should make him pass his urine so often as to become troublesome to him, he may either take them less frequently, or leave out the nitre altogether and take the same quantity of magnesia alba in its stead.

When the pain and inflammation are seated high towards the neck of the bladder, it will be proper frequently to throw up an emollient clyster, which, besides the benefit of procuring stools, will serve as a fomentation to the inflamed parts. Injecting frequently a little milk and water, or linseed tea about the warmth of new milk, up the urethra, by means of a syringe, will likewise be of use. The genitals ought also to be bathed or rather soaked in warm milk and water, two or

* If the patient can swallow a solution of salts and manna, he may take six drams, or, if his constitution requires, an ounce of the former, with half an ounce of the latter. These may be dissolved in half an English pint of boiling water, whey, or thin water gruel, and taken early in the morning.

If an infusion of senna and tamarinds be more agreeable, two drams of the former and an ounce of the latter may be infused all night in half an English pint of boiling water. The infusion may be strained next morning, and half an ounce of Glauber's salts dissolved in it. A small tea-cupful of this infusion may be taken every half hour till it operates.

Should the patient prefer an electuary, the following will be found to answer very well. Take of the lenitive electuary four ounces, jalap in powder two drams, rhubarb one dram, and as much of the syrup of pale roses as will serve to make the whole into a soft electuary. Two tea-spoonfuls of this may be taken over night, and about the same quantity next morning, every day that the patient chooses to take a purge. The doses of the above medicines may be increased or diminished according as the patient finds it necessary.

three times a day, which not only keeps them clean, but tends to take off the stricture of the vessels, and to blunt the acrimony of the humors. We have reason to believe that bathing, injections, and fomentations, if duly persisted in, would have far more influence in the cure of this disease than is generally imagined.

Soft poultices, when they can conveniently be applied to the parts, are of great service. They may be made of the flour of linseed, or of wheat bread and milk, softened with butter or sweet oil. When poultices cannot be conveniently used, cloths wrung out of warm water, or bladders filled with warm milk and water, may be applied. I have often known the most excruciating pains, during the inflammatory state of the gonorrhœa, relieved by one or other of these applications.

Few things tend more to keep off inflammation in the spermatic vessels than a proper truss for the scrotum. It ought to be so contrived as to support the testicles, and should be worn from the first appearance of the disease till it has ceased some weeks.

This treatment will sometimes remove the gonorrhœa so quickly that the person will be in doubt whether he really labored under that disease. This, however, is too favorable a turn to be often expected. It more frequently happens that we are only able to procure an abatement or remission of the inflammatory symptoms, so far as to make it safe to have recourse to the great antidote *mercury*, which in all obstinate venereal cases seems to be absolutely necessary for completing the cure.

When bleeding, purging, fomentations, and the other things recommended above, have eased the pain, softened the pulse, relieved the heat of urine, and rendered the involuntary erections less frequent, the patient may begin to use mercury in any form that is most agreeable to him. One of the most common preparations of mercury used in this case is calomel. Two or three grains of it may be made into a pill with a crumb of bread, or formed into a bolus with conserve of hips, and taken every other night at bedtime. The dose may be gradually increased to eight or ten grains.

Should the patient be purged or griped in the night by the mercury, he must take an infusion of senna, or some other purgative, and drink freely of water gruel, to prevent bloody stools, which are very apt to happen should the patient catch cold, or if the mercury has not been duly prepared. When

the bowels are weak, and the mercury is apt to gripe or purge, these disagreeable consequences may be prevented by making the above quantity of calomel into a bolus, with half a dram or two scruples of diacodium or the Japonic confection. After the pill or bolus has been repeated three or four times, a purging potion must be given, to carry off the mercury and prevent a salivation.

To prevent the disagreeable circumstance of the mercury's affecting the mouth or bringing on a salivation, it may be combined with purgatives. With this view the laxative mercurial pill has been contrived, the usual dose of which is half a dram, or three pills, night and morning, to be repeated every other day; but the safer way is for the patient to begin with two, or even with one pill, gradually increasing the dose.

To such persons as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum Arabic; which not only serves this purpose, but likewise prevents the mercury from affecting the mouth, and renders it in many respects a better medicine.*

It happens, very fortunately for those who cannot be brought to take mercury inwardly, and likewise for persons whose bowels are too tender to bear it, that an external application of it will answer equally well, and in some respects better. It must be acknowledged that mercury taken inwardly for any length of time greatly weakens and disorders the bowels; for which reason, when a plentiful use of it becomes necessary, we should prefer rubbing to any other mode of application whatever. The common mercurial or blue ointment will answer very well. Of that which is made by rubbing together equal quantities of hog's lard and quicksilver, about a dram may be used at a time. The best time for rubbing it on is at night, and the most proper place the inner side of the thighs. The patient should stand before the fire when he rubs, and should wear flannel drawers next his skin all the time he is using the ointment. If ointment of a weaker

* Take quicksilver one dram, gum Arabic reduced to a mucilage two drams; let the quicksilver be rubbed with the mucilage, in a marble mortar, until the globules of mercury entirely disappear; afterwards add gradually, still continuing the trituration, half an ounce of balsamic syrup, and eight ounces of simple cinnamon water. Two table-spoonfuls of this solution may be taken night and morning. Some reckon this the best form in which quicksilver can be exhibited for the cure of gonorrhœa.

or stronger kind be used, the dose must be increased or diminished accordingly.

If, during the use of the ointment, the inflammation of the genital parts, together with the heat and feverishness, should return, or if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of Glauber's salts, or some other cooling purge, may be taken, and the rubbing intermitted for a few days. As soon, however, as the signs of a spitting are gone off, if the virulence be not quite corrected, the ointment must be repeated, but in smaller quantities and at longer intervals than before. Whatever way mercury is administered, its use must be persisted in as long as any virulence is suspected to remain.

During this, which may be called the second stage of the disorder, though so strict a regimen is not necessary as in the first or inflammatory state, yet intemperance of every kind must be avoided. The food must be light, plain, and of easy digestion; and the greatest indulgence that may be allowed with respect to drink is a little wine diluted with a sufficient quantity of water. Spirituous liquors are to be avoided in every shape. I have often known the inflammatory symptoms renewed and heightened, the running increased, and the cure rendered extremely difficult and tedious, by one fit of excessive drinking.

When the above treatment has removed the heat of urine and soreness of the genital parts; when the quantity of running is considerably lessened, without any pain or swelling in the groin or testicle supervening; when the patient is free from involuntary erections; and, lastly, when the running becomes pale, whitish, thick, void of ill smell, and tenacious or ropy;—when all or most of these symptoms appear, the gonorrhœa is arrived at its last stage, and we may gradually proceed to the use of gentle astringents or agglutinating medicines. These, however, ought always to be used with caution. When the contagion is removed, the running will generally stop of itself; and when it does not, there is still reason to fear that the virulence is not completely subdued. But this will soon appear; for if the contagion be not removed, upon stopping the running, swelled testicles, a sore throat, buboes, or some other symptom of the pox, will ensue. When this happens, the running must be again promoted by purges, and more mercury must be used.

That we may proceed with caution, and not give too sud-

den a check to the discharge, gentle astringents may be mixed with purgative medicines, and taken in the following manner: To two ounces of the lenitive electuary add cream of tartar and powdered rhubarb of each half an ounce, balsam of capivi an ounce and a half. Let these be made into an electuary, with the syrup of pale roses, and about the bulk of a large nutmeg taken evening and morning for a dose.

If no bad symptoms ensue from using the above, stronger astringents, if necessary, may be administered, as the Venice turpentine, the Peruvian balsam, balsam of Gilead, &c. If these balsams should occasion nausea or sickness, the patient, instead of them, may take fifteen or twenty drops of the acid elixir of vitriol, in a glass of red wine or water, twice a day.

Should the running, notwithstanding the use of these medicines, still continue, but without any signs of virulence, recourse must be had to astringent injections. For this purpose a little gum Arabic may be dissolved in three or four ounces of rosewater, to which ten or twelve grains of the sugar of lead may be added. Two or three drams of this may be daily injected up the urethra with a small syringe. It should be used a little warm, and may be made stronger as the case requires.

During this course, a proper regimen is likewise to be observed. The patient ought to take gentle exercise in the open air, but should avoid great heat and fatigue. His diet ought to be drying and agglutinating, as biscuit, rice, millet, jellies of hartshorn, and other things of a strengthening nature. His drink should be Bristol water, red port or claret, with the addition of a little water. All excess is carefully to be avoided, and whatever may have a tendency to weaken or relax the habit.

If all these means should prove ineffectual, and, notwithstanding the virulence is perfectly cured, a running should still remain, the disorder is then denominated a GLEET; the proper treatment whereof we shall next endeavor to show.

GLEETS.

A gonorrhœa frequently repeated or improperly treated often ends in a gleet, which may either proceed from relaxation, or from latent ulcers in some of the parts which had been the seat of the gonorrhœa. It is however of the greatest importance in the cure of the gleet to know from which of

these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect that it is owing to ulcers; but if the drain is inconstant, and is chiefly observable when the patient is stimulated by venereal ideas or upon straining to go to stool, we may reasonably conclude that it is chiefly owing to relaxation.

In the cure of a gleet proceeding from relaxation, the principal design is to brace, and restore a proper degree of tension to the debilitated and relaxed vessels. For this purpose, besides the medicines recommended in the last stage of the gonorrhœa, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark,* alum, vitriol, galls, tormentil, bistort, balaustines, &c.

While the patient is taking these medicines, the cure may be promoted by astringent injections, such as are recommended in the last stage of the gonorrhœa, to which a few grains of alum or white vitriol may occasionally be added.

The last remedy which we shall mention in this case is the cold bath, than which there is not perhaps a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet, unless there be something in the constitution of the patient which renders the use of it unsafe. The chief objections to the use of the cold bath are a full habit and an unsound state of the viscera. The danger from the former may always be lessened, if not removed, by bleeding; but the latter is an insurmountable obstacle, as the pressure of the water and the sudden contraction of the external vessels, by throwing the blood with too much force upon the internal parts, are apt to occasion ruptures of the vessels, or a flux of humors upon the diseased organs. But where no objection of this kind prevails, the patient ought to plunge over head in water every morning, fasting, for three or four weeks together. He should not however stay in above three or four minutes, and should take care to have his skin dried as soon as he comes out.

* The Peruvian bark may be combined with other astringents and prepared in the following manner:

Take of Peruvian bark bruised six drams, of fresh galls bruised two drams; boil them in a pound and a half of water to a pound; to the strained liquor add three ounces of the simple tincture of the bark. A small tea-cupful of this may be taken three times a day, adding to each cup fifteen or twenty drops of the acid elixir of vitriol.

The regimen proper in this case is the same as was mentioned in the last stage of the gonorrhœa: the diet must be drying and astringent, and the drink Spa, Pyrmont, or Bristol waters, with which a little claret or red wine may sometimes be mixed.

When the gleet does not in the smallest degree yield to these medicines, there is reason to suspect that it proceeds from ulcers. In this case, recourse must be had to mercury, and such medicines as tend to correct any predominant acrimony with which the juices may be affected, as the decoction of china, sarsaparilla, sassafras, or the like.

Mr. Fordyce says he has seen many obstinate gleets, of two, three, or four years' standing, effectually cured by a mercurial inunction, when almost every other medicine had been tried in vain. Dr. Chapman seems to be of the same opinion, but says he has always found the mercury succeed best in this case when joined with terebinthinate and other agglutinating medicines. For which reason the doctor recommends pills made of calomel and Venice turpentine,* and desires that their use may be accompanied with a decoction of guaiacum or sarsaparilla.

The last kind of remedy which we shall mention for the cure of ulcers in the urinary passage are the suppurating candles or bougies. As they are prepared various ways, and are generally to be got ready made, we shall not spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them. Before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly. It may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are not only often healed, but tumors and excrescences in the urinary passages taken away, and an obstruction of urine removed, by means of bougies.

* Take Venice turpentine, boiled to a sufficient degree of hardness, half an ounce, calomel half a dram; let these be mixed and formed into sixty pills, of which five or six may be taken night and morning. If, during the use of these pills, the mouth should grow sore or the breath become offensive, they must be discontinued till these symptoms disappear.

SWELLED TESTICLE.

The swelled testicle may either proceed from infection lately contracted or from the venereal poison lurking in the blood. The latter indeed is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa, particularly when the running is unseasonably checked from catching cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, &c.

In the inflammatory stage bleeding is necessary, which must be repeated according to the urgency of the symptoms. The food must be light and the drink diluting. High-seasoned food, flesh, wines, and every thing of a heating nature, are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil, are likewise very proper, and ought constantly to be applied when the patient is in bed. When he is up, the testicle should be kept warm, and supported by a bag or truss, which may easily be contrived in such a manner as to prevent the weight of the testicle from having any effect.

If it should be found impracticable to clear the testicle by the cooling regimen now pointed out, and extended according to circumstances, it will be necessary to lead the patient through such a complete antivenereal course as shall ensure him against any future uneasiness. For this purpose, besides rubbing the mercurial ointment on the part, if free from pain, or on the thighs, as directed in the gonorrhœa, the patient must be confined to his bed, if necessary, for five or six weeks, suspending the testicle all the while with a bag or truss, and plying him inwardly with strong decoctions of sarsaparilla.

When these means do not succeed, and there is reason to suspect a scrofulous or cancerous habit, either of which may support a scirrhous induration, after the venereal poison is corrected, the parts should be fomented daily with a decoction of hemlock, the bruised leaves of which may likewise be added to the poultice, and the extract at the same time taken inwardly.* This practice is strongly recommended by Dr. Stork in scirrhous and cancerous cases; and Mr. Fordyce

* The extract of hemlock may be made into pills, and taken in the manner directed under the article Cancer.

assures us that by this method he has cured diseased testicles of two or three years' standing, even when ulcerated, and when the scirrhus had begun to be affected with pricking and lancing pains.

BUBOES.

Venereal buboes are hard tumors seated in the groin, occasioned by the venereal poison lodged in this part. They are of two kinds, viz., such as proceed from a recent infection, and such as accompany a confirmed lues.

The cure of recent buboes, that is, such as appear soon after impure coition, may be first attempted by dispersion, and if that should not succeed by suppuration. To promote the dispersion of a buboe, the same regimen must be observed as was directed in the first stage of a gonorrhœa. The patient must at the same time be bled, and take some cooling purges, as the decoction of tamarinds and senna, Glauber's salts, and the like. If by this course the swelling and other inflammatory symptoms abate, we may safely proceed to the use of mercury, which must be continued till the venereal virus is quite subdued.

