

PART I.

OF THE GENERAL CAUSES OF DISEASES.

CHAPTER I.

OF CHILDREN.

THE better to trace diseases from their original causes, we shall take a view of the common treatment of mankind in the state of infancy. In this period of our lives, the foundations of a good or bad constitution are generally laid; it is therefore of importance that parents be well acquainted with the various causes which may produce diseases in their offspring.

It appears from the annual registers of the dead that about one half of the children born die under twelve years of age. To many, indeed, this may appear a natural evil; but, on due examination, it will be found to be one of our own creating. Were the death of infants a natural evil, other animals would be as liable to die young as man; but this we find is by no means the case.

It may seem strange that man, notwithstanding his superior reason, should fall so far short of other animals in the management of his young. But our surprise will soon cease, if we consider that brutes, guided by instinct, never err in this respect; while man, trusting solely to art, is seldom right. Were a catalogue of those children who perish annually by art alone exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose. These will always endeavor to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been intro-

duced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

Nothing can be more preposterous than for a mother to think it below her to take care of her own child, or to be so ignorant as not to know what is proper to be done for it. If we search nature throughout, we cannot find a parallel to this. Every other creature is the nurse of its own young, and they thrive accordingly. Were the brutes to bring up their young by proxy, they would share the same fate with those of the human species.

We mean not, however, to impose it as a task upon every mother to suckle her own child. This, whatever speculative writers may allege, is in many cases impracticable, and would inevitably prove destructive both to the mother and child. Women of delicate constitutions, subject to low spirits, hysteric fits, or other nervous disorders, make very bad nurses; and these complaints are now so common that it is rare to find a woman of fashion free from them. Such women, therefore, supposing them willing, are really unable to suckle their own children.

Almost every mother would be in a condition to give suck, did mankind live agreeably to nature; but whoever considers how far we have deviated from her dictates, will not be surprised to find many of them unable to perform that necessary office. Mothers who do not eat a sufficient quantity of solid food, nor enjoy the benefit of free air and exercise, can neither have wholesome humors themselves, nor afford proper nourishment to an infant. Hence children who are suckled by delicate women either die young, or are weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother who can ought certainly to perform so tender and agreeable an office. But suppose it to be out of her power, she may, nevertheless, be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other offices are necessary for a child, which the mother ought at least to see done.

A mother who abandons the fruit of her womb, as soon as it is born, to the sole care of a hireling, hardly deserves the name of a parent. A child, by being brought up under the

mother's eye, not only secures her affection, but may reap all the advantages of a mother's care, though it be suckled by another. How can a mother be better employed than in superintending the nursery? This is at once the most delightful and important office; yet the most trivial business or insipid amusements are often preferred to it—a strong proof both of the bad taste and wrong education of modern females.

It is indeed to be regretted that more care is not bestowed in teaching the proper management of children to those whom nature has designed for mothers. This, instead of being made a principal, is seldom considered as any part of female education. Is it any wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, what to do for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence sensible people become the dupes of ignorance and superstition; and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.*

Were the time that is generally spent by females in the acquisition of trifling accomplishments employed in learning how to bring up their children, how to dress them so as not to hurt, cramp, or confine their motions, how to feed them with wholesome and nourishing food, how to exercise their tender bodies so as best to promote their growth and strength—were these made the objects of female instruction, mankind would derive the greatest advantages from it. But while the education of females implies little more than what relates to dress and public show, we have nothing to expect from them but ignorance, even in the most important concerns.

Did mothers reflect on their own importance, and lay it to heart, they would embrace every opportunity of informing themselves of the duties which they owe to their infant off-

* Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care of their offspring. He says that in former times the greatest women in Rome used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the sole care of some poor Grecian wench or other menial servant. We are afraid wherever luxury and effeminacy prevail there will be too much ground for this complaint.

spring. It is their province not only to form the body, but also to give the mind its most early bias. They have it very much in their power to make men healthy or valetudinary, useful in life or the pests of society.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

It is a pity that the men should pay so little regard to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would esteem it an affront were they supposed to know any thing of them. Not so, however, with the kennel or the stables. A gentleman of the first rank is not ashamed to give directions concerning the management of his dogs or horses, yet would blush were he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

Even physicians themselves have not been sufficiently attentive to the management of children. That has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill, when his attendance can only serve to divide the blame and appease the disconsolate parents.

