PART II.—ABOUT THE NURSERY

CHAPTER VII

THE MOTHER AND THE BABY

The Young Mother.—Of all the mysterious processes of Nature, the most beautiful, surely, is the development of the human child. From the moment when by union of the parents the minute ovum has received the divine gift of life till the time of its birth and entry into the world, it has passed through a wonderful series of changes. Encased in a bag of fluid by which it is protected from strain or jar, the nine months of prenatal life are spent deeply enshrined in the body of the mother, receiving from her life-giving stream, warmth, nourishment, and materials for growth and evolution.

It is the mother to whom is entrusted the responsibility of providing the best possible conditions for the development of the child. Her health, mental as well as physical, should under no circumstances be neglected, and her aim should be to lay in a store of energy and vitality which will not only benefit the child, but will enable her to meet with confidence the ordeal which is before her.

After all, pregnancy and child-birth are natural
processes; the former should not be attended by physical discomfort, and many mothers feel unusually well during the time. Should, however, anything unsatisfactory in the mental or physical condition arise during pregnancy, it is an indication that medical attention is necessary. The inevitable pains of childbirth are not purposeless, but are by their nature a tangible evidence to the doctor and nurse of the progress which is being made; and in addition they serve as guidance or as warning of possible danger.

A young wife, far from home, who is looking forward to the birth of her first child, has every need of sympathy and help, especially if she is living in a small station where there are but few European women. Hill stations and cities have all the advantages of skilled doctors, nursing homes, and hospitals; but there may be none of these in a small station. In the latter case it will be necessary to make arrangements for the confinement to take place away in a nursing home, or, if preferred, in a bungalow within reach of an experienced doctor. By facing the situation bravely and making her plans at an early stage, the expectant mother will make things easier both for herself and her husband. As soon as symptoms occur which point to pregnancy, she should see her medical adviser to make sure that she is right in her surmise, and, what is most important, ascertain if there is any condition present which might cause complications.

As regards the choice of a doctor there are experi-
enced European medical practitioners, both men and women, in all the larger stations who would undertake the confinement. It should be remembered that, though there are some extremely clever Indian doctors, only those who have held an appointment in a good midwifery hospital conducted on European lines are likely to be expert in midwifery. Indian women do not allow themselves to be examined or personally treated by Indian men, so the ordinary medical man does not get much practical experience in obstetric medicine. There are Indian medical women who have had training in good European hospitals and medical schools and some of them are skilful and trustworthy. There are, however, many very incompetent women calling themselves "lady doctors" who are a danger to the community.

If it is decided that the confinement is to be at home, or in a hired bungalow, the nurse should be engaged at an early stage of the pregnancy. The doctor may be able to recommend a nurse personally known, or one may be obtained from a Nursing Association which supplies European-trained nurses, and has branches in many of the larger stations. Stress must be laid upon the advisability of having the nurse in residence in good time for the event; this is especially important when the doctor is not within easy call or there is a possibility of his not being able to come at very short notice.

During pregnancy the life should be as normal as possible. Plain food and regular exercise with the
avoidance of fatigue or over-strain are important. Constipation should be prevented, and if the teeth show signs of decay they should receive attention without delay. If untoward symptoms appear at any time the doctor should be sent for at once. A calm and cheerful spirit is a most valuable asset and is worth more than any quantity of medicine.

An excellent manual of advice to the expectant mother may be obtained from the Infant Welfare Association, Delhi. It will give all necessary information about preparations to be made and precautions to be taken.

The Baby

Feeding.—There is no question that every child has a right to be fed on the mother’s milk, which is the only perfect food for a baby—only in the rarest of cases is it unsuitable. In tropical countries especially, where the risks inseparable from other methods of feeding are intensified, it is the duty as well as the privilege of every mother to feed her own child. Where Nature makes this impossible it is a calamity to both. The climate certainly increases the strain, and in some cases the mother, however willing, is unable to provide (either totally or partially) the child’s natural food. It is, however, unusual for there to be an entire failure of the secretion. It is generally possible, if there is any milk at all, to start by partial breast feeding, supplementing with modified cow’s milk or other artificial food. If this course is persevered in, even after several weeks, when the mother’s health is re-established, she
may be rewarded by the appearance of milk adequate in quantity and quality.

From the very beginning regularity of feeding should be the rule. It is astonishing how quickly habits are formed in the young child, and the tenacity with which he adheres to habits once formed is equally surprising. The strain on the mother is very much lessened when regularity is observed and the child is fed every three hours, which experience has shown to be the most satisfactory interval between feeds. Not more than six feeds should be given in the twenty-four hours, and night feeds are quite unnecessary. The child and the mother need a period of undisturbed sleep, during which the stomach as well as other organs can rest. A stomach cannot do its work properly without a periodical rest; in the case of a young child this is essential. If the feeds are given with regularity at seven, ten, one, four, seven, and ten o'clock the mother's life can be adjusted so that the feeding of the child will fit in with her regime.

The feeds should be given slowly, each one taking from 15 to 20 minutes.

If it is found that insufficient food is being taken, a little extra artificial food may be given at the end of each meal, or it may be necessary to substitute artificial food for the mother's milk once, twice, or several times in the day.

