

DOMESTIC MEDICINE,

&c. &c.

CHAP. I.

OBSERVATIONS ON DIET, PARTICULARLY THAT OF THE COMMON PEOPLE.

EXPERIENCE proves, that not a few of the diseases incident to the inhabitants of this country, are owing to their mode of living. The vegetable productions they consume fall considerably short of the proportion they ought to bear to the animal part of their food. The constant use of bread and animal substances excites an unnatural thirst, and leads to the immoderate use of beer and other stimulating liquors, which generate disease, and reduce the lower orders of the people to a state of indigence. To teach the poor man how to live cheaper and better, is the design of the following pages.

Though the common people of this country live at a greater expense than any where else, it does not follow that they live better. They are strong indeed, but by no means healthy; and it is found that, from an attachment to a particular mode of living, they are more liable to disease and death in foreign climates, than the inhabitants of any other country.

It is certainly proper that the poor man should be instructed in every thing that can make his little earnings go as far as possible, or which can add to the comfort of himself and family. Nor can economy in living be deemed a trivial virtue, in a country where the richer depend on the cheapness of labour.

It is alleged that the English are so much attached to their own modes of living, that no argument will induce them to make the smallest change. Habits are indeed obstinate things, especially those which relate to diet; but there are proofs that the English are not inflexible even in this matter. The mode of living among the lower orders has been greatly changed in my time, and I am sorry to say, not for the better.

The people of England have too much good sense not to listen to reason, provided due care were taken to instruct them. But here the people may be truly said "*to perish for want of knowledge.*" No means have been used to give them proper instruction. Hurtful customs have been suffered to prevail, till they have struck such deep roots that it will not be an easy matter to eradicate them. The difficulty, however, is not insurmountable. A few experi-

ments of reform would have the effect to render it as agreeable as it is salutary.

Adults have many old prejudices to overcome, but the case is different in regard to children. They may be taught to use any kind of food, and what they use when young, they will love when old. If I can introduce a different method of feeding children, my purpose will be answered. This alone will, in time, effect a total change in the general mode of living.

Particular attention has been paid to the substitutes for bread, as the scarcity of this article proves peculiarly distressing to the poor. It will appear from the following pages, that bread is by no means so much a necessary of life as is generally imagined, and that its place may, in many instances, be supplied by a variety of other farinaceous substances.

GENERAL OBSERVATIONS ON ALIMENT.

No creature eats such a variety of food as man. Intended for an inhabitant of every climate, he devours the productions of them all; and if they do not suit his palate, or agree with his stomach, he calls in the aid of cookery, an art peculiar to himself; by which many things that, in a crude state, would prove hurtful, or even poisonous, are rendered wholesome and salutary.

The obvious division of food is into animal and vegetable. To say that man was intended *by nature* for using either the one or the other alone, would be absurd. His *structure* and appetite prove that he was formed for both. Judgment, however, is requisite in adjusting the due proportion of each, so as to avoid the inconveniences arising from an extreme on either hand.

Though animal food is more nourishing than vegetable, it is not safe to live on that alone. Experience has shown that a diet, consisting solely of animal food, excites thirst and nausea, occasions putrescence in the stomach and bowels, and finally brings on violent griping pains, with cholera and dysentery.

Animal food is less adapted to the sedentary than the laborious, and least of all to the studious, whose diet ought to consist chiefly of vegetables. Indulging in animal food renders men dull, and unfit for the pursuits of science, especially when it is accompanied with the free use of strong liquors.

The plethoric, or persons of a full habit, should eat sparingly of animal food. It yields far more blood than vegetables taken in the same quantity, and, of course, may induce inflammatory disorders. It acts as a stimulus to the whole system, by which means the circulation of the blood is greatly accelerated.

I am inclined to think that consumptions, so common in England, are in part owing to the great use of animal food. Though pulmonary consumption is not, properly speaking, an inflammatory disease, yet it generally begins with symptoms of inflammation, and is often accompanied with them through its whole progress.

But the disease most common to this country is the scurvy. One finds a taint of it in almost every family, and in some the taint is very deep. A disease so general must have a general cause, and there is none so obvious as the great quantity of salted

animal food devoured by the natives. As a proof that scurvy arises from this cause, we are in possession of no remedy for that disease equal to the free use of vegetables.

By the uninterrupted use of animal food, a putrid diathesis is induced in the system, which predisposes to a variety of disorders. I am fully convinced, that many of those obstinate complaints for which we are at a loss to account, and find it still more difficult to cure, are the effects of a scorbutic taint lurking in the habit.

Improper diet affects the mind as well as the body. The choleric disposition of the English is almost proverbial. Were I to assign cause, it would be, their living so much on animal food. There is no doubt but this induces a ferocity of temper unknown to men whose food is chiefly taken from the vegetable kingdom.

Though these and similar consequences may arise from the excess of animal diet, we are far from discouraging its use in moderation. In all cold countries it is certainly necessary; but the major part of the aliment ought, nevertheless, to consist of vegetable substances. There is a continual tendency in animal food, as well as in the human body itself, to putrefaction, which can only be counteracted by the free use of vegetables.

With regard to the proportion of vegetable food to that of animal, great nicety is by no means required. It must vary according to circumstances, as the heat of the weather, the warmth of the climate, and the like. The vegetable part, however, where nothing forbids, ought certainly to preponderate, and I think in the proportion at least of two to one.

The excessive consumption of animal food is one great cause of the scarcity of grain. The food that a bullock affords bears but a small proportion to the quantity of vegetable matter he consumes.

I am no enemy to good fruit, as an article of diet; but the greater part of what is used in this country, by the lower orders of the people, is mere trash. Fruit should be eaten in the early part of the day, when the stomach is not loaded with food, and it never ought to be eaten raw till it is thoroughly ripe.

OF BREAD.

BREAD, or something resembling it, makes a part of the diet of all nations. Hence it is emphatically denominated *the staff of life*. It may, however, be used too freely. The late Dr. Fothergill was of opinion, and I perfectly agree with him, that most people eat more bread than is conducive to their health. I do not mean to insinuate that bread is unwholesome, but that the best things may prove hurtful when taken to excess. A surfeit of bread is more dangerous than one of any other food. *Omnis repletio mala, repletio panis pessima*. The French consume vast quantities of bread; but its bad effects are prevented by their copious use of soups and fruits, which have little or no share in the diet of the common people of England.

One important use of bread is to form a mass fit for filling up the alimentary canal, and carrying the nutritious juices along that passage in such a state, as to render them fit to be acted upon by the lacteal absorbents, which take up the nourishment, and convey

it to the blood. In this light, bread may be considered as a soil from whence the nourishment is drawn. I do not say that bread contains no nourishment, but that its use, as an article of diet, does not solely depend on the quantity of nutriment it contains, but in some measure on its fitness as a vehicle for conveying the nutritious particles through the intestinal tubes. Hence it follows, that the finest bread is not always the best adapted for answering the purposes of nutrition.

The richest food will not nourish an animal, unless the alimentary canal is sufficiently distended. A dog has been fed on the richest broth, yet could not be kept alive; while another, which had only the meat boiled to a chip, and water, thrived very well. This shows the folly of attempting to nourish men on alimentary powders and other concentrated food.

The great art, therefore, of preparing food, is to blend the nutritive part of the aliment with a sufficient quantity of some light farinaceous substance, in order to fill up the canal, without overcharging it with more nutritious particles than are necessary for the support of the animal. This may be done either by bread, or other farinaceous substances, of which there is a great variety, as will appear from the sequel.

Bread is one of the most expensive modes of using grain, and not adapted to the narrow circumstances of the lower orders of the people, as it is *burthened* with two heavy additional charges, in passing through the hands of *both* the miller and the baker. Besides, the former often grinds down extraneous matter with the wheat, and the latter as frequently bakes it up with the addition of lime, chalk, alum, and other pernicious substances. Since the articles of diet have become branches of manufacture, the public neither know what they eat, nor what they drink.

People imagine, as the finest flour contains the greatest quantity of nourishment, that it must therefore be the most proper for making into bread; but this by no means follows. The finest flour comes the nearest to starch, which, though it may occasionally prove a good medicine, makes bad bread. Household bread, which is made by grinding down the whole grain, and only separating the coarser bran, is, without doubt, the most wholesome.

The best household bread I ever remember to have eaten was in the county of York. It was what they call *meslin bread*, and consisted of wheat and rye ground together. I am not quite certain as to the proportion, but I think there might be two parts of the former to one of the latter. This bread, when well fermented, eats light, is of a pleasant taste, and soluble to the bowels. After using it for some years, I found that bread, made entirely of flour, was neither so agreeable to the palate, nor so conducive to health.

Bread is often spoiled to please the eye. The artificially whitened, drying, stuffing bread, though made of the heart of the wheat, is, in reality, the worst of any; yet this is the bread which most people prefer, and the poorer sort will eat no other.

All the different kinds of grain are occasionally made into bread, some giving the preference to one and some to another, according to early custom and prejudice. The people of South Britain generally prefer bread made of the finest wheat-flour,

while those of the northern countries eat a mixture of flour and oatmeal, or rye-meal, and many give the preference to bread made of oatmeal alone. The common people of Scotland also eat a mixed bread, but more frequently bread of oatmeal only. In Germany the common bread is made of rye, and the American labourer thinks no bread so strengthening as that which is made of Indian corn; nor do I much doubt but the Laplander thinks his bread made of the bones of fishes is the best of any.

Bread made of different kinds of grain is more wholesome than what is made of one only, as their qualities serve to correct one another. For example, wheat flour, especially the finer kind, being of a starchy nature, is apt to occasion constipation. Bread made of rye-meal, on the other hand, proves often too slippery for the bowels. A due proportion of these makes the best bread.

For the more active and laborious I would recommend a mixture of rye with the stronger grains, as peas, beans, barley, oats, Indian corn, and the like. These may be blended in many different ways: they make a hearty bread for a labouring man, and, to use his own language, they lie longer on his stomach than bread made of wheat-flour only. Barley-bread passes too quickly through the alimentary canal to afford time for conveying the proper nourishment; but bread made of barley mixed with peas is very nourishing.

When potatoes, or boiled grain, are used, bread ceases to be a necessary article of diet. During the late scarcity of bread, I made it a rule *not* to eat above one half the quantity I used to do, and I found no inconveniency whatever from the change. Nay, some told me, that for a considerable time they had left off the use of bread altogether, without experiencing any change in the state of their health.

A great part of the bread consumed in this country is by children. It is always ready, and when the child calls for food, a piece of bread is put into its hand, to save the trouble of dressing any other kind of victuals. Of many children this is the principal food, but it is far from being the most proper. Children are often troubled with acidities of the stomach and bowels; and it is well known that bread mixed with water, and kept in a degree of heat equal to that of the human stomach, soon turns sour.

During the late scarcity, many of the labouring men, and even artificers, could not earn as much money as was sufficient to keep their families in the article of bread only. It is certain, however, that on a different plan such families might have lived very comfortably. Many of the articles of diet are cheaper than bread, and equally wholesome. Above one half of the expense of living might be saved, by a due selection of the articles of diet.

The English labourer lives chiefly on bread, which being accompanied with other dry, and often salt food, fires his blood, and excites an unquenchable thirst, so that his perpetual cry is for drink.

But the greatest consumption of bread is occasioned by tea. It is said that the subjects of Great Britain consume a greater quantity of that herb, than the whole inhabitants of all the other nations of this quarter of the globe. The lowest woman in

England must have her tea, and the children generally share it with her. As tea contains no nourishment, either for young or old, there must of course be bread and butter to eat along with it. The quartern loaf will not go far among a family of hungry children, and if we add the cost of tea, sugar, butter, and milk, the expense of one meal will be more than would be sufficient to fill their bellies with wholesome food three times a-day.

There is reason to believe that one half the bread consumed in England is used to tea, without one hearty meal ever being made of it. The higher ranks use tea as a luxury, while the lower orders make a diet of it. I had lately occasion to see a striking instance of this in a family, that was represented to me as in distress for want of bread. I sent them a little money, and was informed that they ran with it directly to the tea-shop.

To a heavy, sluggish, phlegmatic man, a moderate use of tea may not prove pernicious; but where there is a debilitated stomach and an irritability of fibre, it never fails to do much hurt. With many it has the effect to prevent sleep.

Tea will induce a total change of constitution in the people of this country. Indeed, it has gone a great way towards effecting that evil already. A debility, and consequent irritability of fibre, are become so common, that not only women, but even men, are affected with them. That class of diseases, which, for want of a better name, we call *nervous*, has made almost a complete conquest of the one sex, and is making *hasty* strides towards vanquishing the other.

Did women know the train of diseases induced by debility, and how disagreeable these diseases render them to the other sex, they would shun tea as the most deadly poison. No man can love a woman eaten up with vapours, or washed down with diseases arising from relaxation.

It is not tea taken as a beverage after a full meal, or in a crowded assembly, that I so much condemn, though I think something as elegant and less pernicious might be substituted in its place. The mischief occasioned by tea arises chiefly from its being substituted for solid food. This is so much the case at present, that, had I time to spare, I think it could not be better employed than in writing against this destructive drug.

BOILED GRAIN.

THOUGH farinaceous substances, of one kind or another, make a necessary part of the food of man, yet there can be no reason why such substances should always assume the name and form of bread. Many of them are more wholesome, and not less agreeable, in other forms. Bread is often used merely to save the trouble of cookery; and, being portable, is the most convenient article of diet for carrying abroad.

It does not, however, admit of a doubt, that more grain is eaten boiled, though not in this country, than is made into bread; and that this mode of cookery is the most wholesome. Simple boiling precludes all adulteration, and is an operation much less laborious and artificial than baking.

The most general article of diet among mankind is rice. This may be made into a variety of dishes; but simple boiling is all that is required, to render it a proper substitute for bread. It may either be eaten alone, or with milk. In the east, it is used with meat, in the same manner as we do bread. The people of this country believe that rice proves injurious to the eyes; but this seems to be without foundation, as it has no such effect on those who make it the principal part of their food.

Many other kinds of grain will, when boiled, make good substitutes for bread. Even those which make a harsh and unpleasant sort of bread, are often rendered very palatable by boiling. This is the case with all the leguminous class of plants, as peas, beans, &c. Even oats and barley are more agreeable, as well as more wholesome, when boiled, than made into bread.

All allow that peas and beans boiled, when young, are a great luxury; but when old, they are equally wholesome, and when properly cooked, by no means unpleasant. There are few who do not relish peas-pudding, and even prefer it to bread. Beans are not so fit for this purpose; but they make an excellent ingredient in the poor man's broth, and whoever eats this broth will find little occasion for bread.

