CHAP. XVII.

OF ANTACIDS.

These are remedies which obviate acidity in the stomach, by combining with the acid and neutralizing it. The substances most powerful in exerting this kind of action, and which can be employed, are the alkalis, and among the earths magnesia and lime. They are all used both in their pure state and in that of carbonate, the carbonic acid being easily disengaged by the acid in the stomach, and the base therefore exerting its neutralizing power. They can be regarded only as palliatives, the production of the acid being to be prevented by the administration of remedies capable of restoring the tone of the stomach. They are employed in dyspepsia, and in diarrhæa arising from acidity. The principal distinction among them is, that some, such as magnesia, form with the acid in the stomach a salt having a purgative effect; others, as lime, a salt apparently inert.

ANTACIDS.

POTASSA.
SODA.
AMMONIA.
CALX.
MAGNESIA.

POTASSA. Potash. (Page 21. 372.)

This alkali, the chemical characters of which have been already noticed, is obtained from the incineration of the woody parts of vegetables. The ashes are lixiviated, and by evaporation the saline matter, consisting chiefly of sub-carbonate of potash, is procured. This forms the potash of commerce; it is purified by a second solution in water and evaporation; and to procure the alkali, lime is added to the solution of this sub-carbonate: the whole is put upon a filtre, so that the alkaline solution may pass slowly through the mass of lime; the carbonic acid is abstracted by the lime, and the potash passes through in solution, sufficiently pure for any medicinal application. This solution (Aq. Potassæ) is sometimes employed to relieve the symptoms from acidity, where the generation of acid is constant and abundant, being given in a dose of 15 drops diluted in water. Its acrimony

renders it, however, an unpleasant remedy. The sub-carbonate is occasionally employed in solution, and the crystallized neutral carbonate, being more mild, has been introduced as a substitute, and has a place in the London Pharmacopœia. It is still more frequently used as an antacid, under the form of the super-carbonate, (Aq. Super-carbonatis Potassæ), prepared according to a formula inserted in the Edinburgh Pharmacopæia, in which an ounce of sub-carbonate of potash is dissolved in ten pounds of water, and this is combined under a moderate pressure, with an excess of carbonic acid. By this impregnation, the acrid alkaline taste is concealed, and an agreeable pungency communicated. The liquor is taken as an antacid, in the dose of half a pound occasionally; and proves useful in relieving the symptoms connected with acidity in the stomach, not only by the chemical agency of the alkali, but also by the grateful stimulus of the carbonic acid.

SODA. Soda.

This alkali is obtained in the state of carbonate, from the saline matter, formed in the combustion of marine vegetables, the barilla of commerce. In its pure state it is not employed in medicine; the crystallized sub-carbonate is used as a lithontriptic, and as an antacid, in a dose of ten or fifteen grains dissolved in water: the crystallized neutral carbonate, which has a place in the London Pharmacopæia, is more mild and grateful, and may therefore be preferred. Supersaturated with carbonic acid, under the form of the supercarbonated soda water, it is still more grateful, and is an antacid in common use. It is prepared in the same manner as the super-carbonate of potash, the proportions being so adjusted, that the alkaline strength of each solution is nearly the same. It is therefore taken in the same dose, and is

usually preferred to the super-carbonate of potash water, as being supposed to be more mild.

Ammonia. (Page 319.)

The solution of ammonia in water (Aq. Ammoniæ) is sometimes used as an antacid, and it has been recommended by Dr Sims as superior to the other alkalis in relieving cardialgia, and other symptoms from acidity: so much so, that he has been led to suppose that these symptoms frequently arise, not from the liquid contents of the stomach being acid, but from an elastic fluid, having a degree of acidity, on which the ammonia from its volatility more readily acts. From 20 to 30 drops of the solution are given in a cupful of water.

The solution of the carbonate of ammonia is also used in a dose of half a drachm; and the aromatic ammoniated alkohol forms a still more grateful antacid and stimulant.

CALX. Lime. (Page 277.)

LIME, under the form of lime water, (Aqua Calcis), is occasionally used as an antacid, in a dose of four or six ounces. It operates, not only chemically, neutralizing the acid, but by its astringent and tonic power contributes to restore the tone of the stomach. It is also employed under the form of carbonate of lime, of which there are two varieties in use: the one named by the Edinburgh College Carbonas Calcis Mollior, the other, Carbonas Calcis Durior.

CARBONAS CALCIS MOLLIOR. Creta Alba. White Chalk.

This is a carbonate of lime found abundantly in nature, nearly pure, or containing only minute quantities of other

earths. It is soft and earthy, of a white colour. From the grosser impurities with which it is mixed, it is freed by levigation and washing, and is then named Prepared Chalk, (Creta Præparata). This is an antacid in very common use. As the compound it forms with the acid in the stomach has no purgative quality, but appears to be quite inert, it is the antacid commonly employed to check diarrhæa from acidity. It is given in a dose of 1 or 2 drachms, with the addition of a small quantity of aomaic. The chalk mix-tr an y ture of the Edinburgh Pharmacopæia affords a very good form for administering it.

Offic. Prep.—Pulv. Carb. Calc. Comp. Mist. Carb. Calc. Ed. Lond.—Pulv. Cret. C. et Opio. Lond.—Troch. Carb. Calc. Ed.

CARBONAS CALCIS DURIOR. Cancrorum Lapilli et Chelæ. Crabs' Stones, Crabs' Claws. Cancer Astacus. Cancer Pagurus. Insecta. Aptera.

In the head and stomach of the river craw-fish, (cancer astacus), are found concretions, consisting principally of carbonate of lime, with a little phosphate of lime and animal gelatin. They are prepared by levigation, and washing with water, and are named Lapilli Cancrorum præparati, formerly Oculi Cancrorum præparati. The tips of the claws of the common sea-crab (cancer pagurus) are similar in composition, and are prepared in the same manner. They are named Chelæ Cancrorum præparatæ. Both are medicinally employed as carbonates of lime, and being prepared with more care, are in general smoother, and more easily diffused in water than the common prepared chalk, though there is reason to believe, that as met with in the shops, they are merely chalk with a little gelatin.

MAGNESIA. Magnesia. (Page 340.)

MAGNESIA is usually obtained in the state of carbonate, by decomposing its sulphate or muriate by an alkaline carbonate; and from this, again, the magnesia is obtained in a pure state, by expelling the carbonic acid by the application of heat. In either state it is used as an antacid: the carbonate has the inconvenience, where large quantities of it require to be taken, of occasioning flatulence from the disengagement of its carbonic acid, and this leads to the preference of the pure magnesia. It is given in a dose of a scruple or half a drachm. The salt which magnesia forms with the acid in the stomach proves slightly purgative; and this is the only reason for distinction in practice between this earth and the carbonate of lime; the one being used where diarrhea accompanies acidity, the other where a laxative effect is wished to be obtained. To obviate the flatulence which it is liable to occasion, or which of itself attends the dyspeptic affections in which it is used, it is advantageously combined with a small quantity of an aromatic, as ginger or cinnamon.