The Wet Nurse.—When the mother's milk fails to appear, the best substitute is that of a wet nurse, provided that it is possible to obtain one who is satis-
factory in health and disposition. Doubtless the prejudice which exists against native foster-mothers is not without foundation, but with a delicate or premature child and difficulty in obtaining fresh cow's milk or other artificial substitutes, a wet nurse is the best solution of the difficulty. No wet nurse should be employed without a thorough examination by a doctor, and a careful inquiry into her antecedents and personal habits. Indian foster-mothers are usually devoted to their charges, but they need continual supervision. It is difficult to introduce order and regularity in their care for the child.

Sleep.—Newly born children sleep about nine-tenths of the time, waking only for food and the bath. As the child grows older the quantity of sleep necessary becomes less; a six months' old child should sleep about two-thirds of the time, one of a year 14 to 16 hours, a child between two and three years from 12 to 14 hours, between four and five from 10 to 12 hours.

Young babies usually fall asleep after each meal. Older children should be put down to sleep in the morning and afternoon. Later they should sleep only during the afternoon after their chief meal. In India and the tropics a rest during the day is required by all children. They should be undressed and put to bed in a quiet and darkened room, no talking or play being allowed for a specified time.

Some children find difficulty in going to sleep at once after being put to bed at night. Among the causes which may give rise to this are late hours, excitement,
cold feet, lack of fresh air, indigestion, wet clothing, illness, or habit. These causes are all removable. In a healthy child who is properly fed and has adequate exercise, wakefulness is not natural and is always due to some definite cause.

**Night Terrors.**—These are the bane of some nervous children who regularly wake up at night in a panic of terror. They are due to over-excitement, and when they exist, the child should be kept very quiet towards bed-time. Boisterous play and exciting stories should be prohibited. The evening meal should be digestible, the sleeping-room quiet with a shaded light.

**Habits.**—Habits are quickly formed in a young child, but are not easily broken. Regularity of feeding, sleep, and exercise should be insisted upon. A child accustomed to be taken up when it cries, constantly demands this attention, and if persistent it may be necessary to have several battles to break the habit. The child should be allowed to finish its cry. On the first occasion this may take an hour or even more, the second may require less time, and by the third the child will probably have learned its lesson. The precaution of seeing that there is no real cause for tears must, however, be taken as a preliminary. The child should be warm, dry, and comfortable. It is extremely unlikely that a child who habitually cries for no adequate reason, will injure himself, if allowed to continue.

**The Cry**—A careful mother or nurse will soon learn to distinguish between the different cries of a child.
since crying is the only means it possesses of making its wants known. A young baby exercises its lungs by crying; the cry is loud and strong, and the baby gets red in the face: 15 minutes or half an hour a day is not too long a period for exercise of this kind. The cry of pain is usually strong and sharp, sudden and not continuous; the hunger cry is continuous and fretful; the cry of temper is lusty and accompanied by kicking or stiffening of the body; the cry of illness is a moaning fretful sound, though in illness real crying is easily excited. The cry of habit is insistent and stops immediately the wish is granted, whether it is to be rocked, taken up, carried about, or to have the "dummy" to suck. A child sometimes cries between meals or during the night because he is thirsty. A young baby may have sips of water from a spoon or an older child may drink from a cup or glass.

The Bath.—In the tropics children are apt to perspire profusely, so the morning and evening baths are an important part of the toilet.

For the hot bath, the water should be of moderate temperature and the soap mild and unirritating. A sponging with cool but not cold water may follow. A good coal-tar soap will be of service when the skin is irritable. The skin should be very carefully dried, especially between the folds, and a dusting powder used consisting of equal parts of zinc oxide, boracic acid, and starch.

A tepid bath may be taken by the older children; a really cold bath is not safe in the tropics. After
exercise the child must always wait until the body has cooled before a bath is taken.

**Exercise and Fresh Air.**—A young baby exercises its limbs by kicking and squirming and waving its arms in the air. From the beginning it should have regular exercise. Twice a day, at least, the baby should be placed on a blanket or rug in a warm room, with no clothing on but a vest, and allowed to roll and kick. At a later stage, a nursery fence placed round a mattress or rug is an admirable playground. As much time as possible should be passed in the fresh air, due regard being paid to the importance of securing protection from the sun's rays, dust, and wind. Cold weather is no drawback to outdoor life, provided that the clothing is ample and the feet and body are warm. In the hot weather of the plains children must not be allowed to be out in the sun; topees must always be worn, and outdoor exercise taken in the early morning and after sundown. It must be remembered that evenings may be chilly in the hills, and warm wraps must be in readiness.

**Clothing.**—Clothing should be regulated according to the season and the temperature. Babies should not be overdressed. An abdominal band of thin flannel, or a few turns of a gauze bandage round the body, not too tightly wound; a napkin; long-sleeved and high-necked vest; a petticoat with bodice; and a frock—these are all that are necessary. All garments should be open and fastened down the back with flat linen buttons—the three may be slipped on together. They should
cover the feet in young babies, but should not be too long. In winter a second petticoat may be used. The material for vest and petticoat may be soft wool, or wool and silk mixture. When the baby is short-coated, knickers of simple shape may be used. The napkins may be of ordinary soft washing material or of a thin cheap soft gauze which can be obtained in the bazar. If of the former material, when once wet or soiled, they should never be used before being washed, boiled, and thoroughly dried. Napkins made of gauze are to be recommended. They are very inexpensive, so can be burned after use, or, if economy is an object, they may be washed and used again. Older children should not be allowed to go shoeless; sandals or soft shoes should always be worn. It is advisable also for them to wear long stockings.