Peas and beans contain an equal quantity of sugar with wheat, oats, or barley, and at the same time a greater proportion of oil, consequently are more nourishing. *This fact is confirmed by daily experience.*

On those farms where peas and beans are raised in great abundance, the labourers are much fed on that sort of grain; but when removed to farms where they are fed with other kinds of grain, they soon complain of a diminution of strength, and request a supply of peas-meal as formerly.

Nature seems to have pointed out the propriety of the extensive use of peas and beans; it being a fact, that when crops of that kind are duly alternated with crops of wheat, barley, or oats, the fertility of the soil may be maintained, without rest or manure, for many years together. Whereas, if the latter be raised on the same soil for several years successively, they render it barren, so that, without rest or manure, its fertility cannot be preserved.

The people in England are but little accustomed to the use of boiled grain, though in many countries it is eaten as a luxury. Boiled barley is a great favourite with the Dutch, and is eaten with milk, butter, or molasses. It is the principal food of the Dutch sailors, who, in general, are both healthy and robust.

Barley is one of the best ingredients in soup. Count Rumford says, it possesses the quality of *lithing*, or thickening soups, in a superior degree to any other grain. We have reason, however, to believe that grits, or coarse oatmeal, will answer that purpose still better.

Oatmeal is frequently made into bread; but it is a much more wholesome, as well as agreeable food, when made into hasty-pudding, and eaten with milk. The peasants in many parts of Britain make two meals a-day of it, while their children almost wholly subsist on it; and it is well known that both old and young, who are thus fed, are healthy and robust.

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The opinion of oatmeal being heating, and occasioning skin diseases, is wholly without foundation. Bread made of oatmeal, when not leavened, will sometimes occasion the heart-burn; but this is no proof of its heating quality. Unleavened bread, of wheat or any other grain, produces the same effect on a debilitated stomach. Oatmeal thoroughly boiled seldom gives the heart-burn.

Persons who are fed on oatmeal-bread, or hasty-pudding, are not more subject to diseases of the skin, than those who live on wheat-meal. Cutaneous disorders proceed more from the want of cleanliness, than from any particular aliment. The French, so far from thinking that oatmeal is heating, speak of it as possessed of a cooling quality, and even the English give oatmeal, or grit-gruel, to lying-in women, and sick people of every description, which shows that they are inconsistent with themselves, in alleging that the blood is fired by the use of oatmeal.

A lieutenant of the army, residing at a country-village within a few miles of Edinburgh, with a wife and ten children, having no other income than his half-pay, fed the whole of his children with hasty-pudding and butter-milk only, from a conviction that it was the most wholesome and full diet that fell within the reach of his narrow circumstances. They grew apace; and it was the universal remark of the neighbourhood, that they were as sprightly, healthy, and robust, as other children, and at the same time perfectly free from all skin-diseases.

Children are seldom well, *unless when* their bodies are gently open. But this is more likely to be the case *when fed* on oatmeal and milk, than when their bellies are crammed with a starchy substance made of the finest flour; yet this in England is the common food of children. I have seen an infant stuffed four or five times a-day with this kind of food. There needs no conjurer to tell the consequence.

A late author, a man of learning, but the dupe of prejudice, has, by a ridiculous definition, endeavoured to represent oats as proper food for horses only. I wish the horses in England devoured a smaller quantity of that grain, and the people more. Few things would have a greater tendency to lessen the expense of living. The oats in North Britain are of a superior quality, and I hope the people will long have the sense to use them as an article of diet.

Indian corn is likewise said to make the best food when boiled. Count Rumford observes, that of all things it makes the best pudding, and that he has made a hearty meal of it, sauce included, for five farthings. What makes good puddings will make good dumplings, and these will, at any time, supply the place of bread. The Count also remarks, that the Negroes in America prefer Indian corn to rice; and that the Bavarian peasants prefer it to wheat; that it might be imported from North America at about four or five shillings per bushel; that, when made into flour, it would cost only one penny farthing per pound; and that it is highly nutritious, and the cheapest food known. During the late scarcity, a large quantity of this grain was imported; but such is the aversion of the common people of this country to every sort of food to which they are not accustomed, that they refused to

purchase it, and the merchants were very great losers by the importation. On the same principle the Germans, till within these few years, could not be induced to eat potatoes, though now they are become extremely fond of them.

The American, the Italian, and the German, all cook Indian corn, in the same way as the North Britain does his oatmeal, by making it into hasty-pudding. It may be eaten in a variety of ways. Some eat it with a sauce composed of butter and brown sugar, or butter and molasses. Others eat it with milk only. In either way it makes a good, cheap, and wholesome diet, by no means disagreeable to those who are accustomed to it.

The only other grain we shall mention, as best when boiled, is buck-wheat: it is of a very mucilaginous nature, and, of course, highly nutritious. In several parts of Europe it constitutes a principal part of the food of the lower people. In former times it was eaten in Russia; not by the lower classes only; even the nobility made use of it. Boiled, and then buttered, it was such a favourite of the great Czar Peter, that he is said seldom to have supped on any thing else.

BUTTER.

It has been said, that the English *have a thousand religions*, and but one sauce. It *must be* allowed that they use butter with almost every *kind of* food. Butter, though a good article of diet, may be used too freely, and in this country, I am convinced, that is the case. To weak stomachs it is hurtful, even in small quantities, and when used freely it proves prejudicial to the strongest.

Butter, like other things of an oily nature, has a constant tendency to turn rancid. This process, by the heat of the stomach, is greatly accelerated, insomuch that many people, soon after eating butter, complain of its rising in their stomachs, in a state highly disagreeable. Oils of every kind are with difficulty mixed with watery fluids. This is the reason why butter floats in the stomach, and rises in such an unpleasant manner.

Persons afflicted with bile should use butter very sparingly. Some sceptical authors doubt whether or not aliment of any kind has an effect on the bile. One thing, however, is certain, that many patients, afflicted with complaints which were supposed to be occasioned by bile, have been completely cured by a total abstinence from butter.

The most violent bilious complaints that I ever met with, were evidently occasioned by food that became rancid on the stomach, as the cholera morbus, and the like. Nor can such complaints be cured, till the rancid matter is totally evacuated by vomiting and purging.

But supposing butter did not possess the quality of becoming rancid on the stomach, it may, nevertheless, prove hurtful to digestion. Oils of all kinds are of a relaxing quality, and tend to impede the action of digestion. Hence the custom of giving rich broths and fat meats to persons who have a voracious appetite.

The free use of butter, and other oily substances, not only tends to relax the stomach, and impede its action, but to induce a debility of the solids, which paves the way to many maladies. In a country where two-thirds of the inhabitants lead sedentary lives, a debility of fibre must predominate. Whatever increases that debility ought to be avoided.

Children, without exception, are disposed to diseases arising from relaxation. Butter, of course, ought to be given to them with a sparing hand. But is this the case? By no means. Bread and butter constitute a great part of the food of children, and I am convinced that the gross humours with which they are frequently troubled are partly owing to this food. As children abound with moisture, bread alone is, generally speaking, better for them than bread and butter.

I have been astonished to see the quantities of butter eaten by gross women who lead sedentary lives. Their tea-bread is generally contrived so as to suck up butter like a sponge. What quantities of crumpets and muffins they will devour in a morning, soaked with this oil; and afterwards complain of indigestion, when they have eaten what would overload the stomach of a ploughman! Dr. Fothergill is of opinion, that butter produces the nervous or sick head-ach, so common among the women of this country. As a proof of this it is often cured by an emetic.

Oils, in certain quantities, excite nausea, and even vomiting. They must, of course, prove unfriendly to digestion. A Dutch sailor, we are told, can digest train oil. So may an English sailor; but it would be very improper food for a London lady.

To some of the leaner farinaceous substances, as the potato, and the like, butter makes a very proper addition; but eating it to flesh and fish, of almost every description, is certainly wrong. The meat eaten in this country is generally fat enough without the addition of butter; and the more oily kinds of fish, as salmon or herrings, are lighter on the stomach, and easier digested, when eaten without it.

Butter is rather a gross food, and fitter for the athletic and laborious, than the sedentary and delicate. It is less hurtful when eaten fresh than salted. Salt butter certainly tends to induce skin-diseases, and I am inclined to think, the free use of it at sea may have some share in bringing on that dreadful malady, so destructive to our brave sailors, *the sea-scurvy*.

There is a method of rendering salt butter less hurtful, but it seems not to be known in England. What I mean is, to mix it with an equal quantity of honey, and keep it for use. In this way it may be given to children with greater freedom. In North Britain, this method of mixing butter with honey is well known; and, from a common proverb, I take the custom to be very ancient.

Butter, in itself, is not near so hurtful, as when combined with certain other things. For example: bread made with butter is almost indigestible, and pastries of every kind are little better; many people almost live upon pastry, and it is universally given to children. It is little better, however, than poison, and it fails to disorder their stomachs. The fond mother cannot

pass a pastry-shop, without treating her darling boy with some of the dainties, and then wonders how he got the cough, or colic.

I have known a man seemingly in perfect health, who, by eating a pennyworth of pastry, as he passed along the street, was seized with such an asthmatic-fit, that he was obliged to be carried home, and had nearly lost his life. This occurred whenever he inadvertently ate any thing baked with butter.

Every thing that proves very injurious to health, ought, as far as possible, to be prohibited, by laying a high duty upon it. A duty on pastry would be serving the public in more respects than one. It would save many lives, and lessen some tax on necessities.

Cheese, as a diet, is likewise injurious to health. It should never be eaten but as a dessert. It occasions constipation, fires the blood, and excites a constant craving for drink. It is very improper for the sedentary, and hardly to be digested even by the athletic.

If men will live on dry bread, poor cheese, salt butter, broiled bacon, and such like parching food, they will find their way to the ale-house, the bane of the lower orders, and the source of half the beggary in the nation.

FRUITS AND ROOTS.

Fruits and roots form a large class of the substitutes for bread. The latter, being produced under-ground, are less liable to suffer from the inclemency of the seasons than grain. Men who wish to inflame the minds of the multitude may inveigh against the substitutes for bread; but reason and sound sense say, the more substitutes for bread, the better. When one fails, recourse can be had to another.

In warm climates the inhabitants have many substitutes for bread: and as their seasons are more uniform than ours, they can generally depend on the plant, or whatever it is, proving productive. The plantain-tree, commonly called the Indian fig, which has from time immemorial been cultivated in South America, bears fruit of a sweetish taste, which will dissolve in the mouth without chewing. It is eaten either raw, fried, or roasted. When intended to supply the place of bread, it is gathered before it is ripe, and eaten either boiled or roasted. The banana is nearly of the same nature, but its fruit is greatly superior both in taste and flavour.

The inhabitants of the South Sea, or Ladrone islands, are supplied with bread from a tree, which has been lately imported into our West India islands, and will, it is hoped, be found to answer the same purpose there. It has a slight degree of sweetness, but not much flavour. It resembles new bread, and requires to be roasted before it is eaten. Those who have tasted it, say, that it is in no respect superior to the potato.

In some of the West India islands the inhabitants supply the place of grain by making bread from the root of a shrub, called the cassada, or cassava. Though, to my taste, this bread is very insipid, yet the natives are fond of it, to such a degree, that I have known some of them eat it, during their residence in England, in preference to the finest London bread.

But the most general substitutes for bread in the West Indies are the yams. There are three different species of this plant, the roots of which are promiscuously used for bread. They are said to be very nutritious, of easy digestion, and when properly dressed, are by some preferred to the best wheaten bread. The taste is somewhat like the potato, but more luscious. The negroes generally eat them boiled, and beaten into a mash. The white people have them ground into flour, and make bread and puddings of them. They can be preserved for several seasons, without losing any of their primitive goodness.

Of all the substitutes for bread in Europe, the potato is the most extensively useful. This plant is a native of Peru, and has been in Europe above two hundred years. Like most other important discoveries, it made but slow progress, and is still far from being so generally cultivated as it deserves to be. It is indeed known in most parts of Europe, but its culture is best understood in Ireland, and the northern parts of England. At Harwich, however, the preference is given to the Dutch potatoes, brought over by the packets between that place and Helvoet-Sluys. There is a light sandy soil in Holland very favourable to the culture of that inestimable root.

As this plant thrives in every soil, and seldom suffers from an inclemency of seasons, we must blame ourselves if we suffer a famine to exist. Indeed no such thing ever can be, where due attention is paid to the culture of *potatoes*. A far greater quantity of farinaceous food can be raised on an acre of ground planted with potatoes, than sown with any kind of grain. It is not uncommon to have a return of forty for one. They are not so hearty a food as corn, but no man will ever perish for hunger who can have potatoes.

Potatoes abound with an insipid juice, which induces some to think that they are not very nutritious. Facts, however, are against this opinion. Some of the stoutest men, we know, are brought up on milk and potatoes. Dr. Pearson, who has bestowed some pains in analyzing this root, says, that potatoes and water alone, with common salt, can nourish men completely. They differ in colour and consistence, but not materially with regard to their nutritive qualities.

Some think the firm kind are the most nutritious; but the Irish, who must be good judges, give the preference to the mealy. The difference, however, depends much on the mode of cooking them.

More than half the substance of potatoes consists of water, and experience shows, that the mode of cooking, which most diminishes the moisture, is to be preferred. In London, they are drenched in water, and washed before they are brought to market, which accounts in a great measure for the bad quality of the London potatoes.

They are dressed in a variety of ways, but simple boiling or roasting seems to be all the cooking they require, to render them a proper substitute for bread. Some are fond of making bread of them. This, in my opinion, is marring both. Why manufacture any thing into bread, which requires only the aid of fire to make it such? Nobody thinks of making dough of the bread-fruit; but

the potatoe might with as great propriety be called the bread-root, as it is made into bread by the same process.

Stewed mutton and potatoes make not only a nourishing, but a very palatable dish. The excess of fat of the mutton, which, when otherwise cooked, sustains great loss, is thus preserved, by being absorbed by the potatoes. It is, however, to be observed, that when potatoes are used in broths or stews, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Simple boiling or roasting is sufficient to prepare potatoes to supply the place of bread, but when they are intended to serve as a meal, they require something of a softening nature, as milk, butter, or broth. What a treasure is a milch-cow and a potatoe-garden to a poor man with a large family, who lives in the country! Yet, with a little attention from landlords and farmers, almost every man might be so accommodated. What a source of real wealth and population! Men would multiply, and poverty, unless among the profligate, be unknown. Horses are sometimes fed with potatoes, and become very fond of them. With the addition of a small quantity of hay, they are found to be sufficiently nourishing.

