being more complete, because persons cannot wash the un­masticated food down by drinking, and it prevents the gastric juice from being greatly diluted, and so allows it to digest more rapidly. Should these rules be insufficient, then (4) proteid and farinaceous food should be taken in separate meals— farinaceous food at breakfast, proteid alone at lunch; farinaceous in the afternoon, and proteid again in the evening. The reason for this is that farinaceous foods are digested in the intestine and not in the stomach, where they may undergo fermentation, whereas proteid foods are to a great extent digested in the stomach. When the secretion of gastric juice is deficient it may be excited by gastric tonics, such as ten grains of bicar­bonate of soda and a drachm of compound tincture of gentian in water shortly before meals, and may be supplemented by the administration of pepsin and hydrochloric acid after meals. When the nervous system is below par, and both secretion and movements are deficient in the stomach, nervine tonics, such as nux vomica or strychnine, are most useful.

High tension in the arteries is often associated with sleepless­ness, the pressure of blood being such that the circulation in the brain is constantly maintained at a high rate of speed and the brain is unable to obtain rest. The means of producing sleep may be divided into two classes: those (r) which lessen the circulation, and which (2) diminish the excitability of the brain cells. The circulation in the brain may be lessened by warmth to the feet, cold to the head, warm food in the stomach, warm poultices or compresses to the abdomen, antipyretics, which reduce the temperature and con­sequently slow the beats of the heart in fever, and cardiac or vascular tonics, which slow the heart and tend to restore tone to the blood-vessels, so that the circulation in the brain may be more efficiently regulated. Amongst those which lessen ex­citability of the brain-cells are opium, morphine, hyoscyamus, chloral, sulphonal, trional, paraldehyde, chloralamide, chloralose, hop and many others. A combination of the two kinds of remedy is sometimes useful, and chloral sometimes succeeds when other things fail, because it depresses the circulation as well as lessens the activity of the brain-cells.

Irritation of sensory nerves tends to cause contraction of the vessels and to raise the blood pressure, and where pain is present opium or morphine is the most efficient sedative. The sensation of pain is felt in the brain, and the cause of it may be in the sensory centres of the brain alone, as in cases of hysterical pain, with no lesion to cause it. Ordinarily, however, it is due to some peripheral irritation which is conducted by sensory nerves to the spinal cord and thence up to the sensory centre in the brain. Pain may be stopped by removing the cause of irritation, as, for example, by the extraction of a carious tooth or by rendering the nerve­endings insensitive to irritation, as by the application of cocaine; by preventing its transmission along the spinal cord by anti­pyrin, phenacetin, acetanilide, cocaine, &c.; or by dulling the perceptive centre in the brain by means of opium or its alkaloids, by anaesthetics, and probably also, to a certain extent, by antipyrin and its congeners.

Both sleeplessness and pain are sometimes due to the action of toxins absorbed from the intestine, and both of them may sometimes be relieved more efficiently by thorough purgation than by narcotics. Another condition which is probably due to toxins is high pressure within the arteries. When this continues for a length of time it tends by itself to cause deterioration of the blood-vessels and leads to death either by cerebral apoplexy or by cardiac failure. It is therefore very important to discover high tension at an early period. It may be diminished or its increase prevented by a diet from which red meat and meat extracts are excluded, by the use of the lactic acid bacillus, by the administration of laxatives and cholagogues to regulate the bowels, and by the use of iodides and nitrites. By such régime and medicines life may sometimes be prolonged for many years.

Deficient nervous action also leads to defective secretion and movement in the intestine, sometimes with flatulent accumula­tion and sometimes with constipation. In such cases nux vomica or strychnine is useful. Flatulent distension in the stomach or bowels is partly due to air which has been swallowed and partly to gas which has been formed by the decomposition of food. The stomach may become distended with gas on account of acid fermentation leading to the frequent swallowing of saliva, and both this form of flatulence and that caused by the actual formation of gas are much diminished by such drugs as tend to prevent fermentation. Amongst the best of these are carbolic acid in doses of one or two grains, creosote in one or two drops, and sulpho-carbolate of soda in doses of ten grains. Others which may be mentioned arc salicylate of bis­muth, salol, ^-naphthol and naphthalene. By preventing fer­mentation in the intestine these also tend to prevent or check diarrhoea, and they may do good after the irritant has been re­moved by castor oil. After the irritant has been removed and fermentation stopped, the irritation still remaining in the in­testinal wall may be soothed by chalk mixture and bismuth, to which if necessary small quantities of opium may be added. In cases where diarrhoea is very obstinate and lasts for weeks, sulphuric acid is sometimes more efficacious than alkalis; and in chronic colics it may be necessary to treat the mucous mem­brane by local application of astringent solutions. For this purpose solutions of sulphate of copper or of nitrate of silver may be gently introduced into the bowel in quantities of a quart at a time. It is essential that a large quantity should be used, as otherwise the seat of irritation may not be reached by the astringent. Flatulence and diarrhoea as well as many general disorders are often due to intestinal depression caused by microbes. To these injurious microbes Metchnikoff has given the name of “ wild,” and he proposes to restore health by giving “ tame ” microbes, such as lactic acid bacilli. This treatment on the principle of “ setting a thief to catch a thief ” is frequently very useful. The lactic acid bacilli are given either in the form of tablets or milk soured by them, or cheese made from the sour milk. The most efficient form is soured milk, which acts as a food as well as medicine.

Constipation is so common that it may be almost looked upon as the normal condition in civilized countries. Two of its chief causes probably are (r) improvement in cookery, whereby the harder and more irritating parts of the food are softened or removed; and (2) improvement in grinding machinery, whereby the harder and more stimulat­ing parts of the grain are separated from the finer flour which is used for bread. In consequence of the absence of mechanical stimulant the bowels act more slowly, and constipation is the result. It may be considerably diminished by a return to a more natural system of feeding, as by using brown bread instead of white, by taking oatmeal porridge, and by eating raw or cooked fruits, such as apples, oranges, prunes and figs, or pre­serves made of fruit, such as raspberry and strawberry jam, marmalade, &c., by vegetables or by dried and powdered sea­weed. Should these means fail, aperients may be used. The commonest are senna in the form of compound liquorice powder, sulphur in the form of lozenges, cascara sagrada, either in tablets or in the form of liquid or dry extract, rhubarb, colocynth and especially aloes. The last acts chiefly upon the lower bowel, and forms a constituent of nearly every purgative pill. The medicines above mentioned may be taken either in a moderate dose at bedtime or in the form of a dinner pill, or they may be taken in small doses three times a day just before or after meals. Some sufferers from constipation find that they get greater relief from salts dissolved in water, or from natural aperient water taken on rising in the morning, and others again find that the best way of opening the bowels is to inject one or two drachms of glycerine into the rectum, or use it as a sup­pository. If these means fail, exercise, massage and electricity may help a cure.

The most common diseases of malassimilation (or “ meta­bolic ” diseases) are gout, rheumatism and diabetes. In health most of the nitrogenous waste in the body is eliminated as urea, but in gout uric acid is either formed in too great quantity or