

## ON MEDICAL PRESCRIPTIONS.

THE principal objects designed to be attained by the Composition of Medicines, are, to communicate an agreeable taste or flavour; to give a convenient form; to correct the operation of the principal medicine, or obviate some unpleasant symptom it is liable to produce; to promote its action, by the substance combined with it exerting one of a similar kind; to obtain the joint operation of two remedies, which have different powers, but which may be required to obviate different morbid symptoms which are present together; or, lastly, to change the usual effects of the substances mixed, and obtain a remedy different from either, by the power which one may have of modifying the action of another. Some of these effects are highly important, and often establish the propriety of conjoining different medicines in one formula.

A prescription has been usually divided into four parts, which compose it,—the *basis*, or principal ingredient of the prescription; the *adjuvans*, or that which is designed to promote the action of the former; the *corrigens*, or that intended to correct its operation, or obviate any unpleasant symptom which it may be apt to produce; and the *constituens*, or the substance which gives to the other ingredients consistence or form. These are not necessarily present in every formula, as some of these purposes may not require to be attained; nor is the division of much importance, except perhaps as affording the best general rule for regulating the order in which the ingredients of a prescription

should be enumerated, the order being conformable to that which corresponds with this arrangement.

The following are the principal circumstances to be attended to in forming a prescription; and the observation of which may guard against the errors liable to be committed in the composition of medicines.

1st, Simplicity should be attained, so far as is consistent with the objects of the prescription. Nothing ought to enter into the composition which does not add to its virtue, render it less ungrateful, give it a convenient form, or which is not necessary to conceal any particular ingredient; and, in general, the practice of accumulating a number of articles in one prescription is to be avoided, as there is always the risk of one counteracting or modifying the action of another; at least, the addition of less active substances can do little more than add to the bulk of the principal medicine, or cause it to sit uneasy on the stomach.

2dly, Substances, it is evident, ought not to be mixed together, which are capable of entering into chemical combination, or of decomposing each other, unless it be with the view of obtaining the product of the combination, or decomposition, as a remedy. Errors with regard to this are most likely to occur in mixing together saline and metallic preparations.

3dly, Those mixtures are also to be avoided, in which one medicine, by its peculiar action on the stomach or general system, modifies and changes the action usually exerted by another, unless where the object is to obtain the effects of that modified operation.

4thly, The error of contra-indication is to be guarded against, or those medicines ought not to be combined, the virtues of which are not merely different, but are, in some

measure, opposed to each other,—an error not very likely to occur with regard to the principal ingredients of a prescription, but which may happen sometimes to a less extent with regard to those of inferior importance.

*5thly,* The ingredients which are to be combined, must be such as will mix properly together, so that the form in which the remedy is designed to be exhibited may be easily obtained and preserved.

*Lastly,* The form under which a medicine is prescribed must be adapted to certain circumstances; principally to the nature of the disease, the nature of the remedy itself, and, as far as can be conveniently attained, to the taste of the patient. Those medicines which are nauseous, which operate in a small dose, or are designed to operate slowly, or which have a considerable specific gravity, are usually given under the form of pill, or sometimes of bolus. Those which are less ungrateful, or the operation of which is designed to be immediately obtained, are given in the form of electuary, or under some liquid form. Tinctures always require to be diluted: infusions or decoctions may in general be given in the state in which they are prepared. These last are always of extemporaneous preparation, and the proper application of them to individual substances must depend on the chemical properties, and chiefly on the solubility in the menstruum of the active principles of these substances.

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THE Doses of Medicines are not reducible to any general rules, from their general similarity of operation, or any other circumstance, and are therefore specific with regard to each substance. But there are certain general circum-

stances by which their operation is influenced, which require to be attended to in apportioning the dose. The most important of these are, Age, Sex, Temperament, Idiosyncrasy, Habit, and Disease.

*Age.*—From infancy to manhood, a larger dose of any medicine is requisite to produce its effect, in proportion to the advance in life. From manhood to old age, it has been supposed, that there is a similar gradation with regard to diminution of dose; but this is undoubtedly in a much less proportion than that which regulates the increase. The following table given by Gaubius has been supposed to shew these proportions, with regard to the early periods of life in which the necessity for the diminution of dose is unquestionable.

## TABLE.

Let the dose for a person of middle age be 1 or 1 drachm.

For one from xiv to xxi years, it will be....	$\frac{2}{3}$ or 2 scruples
_____ vii to xiv.....	$\frac{1}{2}$ or half a dr.
_____ iv to vii.....	$\frac{1}{3}$ or 1 scruple
_____ of iv years of age.....	$\frac{1}{4}$ or 15 grains
_____ iii _____.....	$\frac{1}{5}$ or half a scr.
_____ ii _____.....	$\frac{1}{6}$ or 8 grains
_____ i _____.....	$\frac{1}{7}$ or 5 grains

*Sex.*—Women, in general, require rather smaller doses of any active medicine than men,—a difference which is probably owing principally to their greater sensibility from their habits of life.

*Temperament.*—By temperament is understood a predis-

position, derived from original conformation, to be affected in a peculiar manner by external causes acting on the system; and much laborious investigation has been bestowed in distinguishing the different temperaments, and the diversities to which they give rise. With regard to their influence in the operation of medicines, those of the sanguine temperament are supposed to be more easily affected, and therefore to require smaller doses than those of the phlegmatic or melancholic. In what has been said, however, on this subject, there is so much uncertainty and hypothesis, that little reliance can be placed on it.

*Idiosyncrasy.*—This denotes that disposition in individuals, unconnected with general temperament, to be affected by certain causes, in a manner different from the generality of mankind. Such idiosyncrasies are observed to exist with regard to medicines, as well as to other agents, and, where they are known, they may require to be attended to by the prescriber.

*Habit.*—This has an important influence on the operation of medicines. In general, it diminishes the effect resulting from the action of external powers on the system; hence medicines often lose part of their power by having been long continued, and the doses of them, therefore, require to be enlarged under their protracted use. This is particularly the case with all strong stimulants and narcotics, and is even observed, to a certain extent, in some of the other classes of the *Materia Medica*. In a few instances, the reverse has been supposed to hold true, particularly with regard to emetics and to the saline cathartics.

*Disease.*—This has an influence on the doses of medicines not less important; the susceptibility to external impressions, and to action, being much varied in morbid affections, and the operations of remedies of course being mo-

dified by such variations. The state of susceptibility being in general apparent, when it varies much from the healthy standard, the doses of the medicines administered are regulated accordingly, and this, it is obvious, admits of no general observations, as being entirely dependent on the nature and state of disease.

The following table shews the doses of the principal medicines, simple and compound, employed in modern practice, those stated being such as are adapted to the prime of life, and requiring, therefore, in particular cases, to be modified according to the influence of the preceding circumstances.