I would beg leave to recommend, both to landlords and farmers, a careful perusal of Earl Winchelsea's excellent letter to Sir John Sinclair, on the advantages of cottagers renting lands. This humane nobleman takes up the matter in a *truly* patriotic light, and shows that farmers, *instead of* lessening the number of poor, do every thing they can to multiply them; and I am sorry to say, that so far as my observation goes, it agrees entirely with his lordship's.

Another letter relating to this subject has lately fallen into my hands, a copy of which I shall take the liberty to insert, as it contains in a few paragraphs the best practical illustration of the truths I have long been endeavouring to enforce. It was written by Sir JOHN METHUEN POORE to Sir WILLIAM PULTENEY; and is dated "Rushall, 4th April, 1801:—

"Sir,

"I can prove, not by theory but practice, the benefit of planting potatoes on fallows. In the parish where I reside, the whole of which, except five acres, is my property, there are thirty cottages, containing one hundred and thirty-one poor people. I have, for five or six years past, allotted, free from rent, four acres of land, intended to be sown with wheat, the following autumn, for the cottagers to plant with potatoes, by which means each raises from ten to fifteen sacks, equal to two hundred and forty pounds per sack, yearly, in proportion to the number of their children: each has not only sufficient for his family, but is enabled also to fat a pig. They declare, were I to give among them a hundred pounds, it would not be of so much benefit to them; and it is not one shilling out of my pocket, for I have as good, if not a better crop of wheat from this land, as I have from the other part of the field.

"The method I take is this: the latter end of November I plough the land; the frost during the winter mellow it: the beginning of March following, I plough it again, and harrow it; at both which times I have little to do with my horses: I then divide

it into lots; a man with a large family has a larger lot than a single person, or one who has only two or three children, allowing about five perches (of 16 1-2 feet square) to each in a family: they then plant it, and put over their potatoes what manure they have collected the year preceding (for every cottager has more manure than necessary for this from their fires, and a variety of other things,) and during the summer, after their day's labour is done, they and their wives hoe them; and as every man works more cheerfully for himself than for another, they do not suffer a weed to grow. In October they dig them up: and it is the most pleasant thing imaginable to see the men, their wives and children, gathering the produce of their little farms, which is to serve them the ensuing winter.—Were this plan generally adopted, the labourers would consume but little corn: which would supply the manufacturing towns, and we should have no occasion to import. As four acres are sufficient for thirty families, it would take but a small quantity of land from every farm in the kingdom. The way practised here is to plant the potatoes in furrows, eighteen inches apart, and a foot apart in the rows. The land about me is of different qualities; on the hills rather light; in the vale, near the parish, inclining to clay; but all fit for turnips: the potatoes are planted in the low land, being nearer home. The poor at present will not live entirely without bread, as many do in Ireland, though potatoes daily get into use more and more; and I am persuaded, were my plan generally adopted, in two or three years the labourers in the country would consume but little or no corn. Thirty years ago the poor in this part of the country would not eat potatoes, if they could get other roots or vegetables."

It is unnecessary to make any comments on this letter, every line of which is dictated by good sense and humanity, as well as by liberal and enlightened policy. I shall only add an earnest wish, that the example of the truly patriotic and benevolent writer may be followed by every man of landed property, and by every considerable farmer in the kingdom!

Some think that the potatoe, unless it be made into bread, will not keep. An accident taught me the contrary. Many years ago a friend of mine sent me a potatoe, after it had been roasted in an oven, on account of its singular figure. I laid it on a shelf among some other things of the like kind, and was surprised, on removing them many years after, to find the potatoe quite fresh, though as dry as a bone. On grating it down, it was perfectly sweet; and as fit for making soup as the day it was roasted. I apprehend that nothing made into bread would have kept so long.

Posterity will hardly believe that a scarcity of bread could be felt in Britain, at a time when it was known that a sufficient quantity of farinaceous food could be raised in one county for the inhabitants of the whole island. Let proper encouragement be given to the culture of potatoes, and set famine at defiance.

Many other domestic roots, sprouts, &c. are very wholesome, and may occasionally supply the place of bread. Of these Mr. Bryant of Norwich reckons above forty; but we shall only take notice, by way of specimen, of the most useful and productive. It is worthy of remark, that no nation can be very populous, which does not draw a great part of its food from under-ground.

The Jerusalem artichoke is a native of Brazil, but having been long cultivated in this country, it is too well known to need any description. From its taste, which is like that of artichoke-bottoms, it would seem to be nutritious, and is far from being unpleasant to the palate. Some reckon it windy, but this may be corrected in the cooking, by warm spices; and as the plant is very productive, we would recommend it to be used in the same manner as potatoes, and the other farinaceous roots.

Of the esculent roots in this country, the parsnip is reckoned the most nourishing. It is likewise of easy digestion, and is agreeable to most palates. Some, indeed, dislike it on account of its sweetness; but that is a proof of its nutritive quality, sugar being the most nourishing thing in nature. We are told that, in the north of Ireland, the poor people make beer from this root.

There is not any plant that affords a more striking proof of the benefits of culture than the turnip. In its wild state it is good for little or nothing; but when properly cultivated, it not only affords wholesome nourishment for man, but furnishes the principal winter-food for cattle. There is a species of this plant which grows in North Britain, called the yellow turnip, which is sweet, and of a superior quality to those produced in the south, particularly about London, which are bitter and stringy. The yellow turnip is the most nourishing, and also the most hardy in *sustaining* the winter. It is eaten with milk to *cure the consumption* and scurvy. Margraaf says, he *could* extract no sugar from the turnip, which affords *ground* to conclude, that it is not so nutritive as certain other roots. Not only the root of the turnip, but the tops, when young, make very pleasant greens. The sprouts, if gathered when very tender, make an excellent salad.

The carrot, like the turnip, is good for little in its natural state, being small, tough, and stringy. Manured, it grows large, succulent, and of a pleasant flavour. It ought, however, to be eaten young, otherwise it lies on the stomach, and is hard of digestion. It is an ingredient in several soups, and, being solid, may in some measure supply the place of bread.

Salsafy, skirrets, and the several kinds of beets, are all pleasant and nourishing. They are likewise of easy digestion, and may be dressed in a variety of ways. Margraaf has, by experiments, discovered, that both skirrets and beets contain a considerable quantity of sugar. Though the extracting a saccharine salt from these plants may be no object while we possess the West India islands, yet it serves to show that they possess a quantity of nutritious matter, sufficient to give them a *rank* among the articles calculated to supply the place of bread.

The onion, we are told, was a great favourite in Egypt four thousand years ago, and Dr. Hasselquist says, it is not to be wondered at, for whoever has tasted the onions of Egypt must allow that none can be better in any part of the globe. There, he says, they are sweet, though in many countries they are strong and nauseous. There they are soft, whereas in northern countries, they are hard, and their coats so compact, that they are difficult to digest. This very quality may, however, recommend them in countries where food is scarce. The Doctor observes, that the

Turks eat them roasted with their meat as we do bread, and are so fond of them that they wish to be indulged with this dish in Paradise.

From the Doctor's account one would be induced to believe that the onion used in Egypt was of a different species from ours; but I am rather inclined to think it may depend on the mode of culture, as well as on the warmth of the climate and the difference of soil, as we find in the southern parts of Europe they are milder than in the more northerly. In Spain they are very mild, and a root weighing two pounds will grow from a single seed.

Onions are dressed in a variety of ways, but, in regard of wholesomeness, there is no method better than simple boiling. By this method of cooking they are rendered mild, of easy digestion, and go off without leaving any disagreeable heat on the stomach or bowels. Many shun them on account of the strong disagreeable smell they communicate to the breath. Mr. Bryant says, this may be remedied, by eating a few raw parsley leaves immediately after, which will effectually overcome the scent of the onions, and likewise cause them to sit more easy on the stomach.

The leek is generally reckoned among pot-herbs; but as the root is the part chiefly used, the consideration of it comes under the present head of discussion. Indeed, it is properly a root as the onion, which grows chiefly above ground. The leek, as well as the onion, is said to be a constant dish at the table of the Egyptians, who chop them small, and eat them with their meat.

The leek is used as a pot-herb in most parts of Britain, especially in Wales, where the natives are said to be fond of it. In Scotland a full-grown fowl and small piece of salt beef, stewed with a large quantity of leeks, is a very favourite dish. In my opinion the leek is not so generally used any where as it deserves to be. There is no ingredient that goes into soup that is more wholesome, or that gives it a better flavour, than leeks. They are in many respects medicinal, and, to my taste, as an ingredient in soups, they are greatly superior to the onion or any other pot-herb whatever.

It is a fact worthy of observation, that the boiling of vegetable substances thoroughly, a thing seldom done in England, extricates a considerable quantity of air, and makes them less liable to produce flatulency.

I could mention a great many more esculent plants which might occasionally supply the place of bread, but the above specimen is sufficient to show how liberal nature is in supplying man with food, provided he will take the trouble of cultivating and cooking it. Mr. Bryant, in his history of esculent plants, enumerates above four hundred and fifty, each of which affords a wholesome nourishment, and may occasionally be used in place of bread.

BROTHS AND SOUPS.

THESE may likewise be considered as substitutes for bread. If properly made, they will serve both for bread and drink. Though broth is a dish of the greatest antiquity, and may be considered as extremely delicious, yet it is not a favourite in this country. Here

the people are fond of what they call solids; yet those very solids, they make into broth, by swallowing as much drink after them as they can get. The only difference is, the foreigner makes his broth in a pot, and the Englishman makes his in the stomach.

A very sensible anonymous writer observes, that in England a pound of meat makes simply a pound of food; whereas in any other country in Europe, that quantity of animal food, when stewed down with vegetables and Scotch barley, will produce an ample meal for half a dozen people. Hence he justly infers that, among the variety of schemes which may have been devised by the humane for relieving the distresses of the poor, a better and more extensive charity cannot be devised than that of instructing them in a new mode of cookery.

The same author adds, that the result of his experiments on this subject had exceeded his most sanguine expectations, and that each day gave him fresh proofs of the excellency of his plan for teaching the poor and needy to find themselves in a wholesome and palatable diet, at the cheapest rate, in which little or no bread was required. He concludes by asserting, that there is scarcely a place in this kingdom, where twenty persons may not have a wholesome, hearty, palatable meal, for three shillings.

This anonymous letter is followed by one from Colonel Poynter, two from Dr. Johnson, of the royal hospital at Haslar, addressed to Admiral Waldegrave, and one from the *Admiral himself*, written for insertion in a public paper. They contain a variety of receipts for making cheap, wholesome, and nourishing dishes for the poor. These dishes consist chiefly of broths, soups, and stews, or what they call pottage, and are calculated to make a hearty and plentiful meal without bread or drink.

I am inclined to pay the more attention to these letters, as they seem all to have been written by gentlemen of observation. The pamphlet is sold by Longman and Debrett, for a charitable purpose, at the small price of three-pence.

The writer who has paid most attention to the improvement of cookery, for the benefit of the poor, is Count Rumford. In his economical and philosophical essays, he has given such a variety of forms for making wholesome, cheap, and nourishing soups, stews, and other dishes for common use, that little more seems necessary to be said on the subject. I shall only observe, that the mode of living on broths, soups, hasty-pudding, and such like, so warmly and justly recommended by the Count, has been practised in the northern parts of this kingdom from time immemorial. There the food of the common people is hasty-pudding, with milk, for breakfast and supper, and broth, with vegetables and meat, for dinner. The poorer sort often make broth without meat; but they all use vegetables in great abundance, and sometimes they supply the place of meat with butter. As the hasty-pudding and milk make a complete meal, no bread is necessary either at supper or breakfast; nor is much required at dinner, as the broth is made thick with barley, cabbage, and a variety of other vegetables or pot-herbs. Cabbage is a favourite ingredient in a Scotchman's broth. It is seldom made without this article, which is not eaten so early as in England. It is there suffered to grow to maturity,

and, when that is the case, there is no plant more productive. This the Germans know well, and make it into *saur kraut*, one of the best antidotes against the scurvy with which we are acquainted.

This kind of diet not only saves bread but drink. The labourer who lives on hasty-pudding and soups, seldom has occasion for drink; while he who is burnt up with dry bread and cheese, or salt meat boiled, has a continual thirst, and spends the greater part of his earnings in liquor. This, by acting as a powerful stimulus, may make him do more work for some time, but it generally cuts him off in the middle of his days. The English labourer, who works hard and drinks hard, seldom lives long, and is an old man when he should be in his prime.

The roasting of meat is a wasteful mode of cookery, which ought to be avoided by the poorer sort of people, as much of the substance, and the most nutritive parts, are lost by scorching and what flies off by evaporation.

I know it will be said, that I recommend slops in place of solid food. They are such slops, however, as the greatest heroes of antiquity lived upon; and though I have visited most parts of the island, I know of no better men than those who live in the manner described above, nor are the people any where more healthy, or longer lived.

Broth is not only a dish of great antiquity, but one that can be made in a great variety of ways. It receives into its composition animal and vegetable substances of every kind that are used in diet, and it may be seasoned so as to suit every palate. Indeed people early accustomed to eat broths properly made, are generally fond of them for their whole lives.

It would be difficult to assign a reason why the inhabitants of South Britain should dislike a dish so much relished by other nations. Custom, no doubt, settles all these things; but how customs arise, is not so clear a matter. If an alteration in diet is to be introduced with effect, it must begin with children. Whatever men are accustomed to eat when young, they generally prefer for the rest of their lives. Were the children in South Britain taught to eat hasty-pudding, with milk, for breakfast and supper, and broth, with vegetables and meat boiled in it, for dinner, they would relish these dishes as long as they lived, would find little occasion for bread, and still less for drink; and would thrive better than on their present food.

What parents love themselves, they generally give to their children, without any regard to its being proper for them or not. I have seen a father, who was fond of strong beer, make his son, an infant, guzzle it at every meal; and the mother, who delights in tea, does not fail to give it to her daughter whenever she takes it herself. By this conduct the son becomes a tippler, and the daughter sips tea in place of solid food, until she is eaten up with vapours and other nervous disorders.

Count Rumford says, brown soup is the common breakfast of the Bavarian peasants, to which they occasionally add bread. This he avers is infinitely preferable in all respects to that pernicious wash, tea, with which the lower classes of the inhabitants of

this island, drench their stomachs, and ruin their constitutions. He adds, that a simple infusion of this drug, drank boiling hot, as the poor generally drink it, is certainly a poison, which, though it be sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitution, where the free use of it is continued for a considerable length of time.