Nurses should do all in their power to prevent diseases; but when a child is taken ill, some person of skill ought immediately to be consulted. The diseases of children are generally acute, and the least delay is dangerous.

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat them properly when sick, but likewise to give useful directions for their management when well. The diseases of children are by no means so difficult to be understood as many imagine. It is true they cannot tell their complaints; but the causes of them

may be pretty certainly discovered, by putting proper questions to the nurses and such as are about them. Besides, the diseases of infants, being less complicated, are easier cured than those of adults.*

It is really astonishing that so little attention should in general be paid to the preservation of infants. What labor and expense are daily bestowed to prop an old tottering carcass a few years, while thousands of those who might be useful in life perish without being regarded. Mankind are too apt to value things according to their present, not their future, usefulness. Though this be of all others the most erroneous method of estimation, yet upon no other principle is it possible to account for the general indifference with respect to the death of infants.

One great source of the diseases of children is the *unhealthiness of parents*. It would be as reasonable to expect a rich crop from a barren soil, as that strong and healthy children should be born of parents whose constitutions have been worn out with intemperance or disease.

An ingenious writer observes,† that on the constitution of mothers depends originally that of their offspring. No one who believes this will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female, brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud; or, should it struggle through a few years' existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

If to the delicacy of mothers we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitutions of their parents. A sickly frame may be originally produced by hardships or intemperance,

* The common opinion, that the diseases of infants are hard to discover and difficult to cure, has deterred many physicians from paying that attention to them which they deserve. I can however, from experience, declare that this opinion is without foundation, and that the diseases of infants are neither so difficult to discover nor so ill to cure as those of adults. This we hope will induce practitioners to pay more regard to the complaints of their young patients, and not to leave them entirely in the hands of old women.

† Rousseau.

but chiefly by the latter. It is impossible that a course of vice should not spoil the best constitution. And did the evil terminate here, it would be a just punishment for the folly of the sufferer; but when once a disease is contracted and rivetted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or king's-evil, to transmit to our offspring. How happy had it been for the heir of many a great estate had he been born a beggar, rather than to inherit his father's fortunes at the expense of inheriting his diseases.

No person who labors under any incurable malady ought to marry. He thereby not only shortens his own life, but transmits misery to others. But when both parties are deeply tainted with the scrofula, the scurvy, or the like, the effects must be still worse. Such will either have no issue at all, or those whom they have must be miserable indeed. Want of attention to these things, in forming connections for life, has rooted out more families than plague, famine, or the sword; and so long as these connections are formed from mercenary views, the evil will be continued.

In our matrimonial contracts, it is amazing so little regard is had to the health and form of the object. Our sportsmen know that the generous courser cannot be bred out of the foundered jade, nor the sagacious spaniel out of the snarling cur. This is settled upon immutable laws. The man who marries a woman of a sickly constitution, and descended of unhealthy parents, whatever his views may be, cannot be said to act a prudent part. A puny scrofulous woman may prove fertile; should this be the case, the family must become an infirmary. What prospect of happiness the father of such a family has, we shall leave any one to judge.

The Jews, by their laws, were, in certain cases, forbid to have any manner of commerce with the diseased; and indeed to this all wise legislators ought to have a special regard. In some countries, diseased persons have actually been forbid to marry. This is an evil of a complicated kind, a natural deformity, and political mischief, and therefore requires a public consideration.

Such children as have the misfortune to be born of diseased parents will require to be nursed with greater care than others. This is the only way to make amends for the defects of constitution; and it will often go a great length. A healthy nurse, wholesome air, and sufficient exercise, will do

wonders. But, when these are neglected, little is to be expected from any other quarter. The defects of constitution cannot be supplied by medicine.

Those who inherit any family disease ought to be very circumspect in their manner of living. They should consider well the nature of such disease, and guard against it by a proper regimen. It is certain that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates; and the libertine, who impairs the one, does greater injury to his posterity than the prodigal who squanders away the other.

The *clothing* of an infant is so simple a matter, that it is surprising how any person should err with regard to it; yet many children lose their lives, and others are deformed, by inattention to this article.

Nature knows no other use of clothes to an infant but to keep it warm. All that is necessary for this purpose is to wrap it in a soft loose covering. Were a mother left to the dictates of nature alone, she would certainly follow this method. But the business of dressing an infant has long been out of the hands of mothers, and has at last become a secret which none but adepts pretend to understand.