But if the buboe should from the beginning be attended with great heat, pain, and pulsation, it will be proper to promote its suppuration. For this purpose the patient may be allowed to use his ordinary diet and to take now and then a glass of wine. Emollient cataplasms, consisting of bread and milk softened with oil or fresh butter, may be applied to the part; and in cold constitutions, where the tumor advances slowly, white-lily roots boiled, or sliced onions raw, and a sufficient quantity of yellow basilicon, may be added to the poultice.

When the tumor is ripe, which may be known by its conical figure, the softness of the skin, and a fluctuation of matter plainly to be felt under the finger, it may be opened either by caustic or a lancet, and afterwards dressed with digestive ointment.

It sometimes, however, happens that buboes can neither be dispersed nor brought to a suppuration, but remain hard, indolent tumors. In this case the indurated glands must be consumed by caustic; but if they should become scirrhous, they must be dissolved by the application of hemlock both externally and internally, as directed in the scirrhous testicle.

CHANCRES.

Chancres are superficial, callous, eating ulcers, which may happen either with or without a gonorrhœa. They are commonly seated about the private parts, and make their appearance in the following manner: First a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter inclining to yellow. This pimple is hot, and itches generally before it breaks; afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges gradually become hard and callous. Sometimes the first appearance resembles a simple excoriation of the cuticle, which, however, if the cause be venereal, soon becomes a true chancre.

A chancre is sometimes a primary affection, but it is much oftener symptomatical, and is the mark of a confirmed lues. Primary chancres discover themselves soon after impure coition, and are generally seated in parts covered with a thin cuticle, as the lips, the nipples of women, the *glans penis* of men, &c.*

When a chancre appears soon after impure coition, its treatment is in every respect similar to that of the virulent gonorrhœa. The patient must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed, or rather soaked, in warm milk and water, and if the inflammation be great an emollient poultice or cataplasm may be applied to them. This course will, in most cases, be sufficient to abate the inflammation, and prepare the patient for the use of mercury.

Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, scurfy eruptions about the roots of the hair, and other symptoms of a confirmed lues.

* When venereal ulcers are seated in the lips, the infection may be communicated by kissing. This ought surely to banish that ridiculous custom, still kept up in many parts of Britain, of kissing every person to whom one is introduced. I have seen very obstinate venereal ulcers in the lips, that would not yield to any thing but a course of mercury, which I had all the reason in the world to believe were occasioned solely by kissing an infected person. Nurses ought to beware of suckling infected children or having their breasts drawn by persons tainted with the venereal disease. This caution is peculiarly necessary for nurses who reside in the neighborhood of great towns.

Though they may be seated in any of the parts mentioned above, they commonly appear upon the private parts or the inside of the thigh. They are also less painful, but frequently much larger and harder, than primary chancres. As their cure must depend upon that of the pox, of which they are only a symptom, we shall take no further notice of them till we come to treat of a confirmed lues.

Thus we have related most of the symptoms which accompany or succeed to a virulent gonorrhœa, and have also given a short view of their proper treatment. There are, however, several others which sometimes attend this disease, as a strangury or obstruction of urine, a phymosis, a paraphymosis, &c.

A strangury may be occasioned either by a spasmodic constriction or an inflammation of the urethra and parts about the neck of the bladder. In the former case, the patient begins to void his urine with tolerable ease, but as soon as it touches the galled or inflamed urethra a sudden constriction takes place, and the urine is voided by spurts, and sometimes by drops only. When the strangury is owing to an inflammation about the neck of the bladder, there is a constant heat and uneasiness about this part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome tenesmus, or constant inclination to go to stool.

When the strangury is owing to spasm, such medicines as tend to dilute and blunt the salts of the urine will be proper. For this purpose, besides the common diluting liquors, soft and cooling emulsions, sweetened with the syrup of poppies, may be used. Should these not have the desired effect, bleeding and emollient fomentations will be necessary.

When the complaint is evidently owing to an inflammation about the neck of the bladder, bleeding must be more liberally performed, and repeated according to the urgency of the symptoms. After bleeding, if the strangury still continues, soft clysters may be administered, and emollient fomentations applied to the region of the bladder. At the same time, the patient may take every four hours a tea-cupful of barley water, to an English pint of which six ounces of the syrup of marsh-mallows, four ounces of the oil of sweet almonds, and half an ounce of nitre, may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper, in this case, to discontinue the diuretics.

Sometimes it is necessary in this case to draw off the water with a catheter; but, as the patient is seldom able to bear its being introduced, we would rather recommend the use of bougies. These soften and lubricate the passage, and greatly facilitate the discharge of urine. Whenever they begin to stimulate or give any uneasiness, they may be withdrawn.

The phymosis is such a constriction of the prepuce over the glands as hinders it from being drawn backwards; the paraphymosis, on the contrary, is such a constriction of the prepuce behind the glands as hinders it from being brought forward.

The treatment of these symptoms is so nearly the same with that of the virulent gonorrhœa that we have no occasion to enlarge upon it. In general, bleeding, purging, poultices, and emollient fomentations, are sufficient. Should these, however, fail of removing the stricture, and the parts be threatened with a mortification, twenty or thirty grains of ipecacuanha and one grain of emetic tartar may be given for a vomit, and may be worked off with warm water or thin gruel.

It sometimes, however, happens that, in spite of all endeavors to the contrary, the inflammation goes on, and symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and if necessary divided, in order to prevent a strangulation and set the imprisoned glands at liberty. We shall not describe the manner of performing this operation, as it ought always to be done by a surgeon. When a mortification has actually taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile flowers and bark, and to give the patient a dram of the bark in powder every two or three hours.

With regard to the *priapism*, *chordee*, and other distortions of the penis, their treatment is no way different from that of the gonorrhœa. When they happen to prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

CONFIRMED LUES OR POX.

We have hitherto treated of those disorders in which the venereal poison is supposed to be confined to the particular part by which it was received, and shall next take a view of

the lues in its confirmed state, that is, when the poison is actually received into the blood, and, circulating with it through every part of the body, mixes with the several secretions, and renders the whole habit tainted.

The symptoms of a confirmed lues are, buboes in the groin; pains of the head and joints, which are peculiarly troublesome in the night or when the patient is warm in bed; scabs and scurf in various parts of the body, of a yellowish color, resembling honey-comb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually by the palate towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and their spongy ends become brittle, and break upon the least accident; at other times they are soft and bend like wax; the conglobate glands become hard and callous, and form, in the neck, armpits, groin, and mesentery, hard movable tumors, like the king's evil; tumors of different kinds are likewise formed in the lymphatic vessels, tendons, ligaments, and nerves, as *gumata*, *nodes*, *tophs*, &c.; the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a singing noise, pain, and deafness, whilst their internal substance is exulcerated and rendered carious; at length all the animal, vital, and natural functions are depraved; the face becomes pale and livid, the body emaciated and unfit for motion, and the miserable patient falls into an atrophy or wasting consumption.

Women have symptoms peculiar to the sex; as cancers of the breast; a suppression or overflow of the menses; the whites; the hysteric passion; an inflammation, abscess, scirrhus, gangrene, cancer, or ulcer of the womb. They are generally either barren or subject to abortion, or, if they bring children into the world, they have a universal erysipelas, are half rotten, and covered with ulcers.

Such is the catalogue of symptoms attending this dreadful disease in its confirmed state. Indeed they are seldom all to be met with in the same person or at the same time; so many of them, however, are generally present as are sufficient to alarm the patient; and if he has reason to suspect the infection is lurking in his body, he ought immediately to set about the expulsion of it, otherwise the most tragical consequences will ensue.

The only certain remedy hitherto known in Europe for the cure of this disease is mercury, which may be used in a great

variety of forms, with nearly the same success. Some time ago it was reckoned impossible to cure a confirmed lues without a salivation; this method is now, however, pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison, when administered in such a manner as not to run off by the salivary glands.

Various preparations of mercury have been extolled at different times, by different authors, for the cure of the venereal disease; but after all it has been found that the most simple forms in which it can be introduced into the system generally succeed as well as the most elaborate chemical preparations. Thus, an ointment or pill prepared by triturating common quicksilver with grease, resin, or mucilage, will, if used for a sufficient length of time, remove the most obstinate venereal symptoms, unless where the constitution is so far destroyed as to render a cure impossible.

These may be used in the same manner as for the virulent gonorrhœa; and if any symptoms of a salivation should appear, they must be discontinued for some days, and a purge or two taken. It is impossible to ascertain either the exact quantity of these medicines that must be taken, or the time they ought to be continued in order to perform a cure. These will ever vary, according to the constitution of the patient, the season of the year, the degree of infection, the time it has lodged in the body, &c. But though it is difficult, as Astruc observes, to determine *à priori* what quantity of mercury will in the whole be necessary to cure this distemper completely, yet it may be judged of *à posteriori* from the abatement and ceasing of the symptoms. The same author adds, that commonly not less than two ounces of the strong mercurial ointment is sufficient, and not more than three or four ounces necessary.

The only chemical preparation of mercury which we shall take notice of is the corrosive sublimate. This was brought into use for the venereal disease, in Germany, by the illustrious Baron Van Swieten, and was soon after introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of giving it is as follows: One grain of corrosive sublimate is dissolved in two ounces of French brandy or malt spirits, and of this solution an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a day, and to be continued as long as any symptoms of

the disorder remain. The sublimate may likewise be given in form of pills or drops; but I never found it answer so well in any form as that of the solution.

Several roots, woods, and barks, have been recommended for curing the venereal disease; but none of them have been found, upon experience, to answer the high encomiums which had been passed upon them. Though no one of these is to be depended upon alone, yet, when joined with mercury, some of them are found to be very beneficial in promoting a cure. One of the best we yet know is the sarsaparilla. Three ounces of the dried root sliced may be boiled in two English quarts of water to one, adding towards the end a little liquorice root, to take off the disagreeable taste. This quantity may be divided into three or four doses, and taken in the space of twenty-four hours. As this decoction not only promotes the cure of the venereal disease, but strengthens the stomach and acts as a restorative, it cannot fail to be of singular service where the patient is greatly weakened or exhausted by the disease.

The mezereon root is likewise found to be a powerful assistant to the sublimate, or any other mercurial. It may either be used along with the sarsaparilla or by itself. When they are used together, an ounce of the fresh bark of the mezereon root may be mixed with eight ounces of sarsaparilla, and a little liquorice added to them, as above. Those who choose to use the mezereon by itself may boil an ounce of the fresh bark, taken from the root, in twelve English pints of water to eight, adding towards the end an ounce of liquorice. The dose of this is the same as of the decoction of sarsaparilla.

We have been told that the natives of America cure the venereal disease in every stage by a decoction of the root of a plant called the lobelia. It is used either fresh or dried, but we have no certain accounts with regard to the proportion. Sometimes they mix other roots with it, as those of the ranunculus, the ceanothus, &c., but whether these are designed to disguise or assist it is doubtful. The patient takes a large draught of the decoction early in the morning, and continues to use it for his ordinary drink through the day.

Many other roots and woods might be mentioned which have been extolled for curing the venereal disease, as the china root, the root of soapwort, burdock, &c., as also the wood of guaiacum and sassafras; but as none of these have

been found to possess virtues superior to those already mentioned, we shall, for the sake of brevity, pass them over, and shall conclude our observations on the disease with a few general remarks concerning the proper management of the patient and the nature of the infection.

The condition of the patient ought always to be considered previous to his entering upon a course of mercury in any form. It would be equally rash and dangerous to administer mercury to a person laboring under any violent acute disease, as a putrid fever, pleurisy, peripneumony, or the like. It would likewise be dangerous in some chronic diseases, as a dropsy, a scirrhus, a slow hectic fever, or the last stage of a consumption. Sometimes, however, the two last-named diseases proceed from a confirmed lues, in which case it will be necessary to give mercury. In chronic diseases of a less dangerous nature, as the asthma, gravel, nervous complaints, and such like, mercury, if necessary, may be safely administered. If the patient's strength has been greatly exhausted by sickness, labor, abstinence, or any other cause, the use of mercury must be postponed, till, by time, rest, and a proper nourishing diet, it can be sufficiently restored.

Mercury ought not to be administered to women during the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of her delivery, and circumstances render it necessary, mercury may be given, but in smaller doses and at greater intervals than usual. With these precautions, both the mother and child may be cured at the same time; if not, the disorder will at least be kept from growing worse, till the woman be brought to bed and sufficiently recovered, when a more effectual method may be pursued, which, if she suckles her child, will in all probability be sufficient for the cure of both.

Mercury ought always to be administered to infants with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labor under a confirmed lues. No doubt the infirmities of age must render people less able to undergo the fatigues of a salivation; but this, as was formerly observed, is seldom necessary; besides, we have generally found that mercury had much

less effect upon very old persons than on those who were younger.

Hysteric and hypochondriac persons, and such as are subject to an habitual diarrhœa or dysentery, or to frequent and violent attacks of the epilepsy, or who are afflicted with the scrofula or the scurvy, ought to be cautious in the use of mercury. Where any one of these disorders prevails, it ought either, if possible, to be cured, or at least palliated, before the patient enters upon a course of mercury. When this cannot be done, the mercury must be administered in smaller doses and at longer intervals than usual.

The most proper seasons for entering upon a course of mercury are the spring and autumn, when the air is of a moderate warmth. If the circumstances of the case, however, will not admit of delay, we must not defer the cure on account of the season, but must administer the mercury; taking care, at the same time, to keep the patient's chamber warmer or cooler, according as the season of the year requires.

The next thing to be considered is the preparation necessary to be observed before we proceed to administer a course of mercury. Some lay great stress upon this circumstance, observing, that by previously relaxing the vessels, and correcting any disorder which may happen to prevail in the blood, not only the mercury will be disposed to act more kindly, but many other inconveniences will be prevented.

We have already recommended bleeding and gentle purges, previous to the administration of mercury, and shall only now add, that these are always to be repeated according to the age, strength, constitution, and other circumstances of the patient. Afterwards, if it can be conveniently done, the patient ought to bathe once or twice a day, for a few days, in lukewarm water. His diet in the mean time must be light, moist, and cooling. Wine, and all heating liquors, also violent bodily exercise, and all great exertions of the mind, are carefully to be avoided.

A proper regimen is likewise to be observed by such as are under a course of mercury. Inattention to this not only endangers the patient's life, but often also disappoints him of a cure. A far less quantity of mercury will be sufficient for the cure of a person who lives low, keeps warm, and avoids all manner of excess, than one who cannot endure to put the smallest restraint upon his appetites. Indeed it but rarely happens that such are ever thoroughly cured.