A large supply of clothes is essential. Frequent changes are necessary, especially in the hot season; damp clothes soiled by perspiration are not safe. Fortunately silk and cotton materials of all sorts are to be obtained at a comparatively small cost, and are soon made up. A few well-cut patterns or models and good taste will do wonders. Children look their best in simple, fresh, and clean garments.

In taking washing materials out from home, it should be remembered that few coloured materials will survive the ordeal of the dhobi; most coloured articles return faded and drab-looking.

**Physical Development of the Child.**—These tables may be of use in indicating the average weight, height,
measurement of head, dentition, etc., of children at different ages.

<table>
<thead>
<tr>
<th>Age</th>
<th>Weight (lbs.)</th>
<th>Length (ins.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 months</td>
<td>9 1/2</td>
<td>20 1/2</td>
</tr>
<tr>
<td>6 months</td>
<td>12</td>
<td>20</td>
</tr>
<tr>
<td>9 months</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>1 year</td>
<td>18 1/2</td>
<td>29</td>
</tr>
<tr>
<td>2 years</td>
<td>30</td>
<td>32 1/2</td>
</tr>
<tr>
<td>3 years</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td>4 years</td>
<td>37</td>
<td>38</td>
</tr>
<tr>
<td>5 years</td>
<td>41</td>
<td>41 1/2</td>
</tr>
<tr>
<td>6 years</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>7 years</td>
<td>48</td>
<td>48</td>
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</tbody>
</table>

Weight.—A baby who is thriving puts on weight with more or less regularity, the average rate of increase being 5 ozs. per week. During the first few months of its life a premature child is to be counted younger than its actual age. It usually overtakes the normal at a later stage, though occasionally it may continue to be undersized.

From five to ten years boys grow more rapidly than girls, from ten to fifteen girls grow more rapidly than boys.

A child who is growing tall usually becomes thinner.

Circumference of Head.—The average circumference of a child’s head is:

- 14 inches at birth
- 16 " 6 months
- 18 " 12 "
- 20 " 2 years
- 21 " 4 "
- 21 1/2 " 12 "
Dentition.—First set—20 teeth:

Two central lower teeth may appear from 5th to 9th month
Four upper central,, 8th to 12th ,,  
Two lower central} ,, 12th to 18th ,,  
Four front double} ,, 18th to 24th ,,  
Four canine teeth ,, 24th to 30th ,,  
Four back double,,

At 1 year a child usually has 6 teeth
,, 1\1/2 years ,, 12 ,,  
,, 2 ,, 16 ,,  
,, 2\1/2 ,, 20 ,,  

The time of appearance of the teeth is very variable.
In some families the children cut their teeth early, in others, late. Illness and debility may cause delay in cutting teeth, but the commonest cause of delayed dentition is rickets.

Progress—

An average child holds up his head during the fourth month, but some children can do this considerably earlier.

An average child smiles during the second month and laughs aloud from the third to the fifth month.

An average child recognizes voices and sounds from the third to the fourth month.

An average child reaches for toys and handles them from the fifth to the seventh month.

An average child sits unsupported during the seventh or the eighth month.

An average child bears his weight on his feet from the ninth to the tenth month.
THE MOTHER AND THE BABY

An average child stands with assistance from the eleventh to the twelfth month.
An average child can walk alone at fifteen or sixteen months.
An average child begins to talk at about twelve months.
An average child can string words into sentences at two years.
An average child distinguishes colours during the second year.

*Respiration*—

<table>
<thead>
<tr>
<th>Age Description</th>
<th>Breaths per minute</th>
</tr>
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<tbody>
<tr>
<td>A newly-born child</td>
<td>44</td>
</tr>
<tr>
<td>In the early months a child</td>
<td>35-40</td>
</tr>
<tr>
<td>At the end of the first year</td>
<td>28</td>
</tr>
<tr>
<td>From three to four years</td>
<td>25</td>
</tr>
<tr>
<td>At fifteen years</td>
<td>20</td>
</tr>
</tbody>
</table>

*Pulse*—

In the second year pulse rate is 110

<table>
<thead>
<tr>
<th>Age Description</th>
<th>Pulse Rate</th>
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<tbody>
<tr>
<td>fifth</td>
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</tr>
<tr>
<td>sixth</td>
<td>90</td>
</tr>
<tr>
<td>twelfth</td>
<td>84</td>
</tr>
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</table>
CHAPTER VIII

FOOD AND FEEDING

Artificial Feeding of Infants.—Pure fresh cow's milk, modified to the human standard, is the best substitute for human milk. Modification is necessary, as undiluted cow's milk is much too strong a food for a young child; further, there are important differences, both in nature and composition, between the food ideal for the calf and that suitable to the baby.

Milk contains in addition to water three important elements, i.e. proteid or curd, fat or butter, and carbohydrates or sugar. There are also certain other substances, minute in quantity, but most important in function and indispensable to nutrition. Among these substances are salts, vitamins, etc.

Human milk contains: Proteid, 1.25 per cent.; Fat, 3.5 per cent.; Carbohydrates, 7.10 per cent.; Mineral matter, 0.27 per cent.