From the most early ages it has been thought necessary that a woman in labor should have some person to attend her. This in time became a business; and, as in all others, those who were employed in it strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwife's province, who no doubt imagined that the more dexterity she could show in this article, the more her skill would be admired. Her attempts were seconded by the vanity of parents, who, too often desirous of making a show of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body as if every bone had been fractured in the birth; while

midwife's Province
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these were often so tight as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary for life.

In several parts of Britain, the practice of rolling children with so many bandages is now, in some measure, laid aside; but it would still be a difficult task to persuade the generality of women that the shape of a child does not entirely depend on the care of the midwife. So far, however, are all their endeavors to mend the shape of children from being successful, that they constantly operate the contrary way, and mankind become deformed just in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations; so little, indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child. Neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management, their children become so strong and hardy, that, by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.

Among brute animals, no art is necessary to procure a fine shape. Though many of them are extremely delicate when they come into the world, yet we never find them grow crooked for want of swaddling-bands. Is nature less generous to the human kind? No; but we take the business out of her hands.

Not only the analogy of other animals, but the very feelings of infants tell us, that they ought to be kept easy and free from all pressure. They cannot indeed tell their complaints, but they can show signs of pain; and this they never fail to do, by crying, when pinched by their clothes. No sooner are they freed from their bracings, than they seem pleased and happy; yet, strange infatuation! the moment they hold their peace they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and, lest, they should receive any injury from pressure in the womb, has surrounded the

fœtus everywhere with fluids. This shows the care which nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

Even the bones of an infant are so soft and cartilaginous, that they readily yield to the slightest pressure, and easily assume a bad shape, which can never after be remedied. Hence it is that so many people appear with high shoulders, crooked spines, and flat breasts, who were as well proportioned at their birth as others, but had the misfortune to be squeezed out of shape by the application of stays and bandages.

Pressure, by obstructing the circulation, likewise prevents the equal distribution of nourishment to the different parts of the body, by which means the growth becomes unequal. One part of the body grows too large, while another remains too small; and thus in time the whole frame becomes disproportioned and misshapen. To this we must add, that when a child is cramped in its clothes, it naturally shrinks from the part that is hurt, and, by putting its body into unnatural postures, it becomes deformed by habit.

Deformity of body may indeed proceed from weakness or diseases, but in general it is the effect of improper clothing. Nine-tenths, at least, of the deformity amongst mankind must be imputed to this cause. A deformed body is not only disagreeable to the eye, but by a bad figure both the animal and vital functions must be impeded, and of course health impaired. Hence few people remarkably misshapen are strong and healthy.

The new motions which commence at the birth, as the circulation of the whole mass of blood through the lungs, respiration, the peristaltic motion, &c., afford another strong argument for keeping the body of an infant free from all pressure. These organs, not having been accustomed to move, are easily stopped; but when this happens, death must ensue. Hardly any method could be devised more effectually to stop these motions than bracing the body too tight with rollers, bandages, &c. Were these to be applied in the same manner to the body of an adult, for an equal length of time, they could hardly fail to hurt the digestion and make him sick. How much more hurtful must they prove to the tender bodies of infants, we shall leave any one to judge.

Whoever considers these things will not be surprised that

so many children die of convulsions soon after the birth. These fits are generally attributed to some inward cause; but, in fact, they oftener proceed from our own imprudent conduct. I have known a child seized with convulsion fits soon after the midwife had done swaddling it, who, upon taking off the rollers and bandages, was immediately relieved, and never had any convulsion fits afterwards. Numerous examples of this might be given, were they necessary.

It would be safer to fix on the clothes of an infant with strings than pins, as these often gall and irritate their tender skins, and occasion convulsions. Pins have been found sticking above half an inch into the body of a child after it had died of convulsion fits, which, in all probability, proceeded from that cause.

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth, and if loaded with too many clothes the fever must be increased. But that is not all; the child is generally laid in bed with the mother, who is often likewise feverish; to which we may add the heat of the bedchamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been for some time in the situation mentioned above, they are often sent into the country to be nursed in a cold house. Is it any wonder if a child, from such a transition, catches a mortal cold, or contracts some other fatal disease? When an infant is kept too hot, its lungs, not being sufficiently expanded, are apt to remain weak and flaccid for life. From hence proceed coughs, consumptions, and other diseases of the breast.