The German on his *polenta*, the American on his *mush*, and the North Britain on his *hasty-pudding*, can make a hearty breakfast for a tenth part of what a tea-breakfast would cost, while it is infinitely more wholesome. It has likewise the advantage that no bread is necessary.

I have been often told, when recommending soups to the poor, that they had not time to make them, and that they could not afford fuel on account of its price, as it is dear in great towns. They can, however, find fuel twice a-day to boil a tea-kettle, and time to make the tea, which is a more tedious operation, by far, than making a mess of hasty-pudding. For a great part of the year even the poorest person must have a little fire; and it would require no more to make a comfortable mess of soup, which is always best when made with a slow fire.

The mode of living that I would recommend to the lower orders of the people, with a view to save expense and improve their health, is to substitute occasionally other farinaceous substances in the place of bread, as potatoes, &c. to give up in a great measure the use of roasted, baked, and broiled meats, and to supply their place with *broths*, soups, stews, and such like, made with a little meat and plenty of vegetables; to give it to children, and to grown people who will eat it for breakfast, milk-porridge, or hasty-pudding with milk, small-beer, or molasses. This will be found a more wholesome breakfast than tea, while it is much cheaper and requires no bread.*

REMARKS.

ALTHOUGH the place of bread may be occasionally supplied by farinaceous roots and other vegetables, yet we would by no means wish to discourage the culture of grain. The culture of grain is the culture of men. While the husbandman is raising

* The celebrated Dr. Hufiland, in his Art of prolonging Life, says the moderate use of soups is certainly not hurtful; and it is singular that people should imagine it tends too much to relax the stomach. Does not all our drink, even though cold, become in a few minutes a kind of warm soup in the stomach; and does not the stomach retain the same temperature during the whole day? Be careful only not to use it hot, in too great quantity at one time, or two watery. It is attended even with great advantages. It supplies the place of drink, particularly to men of letters, women, and all those who do not drink, or drink very little except at table, and who, when they give over soup, receive into their blood too little moisture. And it is here to be remarked, that fluids used in the form of soups unite much better and sooner with our juices than when drunk cold and raw. On this account soup is a great preventative of dryness and rigidity in the body, and, therefore, the best nourishment for old people, and those who are of an arid temperament. It even supplies the place of a medicine. After catching cold, in nervous head-aches, colics, and different kinds of cramp in the stomach, warm soup is of excellent service. It may serve as a proof of the utility, or at least harmlessness of soup, when I remark that our forefathers, who certainly had more strength than we have, used soup; and that it is used by rustics, who are still stronger than those in refined life; and that all the old people with whom I ever was acquainted were great friends to it.

food for his fellow-creatures, he is laying the foundation of health and longevity to himself and his offspring. Innumerable benefits are connected with the culture of grain. While the artificer is sitting in some awkward posture, breathing confined, and, perhaps, contaminated air, the cultivator of the soil rises with the sun, eats his wholesome meal of milk and farinaceous food, hies him to the field, where he spends the day in useful labour, inhales the fresh breezes, and at eve returns home with a keen appetite, to enjoy his simple repast and sound repose.

It has been said, as artificers can earn more money than those who cultivate the ground, that arts ought to be encouraged, and grain, if necessary, imported. No manufacture is equal to the manufacture of grain. It supplies food for man and beast, while the surplus, by being exported, enriches the nation. Nor is it subject to the uncertainty of other manufactures. They often depend on fashion and caprice, but the necessities of life will always find their value somewhere. Though I am convinced that some regulations are wanting for the encouragement of agriculture, I do not consider it as my province to dictate to the wisdom of the legislature. They know their duty, and I have reason to believe that they are inclined to pay it all due attention.

I will venture, however, to assert, that if proper encouragement were given to agriculture, Britain would at all times not only have a sufficiency of grain for her own consumption, but a surplus for exportation. This would contribute more to her real wealth, the happiness of her people, and the stability of her government, than either the increase of her trade, the flourishing of her manufactures, or the extension of her territory.

It is a matter of real regret and wonder that Britain, at a time when agriculture is cultivated as a science, should not be able to raise grain for the supply of her own inhabitants, but become every year more dependent on foreign states for even the necessities of life. Until an adequate remedy can be found for this growing evil, the free use of the various substitutes for bread, cannot fail to alleviate the calamities of the poor, and to reduce the price of labour.

The great consumption of animal food, and the immense number of horses kept in this country, are to be reckoned among the causes of the scarcity of grain. Mr. Mackie computes the number of horses in this country to be about two millions, and that every horse, on an average, consumes the produce of three fertile acres, consequently the produce of six millions of fertile acres is annually consumed by horses. These would produce a quantity of grain more than sufficient to maintain half the inhabitants of Great Britain. Two hundred and sixty thousand of these animals are kept for pleasure. I shall be told that they contribute to health. That I deny. Did our ladies of fashion and fine gentlemen make use of their limbs, instead of being dragged about in carriages, they would both benefit themselves and the public. I shall conclude these remarks with the advice of the humane and benevolent Thomson :—

"Ye gen'rous Britons! venerate the plough,
And o'er your hills and long withdrawing vales
Let Autumn spread her treasures to the sun.
Luxuriant and unbounded. As the sea
Far through his azure turbulent domain
Your empire owns, and from a thousand shores
Wafts all the pomp of life into your ports;
So with superior boon may your rich soil
Exub'rant Nature's better blessings pour
O'er ev'ry land, the naked nations clothe,
And be the exhaustless gran'ry of a world."

FOOD CONSIDERED IN A MEDICAL POINT OF VIEW.

UNDER this point of consideration, the most remarkable distinction of foods is into those which are already assimilated with the animal nature, and into those that are not. Animal substances, generally, are of the first kind, which, although not entirely similar, are nearly so to our nature. Of the second kind are vegetables, which, with much more difficulty are assimilated. But as the nourishment of all animals can be originally traced to the vegetable kingdom, it becomes evident that the principle of all nutrition exists in vegetables.

In the first edition of his *Materia Medica*, Dr. Cullen observes, that though there is, perhaps, no vegetable which does not afford nourishment to some species of animals or other, yet, with regard to mankind, a very considerable distinction is to be made. Those vegetables that are of a mild, *bland, agreeable* taste, are proper nourishment, while *those* of an acrid, bitter, and nauseous nature, are *improper*. We use, indeed, several acrid substances as food, but as *spices* or condiments, which answer the purpose of medicines, rather than any thing else; although, not unfrequently, acrid and bitter acrid vegetables are admitted as food. For instance, celery and endive are used in common food, though both are substances of considerable acrimony; but it must be observed, that when we use them, they are previously blanched, which almost totally destroys their acrimony. Or, if we employ other acrid substances, we generally, in a great measure, deprive them of their acrimony by boiling. In different countries the same plants grow with different degrees of acrimony. Garlic, for example, seldom, in this country, enters our food; but in southern countries, where this plant grows more mild, it is frequently used. The plant which furnishes casada, which, in its recent state, is of a very poisonous and acrimonious nature, affords an instance of the necessity of preparing acrid substances, even in hot countries; and there are other plants, such as the wake-robin, which, in their natural state, are so acrimonious, that they cannot be swallowed with safety; yet, when deprived of that acrimony by boiling, afford good nourishment.

DIFFERENCES BETWEEN VEGETABLE AND ANIMAL FOOD.

VEGETABLE differs from animal food in several respects. 1st, It has a greater tendency to acidity; whilst animal food of all kinds inclines more to alkalescency and putrefaction. 2d, With regard to their difference of solution in the stomach, heaviness, as

it is called, is seldom felt from vegetables, except from tough farinaceous paste, or the most viscid substances; while heaviness from animal food is more frequently noticed, especially when taken in any great quantity. 3d, With regard to mixture, there is no instance of difficult mixture in vegetables, except in vegetable oils; while animal food, especially the fatter meats, both from viscosity and oiliness, are in this respect refractory. 4th, When the putrescency of animal food has proceeded so far, it produces an active stimulus, causing diarrhœa, and dysentery. These effects are, however, but of rare occurrence; whereas from vegetable food and its acid, which, united with bile, proves a pretty strong stimulus, they more frequently occur; fortunately, however, they are of less consequence, if the degree of refrigeration be not very great. 5th, Wherever neither putrefaction nor acidity has gone to any great length, animal food keeps the belly more regular, &c. 6th, Vegetable food gives a greater proportion of succulent matter, and, when exsiccated by the stomach and intestines, is more apt to stagnate and produce slow belly and costiveness, than stimulating animal food, which, before it reaches the large intestines, where stoppage is made, it has obtained a putrefactive tendency, and gives a proper stimulus; thus, those who are costive from the use of vegetables, when they return to animal food, are considerably ameliorated in their natural bodily health. See "*NATURAL AND MEDICAL DIETETICON, or Practical Rules for eating and drinking, &c.*" By J. S. Forsyth, &c., p. 63—67.

Independent of the preceding observations, it is generally pretty well known, that animal food is far more nutritive than vegetable, although they both produce a blood of the same kind but different in quality. The former affords a more dense stimulating elastic blood than the latter, which stretches and causes a greater degree of resistance in the solids, as well as excites them to stronger action.*

CHAP. II.

REMARKS ON SEDENTARY, STUDIOUS, AND LABOURIOUS OCCUPATIONS, &c.

THAT men are exposed to particular diseases from the occupations which they follow, is a fact well known; but to remedy this evil is a matter of some difficulty. Most people are under the necessity of following those employments to which they have been bred, whether they be favourable to health or not.

Chemists, founders, forgers, glass-blowers, and several other artists, are hurt by the deleterious air they are obliged to breathe; which is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston* as to be

* The inflammable principle.—A name given by Stahl to a principle which he imagined was pure fire, or the matter of fire fixed in combustible bodies, in order to distinguish it from fire in action, or in a state of liberty.

rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and pulmonary complaints, so incident to persons who follow these employments.

To prevent such consequences as far as possible, the places where these occupations are carried on ought to be constructed in such a manner as to discharge the smoke and other exhalations, and admit a free current of fresh air. Such artists ought never to continue 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, by its stagnation in deep mines, not only loses its proper elasticity, and other qualities necessary for respiration, but is often charged with such noxious exhalations as to become a most deadly poison.

The two kinds of air which prove most destructive to miners, are what they call the *fire-damp*, and the *choak-damp*.† In both cases the air becomes a poison by its being loaded with noxious gas.‡ The danger from the former may be obviated by making it explode before it accumulates in too great quantities; and the latter may be generally *carried off* 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 affections, which often prove fatal. Lead, and several other metals, are likewise very pernicious to the health.

Miners ought never to go to work fasting, nor to continue too long at work. 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

* When persons heated with labour, have drunk cold liquor, they ought to continue at work for some time after.

† These are the names by which miners distinguish damps. The *choak-damp* extinguishes their candles, hovers about the bottom of the mine, and, for the most part consists of carbonic acid gas. *Fire-damp* or hydrogen gas, occupies the superior spaces of the mine, and does great mischief by exploding whenever it comes in contact with their lights. To subdue this gigantic power, which caused such mutilation and destruction among the miners, by the tremendous explosions that so frequently occurred, was the task which Sir Humphrey Davy assigned to himself, and which, had his genius been baffled, the kingdom could scarcely have hoped to have seen it achieved by another. This, however, he was enabled to overcome: and the Safety Lamp, which goes by his name, will remain to after-ages a testimony of his enlightened genius, to which mankind are so infinitely indebted.

‡ See *Aerial Poison*, under Poisons.

tend more to preserve the health of such people than a strict, and almost religious, regard to cleanliness.

Plumbers, painters, gilders, smelters, 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.

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

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 general classes of *Laborious*, *Sedentary*, and *Studios*.

ON VARIOUS EMPLOYMENTS, &c.

THOUGH the working classes are in general the most healthy of all 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, quinsies, rheumatisms, fevers and other acute disorders. They are likewise forced to work hard, and often to carry burdens above their strength, which, by overstraining the vessels, occasion asthmas, ruptures, pleurisies, &c.

Those who labour 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 they are frequently exposed.

Such as bear heavy burdens, as porters, labourers, &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 overstretched, and often burst, insomuch that a spitting of blood or fever ensues, &c.

Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength, without a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly.

There are, indeed, some employments which necessarily require a great exertion of strength; as porters, blacksmiths, carpenters, &c. None ought to follow these but men of 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 be induced.

St. Anthony's fire (*Eresipelas*,) is a disease very incident to labouring people. It is occasioned by whatever gives a sudden check to the perspiration, as drinking cold water 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 labour 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. See *Eresipelas*, &c.

The iliac passion, the colic, and other complaints of the bowels, are often occasioned by the same causes as the *eresipelas*; but they may likewise proceed from flatulent and indigestible food. Labourers generally eat unfermented bread made of peas, 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, or the like. Such a mixture cannot fail to fill the bowels with wind, and occasion diseases of those parts. See *Iliac Passion*.

Inflammations, whitloes, and other diseases of the extremities are likewise common among those who labour 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 labourers, milk-maids, &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 humours in those parts are suddenly expanded, and the vessels not yielding so quickly, a strangulation happens, and an inflammation or a mortification ensues.

When such persons 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.

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often awake in a burning fever. These ardent fevers, which prove so fatal about the end of summer and beginning of autumn, are frequently occasioned by this means. When labourers 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.

Many people 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 may be, they ought to have it at regular times; and the harder they work, the more frequently they should eat.

Many peasants 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 some 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 labour, though it were to procure them the greatest affluence.

Fevers of a very bad kind are often occasioned among labourers by *poor living*. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak, whence the most fatal consequences ensue. *Poor living* is likewise productive of many of those diseases of the skin so frequent among the lower class of people. 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 humours 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 overtakes them, they are miserable indeed. Here the godlike virtue of charity ought always to exert itself. 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 diseases, for want of proper assistance, and even for want of the necessities of life.

Labourers are often hurt by a foolish emulation which prompts them to vie with one another, till they overheat themselves to such a degree as to occasion a fever, or even to drop down dead.

SOLDIERS AND SAILORS, THE CONSEQUENCES OF THEIR EMPLOYMENT.

The calling of a *soldier*, in time of war, may be ranked among the laborious employments. Soldiers suffer many hardships from the inclemency of seasons, long marches, bad provisions, hunger, watching, unwholesome climates, bad water, &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 season. A few weeks of cold rainy weather will often prove more fatal than an engagement.