Cow's milk contains: Proteid, 3.5 per cent.; Fat, 3.5 per cent.; Carbohydrates, 4 per cent.; Mineral matter, 0.75 per cent.

It will be noted that in cow's milk there is a large excess of curd and a deficiency of sugar. A mixture of equal quantities of cow’s milk and water contains
proteid in very similar proportion to that present in a corresponding amount of human milk, but less fat and sugar. The fat may be supplied by the addition of cream or fat in some other form, and the sugar by adding cane-sugar or lactose.

In order to make one pint of cow’s milk modified to human standard the requisite quantities are—

½ pint cow’s milk; 1 oz. cream (33 per cent.);
½ pint water; 1 oz. sugar.

Cow’s milk varies in richness: milk of average quality contains 33 per cent. butter fat.

The curd of cow’s milk is much less digestible than the curd of human milk. It is less finely divided and exists in a different form. It is apt to collect in large masses in the stomach, and is digested with difficulty by the child.

Cow’s milk may be made more digestible by the process of peptonization or pre-digestion. In the artificial feeding of premature children and in cases of illness or of weak digestive powers, the milk may be wholly or partially peptonized, according to the child’s needs. The process of peptonization should be gradually dispensed with, as the child’s stomach becomes more capable of digesting the curd.

A rough method of ascertaining the quantity of humanized milk to be given to the average child at different ages, is to multiply the weight of the child in pounds by two. The product will give the quantity in ounces for a twenty-four hours’ supply. This, if divided by the number of feeds during the day, will
give the amount in ounces of each feed, i.e. a child weighs 10 lbs.; the quantity of modified milk required for a day's supply is $10 \times 2 = 20$ ozs.; six feeds are given during the day, therefore the amount for each feed is about $3\frac{1}{2}$ ozs.

Children differ in the quantity of food which they need or can assimilate, and judgment must be exercised in deciding whether a child requires more or less than the average. If he is contented and is flourishing, sleeping well and gaining weight at the rate of about 5 ozs. per week, it may be taken for granted that he is receiving an adequate amount of food; though if he digests the food properly and yet calls for more, he is not getting enough. Overfeeding is most harmful. It results in indigestion, flatulence, and colic, and if long continued, may lead to dilatation of the stomach. A normal child, well trained from birth, will cease feeding when he has had enough, but a child suffering from indigestion will often cry for more food, because he obtains relief from discomfort when his stomach is full. The relief is very temporary, however, and the pain and uneasiness are increased by the remedy. Excess of food, or haste in taking it, will in a healthy child, lead to vomiting within a few minutes.

Habitual vomiting between feeds may be a symptom of indigestion caused by food too rich in fat or sugar. The amount of these added to the mixture may be cautiously reduced. Excessive flatulence or wind may be due to an excess of sugar.

**Sterilization.**—All milk given to children should
be sterilized when there is any doubt as to its purity. Milk is a splendid food for germs of all sorts, and if harmful germs gain access to it, they will increase and multiply. Milk thus infected may be the cause of many illnesses, and is in truth a poison to the child.

By the process of sterilization, milk may be rendered safe and free from germs. In sterilizing, milk is heated to boiling point (212° F.), and is kept at this temperature for an hour or more. Milk thus treated if kept on ice will keep sweet two or three weeks, but not longer.

In subjecting milk to a temperature sufficiently high for the destruction of germs, some of the valuable accessory substances which exist in fresh, unboiled milk are destroyed. It is also less digestible, and is more constipating than untreated milk.

A sterilizing apparatus, such as the Soxhlet, should be obtained in all cases where cow's milk is used as the baby's staple food. The apparatus consists of a metal framework resembling the old-fashioned cruet. It holds six bottles, each of which takes one feed. The milk, which should be perfectly fresh and clean, is modified by the addition of the requisite quantities of water, cream, and sugar. A quantity sufficient for twenty-four hours' consumption is measured and divided into six portions, each of which is poured into a bottle. The bottles, sealed with the rubber corks, or with sterile cotton wool, are placed in the frame, which is immersed in a pan about one-third full of water. The lid is placed on the pan and the water
is heated and kept boiling for five minutes. The bottles are then removed in the frame and are rapidly cooled and kept on ice or in a cool place. As each feed is needed, a bottle is taken out and placed in hot water to reheat to the required temperature. It is then unsealed and is ready for use. Milk thus treated is only relatively sterile but is safe for ordinary use.

In an emergency, milk may be sterilized by heating it in a pan to boiling point just before use. It should be used directly it is cool enough and should not be kept longer.

**Pasteurization.**—In this process the water in the pan is brought to a temperature of 160 degrees, and the bottles containing the food are kept at this temperature for thirty minutes, and are then rapidly cooled. Pasteurization will result in the destruction of germs contained in the milk which, however, will not keep sweet for more than a day or two. The taste is more pleasant than that of sterilized milk, and the properties are less altered.

**Dried Milk.**—In places where pure and reliable cow's milk cannot be obtained, one of the various brands of dried milk is the best substitute. This has the advantage of being sterile and portable, and in travelling or on board ship it is the most satisfactory artificial food for infants.

One teaspoonful of dried milk dissolved in one ounce of water is of the same strength as ordinary cow's milk. It should be remembered that the product is cow's not human milk, and that it is necessary to
further dilute with water and to add fat and sugar, as in the case of cow’s milk.