It would answer little purpose to specify the particular pieces of dress proper for an infant. These will always vary in different places, according to custom and the humor of parents. The great rule to be observed is, *that a child have no more clothes than are necessary to keep it warm, and that they be quite easy for its body.*

Stays are the very bane of infants. A volume would not suffice to point out all the bad effects of this ridiculous piece of dress. The madness in favor of stays seems, however, to

be somewhat abated; and it is to be hoped the world will, in time, become wise enough to know that the human shape does not solely depend upon whalebone and bend-leather.*

We shall only add, with respect to the clothes of children, that they ought to be kept very clean. Children perspire more than adults, and if their clothes be not frequently changed, they become very hurtful. Dirty clothes not only gall and fret the tender skins of infants, but likewise occasion ill smells, and, what is worse, tend to produce vermin and cutaneous diseases.

Cleanliness is not only agreeable to the eye, but tends greatly to preserve the health of children. It promotes the perspiration, and by that means frees the body from superfluous humors, which, if retained, could not fail to occasion diseases. No mother or nurse can have any excuse for allowing a child to be dirty. Poverty may oblige her to give it coarse clothes, but if she does not keep them clean it must be her own fault.

Nature not only points out the food proper for an infant, but actually prepares it. This, however, is not sufficient to prevent some, who think themselves wiser than nature, from attempting to bring up their children without her provision. Nothing can show the disposition which mankind have to depart from nature more than their endeavoring to bring up children without the breast. The mother's milk, or that of a healthy nurse, is unquestionably the best food for an infant. Neither art or nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shows an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it. Besides, the first milk that the child can squeeze out of the breast answers the purpose of cleansing better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breast, fevers, and other diseases incident to mothers.

It is strange how people came to think that the first thing

* Stays made of bend-leather are worn by all the women of lower station in many parts of England.

given to a child should be drugs. This is beginning with medicine betimes, and no wonder that they generally end with it. It sometimes happens, indeed, that a child does not discharge the *meconium* so soon as could be wished. This has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c., whether they be necessary or not. Cramming an infant with such indigestible stuff, as soon as it is born, can hardly fail to make it sick, and is more likely to occasion diseases than to prevent them. Children are seldom long after the birth without having passage both by stool and urine, though these evacuations may be wanting for some time without any danger. But if children must have something before they be allowed the breast, let it be a little thin water-pap, to which may be added an equal quantity of new milk. If this be given without any wines, sugars, or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly, wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children need very little food for some time after the birth, and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine, or even sugar, is sufficient to heat and inflame the blood of an infant; but every person conversant in these matters must know that most of the diseases of infants proceed from the heat of their humors.

If the mother or nurse has enough of milk, the child will need little or no other food before the third or fourth month. It will then be proper to give it, once or twice a day, a little of some food that is easy of digestion, as water-pap, milk-pottage, weak broth with bread in it, and such like. This will ease the mother, will accustom the child by degrees to take food, and will render the weaning both less difficult and less dangerous. All great and sudden transitions are to be avoided in nursing. For this purpose, the food of children ought not only to be simple, but to resemble, as nearly as possible, the properties of milk. Indeed milk itself should make a principal part of their food, not only before they are weaned, but for a long time after.

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shows an inclination to chew; and it may at all times be allowed as much as it pleases. The very chewing of bread will promote the cutting of the teeth and the discharge of *saliva*, while, by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the *saliva* down to the stomach, which is too valuable a liquor to be lost.

Bread, besides being used dry, may be many ways prepared into food for children. One of the best methods is to boil it in water, afterwards pouring the water off, and mixing with the bread a proper quantity of new milk unboiled. Milk is both more wholesome and nourishing this way than boiled, and is less apt to occasion costiveness. For a child further advanced, bread may be mixed in veal or chicken broth, made into puddings, or the like. Bread is a proper food for children at all times, provided it be plain, made of wholesome grain, and well fermented; but when enriched with fruits, sugars, or such things, it becomes very unwholesome.

It is soon enough to allow children animal food when they have got teeth to eat it. They should never taste it till after they are weaned, and even then they ought to use it sparingly. Indeed, when children live wholly on vegetable food, it is apt to sour their stomachs; but, on the other hand, too much flesh heats the blood, and occasions fevers and other inflammatory diseases. This plainly points out a due mixture of animal and vegetable food as most proper for children.