There is hardly any thing of more importance in the cure of the venereal disease than cleanliness. By an early attention to it the infection might often be prevented from entering the body, and where it has already taken place its effects may be greatly mitigated. The moment any person has reason to suspect that he has received the infection, he ought to wash the parts with water and spirits, sweet oil, or milk and water. A small quantity of the last may likewise be injected up the urethra, if it can be conveniently done. Whether this disease took its rise at first from dirtiness, we shall not pretend to say; but wherever that prevails the infection will be found in its greatest degree of virulence.*

When the venereal disease has been neglected or improperly treated, it often becomes a disorder of the constitution. In this case the cure must be attempted by restoratives, as a milk diet, the decoction of sarsaparilla, and such like, to which mercury may be occasionally added. It is a common practice in North Britain to send such patients to drink goat whey. This is a very proper plan, provided the infection has been totally eradicated beforehand; but when this is not the case, he will often be disappointed. I have frequently known the disease return with all its virulence after a course of goat whey, even when that course had been thought quite sufficient for completing the cure.

One of the most unfortunate circumstances attending patients in this disease is the necessity they are often laid under of being soon well. This induces them to take medicines too fast, and to leave it off too soon. A few grains more of medi-

* I have not only often seen a recent infection carried off in a few days by means of cleanliness, viz. bathing, fomentations, injections, &c., but have likewise found it of the greatest advantage in the more advanced stages of the disease. Of this I had lately a very remarkable instance, in a man whose penis was almost wholly consumed by venereal ulcers. The matter had been allowed to continue on the sores, without any care having been taken to clean them, till, notwithstanding the use of mercury and other medicines, it had produced the effects above mentioned. I ordered warm milk and water to be injected three or four times a day into all the sinuous ulcers, in order to wash out the matter; after which they were stuffed with dry lint, to absorb the fresh matter as it was generated. The patient at the same time took every day half a grain of the corrosive sublimate of mercury, dissolved in an ounce of brandy, and drank an English quart of the decoction of sarsaparilla. By this treatment, in about six weeks, he was perfectly cured; and, what was very remarkable, a part of the penis was actually regenerated.

cine, or a few days' longer confinement, would often be sufficient to perfect the cure; whereas, by the neglect of these, a small degree of virulence is still left in the humors, which gradually vitiates and at length contaminates the whole mass. To avoid this, we would advise that the patient should never leave off taking medicine immediately upon the disappearing of the symptoms, but continue it for some time after, gradually lessening the quantity, till there is sufficient ground to believe that the disease is entirely eradicated.

It is not only difficult, but absolutely impossible, to ascertain the exact degree of virulence that may attend the disease; for which reason it will always be a much safer rule to continue the use of medicine too long than to leave it off too soon. This seems to be the leading maxim of a modern practitioner of some note, for the venereal disease, who always orders his patient to perform a quarantine of forty days, during which time he takes forty bottles of, I suppose, a strong decoction of sarsaparilla, or some other antivenereal simple. Whoever takes this method, and adds a sufficient quantity of some active preparation of mercury to the decoction, will seldom fail to cure a confirmed lues.

It is peculiarly unfortunate for the cure of this disease, that not one in ten of those who contract it are either able or willing to submit to a proper plan of regimen. The patient is willing to take medicine, but he must follow his business, and, to prevent suspicions, must eat and drink like the rest of the family. This is the true source of nine-tenths of all the mischief arising from the venereal disease. I never knew the cure attended with any great difficulty or danger where the patient strictly followed the physician's advice; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct. Scirrhous testicles, ulcerous sore throats, carious bones, and a rotten progeny, are a few of the blessings derived from this course.

There is a species of false reasoning, with regard to this disease, which proves fatal to many. A person of a sound constitution contracts a slight degree of the disorder; he gets well without taking any great care or using much medicine, and hence concludes that this will always be the case. The next time the disease occurs, though ten times more virulent, it is treated in the same manner, and the constitution is ruined. Indeed the different degrees of virulence in the small-pox are not greater than in this disease, though, as the learned Syden-

ham observes, in some cases the most skilful physician cannot cure, and in others the most ignorant old woman cannot kill, the patient in that disorder. Though a good constitution is always in favor of the patient, yet too great stress may be laid upon it in this disease. It does not appear from observation that the most robust constitution is able to overcome the virulence of the venereal contagion after it has got into the habit. In this case a proper course of medicine is always indispensably necessary.

Although it is impossible, on account of the different degrees of virulence, &c., to lay down fixed and certain rules for the cure of this disease, yet the following general plan will always be found safe and often successful, viz., to bleed and administer gentle purges during the inflammatory state, and as soon as the symptoms of inflammation are abated to administer mercury, in any form that may be most agreeable to the patient. The same medicine, assisted by the decoction of sarsaparilla and a proper regimen, will not only secure the constitution against any further progress of a confirmed pox, but will generally perform a complete cure.

CHAPTER XLVIII.

DISEASES OF WOMEN.

Women, in all civilized nations, have the management of domestic affairs; and it is very proper they should, as nature has made them less fit for the more active and laborious employments. This indulgence, however, is generally carried too far, and females, instead of being benefited by it, are greatly injured, from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milkmaid with the pale complexion of those females whose whole business lies within doors. Though nature has made an evident distinction between the male and female with regard to bodily strength and vigor, yet she certainly never meant either that the one should be always without or the other always within doors.

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting the former is rarely to be found.

I have always observed that women who were chiefly employed without doors, in the different branches of husbandry, gardening, and the like, were almost as hardy as their husbands, and that their children were likewise strong and healthy. But as the bad effects of confinement and inactivity upon both sexes have been already shown, we shall proceed to point out those circumstances in the structure and design of females which subject them to peculiar diseases; the chief of which are their *monthly evacuations*, *pregnancy*, and *childbearing*. These indeed cannot properly be called diseases themselves, but from the delicacy of the sex, and their being often improperly managed in such situations, they become the source of numerous calamities.

THE MENSTRUAL DISCHARGE.

Females generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary, as the future health and happiness of the female depend in a great measure upon her conduct at this period.

If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about nor employed in any active business which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigor decline, and she sinks into a valetudinary for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence or their own narrow circumstances, are at this critical period of life denied the benefit of exercise and free air.

A lazy, indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions amongst the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are, in a manner, eaten up by the *chlorosis*, or greensickness, and other diseases of this nature. We would therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible.

Another thing that proves very hurtful to girls about this period of life is unwholesome food. Fond of all manner of trash, they often indulge in it till their whole humors are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should be properly performed. Accordingly, we find that such girls as lead an indolent life and eat great quantities of trash are not only subject to obstructions of the *menses*, but likewise to glandular obstructions, as the scrofula or king's evil, &c.

A dull disposition is likewise very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health, while the grave, moping, melancholy creature proves the very prey of vapors and hysterics. Youth is the season of mirth and cheerfulness. Let it therefore be indulged. It is an absolute duty. To lay in a stock of health in time of youth is as necessary a piece of prudence as to make provision against the decays of old age. While therefore wise nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom the season destined to mirth and innocent festivity.

Another thing very hurtful to females about this period of life is strait clothes. They are fond of a fine shape, and foolishly imagine that this can be acquired by lacing themselves tight. Hence, by squeezing the stomach and bowels, they hurt the digestion, and occasion many incurable maladies. This error is not indeed so common as it has been; but, as fashions change, it may come about again: we therefore think it not improper to mention it. I know many females who to this day feel the direful effects of that wretched custom which prevailed some time ago, of squeezing every girl into as small a size in the middle as possible. Human invention could not possibly have devised a practice more destructive to health.

After a female has arrived at that period of life when the menses usually begin to flow, and they do not appear, but, on the contrary, her health and spirits begin to decline, we would advise, instead of shutting the poor girl up in the house and dosing her with steel, assafœtida, and other nauseous drugs, to place her in a situation where she can enjoy the benefit of free air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner, and we have little reason to fear but nature, thus assisted, will do her proper work. Indeed she seldom fails unless where the fault is on our side.

When the menses have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceedingly cautious of what they eat or drink at the time they are out of order. Every thing that is cold or apt to sour on the stomach ought to be avoided, as fruit, buttermilk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful to females at this particular period. More of the sex date their disorders from colds, caught while they were out of order, than from all other causes. This ought surely to put them upon their guard and to make them very circumspect in their conduct at such times. A degree of cold that will not in the least hurt them at another time, will at this period be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more so than this. Anger, fear, grief, and other affections of the mind, often occasion obstructions of the menstrual flux, which prove absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this purpose we would recommend sufficient exercise in a dry, open, and rather cool air; wholesome diet, and, if the body be weak and languid, generous liquors; also cheerful company and all manner of amusements. If these fail, the following medicines may be tried.

When the obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. The principal of these are iron, the Peruvian bark, with other bitter and astringent medicines. Filings of iron may be infused in wine or ale, two ounces to an English quart, and after it has stood in a warm place twenty-four hours it may be strained, and a small cupful drank three or four times a day; or they may be reduced to a fine powder, and taken in a dose of half a dram, mixed with a little honey or treacle, three or four times a day. The bark and other bitters may either be taken in substance or infusion, as is most agreeable to the patient.

When obstructions proceed from a viscid state of the blood, and the patient is of a gross or full habit, evacuations, and such medicines as attenuate the humors, are necessary. The woman in this case ought to be bled, to bathe her feet frequently in warm water, to take frequently a cooling purge, and to live upon a spare thin diet. Her drink should be whey, water, or small beer, and she ought to take sufficient exercise.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c., every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behavior to females in this situation is also of the last importance.

An obstruction of the menses is often the effect of other maladies. When this is the case, instead of giving medicines to force down that discharge, which might be dangerous, we ought by all means to endeavor to restore the patient's health and strength. When that is effected, the other will return of course.

But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the color pale, the appetite and digestion are bad, and edematose swellings of the feet, dropsies, and consumptions often ensue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted, high-

seasoned, or acrid food; the use of spirituous liquors; excessive fatigue; violent passions of the mind, &c.

To restrain this flux, the patient should be kept quiet and easy both in body and mind. If it be very violent, she ought to lie in bed with her head low; to live upon a cool and slender diet, as veal or chicken broths with bread; and to drink decoctions of nettle roots or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as alum, the Peruvian bark, &c.*

But the uterine flux may offend in quality as well as in quantity. What is usually called the *fluor albus*, or whites, is a very common disease, and proves extremely hurtful to delicate women. This discharge, however, is not always white, but sometimes pale, yellow, green, or of a blackish color; sometimes it is sharp and corrosive, sometimes foul and fetid, &c. It is attended with a pale complexion, pain in the spine of the back, loss of appetite, swelling of the feet, &c. It generally proceeds from a relaxed and debilitated state of the body, arising from indolence, the excessive use of tea, coffee, or other weak and watery diet.

To remove this disease, the patient must take as much exercise as she can bear without fatigue. Her food must be solid and nourishing, but of easy digestion, and her drink pretty generous, as red port or claret. These may be drank pure or mixed with water, as the patient inclines. Tea and coffee are to be avoided. I have often known strong broths have an exceeding good effect in this case. The patient ought not to lie too long abed. When medicine is necessary, we know none preferable to the Peruvian bark, which, in this case, ought always to be taken in substance. In warm weather, the cold bath will be of considerable service.

That period of life at which the menses cease to flow is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it comes

* Two drams of alum and one of Japan earth may be pounded together and divided into eight or nine doses, one of which may be taken three times a day. Persons whose stomachs cannot bear the alum may take two table-spoonfuls of the tincture of roses three or four times a day, to each dose of which ten drops of laudanum may be added.

If these should fail, half a dram of the Peruvian bark in powder, with ten drops of the elixir of vitriol, may be taken, in a glass of red wine, four times a day.

to pass that so many women either fall into chronic disorders or die about this time. Such of them, however, as survive it without contracting any chronic disease, often become more healthy and hardy than they were before, and enjoy strength and vigor to a very great age.

If the menses cease all of a sudden, in women of a full habit, they ought to abate somewhat of their usual quantity of food, especially of the more nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise, and to keep the body open. This may be done by taking once or twice a week a little rhubarb, or an infusion of hiera picra in wine or brandy.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ankles, or in other parts of the body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or artificial drains should be substituted in their stead. Women who will needs have such sores dried up are often soon after seized with acute or chronic diseases, of which they die.

PREGNANCY.

Pregnant women are often afflicted with the heart-burn. The method of treating this complaint has already been pointed out. They are likewise, in the more early periods of pregnancy, often harassed with sickness and vomiting, especially in the morning. The method of relieving these complaints has also been already shown. Both the headache and toothache are very troublesome symptoms of pregnancy. The former may generally be removed by keeping the body gently open, by the use of prunes, figs, roasted apples, and such like. When the pain is very violent, bleeding may be necessary. For the treatment of the latter, we must refer the reader to that article. Several other complaints incident to pregnant women might be mentioned, as a cough and difficulty of breathing, suppression and incontinency of urine, &c., but as all of these have been taken notice of before, I shall not repeat them.

Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the woman liable to the same misfortune afterwards. Abortion may happen at any period of pregnancy, but it is most common in the

second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens within the first month, it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care.

The common causes of abortion are the death of the child, weakness or relaxation of the mother, great evacuations, violent exercise, raising great weights, reaching too high, vomiting, coughing, convulsion fits, strokes on the belly, falls, fevers, disagreeable smells, excess of blood, indolence, high living or the contrary, violent passions or affections of the mind, as fear, grief, &c.

The signs of approaching abortion are pain in the loins or about the bottom of the belly, a dull heavy pain in the inside of the thighs, a slight degree of coldness or shivering, sickness, palpitation of the heart; the breasts become flat and soft, the belly falls, and there is a discharge of blood or watery humors from the womb.

To prevent abortion, we would advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea and other weak and watery liquors; to rise early and go soon to bed; to shun damp houses; to take frequent exercise in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can shun it.

Women of a full habit ought to use a spare diet, avoiding strong liquors and every thing that may tend to heat the body or increase the quantity of blood. Their diet should be of an opening nature, consisting principally of vegetable substances. Every woman with child ought to be kept cheerful and easy in her mind. All violent passions endanger the life of the *fœtus*, and may cause an abortion.

When any signs of abortion appear, the woman ought to be laid on a bed or mattrass, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be too warm, nor to take any thing of a heating nature. Her food should consist of broths, rice and milk, jellies, gruels made of oatmeal, and the like.