Accessory Substances.—Prepared dried milk is in many respects satisfactory, but like sterilized cow’s milk, it is deficient in certain accessory substances, such as vitamines, which are necessary for the growth and development of the child. These may be best supplied by the addition to the diet of orange juice and a small quantity of broth made from bones and fresh vegetables. The orange juice may be given sweetened between meals, one teaspoonful daily. Broth may be substituted for part of the water used in one of the feeds. One tablespoonful daily at the age of three months should be gradually increased to three tablespoons at nine months.

When fresh sterile cream cannot be obtained to supply the deficiency of fat, a manufactured substitute may be used. Cod liver oil is useful in small quantities, but it is apt to upset the digestion.

Condensed Milk.—Condensed milk generally contains an excessive amount of sugar. Babies like it, and for a time may appear to flourish; but, though it may be given most usefully in emergencies, as it is a very digestible and delicate food, its use should never be too long continued. It should be gradually replaced by either fresh or dried cow’s milk, since it does not contain all the substances requisite for the building up of the body.

Rickets.—Babies fed on condensed milk develop rickets, though they may gain weight rapidly and
appear to be thriving; they seem to have very little power of resisting infection, and once attacked by illness quickly succumb.

Unfortunately the results of wrong feeding are seldom apparent at once. Many a mother is proud of her plump and heavy baby, for she is not yet aware of the softness of its bones and flabbiness of its muscles. To the initiated eye the child is already a victim of rickets. It is only at a later stage that the mother will become conscious of the crooked legs and other deformities characteristic of rickets.

The Feeding of a Premature Child.—A premature child may be too feeble to suck, and, if so, must be fed by hand till it has gained strength. The mother’s milk may be drawn off and a spoon used for feeding. When the mother’s milk or that of a wet nurse is not available, cow’s milk modified to human standard may be substituted; but, as the child’s digestive powers are very limited, the milk must first be carefully predigested or peptonized. Peptonizing powders (Fairchild’s) may be used. One powder is dissolved in a quart of milk. The bottle is immersed in a pan of water, kept at a temperature of 110 degrees, and allowed to stand in it for the required period. Three hours is necessary for complete predigestion. The process is stopped by bringing the milk to the boil. The time of peptonization should be lessened as the child becomes more capable of digesting for itself. A reduction of ten minutes each day may be made till the process is entirely discontinued.
A premature child should be fed with regularity every three hours from birth. The first feed should consist of a teaspoonful of breast milk, or of the modified completely predigested milk, if human milk is not available. The amount given should be gradually increased, till at the end of the first week the child is taking 1 oz., and by the end of the second week 1½ ozs. at each feed, if well absorbed.

**Preparation of Food.**—Every care should be taken to see that all utensils used in the preparation of a child's food are absolutely clean. Rubber corks and nipples should be boiled and kept in boric acid solution. The bottles should be washed in hot water and soap, a special brush being used for cleaning inside. The bottles should then be boiled in water for fifteen minutes before being refilled. The rubber teats should be soft and flexible.

**Weaning.**—The age at which the process of weaning should begin depends on many factors affecting both child and mother. If the mother is strong and healthy and the child is doing well, the substitution of modified milk may be begun at nine months. In all probability the child will already have been accustomed to having a bottle once or twice in the day. The process of weaning should be gradual, beginning with a midday meal of modified milk. As soon as the child is accustomed to this, a change is made to two feeds a day, and the substitution is continued till weaning is complete. The modified milk may then be strengthened by the gradual omission of water, cream, and sugar, till, by
the time the child is a year old, he is taking plain undiluted cow’s milk. The change is made gradually in order that the child’s digestive organs may be educated by degrees to digest the stronger food.

Weaning should not be begun when the child is teething or is out of sorts, when he is ill, or during the hot weather.

Milk may be given in a bottle or, better still, from a spoon.

In cases when owing to deficiency of milk or illness of the mother, or from any other reason, it is considered advisable to wean the child at an earlier age, it may then be necessary, especially if the child is delicate, to begin by partially predigesting the modified milk. This process, however, should never be continued too long, and must be dispensed with as the child becomes accustomed to the change of food.

If it is thought advisable to wean a child rapidly, modified and, if necessary, predigested milk may be given for all the feeds.

Feeding the Older Baby.—When the teeth begin to appear, a hard crust or smooth bone may occasionally be given to the child, so that he may exercise his teeth and jaws.

As soon as weaning is complete, if the child is nine months of age, or in some cases earlier, the diet should be extended to include cereals. The midday meal may then consist of well-cooked gruel made with barley or oatmeal. Rusks, soft-boiled egg, and potatoes mashed with butter may be gradually introduced.
At twelve months and onwards, the midday meal should consist of broth (chicken or mutton), egg, or beef juice, with a little mashed potato, bread crumbs or crisp toast and butter. Five meals a day only should be given; the first and last should consist of milk, the others of milk with a cereal.

A small quantity of vegetable such as mashed turnip, carrot, or artichoke, fruit juice, prune juice, a little baked apple or milk pudding may be added to the diet by degrees. The bottle should be discontinued at twelve months and the quantity of milk lessened.

From the eighteenth month onwards minced chicken or fresh fish, vegetables, and stewed fruit without skins or seeds, may be given. Cocoa or weak, slightly sweetened, fresh lemon-water may be used as a change from milk. An abundance of water may be given to drink between meals.