Few things are more hurtful to children than the common method of sweetening their food. It entices them to take more food than they ought to do, which makes them grow fat and bloated. It is pretty certain if the food of children were quite plain that they would never take more than enough. The excesses of children are entirely owing to nurses. If a child be gorged with food at all hours, and enticed to take it by making it sweet and agreeable to the palate, is it any

wonder that such a child should in time be induced to crave more food than it ought to have?

Children may be hurt by too little as well as too much food. After a child is weaned, it ought to be fed four or five times a day, but should never be accustomed to eat in the night, neither should it have too much at a time. Children thrive best with small quantities of food frequently taken. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavoring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overloaded, but a child who is pinched with hunger will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

Many people imagine that the sort of food which they love themselves cannot be bad for their children; but this notion is very absurd. In the more advanced periods of life we often acquire an inclination for food which when children we could not endure. Besides, there are many things that may agree very well with the stomach of a grown person, which would be hurtful to a child; as high-seasoned, salted, and smoke-dried provisions, &c. It would also be improper to feed children with fat meat, strong broths, rich soups, or the like.

All strong liquors are hurtful to children. Some parents teach their children to guzzle ale, and other strong liquors, at every meal. Such a practice cannot fail to do mischief. Those children seldom escape the violence of the small-pox, measles, hooping cough, or some inflammatory disorder. Milk, water, buttermilk, or whey, are the most proper for children to drink. If they have any thing stronger, it may be fine small beer, or a little wine mixed with water. The stomachs of children can digest well enough without the assistance of warm stimulants. Besides, being naturally hot, they are easily hurt by every thing of a heating quality.

Few things are more hurtful to children than unripe fruits.

They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed show a great inclination for fruit, and I am apt to believe that if good ripe fruit were allowed them in proper quantity it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and acrimony of the humors. This is what most children want; only care should be taken lest they exceed. Indeed, the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.

Roots which contain a crude viscid juice should be sparingly given to children. They fill the body with gross humors, and tend to produce eruptive diseases. This caution is peculiarly necessary for the poor. Glad to obtain what will fill the bellies of their children for a little money, they stuff them two or three times a day with potatoes or other crude vegetables. Children had better eat a small quantity of food which yields a wholesome nourishment than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach and produces gross humors. Indeed, most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, we would recommend honey. Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humors. Children who eat honey are seldom troubled with worms; they are also less subject to cutaneous diseases, as itch, scabbed head, &c.

Many people err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their solids, renders them weak, and disposes them to the rickets, the scrofula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing therefore which tends to unbrace their solids ought to be carefully avoided.

We would not be understood, by these observations, as confining children to any particular kind of food. Their diet may be frequently varied, provided always that sufficient regard be had to simplicity.

Of all the causes which conspire to render the lives of children short and miserable, none has greater influence than the

want of proper *exercise*. Healthy parents, wholesome food, and proper clothing, will avail little, where exercise is neglected. Sufficient exercise will make up for several defects in nursing; but nothing can supply the want of it. It is absolutely necessary to the health, the growth, and the strength of children.

The desire of exercise is almost coeval with life itself. Were this principle attended to, many diseases might be prevented. But while indolence and sedentary employments prevent two-thirds of mankind from either taking sufficient exercise themselves or giving it to their children, what have we to expect but diseases and deformity among their offspring? The rickets, so destructive to children, never appeared in Britain till manufactures began to flourish, and people, attracted by the love of gain, left the country to follow sedentary employments in great towns. It is amongst these people that this disease chiefly prevails, and not only deforms, but kills many of their offspring.

The conduct of other young animals shows the propriety of giving exercise to children. Every other animal makes use of its organs of motion as soon as it can, and many of them, even when under no necessity of moving in quest of food, cannot be restrained without force. This is evidently the case with the calf, the lamb, and most other young animals. If these creatures were not permitted to frisk about, and take exercise, they would soon die or become diseased. The same inclination appears very early in the human species; but, as they are not able to take exercise themselves, it is the business of their parents and nurses to assist them.

Children may be exercised in various ways. The best method, while they are light, is to carry them about in the nurse's arms. This gives the nurse an opportunity of talking to the child, and of pointing out every thing that may please and delight its fancy. Besides, it is much safer than swinging an infant in a machine, or leaving it to the care of such as are not fit to take care of themselves. Nothing can be more foolish than to set one child to keep another. This conduct has proved fatal to many infants, and has rendered others miserable for life.

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading-strings fixed to their backs, has many bad consequences. It makes them throw their bodies

forward and press with their whole weight upon the breast. By this means the breathing is obstructed, the breast flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs, and other diseases.

