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 viscidity 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 LABORIOUS 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.

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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

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* 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 *Aërial Poison*, under POISONS.

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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 *Studious*.

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 fellow these but men of strong body; and

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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.

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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 necessaries 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

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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.

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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.

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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.

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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.

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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 necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

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.

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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.

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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.

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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.

Hypochondriasm.—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.

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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.

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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

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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-

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