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 among the laborious. They undergo great hardships from change of climate, the violence of the weather, hard labour, bad provisions, &c. Sailors are of so great importance both to the trade and safety of this kingdom, that too

much pains can never be bestowed in pointing out the means of preserving their health and lives.

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. Such people ought not to 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 method to restore the perspiration. They should not, in this case, make too free with spirits or other strong liquors, but should rather drink them diluted with warm water, 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 inflames their humours, 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 humours. Flour will keep 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 great antidote against diseases, and should be used by all travellers, especially at sea. It may either be mixed with the water they drink, or taken in their food.

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 peas or other vegetables, ought to be used plentifully. Many other 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

* Our countryman, the celebrated Captain Cook, has shown how far, by proper care and attention, the diseases formerly so fatal to seamen may be prevented. In a voyage of three years and eighteen days, during which he was exposed to every climate, from the 52 deg. north to the 71 deg. of south latitude, of one hundred and eighteen men, composing the ship's company, he lost only one, who died of *phthisis pulmonalis*. The principal means he used were, to preserve a strict attention to cleanliness, to procure abundance of vegetables and fresh provisions, especially good water, and to allow his people sufficient time for rest.

diet, air, clothing, and above all things to the cleanliness of seafaring people, 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, especially where dampness prevails, is the Peruvian bark. This will often prevent fevers, and other fatal diseases. About a drachm of it may be chewed every day; or if this should prove disagreeable,

Take Peruvian bark 1 ounce.

Orange-peel 1-2 ounce.

Snake-root 2 ounces.

To be added, coarsely powdered, to an English quart of brandy, and infused for fourteen days: half a wine-glassful of which is to be taken two or three times 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 is 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.

THE SEDENTARY.

THOUGH nothing can be more contrary to the nature of man than a sedentary life, yet this class comprehends by far the 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.

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 may not be hurt by sitting five or six hours a-day; but if he be obliged to sit ten or twelve, he will soon become diseased.

But it is not want of exercise alone which hurts sedentary people; they likewise suffer from the confined air 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 person to breathe freely. In this situation they generally continue for many hours at a time, often with the

* The appellation of sedentary has generally been given only to the studious; we can see no reason, however, for restricting it to them alone. Many artificers may, with as much propriety, be denominated sedentary as the studious, with this particular disadvantage, that they are often obliged to sit in very awkward postures, which the studious need not do, unless they please.

† A person of observation, in that line of life, told me, that most tailors die of consumptions; which he attributed chiefly to the unfavourable postures in which they sit, and the unwholesomeness of those places where their business is carried on. If more attention were not paid to profit than to the preservation of human lives, this evil might be easily remedied; but while masters only mind their own interest, nothing will be done for the safety of their servants.

addition of several candles, which tend to waste the air, and render it less fit for respiration. Air that is breathed repeatedly, becomes unfit for expanding the lungs. This is one cause of the phthisical coughs, and other complaints of the breast, so frequent among 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 of them happen to have bad lungs, or to be otherwise diseased. Those who sit near the person so affected, 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 in good health. The danger of crowding them together must, therefore, be evident to every one.

INJURIOUS EFFECT OF LONG INCLINED POSTURE, &c.

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, flatulences, head-achs, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, and the *action* of the muscles, is in a manner confined in the *bowels*. Hence indigestions, costiveness, wind, and other hypochondriacal affections, are 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 in the mass of humours.

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 humours soon become universally depraved, and the whole constitution goes to wreck. Being of a soft texture, and in continual action, their functions are easily obstructed by pressure.

The sedentary are not only hurt by pressure on the bowels, but also on their 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 humours are, by stagnation, vitiated, and the perspiration is obstructed; 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 are thereby impeded.

A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source whence most of the diseases of sedentary people flow. Scrophula, (king's evil,) consumption, hysterics, and other nervous diseases, now so common, were very little known in this country 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 large 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 for preserving the health of this useful set of people, which some of them, we hope, will be wise enough to take.

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 functions.

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 footboard, 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.

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

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. 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.

ADVICE TO THE SEDENTARY, &c.

INSTEAD of multiplying rules for preserving the health of the sedentary, we shall recommend them to 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 necessities 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.

Cultivating 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 formed as to be always pleased with somewhat in perspective, 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 more 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. It is indeed to be regretted, that in such a place as London a plan of this kind is not practicable: yet, even there, sedentary artificers may find opportunities of taking air and exercise, if they choose to embrace them.

Mechanics are too much inclined to crowd into great towns. The situation may have some advantages; but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate 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 my observation extends, 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.*

* WATCHMAKERS, in consequence of their sedentary habits, are liable to a peculiar species of disease, to which I have witnessed many of them fall victims. Its commencement is indicated by deficient appetite and eructations of wind from the stomach. There is also sallowness of complexion, and a muddy yellow appearance of the eyes. In the progress of the disease great quantities of black coagulated blood is discharged by stool, and occasionally by vomit. On dissection, the whole intestinal canal is found replete with blood either fluid or black and coagulated. The liver and the spleen appear soft, and as it were rotten.

In its more early stages, this disease admits of being checked by active purgatives, exercise, and country air.

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. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

THE SEDENTARY STUDIOUS.

INTENSE thinking is so destructive to health, that few instances can be produced of studious persons who are strong and healthy. 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.

DISEASES TO WHICH STUDIOUS PEOPLE ARE MORE PECULIARLY LIABLE, &c.

Studious persons are very subject to the gout. This painful disease in a great measure proceeds from 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 humours are not duly prepared, diseases must ensue.

GRAVEL.—The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine; consequently a sedentary life must have a contrary effect. Any one may be satisfied of this by observing, that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits. The discharge of urine not only prevents the gravel and stone, but many other diseases.

HEPATIC COMPLAINTS.—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 schirrous 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 of the liver, or obstructions of the bile.

PULMONARY CONSUMPTION.—*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 and adhesions 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.

ADHESIONS, &c.—The functions of the heart may likewise by this means be injured. I remember to have seen a man opened, whose pericardium † adhered to the breast-bone in such a manner as to obstruct the motion of the heart, and occasion his death. The only probable cause that could be assigned for this singular symptom was, that the man, whose business was writing, used constantly to sit in a bending posture, with his breast upon the edge of a plain table.

WEAKNESS OF THE DIGESTIVE ORGANS, &c.—*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 humours become crude and vitiated, the solids weak and relaxed, and the whole constitution goes to ruin.

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

INFLAMMATION OF THE EYES.—*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 are weak or painful, they should be bathed every night and morning in cold water, to which a little brandy may be added.

DROPSY.—It has already been observed, that the excretions are

* Since the lungs are the first and chief instrument in sanguification, or the formation of blood, the animal that has that organ faulty, can never be duly nourished, nor have the vital juices which are derived from the blood in a good state; and this is true, understanding the lungs only as an instrument of digestion, and abstracting from an acrid and purulent matter, that mixeth with the blood in such as have their lungs ulcerated. See *Arbuthnot on Aliment*, p. 26.

† The membranous bag surrounding the heart. Its use is to secrete and contain the vapour of the pericardium, which lubricates the heart and prevents it from concreting or adhering to this membrane.

very defective in the studious. The dropsy is often occasioned by the retention of those humours 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.

FEVER.—*Fevers, especially of the nervous kind, are often the effect of intense study; which in a manner unhinges the whole human frame, and not only hurts the vital motion, but disorders the mind itself. Hence delirium, melancholy, and even madness, are not unfrequently the effect of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system, which may not be induced by intense thinking.*

HYPPOCHONDRIASM.—But the most afflicting of all the diseases which attack the studious is hypochondriasis.* 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 labour under this disorder, though they are 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 an useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature.

ADVICE TO STUDIOUS AND INTENSE THINKERS, &c.

STUDIOUS persons, and those who indulge long and frequently in intense thought, 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 thought 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.

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

* The state of mind peculiar to hypochondriacs is thus described by Cullen:—"A languor, listlessness, or want of resolution and activity, with respect to all undertakings; a disposition to seriousness, sadness, and timidity, as to all future events, and apprehension of the worst or most unhappy state of them; and, therefore, often upon slight grounds, an apprehension of great evil. Such persons are particularly attentive as to the state of their own health, to every the smallest change of feeling in their bodies; and from any unusual sensation, perhaps of the slightest kind, they apprehend great danger, and even death itself. In respect to these feelings and fears, there is commonly the most obstinate belief and persuasion." And it is only, he adds, when the state of mind just described is joined with indigestion, in either sex, somewhat advanced in years, of a melancholic temperament, and a firm and rigid habit, that the disease takes the names of hypochondriasm.

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 be either 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 conceptions where the all-cheering rays of the sun render the air wholesome, as in places where they never enter.

DESK OCCUPATIONS, &c.

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. Public speakers, indeed, sometimes hurt themselves, by over-acting their part; but this is their own fault. The martyr to mere vociferation merits not our sympathy.

MORNING BEST ADAPTED FOR STUDY AND EXERCISE, &c.

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 part of his business, and should let nothing interrupt his hours of recreation more than those of study.

EFFECTS OF MUSIC ON THE MIND, &c.

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 humour.

It is a reproach to learning, that any of her votaries, to relieve the mind after study, should betake themselves to the use of strong liquors. This indeed is a remedy; but it is a desperate one, and always proves destructive. Would such persons, when their spirits are low, get on horseback, and ride 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.

DR. BUCHAN'S PLAN, &c.

THE following is my plan, and I cannot recommend a better to others. When my mind is fatigued with study or other serious business, I mount my horse, and ride ten or twelve miles into the country, where I spend a day, and sometimes two, with a cheerful friend; after which I never fail to return to town with new vigour, and to pursue my studies or business with fresh alacrity.

It is much to be regretted, that learned men, while in health, pay so little regard to these things! There is not any thing more common than to see a miserable object over-run 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!

DIET OF THE STUDIOUS, &c.

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 windy, rancid, or hard of digestion. Their suppers should *always* be light, or 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, rum, or any other genuine spirit.

THE KIND OF EXERCISE RECOMMENDED TO PEOPLE OF STUDIOUS HABITS, &c.

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.

No person ought either to take violent exercise, or to study immediately after a full meal.

In the above remarks on the usual diseases of the studious, my chief object was to warn them of the evil consequences of *painful* and *intense* thinking. But I should be sorry to damp the ardour of their literary pursuits, which are injurious to health only when continued with incessant toil, at late hours, and without due intervals of rest, refreshment, relaxation, and exercise. It is not thought, says the medical poet, 'tis painful thinking, that corrodes

our clay. I deem it necessary to be more explicit on this head, in consequence of having found that my former cautions to men of genius and science had been understood in too rigorous a sense, as discouraging the manly exertion of real talents.

CHAP. III.

NON-NATURALS.

By the term non-naturals, ancient physicians comprehend AIR, MEAT and DRINK, SLEEP and WATCHING, MOTION and REST, the RETENTIONS and EXCRETIONS, and the affections or passions of the mind; or, in other words, those principal matters which do not enter into the composition of the body, but which at the same time are indispensable to its existence.

OBSERVATIONS ON DIET, &c.

UNWHOLESOME food, and irregularities of diet, occasion many diseases. There is no doubt but the whole constitution of body may be changed by diet alone. 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 regimen of the 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 quality 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 is the chief rule with regard to the quanti-

ty, yet the quality of food merits a 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 the 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, or who promote their own interest by adulterating the necessaries of life.*

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.

Animals which feed grossly, as tame ducks, hogs, &c. are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stalled cattle are crammed with gross food, but not allowed exercise nor free air; by which means they indeed grow fat, but their juices, not being properly prepared or assimilated, remain crude, and occasion indigestions, gross humours, 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-drove cattle; and the fever is often raised even 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 labouring under the very worst of diseases?

SALTED ANIMAL FOOD.—No people in the world eat such quantities of salted animal food as the English, which is one reason why they are so generally tainted with the scurvy, and its numerous train of consequences, 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 animal food in twenty-four hours, and this ought to consist of one kind only.

* The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the labouring poor are of great importance to the state: besides, diseases occasioned by unwholesome food often prove infectious, by which means they reach people in every station. It is, therefore, the interest of all to take care that no spoiled provisions of any kind be exposed to sale.

VEGETABLE DIET.

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. 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. Fresh vegetables, indeed, come to be daily more used in diet; this laudable practice we hope will continue to gain ground.

ALIMENTS.—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: hence 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 humours viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

TEA.—Much has been said on the ill-effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it, than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world; but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by the bye, are the greatest tea-drinkers, cannot eat any thing in the morning. If such persons, after fasting *ten* or twelve hours, drink four or five cups of green tea without eating almost any bread, it must hurt them. Good tea, taken in a moderate quantity, not too strong, nor too hot, nor drank upon an empty stomach, will seldom do harm; but if it be bad, which is often the case, or substituted in the room of solid food, it must have many ill effects.

COOKERY.—*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 this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence 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 tumours or wens on their necks (bronchocele.) 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.*

WATER, &c.—When water is impregnated with foreign bodies, it generally appears by its weight, colour, 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 colour, taste, or smell. In most places of Britain the inhabitants have it in their power to make choice of their water, and few things would contribute more to health than a due attention to this article. But mere indolence often induces people to make use of the water that is nearest to them, without considering its qualities.

Before water is 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, by the corruption of animal and vegetable bodies with which they abound. 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.

FERMENTED LIQUORS, &c.—Notwithstanding fermented liquors have been exclaimed against by many writers, they still continue to be the common drink of almost every person who can afford them; we shall rather endeavour to assist people in the choice of these liquors, than pretend to condemn what custom has so firmly established. It is not the moderate use of sound fermented liquors which hurts mankind: it is excess, and using such as are ill-prepared or vitiated.

Fermented liquors, which are too strong, hurt digestion; and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard labour could not be supported without drinking strong liquors; this is a very erroneous notion. Men who never taste 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, inflames the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong:

* This long controverted opinion, very early broached by Dr. Buchan, relative to the cause of these tumours, (bronchocele or goitres, &c.) among the inhabitants of certain mountainous districts, is now greatly strengthened, in fact corroborated, by a curious history of the disease, in a letter from Dr. Alexander Coventry, President of the Medical Society of the state of New York, to the editors of the New York Medical and Physical Journal for June, 1824. No. 10. See also "NEW DOMESTIC MEDICAL MAN-
VAL," under BRONCHOCELE.

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 turn 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.

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 to the makers and venders of liquor is, to render it intoxicating, and give it the appearance of age. 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 practice is very common, and that all ingredients used for this purpose are of a narcotic or stupefactive quality. But as all opiates are poisonous, 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.

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 pernicious effects.