If she be able to bear it, she should lose at least half a pound of blood from the arm. Her drink ought to be barley water sharpened with juice of lemon; or she may take half a dram of powdered nitre, in a cup of water gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn

prepared. If she be affected with vomiting, let her take frequently two table-spoonfuls of the saline mixture.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might often escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would operate the quite contrary way. Want of exercise not only relaxes the body, but induces a plethora, or too great a fulness of the vessels, which are the two principal causes of abortion.

CHILDBIRTH.

Many diseases proceed from the want of due care in childbed, and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think, when the labor pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the *fœtus;* but proper care and management are necessary for the recovery of the mother. No doubt mischief may be done by too much as well as by too little care. Hence females who have the greatest number of attendants in childbed generally recover worst. But this is not peculiar to the state of childbed. Excessive care always defeats its own intention, and is generally more dangerous than none at all.

During actual labor, nothing of a heating nature must be given. The woman may now and then take a little panado, and her drink ought to be toast and water or thin groat gruel. Spirits, wines, cordial waters, and other things which are given with a view to strengthen the mother and promote the birth, for the most part tend only to increase the fever, inflame the womb, and retard the labor. Besides, they endanger the woman afterwards, as they often occasion violent and mortal hemorrhages, or dispose her to eruptive and other fevers.

When the labor proves tedious and difficult, to prevent inflammations, it will be proper to bleed. An emollient clyster ought likewise frequently to be administered; and the patient should sit over the steams of warm water. The pas-

sage ought to be gently rubbed with a little soft pomatum or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labors; and in all preternatural cases a skilful surgeon or man-midwife ought to be called as soon as possible.

We cannot help taking notice of that ridiculous custom, which still prevails in some parts of the country, of collecting a number of women together upon such occasions. These, instead of being useful, serve only to crowd the house and obstruct the necessary attendants. Besides, they hurt the patient with their noise, and often, by their untimely and impertinent advice, do much mischief.

After delivery, the woman ought to be kept as quiet and easy as possible. Her food should be light and thin, as gruel, panado, &c., and her drink weak and diluting. To this rule, however, there are some exceptions. I have known several hysteric women whose spirits could not be supported in childbed without solid food and generous liquors; to such a glass of wine and a bit of chicken must be allowed.

Sometimes an excessive hemorrhage or *flooding* happens after delivery. In this case, the patient should be laid with her head low, kept cool, and be in all respects treated as for an excessive flux of the menses. If the flooding proves violent, linen cloths, which have been wrung out of a mixture of equal parts of vinegar and water or red wine, should be applied to the belly, the loins, and the thighs. These must be changed as they grow dry, and may be discontinued as soon as the flooding abates.*

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as tea with a little saffron, or an infusion of camomile flowers, and to take small broths, with caraway seeds or a bit of orange-peel in them. An ounce of the oil of sweet almonds may likewise be frequently taken in a cup of any of the above liquors; and if the patient be restless, a spoonful of the syrup of poppies may now

* In a violent flooding after delivery, I have seen very good effects from the following mixture: Take of pennyroyal water, simple cinnamon water, and syrup of poppies, each two ounces, acid elixir of vitriol a dram; mix, and take two table-spoonfuls every two hours, or oftener if necessary.

and then be mixed with a cup of her drink. If she be hot or feverish, one of the following powders may be taken, in a cup of her usual drink, every five or six hours.*

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are generally increased upon touching; by the tension or tightness of the parts; great weakness; change of countenance; a constant fever, with a weak and hard pulse; a slight delirium or raving; sometimes incessant vomiting; a hiccough; a discharge of reddish, stinking, sharp water from the womb; an inclination to go frequently to stool; a heat and sometimes total suppression of urine.

This must be treated like other inflammatory disorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley water, in a cup of which half a dram of nitre may be dissolved, and taken three or four times a day. Clysters of warm water must be frequently administered, and the belly should be fomented by cloths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A suppression of the *lochia*, or usual discharges after delivery, and the milk-fever, must be treated nearly in the same manner as an inflammation of the womb. In all these cases, the safest course is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever, the breasts may be embrocated with a little warm linseed oil, or the leaves of red cabbage may be applied to them. The child should be often put to the breast, or it should be drawn by some other person.

Nothing would tend more to prevent the milk-fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or three days is contrary to nature and common sense, and is very hurtful both to the mother and child.

Every mother who has milk in her breasts ought either to suckle her own child, or to have her breasts frequently drawn,

* Take of crabs' claws prepared half an ounce, purified nitre two drams, saffron powdered half a dram; rub them together in a mortar, and divide the whole into eight or nine doses. When the patient is low-spirited or troubled with hysterical complaints, she ought to take frequently twelve or fifteen drops of the tincture of assafœtida in a cup of pennyroyal tea.

at least for the first month. This would prevent many of the diseases which prove fatal to women in childbed.

When an inflammation happens in the breast, attended with redness, hardness, and other symptoms of suppuration, the safest application is a poultice of bread and milk, softened with oil or fresh butter. This may be renewed twice a day, till the tumor be either discussed or brought to suppuration. The use of repellents, in this case, is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapped, they may be anointed with a mixture of oil and beeswax, or a little gum Arabic may be sprinkled on them. I have seen Hungary water applied to the nipples have a very good effect. Should the complaint prove obstinate, a cooling purge may be given, which generally removes it.

The miliary fever is a disease very incident to women in childbed; but as it has been treated of already, we shall take no further notice of it here. The celebrated Hoffman observes that this fever of childbed women might generally be prevented, if they, during their pregnancy, were regular in their diet, used moderate exercise, took now and then a gentle laxative of manna, rhubarb, or cream of tartar; not forgetting to bleed in the first months, and avoid all sharp air. When the labor is coming on, it is not to be hastened with forcing medicines, which inflame the blood and humors or put them into unnatural commotions. Care should be taken, after the birth, that the natural excretions proceed regularly; and if the pulse be quick, a little nitrous powder should be given, &c.

We shall conclude our observations on childbed women by recommending it to them, above all things, to beware of cold. Poor women, whose circumstances oblige them to quit their bed too soon, often contract diseases from cold, of which they never recover. It is pity the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct must be obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church is likewise a very common cause

of catching cold. All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

BARRENNESS.

Barrenness may be very properly reckoned among the diseases of females, as few married women who have not children enjoy a good state of health. It may proceed from various causes; but we shall only take notice of three, viz., high living, relaxation, and grief.

It is very certain that high living vitiates the humors and prevents fecundity. We seldom find a barren woman among the laboring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty, and it would be an easy matter to adduce many instances of women who, by being reduced to live entirely upon milk and a vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants, they would seldom have cause to envy their poor vassals and dependents the blessing of a numerous and healthy offspring, while they pine in sorrow for the want of even a single heir to their extensive dominions.

Affluence begets indolence, which not only vitiates the humors, but induces a general relaxation of the solids; a state highly unfavorable to procreation. To remove this we would recommend the following course: First, sufficient exercise in the open air; secondly, a diet consisting chiefly of milk and vegetables;* thirdly, the use of astringent medicines, as alum, dragon's blood, elixir of vitriol, the Peruvian bark, &c.; and, lastly, the cold bath.

Whatever obstructs the menstrual flux may be considered as a cause of barrenness. Hence it is often the consequence

* Dr. Cheyne avers that want of children is oftener the fault of the male than of the female, and strongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr. Taylor, whom he calls the milk-doctor of Croydon, had brought sundry opulent families in his neighborhood, who had continued some years after marriage without progeny, to have several fine children, by keeping both parents for a considerable time to a milk and vegetable diet.

of grief, sudden fear, anxiety, or any of the depressing passions. When barrenness is suspected to proceed from affections of the mind, the person ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

CHAPTER XLIX.

DISEASES OF CHILDREN.

Miserable indeed is the lot of man in the state of infancy. He comes into the world more helpless than any other animal, and stands much longer in need of the protection and care of his parents. But, alas! this care is not always bestowed upon him, and when it is he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, becomes one of the most fruitful sources of the disorders of infants.*

It must be obvious to every attentive observer that the first diseases of infants arise chiefly from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every thing that the stomach cannot digest may be considered as a poison; and unless it can be thrown up or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

* We shall only here adduce one instance of the officious care of midwives, viz., the common practice of torturing infants by squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet, as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation, and suppuration of the breasts; but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend is a soft poultice, or a little of the diachylon plaster, spread thin upon a bit of soft leather, about the size of half a crown, and applied over each nipple. These mav be suffered to continue till the hardness be gone off.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table-spoonfuls of water, and sweetened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates; or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are not fond of using the emetic tartar may give six or seven drops of the antimonial wine, in a tea-spoonful of water or thin gruel.

These medicines will not only cleanse the stomach, but will generally likewise open the belly. Should this, however, not happen, and if the child be costive, some gentle purge will be necessary. For this purpose some manna and pulp of cassia may be dissolved in boiling water, and given in small quantities till it operates; or, what will answer rather better, a few grains of magnesia alba may be mixed in any kind of food that is given to the child, and continued till it has the desired effect. If these medicines be properly administered, and the child's belly and limbs frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the internal disorders of infants. They will likewise go a considerable length in alleviating those which appear externally, as the rash, *gum* or *fellon*, &c. These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most commonly relieved by gentle evacuations. Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

THE MECONIUM.

The stomach and bowels of a new-born infant are filled with a blackish-colored matter, of the consistence of syrup, commonly called the *meconium*. This is generally passed soon after the birth, by the mere effort of nature; in which case

it is not necessary to give the infant any kind of medicine. But if it should be retained or not sufficiently carried off, a little manna or magnesia alba may be given, as mentioned above; or, if these should not be at hand, a common spoonful of whey, sweetened with a little honey, may be given.

The most proper medicine for expelling the meconium is the mother's milk, which is always at first of a purgative quality. Were children allowed to suck as soon as they show an inclination for the breast, they would seldom have occasion for medicines to discharge the meconium; but even where this is not allowed, they ought never to have daubs of syrup, oils, and other indigestible stuff, crammed down their throats.

THE APTHÆ OR THRUSH.

The apthæ are little whitish ulcers affecting the whole inside of the mouth, tongue, throat, and stomach of infants. Sometimes they reach through the whole intestinal canal; in which case they are very dangerous, and often put an end to the infant's life.

If the apthæ are of a pale color, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous; but if opaque, yellow, brown, black, thick, or running together, they are bad.

It is generally thought that the apthæ owe their origin to acid humors; we have reason however to believe they are more frequently owing to too hot a regimen both of the mother and child. It is a rare thing to find a child who is not dosed with wine, punch, cinnamon waters, or some other hot and inflaming liquors, almost as soon as it is born. It is well known that these will occasion inflammatory disorders even in adults; is it any wonder then that they should heat and inflame the tender bodies of infants, and set, as it were, the whole constitution on a blaze?

The most proper medicines for the apthæ are those of a cooling and gently opening nature. Five grains of rhubarb and half a dram of magnesia alba may be rubbed together, and divided into six doses, one of which may be given to the child every five or six hours till they operate. These powders may either be given in the child's food or a little of the syrup of pale roses, and may be repeated as often as is found necessary to keep the body open.

Many things have been recommended for gargling the

mouth and throat in this disease; but it is not easy to apply these in very young infants; we would therefore recommend it to the nurse to rub the child's mouth frequently with a little borax and honey; or with the following mixture: take fine honey an ounce, borax a dram, burnt alum half a dram, rose-water two drams; mix them together. A very proper application in this case is a solution of ten or twelve grains of white vitriol in eight ounces of barley water. These may be applied with the finger, or by means of a bit of soft rag tied to the end of a probe.

ACIDITIES.

The food of children being, for the most part, of an ascescent nature, it readily turns sour upon the stomach, especially if the body be any way disordered. Hence it comes to pass that most diseases of children are accompanied with evident signs of acidity, as green stools, gripes, &c. These appearances have induced many to believe that all the diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively will find that these symptoms of acidity are oftener the effect than the cause of their diseases.

Nature evidently intended that the food of children should be ascescent; and until the body be disordered or the digestion hurt from some other cause, we will venture to say that the ascescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children, and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purgings, sour smells, &c., show that the bowels abound with an acid, the child should have a little small broth instead of milk, with light white bread in it; and should have sufficient exercise, in order to promote the digestion. It has been customary in this case to give the pearl julep, chalk, crabs' eyes, and other testaceous powders. These indeed, by their absorbent quality, may correct the acidity; but they are attended with this inconvenience, that they are apt to lodge in the bowels, and occasion costiveness, which may prove very hurtful to the infant. For this reason they should never be given unless mixed with purgative medicines, as rhubarb, manna, or such like.

The best medicine which we know, in all cases of acidity,

is that fine insipid powder called magnesia alba. It purges, and at the same time corrects the acidity; by which means it not only removes the disease, but carries off its cause. It may be given in any kind of food, from ten grains to a teaspoonful, according to the age of the patient. I have often known it answer very well when given in the following manner: Take of magnesia alba two drams, fine rhubarb in powder half a dram, peppermint water and common water of each two ounces, as much syrup of sugar as will make it agreeable. Shake the bottle, and give the child a table-spoonful three or four times a day.

When an infant is troubled with gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things, but should have its body opened with an emollient clyster or the medicine mentioned above; and at the same time a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to succeed, a little brandy or other spirits may be mixed with twice its own quantity of water, and sweetened with a little sugar, and a spoonful of it given frequently till the child be easier. Sometimes a little peppermint water will answer this purpose very well.

GALLING AND EXCORIATION.

These are very troublesome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moistened by the sweat or urine.

As these complaints are in a great measure owing to want of cleanliness, the most effectual means of preventing them are to wash the parts frequently with cold water, to change the linen often, and, in a word, to keep the child in all respects thoroughly clean. When this is not sufficient, the excoriated parts may be sprinkled with absorbent or drying powders, such as burnt hartshorn, tutty, chalk, crabs' claws prepared, &c.* When the parts affected are very sore and tend to a real ulceration, it will be proper to add a little sugar

* One of the best applications for this purpose is to dissolve some fuller's earth in a sufficient quantity of hot water, and after it has stood till it is cold to rub it gently upon the galled parts once or twice a day.

of lead to the powders, or to anoint the place with a little camphorated ointment. If the parts be washed with spring water, in which a little white vitriol has been dissolved, it will dry and heal them very powerfully.

STOPPAGE OF THE NOSE.

The nostrils of infants are often plugged up with a gross mucus, which prevents their breathing freely, and likewise renders it difficult for them to suck or swallow.