After two years, minced under-done mutton or beef may be allowed. When the diet includes butcher's meat, the milk should be restricted to half a pint with the morning and evening meals. Four meals only should be the rule, the late evening one being omitted, and nothing should be eaten between.

Food which should not be given to a child under four years of age:

Meat.—Sausage, pork, bacon, game, kidney, liver, over-cooked meat of any kind, rich sauces or spices, curries of all kinds.
Vegetables.—Raw tomatoes, cucumbers, celery or salads, cabbage, onions, fried vegetables.
Sweets.—Pies or tarts, rich puddings.
Fruit.—Raw bananas (unless mashed to a pulp), currants, nuts, candied or dried fruits, grapes (unless seeds and skins are removed).
Bread.—All new white bread, sweet cakes, especially those containing currants and dried fruits.
Drinks.—Tea, coffee, wine, etc.

The Diet of Children

The diet of older children should be simple and digestible. Highly seasoned and spiced dishes, hot curries, etc., are unsuitable for children of any age. Pish-pash made with chicken or tender mutton, kedgeri, dal and rice, pillau and the sour milk preparations as sold in the bazar (if made at home with pure milk), are both nutritious and popular in the nursery. Fruit should always be served with breakfast. A cereal and milk, an egg or simple dish, toast and butter with some fruit will be ample for this meal. Meat should not be given more than once a day, and then only in small quantities at the chief meal. Crusty wholemeal bread is more suitable than soft white bread, which should be given only in the form of crisp toast.

Food for children should be carefully chosen, and should be as varied and appetizing as possible, and served in an attractive manner.

The child should be taught good table manners from the earliest age. As soon as may be, he should
sit up at the table and learn to feed himself, naturally under supervision. He should be made to eat slowly and to masticate properly.

A healthy child has a good appetite and does not need urging to take his food. Some neurotic or delicate children eat very little and have capricious appetites, especially in the hot weather. These children need careful management. Their food should be tempting, but on no account should they be bribed to eat by the offering of rich or indigestible articles. Too much urging and constant watching at meal-times is as mistaken a policy as that of giving sweets, biscuits, or other trifles between meals to make good the deficiency. If a child refuses to eat without any good reason, no food should be given till the next meal.

When a child takes a dislike to some special and necessary article of diet, it may be possible for a time to substitute something equally suitable. An attempt should be made, however, to accustom him to take what is offered, by occasionally giving him a small portion of the food he dislikes at the beginning of a meal, and withholding all other food till this is eaten. To have acquired a habit of being faddy or fastidious about food is a great drawback in later life.
CHAPTER IX

THE HEALTH OF THE CHILD

As a general rule a healthy child is a happy child, though in different children there is great variation in the amount of vitality and animal spirits. The healthy child is cheerful, loves exercise and fresh air, eats well, sleeps soundly, and takes an interest in his surroundings. A fretful, peevish, languid, or lethargic child is not in good physical condition. To a sympathetic observer the aspect and temper will reveal much.

Apart from more obvious indications, Nature has provided three valuable means of ascertaining when and to what degree a child is out of health. These are the observation of temperature, pulse, and respiration. Every mother should be able to take the temperature of her child, to feel and count the pulse at the wrist, and to note the number of respirations per minute. If she is wise, she will avail herself of any opportunity of taking the classes in First Aid and Home Nursing given by the Red Cross Association. She will in doing this acquire much useful knowledge, and will have practice in some of the necessary duties connected with the care and responsibility of children.
Temperature.—The temperature of a healthy child is 98.4 degrees, though in some cases there may be variations from 98 degrees to 99.5 degrees in apparent sound health. There is in the body a wonderful mechanism by means of which in health the temperature remains constant whatever the extremes of heat or cold outside. In all children the mechanism is very delicate, and in some cases the variation may appear to be out of all proportion to the cause, a slight upset being accompanied by a sharp rise and sudden fall. A normal temperature is a most valuable indication of health, one which rises and remains high or is definitely above or below normal is a very sure sign that there is something wrong—that the body is acting on the defensive against some harmful condition. Rise of temperature is one of Nature’s most powerful weapons against attack by micro-organisms or germs. In the beginning a rise of temperature is not an evil in itself; but it becomes a destructive agency when the enemy has proved too strong and it remains persistently high.

A raised temperature is one of the earliest danger signals and must never be disregarded. The clinical thermometer should always be at hand in the nursery and used when there is any sign of indisposition in a child. Should there be no rise, it is a relief to the mother, and if the mercury does rise above normal, she will be on her guard. The rise may be merely a transient affair, and the child quickly well again, or it may be the beginning of a serious illness.
It must be remembered that during illness in children the temperature rises proportionately higher than it does in adults. For example, a condition which in a grown-up person would cause a rise to 101 degrees, might in a child produce a rise to 103 or 104 degrees.

Temperature may be taken in the armpit, groin, mouth, or rectum. In young children it is most conveniently taken in the groin or armpit. Older children should be trained to have it taken in the mouth. The rectal temperature is slightly higher (99.5 degrees); it is more trustworthy, but only experienced people should attempt to use the thermometer in the rectum.

The thermometer should be cleansed each time after use, and allowed to stand in an antiseptic solution.

