

## ARTIFICIAL DIET FOR INFANTS.

It should be as like the breast-milk as possible. This is obtained by a mixture of cow's milk, water, and sugar, in the following proportions.

Fresh cow's milk, two thirds; Boiling water, or thin barley water, one third; Loaf sugar, a sufficient quantity to sweeten.

This is the best diet that can be used for the first six months, after which some farinaceous food may be combined.

In early infancy, mothers are too much in the habit of giving thick gruel, panada, biscuit-powder, and such matters, thinking that a diet of a lighter kind will not nourish. This is a mistake; for these preparations are much too solid; they overload the stomach, and cause indigestion, flatulence, and griping. These create a necessity for purgative medicines and carminatives, which again weaken digestion, and, by unnatural irritation, perpetuate the evils which render them necessary. Thus many infants are kept in a continual round of repletion, indigestion, and purging, with the administration of cordials and narcotics, who, if their diet were in quantity and quality suited to their digestive powers, would need no aid from physic or physicians.

In preparing this diet, it is highly important to obtain pure milk, not previously skimmed, or mixed with water; and in warm weather just taken from the cow. It should not be mixed with the water or sugar until wanted, and not more made than will be taken by the child at the time, for it must be prepared fresh at every meal. It is best not to heat the milk over the fire, but let the water be in a boiling state when mixed with it, and thus given to the infant tepid or lukewarm.

As the infant advances in age, the proportion of milk may be gradually increased; this is necessary after the second month, when three parts of milk to one of water may be allowed. But there must be no change in the kind of diet if the health of the child is good, and its appearance perceptibly improving. Nothing is more absurd than the notion, that in early life children require a variety of food; only one kind of food is prepared by nature, and it is impossible to transgress this law without marked injury.

There are two ways by the spoon, and by the nursing-bottle. The first ought never to be employed at this period, inasmuch as the power of digestion in infants is very weak, and their food is designed by nature to be taken very slowly into the stomach, being procured from the breast by the act of sucking, in which act a great quantity of saliva is secreted, and being poured into the

mouth, mixes with the milk, and is swallowed with it. This process of nature, then, should be emulated as far as possible; and food (for this purpose) should be imbibed by suction from a nursing-bottle: it is thus obtained slowly, and the suction employed secures the mixture of a due quantity of saliva, which has a highly important influence on digestion. Whatever kind of bottle or teat is used, however, it must never be forgotten that cleanliness is absolutely essential to the success of this plan of rearing children.

The quantity of food to be given at each meal must be regulated by the age of the child, and its digestive power. A little experience will soon enable a careful and observing mother to determine this point. As the child grows older the quantity of course must be increased.

The chief error in rearing the young is overfeeding; and a most serious one it is; but which may be easily avoided by the parent pursuing a systematic plan with regard to the hours of feeding, and then only yielding to the indications of appetite, and administering the food slowly, in small quantities at a time. This is the only way effectually to prevent indigestion, and bowel complaints, and the irritable condition of the nervous system, so common in infancy, and secure to the infant healthy nutrition, and consequent strength of constitution. As has been well observed, "Nature never intended the infant's stomach to be converted into a receptacle for laxatives, carminatives, antacids, stimulants, and astringents; and when these become necessary, we may rest assured that there is something faulty in our management, however perfect it may seem to ourselves."

The frequency of giving food must be determined, as a general rule, by allowing such an interval between each meal as will insure the digestion of the previous quantity; and this may be fixed at about every three or four hours. If this rule be departed from, and the child receives a fresh supply of food every hour or so, time will not be given for the digestion of the previous quantity, and as a consequence of this process being interrupted, the food passing on into the bowel undigested, will there ferment and become sour, will inevitably produce choleric and purging, and in no way contribute to the nourishment of the child.

The posture of the child when fed:- It is important to attend to this. It must not receive its meals lying; the head should be raised on the nurse's arm, the most natural position, and one in which there will be no danger of the food going the wrong way, as it is called. After each meal the little one should be put into its cot, or repose on its mother's knee, for at least half an hour. This is essential for the process of digestion, as exercise is important at other times for the promotion of health.

As soon as the child has got any teeth, and about this period one or two will

make their appearance, solid farinaceous matter boiled in water, beaten through a sieve, and mixed with a small quantity of milk, may be employed. Or tops and bottoms, steeped in hot water, with the addition of fresh milk and loaf sugar to sweeten. And the child may now, for the first time, be fed with a spoon.

When one or two of the large grinding teeth have appeared, the same food may be continued, but need not be passed through a sieve. Beef tea and chicken broth may occasionally be added; and, as an introduction to the use of a more completely animal diet, a portion, now and then, of a soft boiled egg; by and by a small bread pudding, made with one egg in it, may be taken as the dinner meal.

Nothing is more common than for parents during this period to give their children animal food. This is a great error. "To feed an infant with animal food before it has teeth proper for masticating it, shows a total disregard to the plain indications of nature, in withholding such teeth till the system requires their assistance to masticate solid food. And the method of grating and pounding meat, as a substitute for chewing, may be well suited to the toothless octogenarian, whose stomach is capable of digesting it; but the stomach of a young child is not adapted to the digestion of such food, and will be disordered by it.

It cannot reasonably be maintained that a child's mouth without teeth, and that of an adult, furnished with the teeth of carnivorous and graminivorous animals, are designed by the Creator for the same sort of food. If the mastication of solid food, whether animal or vegetable, and a due admixture of saliva, be necessary for digestion, then solid food cannot be proper, when there is no power of mastication. If it is swallowed in large masses it cannot be masticated at all, and will have but a small chance of being digested; and in an undigested state it will prove injurious to the stomach and to the other organs concerned in digestion, by forming unnatural compounds. The practice of giving solid food to a toothless child, is not less absurd, than to expect corn to be ground where there is no apparatus for grinding it. That which would be considered as an evidence of idiotism or insanity in the last instance, is defended and practised in the former. If, on the other hand, to obviate this evil, the solid matter, whether animal or vegetable, be previously broken into small masses, the infant will instantly swallow it, but it will be unmixed with saliva. Yet in every day's observation it will be seen, that children are so fed in their most tender age; and it is not wonderful that present evils are by this means produced, and the foundation laid for future disease."

The diet pointed out, then, is to be continued until the second year. Great care, however, is necessary in its management; for this period of infancy is ushered in by the process of teething, which is commonly connected with more or

less of disorder of the system. Any error, therefore, in diet or regimen is now to be most carefully avoided. 'Tis true that the infant, who is of a sound and healthy constitution, in whom, therefore, the powers of life are energetic, and who up to this time has been nursed upon the breast of its parent, and now commences an artificial diet for the first time, disorder is scarcely perceptible, unless from the operation of very efficient causes. Not so, however, with the child who from the first hour of its birth has been nourished upon artificial food. Teething under such circumstances is always attended with more or less of disturbance of the frame, and disease of the most dangerous character but too frequently ensues. It is at this age, too, that all infectious and eruptive fevers are most prevalent; worms often begin to form, and diarrhoea, thrush, rickets, cutaneous eruptions, etc. manifest themselves, and the foundation of strumous disease is originated or developed. A judicious management of diet will prevent some of these complaints, and mitigate the violence of others when they occur.