Some, in this case, order, after a suitable purge, two or three grains of white vitriol, dissolved in half an ounce of marjoram water and filtered, to be applied now and then to the nostrils with a linen rag. Wedelius says if two grains of white vitriol and the same quantity of *elaterium* be dissolved in half an ounce of marjoram water and applied to the nose, as above directed, that it brings away the mucus without sneezing.

In obstinate cases these things may be tried; but we have never found any thing necessary besides rubbing the nose at bedtime with a little grease, sweet oil, or fresh butter. This resolves the filth and renders the breathing more free.

ERUPTIONS.

Children while on the breast are seldom free from eruptions of one kind or other. These however are not often dangerous, and ought never to be stopped but with the greatest caution. They tend to free the bodies of infants from hot and acrid humors, which if retained might produce fatal disorders.

The eruptions of children are chiefly owing to the following causes, viz., improper food and neglect of cleanliness. If a child be stuffed at all hours with food that its stomach is not able to digest, such food, not being properly assimilated, instead of nourishing the body, fills it with gross humors. These must either break out in form of eruptions upon the skin, or remain in the body and occasion fevers and other internal disorders. That neglect of cleanliness is a very general cause of eruptive disorders must be obvious to every one. The children of the poor, and of all who despise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with the scab, itch, and other eruptions.

When eruptions are the effect of improper food or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case some drying medicines will be necessary; but they should never be applied without the greatest caution. If drying medicines are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be sparingly used. A little of the flour of sulphur may be mixed with fresh butter, oil, or hog's lard, and the parts affected frequently touched with it.

The most obstinate of all the eruptions incident to children are the *tinea capitis*, or scabbed head, and chilblains. The scabbed head is often exceeding difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died, soon after their scabbed heads had been healed by the application of drying medicines.* The cure ought always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c. If this be not sufficient, let the head be shaved once a week, or oftener, and washed daily with soap suds or lime-water. Should these fail, a plaster of black pitch may be applied, in order to pull out the hair by the roots. And if there be proud flesh, it should be touched with a bit of blue vitriol or sprinkled with a little burnt alum. While these things are doing, the patient must be confined to a regular light diet, his belly should be kept gently open, and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the

* I some time ago saw a very striking instance of the danger of substituting drying medicines in the place of cleanliness and wholesome food, in the foundling hospital at Ackworth, where the children were grievously afflicted with scabbed heads and other cutaneous disorders. I found upon inquiry that very little attention was paid either to the propriety or soundness of their provisions, and that cleanliness was totally neglected; accordingly I advised that they should have more wholesome food and be kept thoroughly clean. This advice however was not followed. It was too troublesome to the servants, superintendents, &c. The business was to be done by medicine; which was accordingly attempted, but had near proved fatal to the whole house. Fevers and other internal disorders immediately appeared, and at length a putrid dysentery, which proved so infectious that it carried off a great many of the children.

neck or arm, which may be kept open till the patient becomes more strong and the constitution be somewhat mended.

Chilblains commonly attack children in cold weather. They are generally occasioned by the feet or hands being kept long wet or cold and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humors and an infarction of the vessels; which being often repeated, the vessels are at last over-distended and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with mustard and brandy, or something of a warming nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes betwixt cloths to the swelled parts, which frequently help to reduce them. When there is a sore, it must be dressed with Turner's cerate, or some other drying ointment, as the ointment of tutty, the plaster of ceruss, &c. These sores are indeed troublesome, but seldom dangerous. They generally heal as soon as the warm weather sets in.

THE CROUP

Children are often seized very suddenly with a great difficulty of breathing, which, if not quickly relieved, proves mortal. This disease is known by various names in different parts of Britain. In the east coast of Scotland it is called the *croup*. On the west they call it the *chock* or *stuffing*. In some parts of England, where I have observed it, the good women call it *the rising of the lights*. It seems to be a species of *asthma*, attended with very acute and violent symptoms.

This disease generally prevails in cold and wet seasons. It is most common upon the sea-coast and in low marshy countries. Children of a gross and lax habit are most liable to it. I have sometimes known it hereditary. It generally attacks children in the night, after having been much exposed to damp, cold, easterly winds through the day. Damp houses, wet feet, thin shoes, wet clothes, or any thing that obstructs the perspiration, may occasion the croup.

It is attended with a frequent pulse, quick and laborious

breathing, which is performed with a peculiar kind of croaking noise that may be heard at a considerable distance. The voice is sharp and shrill, and the face is generally much flushed, though sometimes it is of a livid color.

When a child is seized with the above symptoms, his feet should immediately be put into warm water. He ought likewise to be bled, and to have a laxative clyster administered as soon as possible. He should be made to breathe over the steams of warm water or an emollient decoction, and emollient cataplasms or fomentations may be applied round his neck. If the symptoms do not abate, a blistering plaster must be applied round the neck or betwixt the shoulders, and the child may take frequently a table-spoonful of the following julep: take pennyroyal water three ounces, syrup of althea and balsamic syrup each one ounce, mix them together.

Some, in this case, recommend assafœtida. It may both be given in form of a clyster and taken by the mouth. Two drams of assafœtida may be dissolved in one ounce of Mindererus's spirit and three ounces of pennyroyal water. A table-spoonful of this mixture may be given every hour, or oftener if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drams of the assafœtida may be dissolved in a common clyster, and administered every six or eight hours till the violence of the disease abates.

To prevent a return of the disorder, all those things which occasion it must be carefully avoided, as wet feet, cold damp easterly winds, &c. Children who have had frequent returns of this disease, or whose constitution seems to dispose them to it, ought to have their diet properly regulated; all food that is viscid or hard of digestion, and all crude, raw, trashy fruits, are to be avoided. They ought likewise to have a drain constantly kept open in some part of their body, by means of a seton or issue. I have sometimes known a Burgundy pitch plaster, worn continually betwixt the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

TEETHING.

Dr. Arbuthnot observes that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms

are in a great measure owing to the great delicacy and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education. Hence it comes to pass that children who are delicately brought up always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month the teeth generally begin to make their appearance; first the *incisores* or fore teeth, next the *canini* or dog teeth, and lastly the *molares* or grinders. About the seventh year there comes a new set, and about the twentieth the two inner grinders, called *dentes sapientiæ*, the teeth of wisdom.

Children about the time of cutting their teeth slaver much, and have generally a looseness. When the teething is difficult, especially when the dog teeth begin to make their way through the gums, the child has startings in his sleep, tumors of the gums, inquietude, watchings, gripes, green stools, the thrush, fever, difficult breathing, and convulsions.

Difficult teething is in all respects to be treated as an inflammatory disease. If the belly be bound, it must be opened either by emollient clysters or gentle purgatives, as manna, magnesia alba, rhubarb, senna, or the like. The food should be light and in small quantity; the drink plentiful, but weak and diluting, as infusions of balm or of the lime-tree flowers, to which about a third or fourth part of milk may be added.

If the fever be very high, bleeding will be necessary; but this, in very young children, ought always to be sparingly performed. It is an evacuation which they bear the worst of any. Purging, vomiting, or sweating agree much better with them, and are generally more beneficial. Harris however observes, that, when an inflammation appears, the physician will labor in vain if the *cure* be not begun with applying a leech under each ear. If the child be seized with convulsion fits, a blistering plaster may be applied betwixt the shoulders, or one behind each ear.

Dr. Sydenham says that in fevers occasioned by teething he never found any remedy so effectual as two, three, or four drops of spirits of hartshorn, in a spoonful of simple water or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a larger dose

necessary. It may be given from five drops to fifteen or twenty, according to the age of the child.

In Scotland, it is very common, when children are cutting their teeth, to put a small Burgundy pitch plaster between their shoulders. This generally eases the tickling cough which attends teething, and is by no means a useless application. When the teeth are bred with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c., but from these much is not to be expected. If any thing of this kind is to be used, we would recommend a little fine honey, which may be rubbed on with the finger three or four times a day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the pressure of their gums, as a crust of bread, a wax candle, a bit of liquorice root, or such like.

With regard to cutting the gums, we have seldom known it of any great advantage. In obstinate cases however it ought to be tried. It may be performed by the finger nail, the edge of a sixpenny piece that is worn thin, or any sharp body which can be with safety introduced into the mouth.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and that their nerves be braced by sufficient exercise without doors, the use of the cold bath, &c. Were these things duly regarded, few children would die of teething.

THE RICKETS.

This disease generally attacks children betwixt the ages of nine months and two years. It appeared first in England, about the time when manufactures began to be introduced, and still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either to take proper exercise themselves or to give it to their children.

Causes.—One cause of the rickets is diseased parents. Mothers of a weak relaxed habit, who neglect exercise and live upon weak watery diet, can neither be expected to bring

forth strong and healthy children, or to be able to nurse them after they are brought forth. Accordingly, we find that the children of such women generally die of the rickets, the scrofula, consumptions, or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, the gravel, or other chronic diseases, or who have been often affected with the venereal disease in their youth, are likewise very liable to the rickets.

Any disorder that weakens the constitution or relaxes the habit of children, as the small-pox, measles, teething, the hooping-cough, &c., disposes them to this disease. It may likewise be occasioned by improper diet, as food that is either too weak and watery, or so viscid that the stomach cannot digest it.

Bad nursing is the chief cause of this disease. When the nurse is either diseased or has not enough of milk to nourish the child, it cannot thrive. But children suffer oftener by want of care in nurses than want of food. Allowing an infant to lie or sit too much, or not keeping it thoroughly clean in its clothes, has the most pernicious effects.

The want of free air is likewise very hurtful to children in this respect. When a nurse lives in a close, small house, where the air is damp and confined, and is too indolent to carry her child abroad into the open air, it will hardly escape this disease. A healthy child should always be in motion, unless when asleep; if it be suffered to lie or sit, instead of being tossed and dandled about, it will not thrive.

Symptoms.—At the beginning of this disease the child's flesh grows soft and flabby; its strength is diminished; it loses its wonted cheerfulness, looks more grave and composed than is natural for its age, and does not choose to be moved. The head and belly become too large in proportion to the other parts; the face appears full and the complexion florid. Afterwards the bones begin to be affected, especially in the more soft and spongy parts. Hence the wrists and ankles become thicker than usual; the spine or back-bone puts on an unnatural shape; the breast is likewise often deformed; and the bones of the arms and legs grow crooked. All these symptoms vary according to the violence of the disease. The pulse is generally quick but feeble; the appetite and digestion for the most part bad; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Rickety children generally have great acuteness of mind and an understanding

above their years. Whether this is owing to their being more in the company of adults than other children, or the preternatural enlargement of the brain, is not material.

Regimen.—As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome, nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool, as sweating is apt to weaken it; and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, and the child kept as cheerful as possible.

The diet ought to be light and dry, as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pullets, veal, rabbits or mutton roasted or minced, are the most proper flesh. If the child be too young for flesh-meats, he may have rice, millet, or pearl barley boiled with raisins, to which may be added a little wine and spice. His drink may be good claret, mixed with an equal quantity of water. Those who cannot afford claret may give the child now and then a wine-glass of fine mild ale.

Medicine.—Medicines are here of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a gross habit, gentle purges or vomits may be of use; but they will never carry off the malady. That must depend upon bracing alone; for which purpose, besides the regimen mentioned above, we would recommend the cold bath, especially in the warm season. It must however be used with prudence, as some rickety children cannot bear it. The best time for using the cold bath is in the morning, and the child should be well rubbed with a dry cloth immediately after he comes out of it. If the child should be weakened by the cold bath, it must be discontinued.

Sometimes issues have been found beneficial in this disease. They are peculiarly necessary for children who abound with gross humors. An infusion of the Peruvian bark in wine or ale is likewise of use; but it is scarce possible to bring children to take it. We might here mention many other medi-

cines which have been recommended for the rickets; but as there is far more danger in trusting to these than in neglecting them altogether, we choose rather to pass them over, and to recommend a proper regimen as the only thing to be depended on.

CONVULSIONS.

Though more children are said to die of convulsions than of any other disease, yet they are for the most only a symptom of some other malady. Whatever greatly irritates or stimulates the nerves may occasion convulsions. Hence infants whose nerves are easily affected are often thrown into convulsions by any thing that irritates the alimentary canal, by teething, strait clothes, the approach of the small-pox, measles, or other eruptive diseases.

When convulsions proceed from an irritation of the stomach or bowels, whatever clears them of their acrid contents, or renders these mild and inoffensive, will generally cure the convulsions. Wherefore, if the child be costive, the best way will be to begin with a clyster, and afterwards to give a gentle vomit, which may be repeated occasionally, and the body in the mean time kept open by gentle doses of magnesia alba, or small quantities of rhubarb mixed with the powder of crabs' claws.

Convulsions which precede the eruption of the small-pox, &c., generally go off upon these making their appearance. The principal danger in this case arises from the fears and apprehensions of those who have the care of the patient. Convulsions are very alarming, and something must be done to appease the affrighted parents, nurses, &c. Hence the unhappy infant often undergoes bleeding, blistering, and several other operations, to the great danger of its life, when a little time, bathing the feet, and throwing in a mild clyster, would have set all to rights.

When convulsion fits arise from the cutting of teeth, besides gentle evacuations, we would recommend blistering and the use of antispasmodic medicines, as the tincture of soot, assafœtida, or castor. A few drops of any of these may be mixed in a cup of white wine whey and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by strait clothes or bandages, &c., these ought immediately to be removed. Though in this case tak-

ing away the cause will not always remove the effect, yet it ought to be done, as it is not likely that the patient will recover so long as the cause which first gave rise to the disorder continues to act.

When a child is seized with convulsions without having any complaint in the bowels or symptoms of teething, or any rash or other discharge which has been suddenly dried up, we have reason to conclude that they are a primary disease, and proceed immediately from the brain. Cases of this kind, however, happen but seldom, which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose is to make some derivation from the brain, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck or between the shoulders.

WATER IN THE HEAD.

Though water in the head, or a dropsy of the brain, may affect adults as well as children, yet, as the latter are more peculiarly liable to it, we thought it would be most proper to place it among the diseases of infants.

Causes.—A dropsy of the brain may proceed from injuries done to the brain itself by falls, blows, or the like; it may likewise proceed from an original laxity or weakness of the brain; from scirrhous tumors or excrescences within the skull; a thin watery state of the blood; a diminished secretion of urine; and, lastly, from tedious and lingering diseases which waste and consume the patient.

Symptoms.—This disease has at first the appearance of a slow fever; the patient complains of a pain in the crown of his head or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular and generally slow. Though he seems heavy and dull, yet he does not sleep; he is sometimes delirious, and frequently sees objects double. Towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are dilated, the cheeks flushed, the patient becomes comatose, and convulsions ensue.