The most common causes of a transient rise of a child's temperature in the tropics are stomach upsets (especially during the cutting of teeth), constipation, and sore throats. More prolonged and serious rises take place in such conditions as malaria, influenza, sand-fly fever, dengue, tubercle, other infectious fevers, dysentery, diphtheria, etc.

**Pulse.**—The normal rate in children is higher than in adults. At birth, the average rate is 130; it comes down to about 120 at one year, 100 at two years, 96 at three years, and at seven years is about 84. It is often raised temporarily by excitement and other unimportant causes. In acute illness the rate may be
as high as 150 and even 170. With rise of temperature there is usually a coincident rise of pulse rate. Slight irregularity in a quick pulse may have no special significance, but a slow irregular pulse may be a sign of brain trouble.

Respiration.—A child in good health breathes regularly and easily. The rate of respirations per minute may vary from 44 in the newly born to 28 at the end of the first year. When there is obstruction in the nose or throat the breathing is rendered difficult and may be irregular. In acute bronchitis it is somewhat increased in rate, while in pneumonia and other lung affections the respirations may be 60 or 70 to the minute.

Care of the Eyes.—In India and other countries with a hot and dry climate, particles of sand and dust, often contaminated by poisonous germs, are liable to get into the eyes; consequently ophthalmia or inflammation of the eyes is very prevalent. As ophthalmia is most infectious and is a dangerous disease often leading to blindness, it is necessary to take a great deal of care to guard children from contact with it. Ayahs or servants having any inflammation of the eyes should be sent off duty at once.

When travelling with children it is wise to take a small bottle of weak boracic solution and a packet of sterilized cotton wool, so that the eye may be bathed if a fly, cinder, or gritty particle enters it during the journey. In bathing an inflamed eye, a precaution, which never should be omitted, is not to touch a
sound eye with the pledget which has been used for the other eye, because it is very easy to convey infection from one eye to the other.

Symptoms of infection are—pain, redness, and watering of the eye, with dislike of the light. If there should be any pus or matter the case is serious, and medical advice should be sought without delay. Treatment should always be begun at once, the eye should be bathed frequently with the boracic solution, and light excluded by means of a brown-paper shade. If the child is likely to rub the eye a wad of cotton wool soaked in boracic solution may be bandaged over it.

The glare of strong sunlight, especially during travelling, is exceedingly trying and may cause eye-strain. Dark glasses may be worn by older children; the eyes of young children should be protected by drawn blinds or screens, and when taken out in their perambulators, the hood should always be ample enough to ensure complete shade from glare.

When a child begins to use his eyes for reading or fine work, he must be made to sit in such a position that the light comes from behind and over the left shoulder. It must be noticed if he has a tendency to hold the book too near or too far away from his eyes, or if there is any squint. When any one of these conditions exists the child’s eyes should be examined by an experienced oculist, so that any error of vision may be corrected by glasses. Early attention may prevent much future trouble.

Care of the Ears.—Discharge from a child’s ear is a
sign that something is wrong. After an illness such as measles, influenza, or scarlet fever, there is liability to ear trouble. Pain or discharge should mean a visit to the doctor, so that any mischief, if present, may be detected at an early stage and future deafness prevented. It is unwise to syringe a discharging ear without explicit directions from the doctor, for much damage may quite unwittingly be done by an inexperienced person. The ear passage is separated from the very delicate and intricate mechanism of the organ of hearing by a membrane, the ear drum. When the membrane is ruptured, as may be the case when there is a discharge, syringing may be quite the wrong kind of treatment.

If a button, bead, or insect enters the ear, or if there should be an accumulation of wax, gentle syringing may be used. First pour from a warmed teaspoon a few drops of sweet oil into the ear, allow them to remain for a few minutes, then very gently syringe the ear with warm boracic solution. If the object does not come away, do not use force, and above all do not put any kind of instrument into the passage. The child must be taken to the doctor, who will remove the obstructing body without damage.

**Nose and Throat.**—The all-pervading dust of India and the tropics has an irritating effect on the delicate cellular lining of the nose and throat, and some children are very subject to colds in the head and sore throats, especially during the season of dust and sand storms. With older children gargling should be a daily habit,
and when epidemics of influenza, septic throats, etc. are prevalent a simple gargle of alum, chlorine, or salt solution should be available and frequently used.

Mouth breathing is dangerous and should be prevented. From the first days of a child's life it should be made to form the habit of nose breathing. One of the commonest causes of adenoids and enlarged tonsils is mouth breathing in early infancy. It is easy by altering the position of a sleeping child and gently closing its mouth to make it breathe properly. When awake, each time the mouth is seen to be hanging open, it should be closed by raising the chin. The muscles will soon learn to react to this stimulus, the mouth will be kept shut, and the habit of nose breathing acquired.

When the child has a cold and the nose is blocked by discharge, gentle syringing with a weak boracic or salt solution will give relief. Persistent breathing through the mouth should receive medical attention.

If any small object becomes impacted in a child's nose the opposite nostril may be closed with a finger and the child made to sniff downwards. When this is not effectual in removing the obstruction, gentle syringing through the opposite nostril may be tried. This may have the result of sweeping out the object through the orifice by which it entered. No force must be used, and if the attempt is not successful the child must be taken to a doctor.