It is a common notion that if children be set upon their feet too soon their legs will become crooked. There is reason to believe that the very reverse of this is true. Every member acquires strength in proportion as it is exercised. The limbs of children are weak indeed, but their bodies are proportionably light; and had they skill to direct themselves, they would soon be able to support their own weight. Who ever heard of any other animal that became crooked by using its legs too soon? Indeed, if a child be not permitted to make use of its legs till a considerable time after the birth, and be then set upon them with its whole weight at once, there may be some danger; but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

Mothers of the poorer sort think they are great gainers by making their children lie or sit while they themselves work. In this they are greatly mistaken. By neglecting to give their children exercise, they are obliged to keep them a long time before they can do any thing for themselves, and to spend more on medicine than would have paid for proper care.

To take care of their children is the most profitable business in which even the poor can employ themselves; but, alas! it is not always in their power. Poverty often obliges them to neglect their offspring, in order to procure the necessities of life. When this is the case, it becomes the interest, as well as the duty, of the public to assist them. Ten thousand times more benefit would accrue to the state by enabling the poor to bring up their own children, than from all the hospitals that ever can be erected for that purpose.

Whoever considers the structure of the human body will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of vessels, whose fluids cannot be pushed on without the action and pressure of the muscles. But if the fluids remain inactive, obstructions must happen, and the humors will of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without ac-

tion this admirable contrivance can have no effect. The final cause of this part of the animal economy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to show the importance of exercise might be drawn from every part of the animal economy. Without exercise the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise the humors cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motion of the lungs, and all the vital functions, are greatly assisted by exercise. But to point out the manner in which these effects are produced would lead us further into the economy of the human body than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that where exercise is neglected none of the animal functions can be duly performed; and when that is the case the whole constitution must go to wreck.

A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life; and whoever neglects it not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When a child is at school he needs no keeper. Thus the schoolmaster is made the nurse; and the poor child is fixed to a seat seven or eight hours a day, which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body. Nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.

But suppose this were the way to make children scholars, it certainly ought not to be done at the expense of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boy's education will be quite marred unless he be carried to school in his nurse's arms. No wonder if such hot-bed plants seldom become either scholars or men.

Not only the confinement of children in public schools, but their number, often proves hurtful. Children are much injured by being kept in crowds within doors. Their breathing not only renders the place unwholesome, but if any one of

them happens to be diseased the rest catch the infection. A single child has been often known to communicate the bloody-flux, the hooping cough, the itch, or other diseases, to almost every individual in a numerous school.

But if fashion must prevail, and infants are to be sent to school, we would recommend it to teachers, as they value the interests of society, not to confine them too long at a time, but to allow them to run about and play at such active diversions as may promote their growth and strengthen their constitutions. Were boys, instead of being whipped for stealing an hour to run, ride, swim, or the like, encouraged to employ their time in these manly and useful exercises, it would produce many excellent effects.

It would be of great service to boys if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and, when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.

An effeminate education will infallibly spoil the best natural constitution; and if boys are brought up in a more delicate manner than even girls ought to be, they never will be men.

Nor is the common education of girls less hurtful to the constitution than that of boys. Miss is set down to her frame before she can put on her clothes, and is taught to believe that to excel at the needle is the only thing that can entitle her to general esteem. It is unnecessary here to insist upon the dangerous consequences of obliging girls to sit too much. They are pretty well known, and are too often felt at a certain time of life. But suppose this critical period to be got over, greater dangers still await them when they come to be mothers. Women who have been early accustomed to a sedentary life generally run great hazard in childbed; while those who have been used to romp about and take sufficient exercise are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle and a good constitution. Close and early confinement generally occasions indigestions, headaches, pale complexions, pain of the stomach, loss of appetite, coughs, consumptions of the lungs, and deformity of body. The last of these indeed is not to be won-

dered at, considering the awkward postures in which girls sit at many kinds of needlework, and the delicate, flexible state of their bodies in the early periods of life.

Would mothers, instead of having their daughters instructed in many trifling accomplishments, teach them plain work and housewifery, and allow them sufficient time to run about in the open air, they would both make them more healthy mothers and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health.