MEDICINE.—No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring to light what at present we have no ideas of. The medicines generally used are purges of rhubarb or jalap with calomel, and blistering plasters applied to the neck or back part of the head; to which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted by causing the patient to snuff the powder of asarum, white hellebore, or the like.

CHAPTER L.

OF SURGERY.

To describe the various operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far beyond the limits set to it; we must therefore confine our observations to such cases as most generally occur, and in which proper assistance is either not asked or not always to be obtained.

Though an acquaintance with the structure of the human body is indispensably necessary to qualify a man for being an expert surgeon, yet many things may be done, to save the lives of their fellow-men in emergencies, by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species; yet they seldom fail of success.

Indeed, every man is in some measure a surgeon, whether he will or not. He feels an inclination to assist his fellow-creatures in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment, are apt to mislead. Thus one, by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend perish, without

so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon any such emergencies.

BLEEDING.

No operation of surgery is so frequently necessary as bleeding; it ought therefore to be very generally understood. But though practised by midwives, gardeners, blacksmiths, &c., we have reason to believe that very few know when it is necessary. Even physicians themselves have been so much the dupes of fashion in this article as to render it the subject of satire and ridicule. It is however an operation of great importance, and must, when seasonably and properly performed, be of singular service to those in distress.

Bleeding is proper at the beginning of all inflammatory fevers, as pleurisies, peripneumonies, &c. It is likewise proper in all topical inflammations, as those of the intestines, womb, bladder, stomach, kidneys, throat, eyes, &c., as also in the asthma, sciatic pains, coughs, headaches, rheumatisms, the apoplexy, epilepsy, and bloody flux. After falls, blows, bruises, or any violent hurt received either externally or internally, bleeding is necessary. It is likewise necessary for persons who have the misfortune to be strangled, drowned, suffocated with foul air, the fumes of metals, or the like. In a word, whenever the vital motions have been suddenly stopped, from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein; but in all disorders proceeding from a relaxation of the solids and an impoverished state of the blood, as dropsies, cacochymies, &c., bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life, and other circumstances relating to the patient. It would be ridiculous to suppose that a child could bear to lose as much blood as a grown person, or that a delicate lady should be bled to the same extent as a robust man.

From whatever part of the body blood is to be let, a bandage must be applied betwixt that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow, to slacken it a little. The bandage ought to be applied at least an inch or an inch and a half from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or a tendon, if they can avoid it. The former may easily be known from its pulsation or beating, and the latter from its feeling hard and tight like a whipcord under the finger.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will lose almost the whole blood of his body before he faints. Swooning depends more upon the state of the mind than of the body; besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This, though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are not easily healed. Would those who practise bleeding take a little more pains, and accustom themselves to bleed children, they would not find it such a difficult operation as they imagine.

Certain hurtful prejudices with regard to bleeding still prevail among the country people. They talk, for instance, of head-veins, heart-veins, breast-veins, &c., and believe that bleeding in these will certainly cure all diseases of the parts from whence they are supposed to come, without considering that all the blood-vessels arise from the heart and return to it again; for which reason, unless in topical inflammations, it signifies very little from what part of the body blood be taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation when necessary, in order to reserve it for some more important occasion, and when they think themselves in extreme danger they

fly to it for relief, whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects.

It is likewise a common notion that bleeding in the feet draws the humors downwards, and consequently cures diseases of the head and other superior parts; but we have already observed that in all topical inflammations the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small and the bleeding is apt to stop too soon, the part ought to be immersed in warm water, and kept there till a sufficient quantity of blood be let.

We shall not spend time in describing the manner of performing this operation. That will be better learned by example than precept. Twenty pages of description would not convey so just an idea of the operation as seeing it once performed by an expert hand. Neither is it necessary to point out the different parts of the body from whence blood may be let, as the arm, forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is only to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

INFLAMMATIONS AND ABSCESSES.

From whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and

if the skin be very tense it may be embrocated with a mixture of three-fourths of sweet oil and one-fourth of vinegar, and afterwards covered with a piece of wax plaster.

If, notwithstanding these applications, the symptomatic fever increases, and the tumor becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, a fluctuation of matter which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet or by means of caustic.

The last way in which an inflammation terminates is in a gangrene or mortification, the approach of which may be known by the following symptoms: The inflammation loses its redness and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colors spread all over it; the tumor subsides, and from a duskish complexion becomes black. A quick low pulse, with cold clammy sweats, are the immediate forerunners of death. When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran; should the symptoms become worse, the part must be scarified, and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated as such.

This article includes the treatment of all those diseases which, in different parts of the country, go by the names of *biles*, *imposthumes*, *whitlows*, &c. They are all abscesses in consequence of a previous inflammation, which if possible ought to be discussed; but when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary. Afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

WOUNDS.

No part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters, are possessed of wonderful healing virtues, and imagine that no wound can be cured without the application of them. It is, however, a fact that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft and defending them from the external air, which may be as effectually done by dry lint as by the most pompous applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds so far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of nature. It is nature alone that cures wounds; all that art can do is to remove obstacles, and to put the parts in such a condition as is most favorable to nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavor to point out such steps as ought to be taken to facilitate their cure.

The first thing to be done when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleaned, before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c., or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great that if it be not stopped the patient may die even before a surgeon, though at no great distance, can arrive. In this case, something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight ligature or bandage round the member a little above the wound. The best method of doing this is to put a strong broad garter round the part, but so slack as easily to

admit a small piece of stick to be put under it, which must be twisted, in the same manner as a countryman does a cart-rope to secure his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as straining it too much might occasion an inflammation of the parts and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the styptic water of the dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used.

Though spirits, tinctures, and hot balsams may be used in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem, as it were, to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but, by rendering the parts callous, they obstruct the cure.

In slight wounds which do not penetrate much deeper than the skin, the best application is a bit of the common black sticking plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all that is necessary. When a wound penetrates deep, it is not safe to keep its lips quite close; this keeps in the matter, and is apt to make the wound fester. In this case the best way is to fill the wound with soft lint, commonly called *caddis*. It however must not be stuffed in too hard, otherwise it will do hurt. The caddis may be covered with a cloth dipped in oil or spread with the common wax* plaster; and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body; common sense will generally suggest the most commodious method of applying a bandage; besides, descriptions of this kind are not easily understood or remembered.

* The wax plaster is made by melting together over a slow fire a pound of yellow wax, white resin and mutton suet of each half a pound. This not only supplies the place of melilot plaster, formerly so much in vogue, but makes a very proper application to slight wounds, and to large ones after they are nearly healed.

The first dressing ought to continue on for at least two days; after which it may be removed, and fresh lint applied as before. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet oil laid over it. This will soften it so as to make it come off easily at next dressing. Afterwards the wound may be dressed twice a day in the same manner, till it be quite healed. Those who are fond of salves or ointments may, after the wound is become very superficial, dress it with the yellow basilicum;* and if fungus, or what is called proud flesh, should rise in the wound, it may be checked by mixing with the ointment a little burnt alum or red precipitate of mercury.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of the plaster, and should be changed two or three times a day.

If the wound be large and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit and has lost but little blood from the wound, he must be bled; and if the symptoms be urgent the operation may be repeated. But when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted. It is always more safe to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to be kept perfectly quiet and easy. Every thing that ruffles the mind or moves the passions, as love, anger, fear, excessive joy, &c., are very hurtful. They ought above all things to abstain from venery. The belly should be kept gently open either by laxative clysters, or by a cool vegetable diet, as roasted apples, stewed prunes, boiled spinage, &c.

* The ointment called yellow basilicum is prepared in the following manner: Take of olive oil an English pint, yellow wax, yellow resin, and Burgundy pitch of each one pound, common turpentine three ounces. Melt the wax, resin, and pitch, along with the oil, over a slow fire; after taking them from the fire, add the turpentine, and whilst the mixture remains hot strain it.

BURNS.

In slight burns which do not break the skin, it is customary to hold the part near the fire for a competent time, to rub it with salt, or to lay a compress upon it dipped in spirits of wine or brandy. But when the burn has penetrated so deep as to blister or break the skin, it must be dressed with some emollient and gently drying ointment of calamine, commonly called Turner's cerate.* This may be mixed with an equal quantity of fresh olive oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad oil. This will serve very well till a proper ointment can be prepared. When the burning is very deep, after the first two or three days it should be dressed with equal parts of yellow basilicum and Turner's cerate mixed together.

When the burn is violent, or has occasioned a high degree of inflammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent it as are recommended in other violent inflammations. The patient, in this case, must live low, and drink freely of weak diluting liquors. He must likewise be bled and have his belly kept open. But if the burnt parts become livid or black, with other symptoms of a mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics mixed with a decoction of the bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous.

BRUISES.

Bruises are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the method of treating it.

* Turner's cerate may be prepared by dissolving half a pound of yellow wax in an English pint of olive oil, over a slow fire. As the mixture cools and begins to grow stiff, half a pound of calamine prepared must be sprinkled into it, keeping constantly stirring them together till the cerate is grown quite cold.

In slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung, with very happy effects.*

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature, as whey sweetened with honey, decoctions of tamarinds, barley, cream-tartar whey, and such like. The bruised part must be bathed with vinegar and water, as directed above, and a poultice, made by boiling crumb of bread, elder flowers, and camomile flowers, in equal quantities of vinegar and water, applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a day.

As the stricture of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place, that is, before the diseased part of the bone separates and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens that these sores are frequently mistaken for the king's evil, and treated as such, though, in fact, they proceed solely from the injury which the solid parts received from the blow.†

* I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like, and never once knew it fail to have a good effect.

† Patients in this case are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is, in a manner, poisoned with various and opposite applications, and is often at length rendered absolutely incurable. The best method of managing such sores is to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them but some simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile flowers or the like, may be put, to nourish the part and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

ULCERS.

Ulcers may be the consequence of wounds, bruises, or imposthumes improperly treated; but they generally proceed from an ill state of the humors, or what may be called a bad habit of the body.

When this is the case, they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise and live grossly are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humor, which is often so acrid as to inflame and corrode the skin; by the hardness and perpendicular situation of its sides or edges; by the time of its duration, &c.

It requires considerable skill to be able to judge when an ulcer ought to be healed and when not. In general, all ulcers which proceed from a bad habit of body should be suffered to continue open at least till the constitution be so far changed, by proper regimen or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers or other acute diseases may generally be healed with safety after the health has been restored for some time. The cure ought not however to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength and consumes the patient by a slow fever, it should be healed as soon as possible.

We would earnestly recommend a strict attention to these particulars to all who have the misfortune to labor under this disorder, particularly persons in the decline of life, as we have frequently known people throw away their lives by the want of it, while they were extolling and generously rewarding

those whom they ought to have looked upon as their murderers.

The most proper regimen for promoting the cure of ulcers is to avoid all spices, salted and high-seasoned food, all strong liquors, and to lessen the usual quantity of flesh-meat. The belly ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking buttermilk whey sweetened with honey, or the like. The patient ought to be kept cheerful, and should take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a day with a little red precipitate of mercury, and afterwards dressed with the yellow basilicum ointment. Sometimes it will be necessary to have the edges of the ulcer scarified with a lancet.

Lime-water has frequently been known to have very happy effects in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel.

My late learned and ingenious friend Dr. Whytt strongly recommends the use of the solution of corrosive sublimate of mercury in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the doctor's directions, prove very successful. The dose is a table-spoonful night and morning; at the same time washing the sore twice or thrice a day with it. In a letter which I had from the doctor a little before his death, he informed me "that he observed washing the sore thrice a day with the solution of a triple strength was very beneficial."

DISLOCATIONS.

When a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be *luxated* or *dislocated*. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs and even lives are frequently lost, we shall endeavor to point out the method of reducing the most common luxations, and those which require the most immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to

attempt a reduction; and by waiting till they are gone off, the muscles become so relaxed and the cavity filled up that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for some time, and a swelling or inflammation has come on, it will be necessary to bleed the patient, and, after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction be attempted. All that is necessary after the reduction is to keep the part easy, and to apply to it cloths dipped in vinegar or camphorated spirits of wine. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.

The lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily known from the patient's being unable to shut his mouth or eat any thing, as the teeth of the under jaw do not correspond with those of the upper; besides, the chin either hangs down or is thrown towards one side, and the patient is neither able to speak distinctly nor to swallow without considerable difficulty.

The usual method of reducing a dislocated jaw is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapped up with linen cloths that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elapsed heads of the jaw may be easily pushed into their former cavities.

The peasants in some parts of the country have a peculiar way of performing this operation. One of them puts a hand-

kerchief under the patient's chin, then, turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground. This method often succeeds, but we think it a dangerous one, and therefore recommend the other.

DISLOCATION OF THE NECK.

The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken. It is however, for the most part, only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death.

When the neck is dislocated, the patient is immediately deprived of all sense and motion, his neck swells, his countenance appears bloated, his chin lies upon his breast, and his face is generally turned towards one side.

To reduce this dislocation, the unhappy person should immediately be laid upon his back on the ground, and the operator must place himself behind him, so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture.

This is one of those operations which it is more easy to perform than describe. I have known instances of its being happily performed even by women, and often by men of no medical education. After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE RIBS.

As the articulation of the ribs with the back bone is very strong, they are not often dislocated. It does however sometimes happen, which is a sufficient reason for our taking notice of it. When a rib is dislocated either upwards or downwards, in order to replace it, the patient should be laid upon his belly

on a table, and the operator must endeavor to push the head of the bone into his proper place. Should this method not succeed, the arm of the disordered side may be suspended over a gate or ladder, and while the ribs are thus stretched asunder the heads of such as are out of place may be thrust into their former situation.

Those dislocations wherein the heads of the ribs are forced inwards are both most dangerous and the most difficult to reduce, as neither the hand nor any instrument can be applied internally to direct the luxated heads of the ribs. Almost the only thing that can be done is to lay the patient upon his belly over a cask or some gibbous body, and to move the fore part of the rib inwards toward the back, sometimes shaking it. By this means the heads of the luxated ribs will sometimes slip into their former place.

DISLOCATION OF THE SHOULDER.

The humerus or upper bone of the arm may be dislocated in various directions; it happens however most frequently downwards, but very seldom directly upwards. It may be known by a depression or cavity on the top of the shoulder and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the armpit; but when it is luxated backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards toward the breast.