HOME BAKED BREAD, &c.—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.

PLAIN RULES TO BE OBSERVED IN THE SELECTION OF ALIMENTS, &c.

1. PERSONS whose solids are weak and relaxed ought to avoid all viscid food, or such things as are difficult of digestion. Their diet, however, ought to be nourishing; and they should take sufficient exercise in the open air.

2. Such as abound with blood should be sparing in the use of every thing that is highly nourishing, as fat meat, rich wines, strong ales, and such like. Their food should consist chiefly of bread and other vegetable substances; and their drink ought to be water, whey, or small beer.

3. 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.

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

5. People who are affected with the gout, hypochondriac or hysterical 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 turn sour on the stomach. Their food should be light, spare, cool, and of an opening nature.

6. 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 labours hard without doors. Many kinds of food will nourish a peasant very well, which would prove almost indigestible to a citizen; and the latter will live upon a diet on which the former would starve.

7. 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 aliment which she has provided for man, and likewise by giving him an appetite for different kinds of food.

8. Those who labour under any particular disease, ought to avoid such aliments as have a tendency to increase it: for example, a gouty person should not indulge in 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 be sparing in the use of salted provisions, &c.

GENERAL OBSERVATIONS ON DIET, LONG FASTING, ITS CONSEQUENCES, REGULARITY, &c.

It has always been an established rule with respect to diet, that the softer and milder kinds of food are best adapted for children and young subjects generally; that for grown-up people the more substantial is necessary; and, with regard to old people, they should gradually, as they advance towards their climax, lessen the quantity of solid food, while they increase that of their drink, both of the diluent and cordial kind; taking care, however, that, in thus accommodating "pliant nature," that slow must be the change:—

"And stage by stage—
Slow as the stealing progress of the year."

For nature looks up to custom as a kind of hereditary right to which she is entitled by long possession, and although she may be taught to relinquish her pretensions to it, this must never be attempted by sudden changes, or hasty transitions either of one kind or other.

It is not only necessary for health that our diet be wholesome, but also that it be taken at regular periods. Some imagine 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.

Long fasting is extremely hurtful to young people; it not only vitiates their humours, but prevents their growth. 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, head-achs, and faintness. These complaints may generally be removed by a piece 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 little bread, from nine o'clock at night till two or three the next afternoon. Such may be said to fast almost three fourths of their time. *This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind*; all which might be prevented by a solid breakfast.

SUPPERS AND BREAKFASTS CONTRASTED, &c.

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 plethora, or too great fulness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humours. 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, apoplexies, &c. 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 better agree with it than food of a more salutary nature to which it has not been used. When, therefore, a change becomes necessary, it ought always to be made gradually; 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 under-

stood 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 a due regard be had to moderation.

The details which some writers have entered into respecting the supposed qualities of every article of food and drink, as well as the proper quantities of each, appear to me just as trifling as the minuteness of the physician who inserted in his prescription how many grains of salt should be eaten with an egg. Every man's experience of what he has found to agree or disagree with him, is a much more unerring guide than whimsical calculations of the difference between the mucilage of a carrot and a parsnip, or between the jelly contained in a leg and a shoulder of mutton. But while I point out the folly of extreme solicitude in such matters, I am far from advising people to eat and drink, without any choice or restraint, whatever falls in their way. This would be inconsistent with the rules I have already laid down. Rational enjoyment of the gifts of nature, is the happy medium between boundless indulgence and frivolous or unnecessary self-denial.

Such as have a faulty circulation through the lungs, the consequence of pulmonary or other complaints, ought to eat very little at a time, because the quantity of chyle being increased must obviously render that circulation still more uneasy. The great secret then for consumptive and asthmatic patients in particular, and upon which their cure principally depends, is to take their food in small quantities at a time. It happens, however, rather unfortunately for asthmatic patients, that their desire for food is considerably increased; in consequence of which, sanguification is but imperfectly performed, they become what is termed leucophlegmatic, that is, they acquire a dropsical tendency. The choice, therefore, as well as the quantity, of diet, is of great importance to those who have weak lungs, as well as to persons generally who are of delicate constitutions.

CHAP. IV.

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 or 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 in contact, and is often so replenished with those of a noxious quality, as to occasion immediate death. But such vio-

lent 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, endeavour to point out some of these, and to show whence the danger chiefly arises.

Airs may become noxious many ways. Whatever greatly alters its degrees 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 humours adust and thick. Hence proceed bilious and inflammatory fevers, cholera morbus, &c. Very cold air obstructs the perspiration, constricts the solids, and condenses the fluids. It occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to intermitting fevers, dropsies, &c.

Wherever great numbers of people are crowded into one place, if the air has not a free circulation 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 injured by breathing, fires, candles, or the like.

In great cities, so many things tend to contaminate 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 vapours 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 churchyards 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.*

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from putrid carcasses must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom open above once a week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels upon entering a church, and renders it a very unsafe place for the weak and valetudinary. These inconveniencies

* In most eastern countries it was customary to bury the dead at some distance from any town. As this practice obtained among the Jews, the Greeks, and also the Romans, it is strange that the western parts of Europe should not have followed their example in a custom so truly laudable.

might, in a great measure, be obviated by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.*

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 open free 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 vapour, 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. In all places, where numbers of people are crowded together, ventilation becomes absolutely necessary.

Air which stagnates in mines, wells, cellars, &c. is extremely deleterious and fatal to life; and ought 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 closely 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 from a small room becomes still greater. Numbers have been stifled when asleep by a fire in a small apartment, which is always hurtful.

Those who are obliged, on account of business, to spend the day in close towns, ought, if possible, to sleep in the country. Breath-

* One cannot pass through a large church or cathedral, even in summer, without feeling quite chilly.

† We have daily accounts of persons who lose their lives by going down into deep wells and other places where the air stagnates: all these accidents might be prevented by only letting down a lighted candle before them, and stopping when they perceive it go out; yet this precaution, simple as it is, is seldom used.

ing 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 avoid cities as they would 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 CLEANLINESS would tend more to preserve the health of mankind, than all the prescriptions of the faculty.*

Surrounding houses too closely with plantations 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 driest 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. fre-

quently 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. are often rendered 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.

CHAP. V.

EXERCISE.

MANY people look upon the necessity man is under, of earning his bread by labour, 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 labour for daily bread, are not only the most healthy, but generally the most happy part of mankind. Industry seldom fails to place them 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 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, or be able to find subsistence. 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 an universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed.

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate of maladies. So long as the liver, kidneys, and other glands, duly perform their functions, health is seldom impaired: but when they fail, nothing can restore 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 very 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 labour 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 humours, and occasions the gout, fevers, rheumatisms, &c. Exercise alone would prevent many of those diseases which cannot be cured, and would remove others where medicine proves ineffectual.

A late author,* 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,† shopkeepers, 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 lying a-bed too long in the 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 a-bed 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,

* Cheyne.

† Sedentary occupations ought chiefly to be followed by women. They bear confinement much better than men, and are fitter for every kind of business which does not require much strength. It is ridiculous enough to see a lusty fellow making pins, needles, or watch-wheels, while many of the laborious parts of husbandry are carried on by the other sex. The fact is, we want men for laborious employments, while one half of the other sex are rendered useless for want of occupations suited to their strength, &c. Were girls bred to mechanical employments, we should not see such numbers of them prostitute themselves for bread, nor find such a want of men for the important purposes of navigation, agriculture, &c. An eminent silk manufacturer told me, that he found women answer better for that business than men; and that he had lately taken a great many girls apprentices as silk-weavers. I hope his example will be followed by many others.

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, rubbing furniture, 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 labouring 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, golf,* &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 instead of strengthening the body tends to weaken it.

Every man should lay himself under some sort of necessity to take exercise. Indolence, like 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 from 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 honour from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking.

* Golf is a diversion very common in North Britain. It is well calculated for exercising the body, and may always be taken in such moderation as neither to over-heat nor fatigue. It has greatly the preference over cricket, tennis, or any of those games which cannot be played without violence.

Besides, men of leisure, by applying themselves to the mechanic 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 to call 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 was never 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.

It is indeed evident, that the love of motion, as well as the love of food, so observable in every living creature from the moment of its birth, are wisely designed by nature as the means of its preservation. The indolent man is therefore a rebel to her laws, and will certainly provoke her severest punishment. In vain does he hope for enjoyment in the lap of sloth; its chilling influence poisons the source of every pleasure, and not only invites disease, but renders it almost incurable.

CHAP. VI.

SLEEP.

THE benefits resulting from sleep are sufficiently obvious, from the effects it produces. It restores both the powers of the mind and body, when exhausted by exercise, giving vigour to the one, and restoring the other to its accustomed alacrity. By means of sleep, the muscles are again rendered active and moveable; after they have become wearied, rigid, painful, and trembling, from hard labour and severe exercise. It moderates the quickness of the pulse, which usually increases at night, and brings it back to its morning standard. It seems also to assist digestive of aliment—it diminishes both excretions and secretions; and renders the fluids thicker than otherwise they would be, particularly in a body endowed with much sensibility or mobility. Sleep, therefore, is not only useful, but absolutely indispensable, for the preservation of life and health; and it contributes most essentially to the alleviation, as well as to the total removal of disease. The want of it is equally hurtful, and in many different ways, to the nervous system. Its absence renders the external as well as internal organs of sense, and those of every kind of motion, unfit for the performance of their offices.

Sleep, therefore, like 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 to apoplexies, lethargies, and other complaints of a similar nature. 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 in bed more than eight hours 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 dose till noon. The best way to make sleep sound and refreshing is to rise betimes. The custom of lying in bed for nine or ten hours, not only makes the sleep less refreshing, but relaxes the solids, 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 a 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 countenances of those who, as the phrase is, turn day into night, and night into day.

TO PROCURE REFRESHING SLEEP, &c.

To make sleep refreshing, *the following things are requisite:* First, to take sufficient exercise in the open air; to avoid strong tea or coffee; 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 sits 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 labourer 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, the night-mare, &c. Were the same persons to go to bed with a light supper, or sit up till that meal was pretty well digested, they would enjoy sound sleep, and rise refreshed and cheerful. There are indeed some people who cannot sleep unless they have eat 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 degree of exercise.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched and visits the hap-

py, the cheerful, and the gay. This is a sufficient reason why every man should endeavour 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 be the effect of habit or not, is hard to say; but as most people are accustomed to go early to bed when young, it may be presumed that sleep, at this season, will prove most refreshing to them ever after. Whether the fore part of the night be best for sleep or not, surely the fore part of the day is fittest both for business and amusement. I hardly ever knew an early riser who did not enjoy a good state of health.*

Early rising is the natural consequence of going to bed early; and this habit implies sobriety, good order, and an exemption from many fashionable follies extremely prejudicial to health. The man, who accustoms himself to go to bed at an early hour, can seldom join the revels of Bacchus, or what are improperly called the *amusements* of the gay world. His rest is not disturbed by the effects of unseasonable luxury. He knows, that temperance, moderate exercise, composure of mind, and external tranquillity, are the best opiates. His slumbers are sound and refreshing. The waste of spirits on the preceding day is fully repaired. Every muscle, every fibre, every nerve has *regained its proper tone*. He rises with cheerfulness and *vigour* to breathe the morning air, and to enter upon the duties of the day. In short, an attention to this single point of going to bed early, and of rising betimes, will be found to supersede a variety of other precepts, and may be justly called the *golden rule* for the attainment of health and long life.

CHAP. VII.

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 between 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;

* Men of every occupation, and in every situation of life, have lived to a good old age; nay some have enjoyed this blessing whose plan of living was by no means regular: but it consists with observation, that all very old men have been early risers. This is the only circumstance attending longevity to which I never knew an exception.

but in the decline of life, when the skin becomes rigid and the humours 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.

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 rigour, and we have frequently 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 to the wearer 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: a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

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, and other complaints so common among females.

The feet likewise often suffer by pressure. How a small foot came to be reckoned genteel, I will 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 strait shoes. Corns are not only very troublesome, but by rendering people unable to walk, they may likewise be considered as the remote cause of other diseases.‡

* *That colds kill more than plagues* is an old observation; and, with regard to this country, it holds strictly true. Every person of discernment, however, will perceive, that most of the colds which prove so destructive to the inhabitants of Britain, are owing to their imprudence in changing clothes. A few warm days in March or April induce them to throw off their winter garments, without considering that our most penetrating colds generally happen in the spring.

† This madness seems to have pervaded the minds of mothers in every age and country. Terence, in his comedy of the Eunuch, ridicules the Roman matrons for attempting to mend the shape of their daughters.

‡ We often see persons, who are rendered quite lame by the nails of their toes hav-

The size and figure of the shoe ought certainly to be adapted to the foot. In children the feet are as well shaped as the hands, and the motion of the toes as free and easy as that of the fingers; yet few persons in the advanced period of life are able to make any use of their toes; they are generally, by narrow shoes, squeezed all of a heap, and often laid over one another in such a manner as to be rendered altogether incapable of motion. Nor is the high heel less hurtful than the narrow toe. A lady may seem taller for walking on her tiptoes, but she will never walk well in this manner. It strains her joints, distorts her limbs, makes her stoop, and utterly destroys all her ease and gracefulness of motion; it is entirely owing to shoes with high heels and narrow toes, that not one female in ten can be said to walk well.

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 head-achs, 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 till 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 ribands, 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 clothes is necessary to keep him warm.*

ing grown into the flesh, and frequently hear of mortifications proceeding from this cause. All these, and many other inconveniences attending the feet, must be imputed solely to the use of short and tight shoes.

Though we hear frequently of plasters, salves, ointments, &c. for eradicating corns, yet they are never known to produce that effect. The only rational mode of proceeding is to soften the corn a little by immersion in warm water, and then to cut it carefully, and to renew this operation every week, till the scarf skin is reduced to its original or natural thinness, after which it must be preserved from the irritating pressure of strait shoes, which had at first occasioned the painful callosity.

* The celebrated Boerhaave used to say, that nobody suffered by cold, save fools and beggars; the latter not being able to procure clothes, and the former not having sense to wear them. Be this as it may, I can with the strictest truth declare, that in

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Since the first publication of the preceding remarks, very important changes have taken place in the dress of our fair countrywomen, which afford the strongest proofs of their good sense and taste. The shape is no longer distorted, nor is growth checked and the vital functions impeded by a whalebone press. Easy, safe, and graceful motion in a flat-heeled shoe has completely abolished the awkwardness and danger of former attempts to totter about, as it were upon stilts. In a word, a becoming regard to health, simplicity, and elegance, seems now to have more influence over female fashions than absurdity, caprice, or the desire of concealing any personal deformity.