Many people imagine it a great advantage for children to be early taught to earn their bread. This opinion is certainly right, provided they were so employed as not to hurt their health or growth; but when these suffer, society, instead of being benefitted, is a real loser by their labor. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

In order to be satisfied of the truth of this observation, one needs only look into the great manufacturing towns, where he will find a puny, degenerate race of people, weak and sickly all their lives, seldom exceeding the middle period of life; or, if they do, being unfit for business, they become a burden to society. Thus arts and manufactures, though they may increase the riches of a country, are by no means favorable to the health of its inhabitants. Good policy would therefore require that such people as labor during life should not be set too early to work. Every person conversant in the breed of horses, or other working animals, knows that if they be set to hard labor too soon they never will turn out to advantage. This is equally true with respect to the human species.

There are nevertheless various ways of employing young people without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some parts of them may always be adapted to their age, taste, and strength.

Such parents, however, as are under the necessity of em-

ploying their children within doors, ought to allow them sufficient time for active diversions. This would both encourage them to do more work and prevent their constitutions from being hurt.

Some imagine that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this is to make them run about in a long room or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I knew an eminent physician who used to say that he made his children dance instead of giving them physic. It were well if more people would follow his example.

The *cold bath* may be considered as an aid to exercise. By it the body is braced and strengthened, the circulation and secretions promoted, and were it conducted with prudence, many diseases, as the rickets, scrofula, &c., might be prevented. The ancients, who took every method to render children hardy and robust, were no strangers to the use of the cold bath; and, if we may credit report, the practice of immersing children daily in cold water must have been very common among our ancestors.

The greatest objection to the use of the cold bath arises from the superstitious prejudices of nurses. These are often so strong that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effect of the water. Others will even put clothes dipped in the water upon the child, and either put it to bed or suffer it to go about in that condition. Some believe that the whole virtue of the water depends upon its being dedicated to a particular saint; while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children lose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

We ought not, however, entirely to set aside the use of the cold bath because some nurses make a wrong use of it. Every child, when in health, should at least have its extremities daily washed in cold water. This is a partial use of the

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cold bath, and is better than none. In winter this may suffice; but in the warm season, if a child be relaxed, or seem to have a tendency to the rickets or scrofula, its body ought to be daily immersed in cold water. Care, however, must be taken not to do this when the body is hot or the stomach full. The child should be dipped only once at a time, should be taken out immediately, and have its skin well rubbed with a dry cloth.

Few things are more destructive to children than confined or unwholesome air. This is one reason why so few of those infants who are put into hospitals or parish workhouses live. These places are generally crowded with old, sickly, and infirm people; by which means the air is rendered so extremely pernicious that it becomes a poison to infants.

Want of wholesome air is likewise destructive to many of the children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has no access. Though grown people who are hardy and robust may live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed. As such people are not able to carry their children abroad into the open air, we must lay our account with losing the greater part of them. But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them?

A very bad custom prevails of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery ought always to be the largest and best aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and many other disorders.

Children who are kept within doors all day, and sleep all night in warm close apartments, may with great propriety be compared to plants nursed in a hothouse, instead of the open air. Though such plants, by extraordinary care, may be kept

alive for some time, they will never arrive at that degree of strength, vigor and magnitude which they would have acquired in the open air, nor would they be able to bear it afterwards, should they be exposed to it.

Children brought up in the country, who have been accustomed to open air, should not be too early sent to great towns, where it is confined and unwholesome. This is frequently done with a view to forward their education, but proves very hurtful to their health. All schools and seminaries of learning ought if possible to be so situated as to have fresh, dry, wholesome air, and should never be too much crowded.

Without entering into a detail of the particular advantages of wholesome air to children, or the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children which have been under my care, I do not remember one instance of a single child who continued healthy in a close, confined situation; but have often known the most obstinate diseases cured by removing them from such a situation to an open, free air.

Hired nurses are guilty of many faults, which prove fatal to infants. It is therefore the duty of parents to watch over their conduct with the greatest care, and to be extremely cautious in the choice of them.

One of the most common faults of those who nurse for hire is to dose children with stupefactive, or such things as lull them asleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not choose to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodium, saffron, or, what answers the same purpose, a dram of spirits, or other strong liquors. These, though they be certain poison to children, are every day administered by many who bear the character of very good nurses.

A nurse who has not milk enough is apt to imagine that this defect may be supplied by giving the child wines, cordial waters, or other strong liquors. This is an egregious mistake. The only thing that has any chance to supply the place of the nurse's milk must be somewhat nearly of the same quality, as cow's milk, ass's milk, or the like, with good bread. It never can be done by the help of strong liquors. These, instead of nourishing an infant, never fail to produce the contrary effect.