The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body, so that it may not give way to the extension, while another lays hold of the arm a little above the elbow and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck; by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, I have generally found it a very easy matter to reduce the shoulder by extending the arm with one hand and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

The bones of the fore-arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known.

Two assistants are generally necessary for reducing a dislocation of the elbow; one of which must lay hold of the arm above, and the other below the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz., by making an extension in different directions and thrusting the head of the bone into its cavity.

DISLOCATION OF THE THIGH.

When the thigh bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened and the foot is turned inwards.

When the thigh bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back, and made fast by bandages or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh, a little above the knee. While the extension is made, the operator must push the head of the bone outward till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and, during the extension, the head of the bone must be pushed inward.

Dislocations of the *knees*, *ankles*, and *toes* are reduced much in the same manner as those of the upper extremities, viz., by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip into its place merely by pulling the limb with sufficient force.

BROKEN BONES.

There is in most country villages some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would however advise people never to trust such operators when an expert and skilful surgeon can be had; but when that is impracticable, they must be employed. We shall therefore recommend the following hints to their consideration.

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his belly should be opened either by emollient clysters, or, if these cannot be conveniently administered, by food that is of an opening quality, as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought however to be here remarked, that persons who have been accustomed to live high are not all of a sudden to be reduced to a very low diet. This might have fatal consequences. There is often a necessity of indulging even bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any bruise or contusion. This operation should not only be performed soon after the accident happens, but if the patient be very feverish it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the weight of the body be broken, the patient must keep his bed for several weeks. It is by no means necessary however that he should lie all this while, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed-chair or the like, which will greatly relieve him. Great care however must be taken, in raising him up and laying him down, that he make no exertion himself, otherwise the action of the muscles may pull the bone out of its place.

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this he is often so galled and excoriated that he is forced to keep shifting places for ease. I have known a fractured thigh bone, after it had laid straight for about a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary, when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient and unfavorable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected by either laying the patient upon his side or making the bed so as to favor this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into a great many pieces. In this case it will generally be necessary to have the limb taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation often occasions its being delayed in such cases till too late.

When a fracture is accompanied with a wound, it must be dressed in all respects as a common wound.

All that art can do towards the cure of a broken bone is to lay it perfectly straight and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which succeed to fractured bones are owing to tight bandages. This is one of the ways in which the excess of art, or rather the abuse of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cures of broken bones which were ever known happened where no bandages were applied at all. Some method however must be taken to keep the member steady; but this may be done many ways without bracing it with a tight bandage.

The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they be applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The bandage which we would recommend is that made with twelve or eighteen tails. It is much easier applied and taken off than rollers, and answers all the purposes of retention equally well. The

splints should always be as long as the limb, with holes cut for the ankles when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food and drinking freely of weak watery liquors.

The most proper external application for a fracture is *oxycrate*, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

STRAINS.

Strains are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is only strained, the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter or some other bandage pretty tight about the strained part is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the disease. It should not however be applied too tight. I have frequently known bleeding near the affected part have a very good effect; but what we would recommend above all things is *ease*. It is more to be depended on than any medicine, and seldom fails to remove the complaint.*

* A great many external applications are recommended for strains, some of which do good and others hurt. The following are such as may be used with the greatest safety, viz., poultices made of stale

RUPTURES.

Children and very old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting, or the like. In the latter it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both, a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease.

On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture-bandages for children is pretty well known. The child must, as far as possible, be kept from crying, and from all violent motion, till the rupture is quite healed.

In adults, when the gut has been forced down with great violence, or happens from any cause to be inflamed, it is often very difficult to return it, and sometimes quite impracticable without an operation, a description of which is foreign to our purpose. As I have been fortunate enough, however, always to succeed in my attempts to return the gut, without having recourse to any other means than what are in the power of every man, I shall very briefly mention the method which I generally pursue. After the patient has been bled, he must be laid upon his back, with his head very low, and his breech raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and a little salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumor be very hard, considerable force will be necessary; but it is not force alone which succeeds here. The operator, at the same time that

beer or vinegar and oatmeal, camphorated spirits of wine, Minderer's spirit, volatile liniment, volatile aromatic spirit diluted with a double quantity of water, and the common fomentation, with the addition of brandy or spirit of wine.

he makes a pressure with the palm of his hand, must with his fingers conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conceived than described. Should all these endeavors prove ineffectual, clysters of the smoke of tobacco must be tried. These have been often known to succeed where every other method failed.

An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready-made from the artists. Such bandages are generally uneasy to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he arrived at man's estate should ever be without one of these bandages.

Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors, and should carefully guard against catching cold.

CHAPTER LI.

OF CASUALTIES.

It is certain that life, when to all appearance lost, may often, by due care, be restored. Accidents frequently prove fatal merely because proper means are not used to counteract their effects. No person ought therefore to be looked upon as killed by any accident unless where the structure of the heart, brain, lungs, or some organ necessary to life, is evidently destroyed. The action of these organs may be so far impaired as even to be for some time imperceptible, when life is by no means gone. In this case, however, if the fluids be suffered to grow cold, it will be impossible to put them again in motion, even though the solids should recover their power of acting. Thus, when the motion of the lungs has been stopped by unwholesome vapor, the action of the heart by a stroke on the breast, or the functions of the brain by a blow on the head, if the person be suffered to grow cold he will in

all probability continue so; but if the body be kept warm, as soon as the injured part has recovered its power of acting, the fluids will begin to move, and all the vital functions will be restored.

It is a horrid custom immediately to consign over to death every person who has the misfortune, by a fall, a blow, or the like, to be deprived of the appearance of life. The unhappy person, instead of being carried into a warm house and laid by the fire or put in a warm bed, is generally hurried away to a church, a barn, or some other cold damp house, where, after a fruitless attempt has been made to bleed him, perhaps by one who knew nothing of the matter, he is given over for dead, and no further notice taken of him. This conduct seems to be the result of ignorance, supported by an ancient superstitious notion, which forbids the body of any person supposed to be killed by an accident to be laid in a house that is inhabited. What the ground of this superstition may be we shall not pretend to inquire; but surely the conduct founded upon it is contrary to all the principles of reason, humanity, and common sense.

When a person seems to be suddenly deprived of life, our first business is to inquire into the cause. We ought carefully to observe whether any substance be lodged in the windpipe or gullet; and, if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped, from any cause whatever except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c., to promote that evacuation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the patient with hot cloths, covering his body with warm sand, ashes, or the like.

We shall now proceed to treat more fully of those accidents which, without immediate assistance, would often prove fatal, and to point out the most likely means for relieving the unhappy sufferers; but as we have been greatly anticipated in this part of our subject by the learned and humane Dr. Tissot, we shall content ourselves with selecting such of his observations as seem to be the most important, and adding such of our own as have occurred in the course of practice.

SUBSTANCES STOPPED BETWEEN THE MOUTH AND STOMACH.

Though accidents of this kind are very common and extremely dangerous, yet they are generally the effect of carelessness. Children should be taught to chew their food well, and to put nothing into their mouths which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who put pins, nails, and other sharp-pointed substances in their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly incautious, as a fit of coughing, or twenty other accidents, may force over the substance before the person be aware.

When any substance is detained in the gullet, there are two ways of removing it, viz., either by extracting it or pushing it down. The safest and most certain way is always to extract or draw it out, but this is not always the easiest; it may therefore be more eligible sometimes to thrust it down, especially when the obstructing body is of such a nature that there is no danger from its reception into the stomach. The substances which may be pushed down without danger are all common nourishing ones, as bread, flesh, fruits, and the like. All indigestible bodies, as cork, wood, bones, pieces of metal, and such like, ought, if possible, to be extracted, especially if these bodies be sharp-pointed, as pins, needles, fish-bones, bits of glass, &c.

When such substances have not passed in too deep, we should endeavor to extract them with our fingers, which method often succeeds. When they are lower, we should make use of nippers, or a small pair of forceps, such as surgeons use. But this attempt to extract rarely succeeds if the substance be of a flexible nature and has descended far into the gullet.

If the fingers and nippers fail, or cannot be duly applied, crotchets, a kind of hooks, must be employed. These may be made at once, by bending a piece of pretty strong iron wire at one end. It must be introduced in the flat way; and for the better conducting it there should likewise be a curve or bending at the end it is held by, to serve as a kind of handle to it, which has this further use, that it may be secured by a string tied to it, a circumstance not to be omitted in any

instrument employed on such occasions, to avoid such ill accidents as have sometimes ensued from these instruments slipping out of the operator's hand. After the crotchet has passed below the substance that obstructs the passage, it is drawn up again, and hooks up the body along with it. The crotchet is also very convenient when a substance somewhat flexible, as a pin or fish-bone, sticks across the gullet. The hook, in such cases, seizing them about their middle part, crooks and thus disengages them; or, if they are very brittle substances, it serves to break them.

When the obstructing bodies are small and only stop up a part of the passage, and which may either easily elude the hook or straighten it by their resistance, a kind of rings, made either of wire, wool, or silk, may be used. A piece of fine wire, of a proper length, may be bent into a circle, about the middle, of about an inch diameter, and the long unbent sides brought parallel and near each other; these are to be held in the hand, and the circular part or ring introduced into the gullet, in order to be conducted about the obstructing body, and so to extract it. More flexible rings may be made of wool, thread, silk, or small pack-thread, which may be waxed for their greater strength and consistence. One of these is to be tied fast to a handle of iron wire, whalebone, or any kind of flexible wood, and by this means introduced, in order to surround the obstructing substance and to draw it out. Several of these rings passed through one another may be used, the more certainly to lay hold of the obstructing body, which may be involved by one if another should miss it. These rings have one advantage, which is, that when the substance to be extracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted as to be moved every way, which must in many cases be a considerable advantage.

Another material employed on these unhappy occasions is the sponge. Its property of swelling considerably on being wet is the principal foundation of its usefulness here. If any substance is stopped in the gullet, but without filling up the whole passage, a bit of sponge may be introduced into that part which is unstopped, and beyond the substance. The sponge soon dilates and grows larger in this moist situation, and indeed the enlargement of it may be forwarded by making the patient swallow a few drops of water. Afterwards it is to be drawn back by the handle to which it is fastened, and

as it is now too large to return through the small cavity by which it was conveyed in, it draws out the obstructing body along with it.

The compressibility of sponge is another foundation of its usefulness in such cases. A pretty large piece of sponge may be compressed or squeezed into a small size, by winding a string or tape closely about it, which may be easily unwound and withdrawn after the sponge has been introduced. A bit of sponge may likewise be compressed by a piece of whalebone split at one end; but this can hardly be introduced in such a manner as not to hurt the patient.

I have often known pins and other sharp bodies, which had stuck in the throat, brought up by causing the person to swallow a bit of tough meat tied to a thread, and drawing it quickly up again. This is safer than swallowing sponge, and will often answer the purpose equally well.

When all these methods prove unsuccessful, there remains one more, which is, to make the patient vomit; but this can scarcely be of any service unless when such obstructing bodies are simply engaged in, and not hooked or stuck into the sides of the gullet, as in this case vomiting might sometimes occasion further mischief. If the patient can swallow, vomiting may be excited by taking half a dram or two scruples of ipecacuanha in powder made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting by tickling the throat with a feather, and if that should not succeed a clyster of tobacco may be administered. It is made by boiling an ounce of tobacco in a sufficient quantity of water. This has often been found to succeed when other attempts to excite vomiting had failed.

When the obstructing body is of such a nature that it may be safely pushed downwards, this may be attempted by means of a wax candle oiled, and a little heated, so as to make it flexible; or a piece of whalebone, wire, or flexible wood, with a sponge fastened to one end.

Should it be impossible to extract even those bodies which it is dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened where the swallowing of such hurtful or indigestible substances has been followed by no disorder.

Whenever it is manifest that all endeavors either to extract or push down the substance must prove ineffectual, they should be discontinued, because the inflammation occasioned by persisting in them might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been removed.

While the means recommended above are making use of, the patient should often swallow, or if he cannot he should frequently receive by injection, through a crooked tube or pipe that may reach down to the gullet, some emollient liquor, as warm milk and water, barley water, or a decoction of mallows. Injections of this kind not only soften and soothe the irritated parts, but when thrown in with force are often more successful in loosening the obstruction than all attempts with instruments.

When, after all our endeavors, we are obliged to leave the obstructing body in the part, the patient must be treated as if he had an inflammatory disease. He should be bled, kept upon a low diet, and have his whole neck surrounded with emollient poultices. The like treatment must also be used if there be any reason to suspect an inflammation of the passages, *though the obstructing body be removed.*

A proper degree of agitation has sometimes loosened the inhering body more effectually than instruments. Thus a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the windpipe. In this case vomiting and sneezing are likewise to be excited. Pins which stuck in the gullet have been frequently discharged by riding on horseback or in a machine.

When any indigestible substance has been forced down to the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous mealy substances, as puddings, pottage, and soups. He should avoid all heating and irritating things, as wine, punch, pepper, and such like; and his drink should be milk and water, barley water, or whey.

When the gullet is so strongly and fully closed that the patient can receive no food by the mouth, he must be nourished by clysters of soup, jelly, and the like.

When the patient is in danger of being immediately suffocated, when all hope of freeing the passage is vanished, and

death seems at hand if respiration be not restored, the operation of *bronchotomy*, or opening of the windpipe, must be directly performed. As this operation is neither difficult to an expert surgeon nor very painful to the patient, and is often the only method which can be taken to preserve life in these emergencies, we thought proper to mention it, though it should only be attempted by persons skilled in surgery.

DROWNED PERSONS.

When a person has remained a quarter of an hour under water there can be no considerable hopes of his recovery. But as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should always endeavor to afford them the most effectual relief, and never to give them up as irrecoverable too soon, since it has been often known that until the expiration of two, and sometimes even of three hours, such persons have exhibited some tokens of life.

The intention which should be pursued is that of unloading the lungs and brain, and restoring the natural warmth and circulation, &c. Though cold was by no means the cause of the person's death, yet it will prove an effectual obstacle to his recovery. For this reason, after stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with coarse linen cloths, as warm as they can be made, and as soon as a well-heated bed can be got ready he may be laid in it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to his stomach and bowels, and hot bricks, or bottles filled with warm water, to the soles of his feet.

Bleeding will likewise be of service to renew the circulation. Ten or twelve ounces of blood may be taken from any part of the body, if a vein can be found; but as the veins of the arm will seldom bleed upon such occasions, it will be proper to try those of the neck, which are both most apt to bleed and afford the most sudden relief to the brain.