I wish I could pay my own sex the same compliment which the ladies have so well deserved. But an affectation of what is called military smartness seems to have converted their whole apparel into a system of bandages. The hat is as tight as if it was intended for a helmet, and to defy the fury of a hurricane. Its form also being by no means suited to the natural shape of the head, it must be worn for a considerable time with very painful and unequal pressure, before it can be made to fit its new block. The neck is bolstered up and swathed with the most unnatural stiffness. Easy motion without, and free circulation within, are alike obstructed. Blotches and eruptions in the face, head-achs, apoplexies, and sudden deaths, may be often traced to this cause; and if we view its effects in another light, we shall not be surprised at any inconsistency in the language or conduct of persons who take so much pains to suspend all intercourse between the head and the heart.

The close pressure of the other articles of dress is equally reprehensible. Narrow sleeves are a great check upon the muscular exercise of the arms. The waistcoat in its present fashionable form, may be very properly termed a *strait* one; and, no doubt, is in many instances an indication of some mental derangement. The wrists and knees, but more particularly the latter, are braced with ligatures, or tight buttoning; and the legs, which require the utmost freedom of motion, are screwed into leathern cases, as if to convey an idea that the wearer is sometimes mounted on horseback. To complete the whole, and in order that the feet may be kept in as tight a press as the head, when shoes are to be worn, the shape of the foot, and the easy expansion of the toes are never consulted, but fashion regulates the form of the shoe, sometimes square-toed, more frequently pointed, and always sure to produce cramps and corns, the keen, the sensible announcers of every change of the weather. I have so long employed serious argument upon these subjects in vain, that I am now accustomed to view them with pleasantry; and when I meet with such figures, disguised, and rendered truly awkward both in their motions and appearance, I cannot help thinking with SHAKESPEARE, "that some of Nature's journeymen had made them and not made them well; they imitate humanity so abominably!"

many cases, where the powers of medicine had been tried in vain, I have cured the patient by recommending thick shoes, a flannel waistcoat and drawers, a pair of understockings, or a flannel petticoat, to be worn during the cold season at least. Where warmer clothing is wanted, I would recommend the fleecy hosiery to be worn next the skin

CHAP. VIII.

OF INTEMPERANCE.

A MODERN author* 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; yet 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 while these go regularly on, we are sound and well; but whatever disturbs them necessarily impairs health. Intemperance never fails to disorder the whole animal economy; it hurts the digestion, relaxes the nerves, and renders the different secretions irregular, vitiates the humours, and occasions numberless diseases.

The analogy between the *nourishment* of plants and animals affords a striking *proof* of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay destructive, when carried to excess. 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 chiefly 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 after something that may gratify them; but imaginary wants can never 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

* Rousseau.

whole creation in quest of luxuries, to his own destruction. "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 gout and dropsies, fevers and "lethargies, with other innumerable distempers, lying in ambush "cade 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 hastening 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 dung-hills, 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 intemperance. Nothing tends so much to prevent propagation, and to shorten the lives of children, as the intemperance of parents. The poor man who labours all day, and at night lies down contented with his humble fare, can boast 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 diseases of the lungs. These are the common ways in which

* Addison.

drunkards make their exit. Disorders 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 humours 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 affections, and other symptoms of indigestion.

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 sily 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 to pieces; yet so great is the consumption of them in this country, that one would almost be induced to think that 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 short-lived; and when it is over, the spirits sink as much below their usual tone 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-humour.

Drunkness 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.*

* It is amazing that our improvements in arts, learning, and politeness, have not put the barbarous custom of drinking to excess out of fashion. It is indeed less common in South Britain than it was formerly; but it still prevails very much in the North, where this relic of barbarity is mistaken for hospitality. There no man is supposed to entertain his guests well, who does not make them drunk. Forcing people to drink is certainly the greatest piece of rudeness that any man can be guilty of. Manliness, complaisance, or mere good-nature, may induce a man to take his glass, if urged to it

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 any benefit that might arise from 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 in itself a most abominable vice, but it is an inducement to many others. 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 eat, and afterwards even the infants themselves, in order to purchase the accursed draught.

It is of the utmost importance to check the first propensities to gluttony and intoxication, or they soon become uncontrollable. With respect to eating, the stomach, being often put upon the full stretch, feels uneasiness from the least vacuity, and acquires by degrees a sort of unnatural craving, the gratifications of which are sure to be attended with a stupor, debility, and disease.

The same remark is applicable to drinking. After frequent indulgence in excess, the smallest self-denial causes a faintness and depression of spirits, which nothing can remove but the favourite dram or pretended cordial. Nay more, the repetition of the last night's debauch is looked upon as the best remedy for the sickness of the ensuing day. Mild diluting liquors are rejected as insipid, and some hot stimulant is required for the palate and stomach, without considering, that by such means the action of the heart and arteries is stimulated also; that the lungs are inflamed; and the whole system is relaxed and enfeebled.

CHAP. IX.

CLEANLINESS.

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

*Diseases of the skin are chiefly owing to want of cleanliness.** They

at a time when he might as well take poison. The custom of drinking to excess has long been out of fashion in France; and, as it begins to lose ground among the polite part of the English, we hope it will soon be banished from every part of this island.

* Mr. Pott, in his surgical observations, was the first to notice a disease which he called the chimney-sweeper's cancer, now well known, as it is almost peculiar to that unhappy set of people, and of which he has left us a concise and accurate history.

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 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 neighbour affects my health as well as his. 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.

In many great towns the streets are little better than dung-hills, 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?

Whatever pretensions people may make to learning, politeness, or civilization, we will venture to affirm, that while they neglect cleanliness, they are in a state of barbarity.*

The peasants in most countries seem to hold cleanliness in a sort of contempt. Were it not for the open situation of their houses, they

This he attributes to neglect of cleanliness, and with great justice. I am convinced that if that part of the body which is the seat of this cruel disease were kept clean by frequent washing, it would never happen. The climbing-boys, as they are called, are certainly the most miserable wretches on the face of the earth; yet, for cleaning chimneys, no such persons are necessary.

According to the opinion of Mr. Earle, (see Medico Chirurgical Transactions, vol. xii.) it is invariably produced by the irritation of soot applied to the rugæ or folds of the skin. It is not a common disease, and rarely attacks under the age of thirty, which accounts for its comparative unfrequency.

* In ancient Rome the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the *Cloaca*, or common sewers 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 those who achieved the greatest conquests.

How truly great does the Emperor Trajan appear when giving directions to Pliny his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city!

would often feel the bad effects of this disposition. One seldom sees a farm-house without a dung-hill before the door, and frequently the cattle and their masters lodge under the same roof. Peasants are likewise extremely careless with respect to change of apparel, keeping their houses, &c. clean. This is merely the effect of indolence and a dirty disposition. Habit may, indeed, render it less disagreeable to them, but no habit can ever make it salutary to wear dirty clothes, or breathe unwholesome air.

As many articles of diet come through the hands of peasants, every method should be taken to encourage and promote habits of cleanliness among them. This, for example, might be done, by giving a small premium to the person who brings the cleanest and best article of any kind to market, as butter, cheese, &c., and by punishing severely those who bring it dirty. The same method should be taken with butchers, bakers, brewers, and all who are employed in preparing the necessaries of life.

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, the diseases to which they were liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable, that in the 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 might be designed to represent inward purity, but they were at the same time 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 touching any thing that might convey infection, 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.

NECESSITY OF FREQUENT ABLUTIONS, &c.

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, though less necessary in this country, is nevertheless a very agreeable piece of cleanliness, and 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

* See Deuteron. chap. xxii. ver. 12, 13.

would often prevent colds and fevers. Were people careful to bathe their feet and legs in lukewarm 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 no where 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 collected together, as jails, hospitals, &c. 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 an 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. 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 to have induced them to keep them dirty. Both these destructive prejudices will, we hope, be soon entirely eradicated.

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 general cleanliness. It ought to be carefully cultivated every where; but in populous cities it should be almost revered.*

* As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magistrates of great towns to be particularly attentive to this article. Most great towns in Britain are so situated as to be easily supplied with water; and those persons who will not make a proper use of it after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is the only effectual method of keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest.

Some of the most dreadful diseases incident to human nature might, in my opinion, be entirely eradicated by cleanliness.

INFECTION AND CONTAGION.

CHAP. X.

INFECTION AND CONTAGION.

INFECTION is designated a febrific agent, produced by the decomposition of animal and vegetable substances. It usually exists in the state of miasm or gas, and, in this form, occurs in filthy houses, ships, jails, hospitals, and cities; and also in marshes, and fenny and low districts of country. Under the denominations of *marsh*, or *paludal miasmata*, *exhalations of the soil*, *vegeto-animal effluvia*, *malaria*, *human effluvia*, *febrile* and *putrid contagion*, its various specific effects are detailed in the works of practical writers, as having a decided influence on the human body.*

CONTAGION is a poison generated by morbid animal secretion, possessing the power of inducing a similar morbid action in healthy bodies, whereby it is reproduced, and indefinitely modified. This contagion can only be known by its effects, and can only be divided into genera by classifying it with the diseases it produces: e. g. 1st, Contagion communicable exclusively by contact, the species of which are as follows: *itch*, *syphilis*, *sibbens*, *loanda of Africa*, *frambesia* or *yaws*, *elephantiasis*, *hydrophobia*, and *small-pox*.† These diseases cannot be conveyed through the medium of the air, but require actual contact. Hence they are strictly contagious, in the etymological sense of the word. 2d, Contagion communicable both by contact and by the atmosphere. These are liable to become epidemic, in contradistinction to those of the first genera. In this the species are, *small-pox*, *measles*, *chicken-pox*, *scarlet fever*, *hooping-cough*, &c.

One of the laws which govern these contagions is, that they are communicable in every season, in the heat of summer as well as in the cold of winter, in a pure as well as an impure air. Another law is, general *insusceptibility* to future attacks of the same disease, but with exceptions.

Many 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 me to discourage any act of charity or benevolence; especially towards those in distress; but I cannot help blaming such as endanger their own or their neighbours' 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 visitors. It is customary in such places, for servants and young people to wait upon the

* It has erroneously, we conceive, been denied that animal substances have any thing to do in the production of febrific miasmata. An unequivocal proof, however, was lately been exhibited of the contrary opinion, or rather fact, produced by opening a grave in the island of Lenten. See *Med. Chirurg. Review*.

† To these, Dr. Hossack, of New York, adds *influenza*, and *cynancha maligna*, or *putrid sore throat*, although Dr. Smith, whose modification of Dr. H.'s classification we have given, says, though without proof, that the former is evidently not contagious, and that the latter is either a modification of *scarlatina*, or an atmospheric disease.

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 I am 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 visitors not only endanger themselves and their connexions, 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*. Every thing that comes into *contact* with his body while alive, receives the contagion, and some of them, as clothes, blankets, &c. will retain it for a long time. Persons who die of infectious disorders 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 a person who died of an infectious disease, unless it has been well washed and fumigated, 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 worn 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 bestowed, either to prevent the introduction or spreading of infectious maladies. Some atten-

tion indeed is generally paid to the plague; but other diseases pass unregarded.

Infection is often spread through 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 various kinds 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 house 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 should stuff their noses with tobacco, or some other strong-smelling herb, as *ruë*, *tansy*, or the like. They ought likewise to keep the patient very clean, to sprinkle the room where he lies with vinegar or other strong acids, frequently to admit a stream of fresh air into it, and to avoid the smell of his breath as much as they can. They ought never to go into company without having changed their clothes and washed their hands; 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 great importance in preventing diseases. As most diseases are in some degree infectious, 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.

As a disinfecting agent, either of the following simple and easily obtained fumigations, may be carried at least once a-day through the apartments of the sick; or for the purpose of fumigating apartments where sick people have been lodged:

Take nitrate of potash, (nitre,) four drachms.
Sulphuric acid, (oil of vitriol,) two drachms.

Place them in a saucer upon hot sand;

or,

Take muriate of soda, (common salt,) three ounces.
Black oxide of manganese, one ounce.

Sulphuric acid, one ounce.

Water, two ounces.

Mix the three first ingredients, and pour in the water gradually, when visible streams of gas will be elicited, capable of destroying the contagious effluvia generated in the apartment, or about the furniture, bed-clothes, &c. The saucer, or other earthenware vessel, containing either of these, may be placed in the middle of the room, observing to have, during its use, the doors and windows closely shut.

In a conversation with the late Sir John Pringle, for whom I had a great regard, he expressed some apprehension that the contents of this chapter might deter people from attending their friends and relations in fevers. I told Sir John that was the very evil I meant to cure, having always found the country-people too apt to visit their friends and neighbours in fever, even so as to crowd the house, and incommode the sick. Nor could I impute this to humanity, but to an inquisitive disposition to learn what was likely to be the patient's fate, and to ask improper questions of those about him, or of the doctor himself, were he weak enough to answer them. In this case, his answer would be sure to come back to the patient, and if unfavourable, greatly magnified; so strong is the inclination which some men feel to spread terror, even at the risk of another's life.

Sir John, not having practiced in the country, was not immediately struck with the force of my reasoning, till I told him what had happened to a family of his own name who lived near Edinburgh, who had nearly all perished in a fever. The family consisted of a father and mother, with nine or ten children, most of them grown up and in place. The mother was seized with a fever of the putrid kind, and the children came in turns to nurse her. They all caught the fever: some died; and others narrowly escaped with their lives. The evil did not end there. They carried the fever into the families where they lived, and spread the infection far and wide. This I have often known to happen in the country, and would advise masters and mistresses never to suffer their servants to act as nurses or attendants on the sick, even though the latter should be their nearest relations. They had much better hire nurses, than allow their servants to act in that dangerous capacity.

CHAP. XI.

AFFECTIONS OF THE MIND.

MENTAL AFFECTIONS have great influence both in the cause and cure of diseases. How the mind affects the body, will, in all probability, ever remain a secret. It is sufficient for us to know, that there is established a reciprocal influence between the mental and

corporeal parts; and that whatever injures the one, disorders 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 such persons frequently lose their lives by a violent fit of anger, and would advise them 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 harbouring 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 endeavour 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 miserable by frolics of this kind. It is dangerous to tamper with the human passions. The mind may easily be thrown into such disorder as never again to act with regularity.

THE EFFECTS OF FEAR ON CHILD-BED WOMEN.