Children are often hurt by nurses suffering them to cry

long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. The nurse who can hear an infant cry till it has almost spent itself, without endeavoring to please it, must be cruel indeed, and is unworthy to be intrusted with the care of a human creature.

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse who had her Godfrey's cordials, Daffy's elixirs, &c., at hand. Such generally imagine that a dose of medicine will make up for all defects in food, air, exercise, cleanliness, &c.

Allowing children to continue long wet is another very pernicious custom of indolent nurses. This is not only disagreeable, but it galls and frets the infant, and, by relaxing the solids, occasions scrofulas, rickets, and other diseases. A dirty nurse is always to be suspected.

Nature often attempts to free the bodies of children from bad humors, by throwing them upon the skin. By this means fevers and other diseases are prevented. Nurses are apt to mistake such critical eruptions for an itch, or some other infectious disorder. Accordingly, they take every method to drive them in. In this way many children lose their lives; and no wonder, as nature is opposed in the very method she takes to relieve them. It ought to be a rule, which every nurse should observe, never to stop any eruption without proper advice, or being well assured that it is not of a critical nature. At any rate, it is never to be done without previous evacuations.

Loose stools is another method by which nature often prevents or carries off the diseases of infants. If these proceed too far, no doubt they ought to be checked: but this is never to be done without the greatest caution. Nurses, upon the first appearance of loose stools, frequently fly to the use of astringents, or such things as bind the belly. Hence inflammatory fevers and other fatal diseases are occasioned. A dose of rhubarb, a gentle vomit, or some other evacuation, should always precede the use of astringent medicines.

One of the greatest faults of nurses is concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from their

nurse's arms, which she through fear concealed till the misfortune was past cure. Every parent who intrusts a nurse with the care of a child ought to give her the strictest charge not to conceal the most trifling disorder or misfortune that may befall it.

We can see no reason why a nurse who conceals any misfortune which happens to a child under her care till it loses its life should not be punished. A few examples of this would save the lives of many infants. But as there is little reason to expect that it ever will be the case, we would earnestly recommend it to all parents to look carefully after their children, and not to trust so valuable a treasure entirely into the hands of a hireling.

The above is only a small specimen of the numerous faults which we know are daily committed by mercenary nurses. It is hoped, however, that these examples will be sufficient to rouse the attention of parents, and to make them look more strictly into the conduct of those to whom they commit the care of their infant offspring.

Were it practicable to have all children nursed and educated in the country, we should lose very few of them. One seldom sees a country farmer without a numerous offspring, most of whom arrive at maturity. Many things conspire to this end. The children of these people are generally nursed by their mothers, they eat plain wholesome food, enjoy the benefit of fresh air, and have plenty of proper exercise; they have rural sports and pastimes suited to their age, and as they grow up find employments adapted to their strength and conducive to their health. In fine, we cannot help joining with the learned Mr. Locke, in recommending the example of the yeomen and substantial farmers as a model to all in the management of their children.

No person ought to imagine that these things are unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which they belong. Effeminacy ever will prove the ruin of any state where it prevails; and when its foundations are laid in infancy it can never afterwards be wholly eradicated.

We would therefore recommend to all parents who love their offspring and wish well to their country, to avoid, in the management of their children, every thing that may have a tendency to make them weak or effeminate, and to take every

method in their power to render their constitutions strong, healthy, and hardy.

By arts like these
 Laconia nursed of old her hardy sons,
 And Rome's unconquered legions urged their way
 Unhurt through every toil in every clime.

CHAPTER II.

OF LABORERS, ARTIFICERS, &c.

THAT men are exposed to particular diseases from the occupations which they follow, is a fact well known; but how to remedy this evil is a matter of some difficulty. Most people are under a necessity of following the employments to which they have been bred, whether they be favorable to health or not. For this reason, instead of inveighing, in a general way, against those occupations which are hurtful to health, we shall endeavor to point out the circumstances in each of them from which the danger chiefly arises, and to propose the most rational methods of preventing it.

Chemists, founders, glass-makers, &c., are often hurt by the unwholesome air which they are obliged to breathe. This air is not only loaded with noxious exhalations, but is so parched, or rather burnt, as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent these ill consequences, as far as possible, the places where such occupations are carried on ought to be constructed with the utmost care for discharging the smoke and other exhalations, and admitting a free current of fresh air. Such artists ought never to continue too 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