In order to renew the breathing, a strong person may blow his own breath into the patient's mouth with all the force he can; or, what will generally succeed better, the smoke of tobacco may be blown into the lungs by means of a pipe or

funnel.* The fume of tobacco should likewise be thrown up as speedily and plentifully as possible into the intestines in form of clyster. There are various contrivances for this purpose, and common sense will generally suggest which is the most commodious upon such emergencies.

The strongest volatiles should likewise be applied to the nose, as spirit of hartshorn, sal volatile oleosum, burnt feathers, and such like. The nose may likewise be tickled with a feather, and the powder of dried marjoram, tobacco, or rue blown up the nostrils. The temples and pit of the stomach may be frequently rubbed with warm brandy or spirits of wine, a few drops of which may likewise be put into the mouth by means of a feather.

Should these endeavors prove unsuccessful, the patient may be put into a warm bath, or laid among warm ashes, hot dung, sand, or such like. Dr. Tissot mentions an instance of a girl who was restored to life, after she had been taken out of the water, swelled, bloated, and to all appearance dead, by laying her naked body upon hot ashes, covering her with others equally hot, putting a bonnet round her head, and a stocking round her neck stuffed with the same, and heaping coverings over all. After she had remained half an hour in this situation, her pulse returned, she recovered her speech, and cried out, "I freeze, I freeze;" a little cherry-brandy was given her, and she remained buried, as it were, under the ashes for eight hours; afterwards she was taken out, without any other complaint except that of lassitude or weariness, which went off in a few days. The doctor mentions another instance of a man who was restored to life, after he had remained six hours under water, by the heat of a dung-heap.

As soon as the patient discovers any motion, he may take frequently a table-spoonful of the oxymel of squills, diluted with warm water; or, if that medicine is not at hand, a strong infusion of sage, camomile flowers, or *carduus benedictus*, sweetened with honey, may be used in its stead. Where nothing else can be had, some warm water, with the addition of a little common salt, should be given.

We are by no means to discontinue our assistance as soon as the patients discover some tokens of life, since they some-

* I have known a pig drowned and restored to life two or three times successively, by blowing air into its mouth with a pair of bellows and laying it before the fire.

times expire after these first appearances of recovering. The warm and stimulating applications are still to be continued, and small quantities of some cordial liquor ought frequently to be administered. Lastly, though the person should be manifestly reanimated, there sometimes remain an oppression, a cough and feverishness, which effectually constitute a disease. In this case it will be necessary to bleed the patient in the arm, and to cause him to drink plentifully of barley water, elder-flower tea, or any other soft pectoral infusion.

The directions with respect to persons who have been *strangled* are so nearly the same with those for drowned people, that we think it unnecessary to mention them. The general intention is the same, viz., to renew the circulation, respiration, &c., which must be attempted by bleeding, blowing warm air into the lungs and intestines, and applying warm substances, as ashes, salt, or such like, to the whole surface of the body.

Such persons as have the misfortune to be deprived of the appearances of life by a fall, a blow, or the like, must also be treated nearly in the same manner as those who have been for some time under water. I have seen a person so stunned by a fall from a horse that for above six hours he scarcely exhibited any signs of life; yet this man, by being bled, and proper methods taken to keep up the vital warmth, recovered, and in a few days was perfectly well. Dr. Alexander gives an instance to the same purpose, in the Edinburgh Physical and Literary Essays, of a man who was to all appearance killed by a blow on the breast, but recovered upon being immersed for some time in warm water. These, and other instances of a similar nature which might be adduced, amount to a full proof of this fact, that many of those unhappy persons who lose their lives by falls, blows, and other accidents, might be saved *by the use of proper means duly persisted in.*

NOXIOUS VAPORS.

Air may be many ways rendered noxious or even destructive to animals. This may either happen from its vivifying principle being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire nor the life of animals. Hence the danger of sleeping in close chambers with charcoal fires. Some indeed suppose the danger here

proceeds from the sulphurous oil contained in the charcoal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the quality of the air of the room being altered by the fire alone. Be this as it may, it is a situation that ought carefully to be avoided. Indeed it is dangerous to sleep in a small apartment with a fire of any kind.

The vapor which exhales from wine, cider, beer, or other liquors, in the state of fermentation, contains something poisonous, which kills in the like manner with the vapor of coal. Hence there is always danger in going into cellars where a large quantity of these liquors is in a state of fermentation, especially if they have been close shut up for some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterranean caves that have been very long shut are opened, or when deep wells are cleaned which have not been emptied for several years, the vapors arising from them produce the same effects as those mentioned above. For this reason no person ought to venture into a well, pit, cellar, or any place that is damp and has been long shut up, till the air has been sufficiently purified by burning gunpowder in it. It is easy to know when the air of such places is unwholesome, by letting down a lighted candle, throwing in burning fuel, or the like. If these continue to burn, people may safely venture in; but where they are suddenly extinguished, no one ought to enter till the air has been first purified by fire.

The offensive stink of lamps and of candles, especially when their flames are extinguished, operate like other vapors, though with less violence and less suddenly. There have, however, been instances of people killed by the fumes of lamps which had been extinguished in a close chamber; and persons of weak delicate breasts generally find themselves quickly oppressed in apartments illuminated with many candles.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air; or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned as to have lost their feeling and understanding, the following means must be used for their recovery:

The patient should be exposed to a very pure, fresh, and

open air, and volatile salts or other stimulating substances held to his nose. He should next be bled in the arm, or, if that does not succeed, in the neck. His legs ought to be put into warm water and well rubbed. As soon as he can swallow, some lemonade, or water and vinegar, with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected. These may be made by adding to the common clyster syrup of buckthorn and tincture of senna, of each two ounces; or, in their stead, half an ounce of Venice turpentine, dissolved in the yolk of an egg, may be added. Should these things not be at hand, two or three large spoonfuls of common salt may be put into the clyster. The same means, if necessary, must be used to keep up the natural warmth, circulation, &c., as were recommended in the former part of this chapter.

INTOXICATION.

The effects of intoxication are often fatal. No kind of poison kills more certainly than an overdose of ardent spirits. Sometimes indeed, by destroying the nervous energy, they put an end to life at once; but in general their effects are more slow, and in many respects similar to those of opium. Other kinds of intoxicating liquors may prove fatal when taken to excess, as well as ardent spirits, but they may generally be discharged by vomiting, which ought always to be excited when the stomach is overcharged with liquor.

More of those unhappy persons who die intoxicated lose their lives from an inability to conduct themselves than from the destructive quality of the liquor. Unable to walk, they tumble down, and lie in some awkward posture, which obstructs the circulation or breathing, and often continue in this situation till they die. No drunk person should be left by himself till his clothes have been loosened and his body laid in such a posture as is most favorable for continuing the vital motions, discharging the contents of the stomach, &c. The best posture for discharging the contents of the stomach is to lay the person upon his belly; when he falls asleep he may be laid on his side, with his head a little raised, and particular care must be taken that his neck be no way bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors often induces people to quench it by taking what is

hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine or sour punch; these acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that it could never be digested. The safest drink after a debauch is water with a toast, tea, infusions of balm, sage, barley water, and such like. If the person wants to vomit, he may drink a weak infusion of camomile flowers, or lukewarm water and oil; but in this condition vomiting may generally be excited by only tickling the throat with the finger or a feather.

Instead of giving a detail of all the different symptoms of intoxication which indicate danger, and proposing a general plan of treatment for persons in this situation, I shall briefly relate the history of a case which lately fell under my own observation, wherein most of those symptoms usually reckoned dangerous occurred, and where the treatment was successful.

A young man, about fifteen years of age, had, for a hire, drunk ten glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for near twelve hours, till at length his uneasy manner of breathing, the coldness of his extremities, and other threatening symptoms, alarmed his friends, and made them send for me. I found him still fast asleep, his countenance ghastly, and his skin covered with a cold clammy sweat. Almost the only signs of life remaining were a deep laborious breathing and a violent agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits and other stimulating things to his nose, &c. A few ounces of blood were likewise let from his arm, and a mixture of vinegar and water was poured into his mouth; but, as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered his legs to be put into warm water, and some time after a sharp clyster to be administered. This gave him a stool, and was the first thing that relieved him. It was afterwards repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to show some signs of life, took drink when it was offered him, and came gradually to his senses. He continued, however, for several days weak and feverish, and complained much of a soreness in his bowels, which gradually went off, by giving him a slender diet and cool mucilaginous liquors.

This young man would probably have been suffered to die, without any assistance being called, had not a neighbor, a few days before, who had been advised to drink a bottle of whisky to cure him of an ague, expired under very similar circumstances.

EFFECTS OF COLD.

When cold weather is extremely severe and a person is exposed to it for a long time at once, it proves mortal, in consequence of its congealing the blood in the extremities and forcing too great a proportion of it up to the brain; so that the patient dies of a kind of apoplexy, which is preceded by a great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, would, if indulged, prove his last.

Such violent effects of cold are happily not very common in this country; it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the fire, yet reason and observation show that this is a most dangerous and imprudent conduct.

Every peasant knows if frozen meat, fruits, or roots of any kind, be brought near the fire or put into warm water, they will be destroyed by rottenness or a kind of mortification, and that the only way to recover them is to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed in cold water or rubbed with snow till they recover their natural warmth and sensibility; after which the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder flowers sweetened with honey. Every person must have observed, when his hands were even but slightly affected with cold, that the best way to warm them was by washing them in cold water and continuing to rub them well for some time.

When a person has been so long exposed to the cold that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been exposed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours, have nevertheless been revived.

I have always thought that the whitlows, kibes, chilblains, and other inflammations of the extremities, which are so common amongst the peasants of this country in the cold season, were chiefly occasioned by their sudden transitions from cold to heat. After they have been exposed to an extreme degree of cold, they immediately apply their hands and feet to the fire, or, if they have occasion, plunge them into warm water, by which means, if a mortification does not happen, an inflammation seldom fails to ensue. Most of the ill consequences from this quarter might be easily avoided by only observing the precautions mentioned above.

OTHER CASES WHICH REQUIRE IMMEDIATE ASSISTANCE.

Strong and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, or the like.

In such cases the patient should be made to smell to some vinegar. His temples, forehead, and wrists ought at the same time to be bathed with vinegar mixed with an equal quantity of warm water; and two or three spoonfuls of vinegar, with four or five times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a *syncope*, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be kept easy and quiet, only giving him every half hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings which arise from this cause occur frequently in the same person, he should, in order to escape

them, confine himself to a light diet, consisting chiefly of bread, fruits, and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or such like. In these an almost directly opposite course to that mentioned above must be pursued.

The patient should be laid in bed, and, being covered, should have his legs, thighs, arms, and his whole body rubbed strongly with hot flannels. Hungary water, volatile salts, or strong-smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy, and, if he can swallow, some hot wine, mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipped in hot wine or brandy must be applied to the pit of his stomach, and warm bricks or bottles filled with hot water laid to the feet.

As soon as the patient has recovered a little, he should take some strong soup or broth, or a little bread or biscuit soaked in hot-spiced wine. To prevent the return of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panado made with soup instead of water, new-laid eggs lightly poached, chocolate, light roasted meats, jellies, and such like.

Those fainting fits which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed, persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting, however, continue longer than usual, some vinegar may be smelt to, and a little, mixed with some water, swallowed.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water and oil, barley water, or such like. Emollient clysters will likewise be proper, and the patient's strength should afterwards be recruited by giving him generous cordials and anodyne medicines.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When

the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile flowers, *carduus benedictus*, or the like. When the disorder proceeds from the nature of the food, the patient, as in the case of weakness, must be revived by strong smells, &c., but the most essential point is to make him swallow a large quantity of light warm fluid, which may serve to drown, as it were, the offending matter, to soften its acrimony, and either to effect a discharge of it by vomiting or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried into the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have already taken notice of swoonings which arise from nervous disorders, and shall therefore say no more upon that head.

Fainting fits often happen in the progress of diseases. In the beginning of putrid diseases, they generally denote an oppression at stomach or a mass of corrupted humors, and they cease after evacuations either by vomit or stool. When they occur at the beginning of malignant fevers, they indicate great danger. In each of these cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon-juice and water after it. Swoonings which happen in diseases accompanied with great evacuations must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, the patient must be supported by small draughts of wine and water.

Suffocating or strangling fits likewise require immediate assistance. They proceed either from an infarction of the lungs, produced by viscid clammy humors, or a spasmodic affection of the nerves of that organ. Persons who feed grossly and abound with blood are most liable to suffocating fits from the former of these causes. Such ought, as soon as they are attacked, to be bled, to receive an emollient clyster, and to have frequently a cup of any kind of warm diluting liquor, with a little nitre in it, given them. They should likewise receive the steams of hot vinegar into their lungs by breathing. Nervous and asthmatic people are most subject

to spasmodic affections of the lungs. In this case the patient's legs should be immersed in warm water, and the vapor or steam of vinegar be applied as above. He may also be made to smell to burnt paper, feathers, or leather, and fresh air should be very freely admitted to him.

From whatever cause fainting fits may proceed, fresh air is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends, while they are endeavoring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate, and such persons as fall into fainting fits from mere exhaustion or the violence of some disease. No more persons ought ever to be admitted into the room where a patient lies in a swoon than are absolutely necessary for his assistance, and the windows of the apartment should always be opened, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings or fainting fits should neglect no means to remove the cause of them, as their consequences are always hurtful to the constitution. Every fainting fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humors disposed to stagnation, coagulations and obstructions are formed, and, if the motion of the blood be totally intercepted or very considerably checked, *polypuses* are formed in the heart or larger vessels, the consequences of which are always dangerous and often fatal. The only kind of swoonings not to be dreaded are those which sometimes mark the crisis in fevers; yet even these ought as soon as possible to be removed.

Before we conclude, we must beg leave earnestly to recommend to the reader a particular attention to the contents of this chapter, and a steady perseverance in the use of such means as are therein pointed out, for recovering persons who have had the misfortune to be suddenly deprived of life by any accident. Were it necessary, we could bring many well-attested proofs of the happy success which has attended such perseverance, even in cases where there was very little reason to have expected it. It would also be an easy matter to adduce numerous arguments to recommend and enforce the practice of these humane and benevolent offices; but all these,

we are persuaded, would be superfluous. Every good man must feel the strongest propensity, upon such emergencies, to do all in his power to preserve the life of a useful citizen, a beloved friend, or even of an enemy; nor can any pleasure equal that which a generous mind experiences when such endeavors are crowned with success.

THE END.

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