BUT the gradual effects of fear prove most 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 those 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 child-bed. Many of those who die in that situation, are impressed with the notion of their death, a long time before it hap-

pens; 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 the apprehensions of the great *pain* and *peril* of child-birth, are very hurtful. Few women die in labour, 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 imagination, when there would be no danger, did they apprehend none.

It seldom happens, that two or three women in a great town die in child-bed, 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 child-bed woman, ought with the greatest care to be guarded against.

Many women have lost their lives in child-bed 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 tolled 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 matter to persuade them of the contrary.

But this custom is not pernicious to child-bed 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 labours. 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. The only town which has abolished this custom is Bath.

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 other thing 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.

REPREHENSIBLE CUSTOMS, &c.

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 mankind.

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 unfavourable 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.

Kind heaven has, for the wisest ends, concealed from mortals their fate; and 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 solicit 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 proper. 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-by, 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.

We readily admit, that there are cases where the physician ought to give intimation of the patient's danger to some of his near connections; though even this ought always to be done with the greatest caution: but it never can be necessary in any case that the whole town and country should know, immediately after the doctor has made his first visit, *that he has no hopes of his patient's recovery*. Persons whose impertinent curiosity leads them to question the physician with regard to the fate of his patient, certainly deserve no other than an evasive answer.

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 neighbours often do much hurt in this way. Humanity surely calls upon every one to comfort the sick, and not add to their affliction by alarming their fears. A friend, or even a physician, may often do more good by a mild and sympathizing behaviour 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 in 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, especially of a disagreeable nature, it hurts the whole functions of the body. Hence grief, indulged, spoils the digestion and destroys the appetite; by which means the spirits are depressed, the nerves relaxed, the bowels inflated with wind, and the humours, for want of fresh supplies of chyle, vitiated. Thus many an excellent constitution has been ruined by a family misfortune, or any thing that occasions 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-humoured and cheerful. This, indeed, is not altogether in our own power; yet our temper of mind, as well as our actions, depend 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.

Some persons, 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 tapers with this passion, to consider well the probability of his being able to obtain the object of his wishes. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to flee 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 endeavour, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

There is no passion with which people are so apt to tamper as love, although none is more dangerous. Some men make love for amusement, others from mere vanity, or on purpose to show their consequence with the fair.

This is perhaps the greatest piece of cruelty which any one can be guilty of. What we eagerly wish for, we easily credit. Hence the too credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no other cure but the possession of its object, which in this case ought always, if possible, to be obtained.

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 in the most innocent amusements. A perpetual gloom hangs over 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 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 *True religion* to raise and support the mind of its votaries under every affliction that can befall them. It teaches that even 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.

Persons whose business it is to recommend religion to others, should

beware of dwelling too much on gloomy subjects. That peace and tranquillity of mind, which true religion is calculated to inspire, is a more powerful argument in its favour, than all the terrors that can be uttered. Terror may indeed deter men from outward acts of wickedness, but can never inspire them with that love of God, and real goodness of heart, in which alone true religion consists.

To conclude; the best way to counteract the violence of any passion, is to keep the mind closely engaged in some useful pursuit.

I have often heard that the late Lord KAIMES, when he saw any literary friend sinking under the pressure of melancholy, or some other corroding passion, always gave this advice in a few emphatical words, "Write a book;" which he believed to be an infallible remedy. I also knew the author of a very beautiful elegy cured of his grief for a wife, whom he tenderly loved, by studying how to express the greatness of his loss, and the pungency of his sorrows in the most plaintive and affecting strains. Indeed, the earnest direction of our thoughts to some important object is, as I before hinted, the surest method of subduing passions which may stubbornly resist the control of reason.

CHAP. XII.

THE NATURAL EVACUATIONS.

THE principal evacuations from the human body are those by *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.

THE FÆCAL EVACUATION, &c.

FEW things conduce more to health than keeping the body regular. When the *fæces* lie too long in the bowels, they vitiate the humours; and when they are too soon discharged, the body 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 body 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 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 more or 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 labours under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

One method of procuring a stool every day is to rise betimes, and go abroad in the open air. Not only the posture in bed is unfavourable to regular stools, but also the warmth. This, by promoting 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 medicines 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 should likewise go thinly clothed, and avoid every thing of an astringent or of an 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 an habitual looseness ought likewise to suit their diet 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, claret, brandy and water, in which toasted bread has been boiled, and such like.

As an 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 take every other 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 says, the urine

* Some persons have told me that they did not go to stool above once a month.
† 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 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 num-

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 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, 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 resorbed, 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 tedious, and even incurable disorders, by retaining their urine too long, from a false delicacy. When 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, dilutes 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.

berless 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 impostors, however, are very common all over Britain, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favour of *urine doctors* is the strongest. The common people have still an unlimited faith in their skill, although it has been demonstrated that no one of them is able to distinguish the urine of a horse, or any other animal, from that of a man.

THE 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 soon 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 obstructed perspiration, before we are aware of its having taken place.

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 endeavour 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 due attention to these, costs Britain annually some thousands of useful lives.

CAUSES OF OBSTRUCTED PERSPIRATION, &c.

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 of 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

* Sanctorius, an Italian physician, was the first that directed the attention of the faculty to the cutaneous and pulmonary transpiration, which he proved to exceed the other secretions considerably in weight; and he maintained that this function must have a considerable influence on the system, and was deserving of great consideration in the treatment of diseases. There is, doubtless, much of truth in this general observation; but in its application to practice, he appears to have gone to an extravagant length, and to have considerably contributed to prolong the humoral pathology, which referred all diseases to a vitiated state of the fluids, which is now well known to be the effect instead of the cause. Ed.

† From the time of Sanctorius, colds, coughs, fevers, and other diseases, have been attributed, by many, to the suppression of perspiration, although there was no direct experiment to prove it. That this may sometimes act as a cause there can be little doubt, but not so frequently as has been imagined; for we see people perspiring sometimes a great deal, at other times not at all, and without any bad effect. A man, in fine, enjoys as good health in winter as in summer; in cold as in hot countries; and, besides that perspiration is carried on to a great extent by the lungs, nature has also taken care to guard against obstructed perspiration, by making it a vicarious secretion with the urine; for when the former is increased the latter is diminished, and *vice versa*. The matter of perspiration, nevertheless, appears to be useless to the human frame, and perhaps contains materials that might prove hurtful if retained; hence, when obstructed, it may produce some complaints and aggravate others; although many of the diseases attributed to retained perspiration arise from mere torpor of the skin; and the effect is here taken for the cause. See *Diaphoretics*. Cold Bath, &c. Ed.

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 from taking this precaution, that they often sit or lie down in the fields with their clothes wet, and frequently sleep even whole nights in this condition. The frequent instances which we have of the fatal effects of this conduct, ought certainly to deter all from being guilty of it.

WET FEET.

WET feet often occasion fatal diseases. *The colic, inflammations of the breast and of the bowels, the iliac passion, 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 a cool evening; but this is a pleasure to be avoided by all who value their health. The effects of evening dews are gradual, indeed, and almost imperceptible; but they are not the less to be dreaded: we would therefore advise travellers, labourers, 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, labourers are often seized with intermitting fevers, quinseys, and other dangerous diseases.

DAMP BEDS.

BEDS become damp, either from their not being used, standing in damp houses, or in rooms without fire, or from the linen not being dry when laid on the bed. 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 in 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 safe? 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 easily be prevented in private families, by causing their servants to sleep in the spare beds, and resign them to strangers when they come. 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.

That baneful custom, said to be practised in many inns, of damping sheets, and pressing them, in order to save washing, and afterwards laying them on the beds, ought, when discovered, to be punished with the utmost severity. It is really a species of murder, and will often prove as fatal as poison or gun-shot. Indeed no linen, especially if it has been washed in winter, ought to be used till it has been exposed for some time to the fire; nor is this operation less necessary for linen washed in summer, provided it has lain for any length of time. This caution is the more needful, as gentlemen are often exceedingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance.*

DAMP HOUSES.

DAMP houses frequently produce the like ill consequences: for this reason those who build should be careful to choose a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. 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 storied, seldom continue long in health: masters ought surely to pay

* If a person suspect that his bed is damp, the simple precaution of taking off the sheets and lying in the blankets, with all, or most of his clothes on, will prevent all the danger. I have practised this for many years, and never have been hurt by damp beds, though no constitution, without care, is proof against their baneful influence.

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 inconvenience, 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, paint, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work among these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before company is put into them. Most people 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 are not always proof against its influence.*

SUDDEN TRANSITIONS FROM HEAT TO COLD.

THE perspiration is commonly obstructed by 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 labourers *not to be too hot* upon some occasions; but it is *generally in their power* to let themselves cool gradually, 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 often prevent fevers and other fatal disorders.

It is very common for people, when hot, to drink freely of cold water, or 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, however, 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, if it can be obtained, ought to be preferred to any thing else. But if any one has been

* People imagine if a good fire is made in a room after it has been washed, that there is no danger from sitting in it; but they must give me leave to say that this increases the danger. The evaporation excited by the fire generates cold, and renders the damp more active.

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 liquors when the body is hot. Sometimes this has occasioned immediate death. Hoarseness, quinsys, 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 upon 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 consequences of this conduct; yet nothing is more common than for people, after they have drunk warm liquors for several hours, to walk or ride a number of miles in the coldest night, or to ramble about in the streets.*

People are very apt, when a room is hot, to throw open a window, and to 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, quinsys, 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, unless the window is at a distance. I have known mechanics frequently contract fatal diseases, by working stripped at an open window, and would advise all of them to beware of such a practice.†

Few things expose 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 neighbour but at the hazard of their lives. Were there no other reason for keeping houses moderately cool, 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 frequent-

* The tap-rooms in London and other great towns, where such numbers of people spend their evenings, are highly pernicious. The breath of a number of people crowded into a low apartment, with the addition of fires, candles, the smoke of tobacco, and the fumes of hot liquor, &c. must not only render it hurtful to continue in such places, but dangerous to go out of them into a cold and chilly atmosphere.

† Although this long uncontradicted opinion, which daily observation confirms, has also been contradicted by Sir Arthur Clarke, the analogies are too wide to bear comparison. It will, we believe, be universally admitted that a current of air pressing upon an overheated body, although it might not prove "inevitably fatal," is neither consistent with safety nor prudence, while that body is in a passive state; and in an active one it is better to be removed some distance from a voluminous rush of air, which would be the means of keeping perspiration in check that was labouring to be set free, thereby counteracting the effects of exertion.

‡ A modern writer (Sir Arthur Clarke) entertains, we rather suspect, an untenable opinion on this particular subject; nor do we conceive in what manner sudden external transitions should be attended with less danger than such as are internally applied.

ly been the effect of this conduct. Indeed it looks too like the action of a madman to deserve a serious consideration.

The result of all these observations is, that every one ought 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, when heated, to let it cool gradually.

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

I shall put an end to what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of health: "A man," says he, "who is blessed with good health, should confine himself to no particular rules either with respect to regimen or medicine. He ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the country; to hunt, sail, indulge himself in rest, but more frequently to use exercise. He ought to refuse no kind of food that is commonly used, but sometimes to eat more and sometimes less; sometimes to make one at an entertainment, and sometimes to forbear it; to make rather two meals a-day than one, and always to eat heartily, provided he can digest it. He ought neither too eagerly to pursue, nor too scrupulously to avoid intercourse with the fair sex: pleasures of this kind, rarely indulged, render the body alert and active; but when too frequently repeated, weak and languid. He should be careful in time of health not to destroy, by excesses of any kind, that vigour of constitution which should support him under sickness."

This plain, yet elegant and judicious summary of the most useful maxims of health, confirms the justness of my former remark, that enlightened Medicine breathes the true spirit of liberal indulgence, laying down no rules but such as a man of sense would cheerfully

"It has been very commonly supposed," observes Sir Arthur, "even by medical men, that immersion in the cold-bath, when the body was considerably heated with exercise or other exertion, is a dangerous practice; and, accordingly, it is a general custom with bathers who find themselves overheated, to wait till they become cool, before they plunge into the bath. This opinion and practice has been ably controverted by the late Dr. Currie, who has shown, both from theory and experience, that the opinion is erroneous, and the practice injudicious. This is so true, that for some years he has directed infirm persons to use a degree of exercise before immersion, as may produce an increased action of the vascular, with some increase of heat, and thus secure a force of re-action under the shock, which otherwise might not always take place." We think Sir Arthur has brought Dr. Currie forward rather untimely; for it is evident the latter alludes to infirm persons, convalescents, with whom almost invariably the heat of the body, accompanied with a sense of chilliness, is below the natural standard: it is judicious, therefore, enough that such people should use a degree of exercise to enable them to resist the shock of the cold-bath, and to secure a re-action under it, which otherwise they could not withstand. This practice, however, applies equally to persons in health, whom we would caution never to use the cold-bath at a time when a cold sensation pervades the whole body, any more than to plunge into it at a time when the body is overheated; although both of these conditions may admit of being considerably regulated by the feelings of the individual. "The popular opinion, therefore," says Sir Arthur Clarke, upon the preceding grounds, "that it is safest to go perfectly cool into the water is an unfounded error productive of injurious consequences." Practice and experience, with all deference to such an opinion, have proved the reverse. E.D.

follow and forbidding nothing but what is incompatible with real happiness. Here the votaries of fashion and folly may learn to correct their own mistaken ideas of enjoyment; the epicure may acquire a relish for rational gratification; and the man of pleasure may be taught the economy of love.

PART II.

CHAP. I.

THE KNOWLEDGE AND CURE OF DISEASES.

THE cure of diseases 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 foresee the patient's fate sooner than many 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 observation and experience.

DEFINITION OF DISEASES, &c.—Every disease may be considered as an assemblage of symptoms, and must be distinguished by those which are most obvious and permanent. Instead, therefore, of giving a classical arrangement of diseases, according to the systematic method, it will be more suitable, in a performance of this nature, to give a full and accurate description of each particular disease as it occurs; and, where any of the symptoms of one disease have a near resemblance to those of another,† to take notice of that circumstance, and at the same time to point out the peculiar or characteristic symptoms by which it may be distinguished. By a due attention to these, the investigation of diseases will be found to be a less difficult matter than most people would at first be ready to imagine.

A proper attention to the patient's age, sex, temper of mind, constitution, and manner of life, will likewise greatly assist, both in the investigation and treatment 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

* Physicians express this prescience by the term *Prognosis*, or the art of predicting the event of diseases from particular symptoms.

† Physicians express these symptomatic characters by the word *Diagnosis*; viz the signs by which one disease may be distinguished from another disease. Hence those symptoms which distinguish such affections are termed *diagnostic signs*.