The Teeth.—Care of the teeth is important in the tropics where decay may set in suddenly and advance
very rapidly. A periodical inspection should be made and advantage taken of a visit to a station in which there is a dentist, to have the teeth overhauled. The first set of teeth should not be allowed to decay without treatment. Their presence in good condition, till they are replaced by the second teeth, is necessary, both for good digestion and preservation of the shape of the jaw.

Regular cleaning of the teeth should be insisted upon, and excessive sweet eating not allowed. The childish love of sweets is no doubt a natural instinct, but if over-stimulated it becomes an abnormal craving. One or two sweets given daily as a treat after a meal, when the child is not hungry, will give far more satisfaction and pleasure than would be obtained from an unlimited supply accessible at will. Visitors should be discouraged from presenting the children with boxes of sweets; if they do so the sweets should be kept in reserve by the mother or nurse, and the periodical selection of sweets by the children made into an eagerly anticipated ceremony.

A child's teeth are meant for use, and as soon as they appear crusts, crisp toast, and hard biscuits should be given. They will not develop properly when they have not enough work to do, as is the case when the food is soft and pappy.

Glands.—Nature has provided our bodies with a set of organs called lymphatic glands, which are small collections of soft tissue stationed at intervals along the course of the chief blood vessels. One of their
duties is to act as a barrier against invasion of the body by germs which, having entered through some unguarded opening, are liable to cause abscesses or other infections resulting in illness.

In intercepting these germs and in other ways helping in their destruction, the glands become enlarged and nodular, and in some situations, such as the neck, armpits, groins, etc., may be felt and even seen, though in normal health they are imperceptible to touch or sight. Tonsils are collections of lymphatic tissue, so are adenoids. If a chain of small nodules is felt running down the neck when it is gently pressed with the finger-tips, it is a sign that there is infection of some kind present in the head, throat, or teeth.

The Skin.—The moist heat which is so trying in many parts of India and the tropics causes profuse sweating which, in some people, gives rise to a condition known as prickly heat. The burning and itching is very troublesome, especially to delicate children, and rubbing and scratching which are irresistible may result in boils and other skin infections. The rash appears all over the body, especially in the parts covered by clothing. It consists of innumerable closely set little papules or grain-like elevations, which may be slightly red or glazed. This rash comes and goes. Any hot drink, exposure to the sun, or warm clothes may bring on an attack with its unbearable irritation.

Anything which causes excessive perspiration should be avoided. Hot fluids should not be given,
and the child should not be allowed to drink too much. Baths should be neither cold nor too hot; soap should not be used when prickly heat is present. After the bath, the body should be carefully dried, and a simple dusting powder applied, especially between the folds of skin. A good dusting powder consists of equal parts of zinc oxide, boracic powder, and starch.

At night the bedclothes should not be too heavy. The best bed covering for a child, during the hot weather, is the half of a thin Kashmir shawl, which is extremely light and serves as a protection. Mattress and pillow should be firm.

Dry winds may cause roughness of the skin; a simple toilet cream such as lanoline or hazeline snow, used before exposure, may prevent soreness of the face and limbs and troublesome cracks of the lips.
CHAPTER X

INFANTILE MALADIES

Constipation.—Constipation in a child is a common ailment and is troublesome to treat. It may arise from faulty training, errors in diet or weakness of the muscular walls of the intestine, which by their contraction should force the undigested food down through the rectum to the external opening or anus. In a few cases habitual constipation may be due to accident or deformity.

It is impossible to be too emphatic about the importance of the formation of good habits, from the very first day of a child’s life. Lack of care in this respect may cause lifelong trouble. The youngest child should be regularly held out over a chamber once or twice a day just after a feed, at stated times, and encouraged to pass a motion. The habit is quickly formed, and once formed should not be broken. Older children should have their bowels opened after breakfast, when the intestines have been stimulated to contraction by the food taken in.

A deficiency of fat in the food is sometimes the cause of constipation. This is often found in bottle-fed babies; the addition of cream to the diet, or in
the case of older children butter, may relieve the trouble. Too much starchy food or an excess of milk are other causes.

Even very young babies may derive benefit from the giving of fruit juice and broth, older children may have the pulp of cooked fruit, while a child who has cut his teeth may be allowed a variety of fruit and vegetables. Exercise is very necessary from the first. The baby should be encouraged to develop his abdominal and other muscles by being allowed every opportunity of kicking and squirming, free and un-trammelled by clothes.

Children who are given a well-balanced diet, containing all the constituents required for the building up of their tissues and the supply of energy in proper proportions, will rarely be troubled with constipation, if they take regular exercise in the fresh air.

Castor oil, though it is a valuable drug in its proper place, should not be used in the treatment of habitual constipation. Milk of magnesia, syrup of figs, cascara sagrada, or liquid paraffin may be given at times, but diet and exercise are the essentials in treatment.

**Indigestion.**—Simple indigestion may be chronic or acute. If chronic it points to some persistent error in feeding or to some stomach defect. The former can be easily remedied by alteration of the diet, the latter is a matter for treatment by the doctor. Wrong feeding will naturally cause the stomach to revolt. An indigestible meal will be got rid of by an attack
of vomiting or diarrhoea; continual wrong feeding will give rise to chronic indigestion.

Over-eating, indigestible food, excessive heat, or a chill may result in vomiting and pain, with or without diarrhoea. As a rule the attack subsides as soon as the cause has been removed. If the sickness has been occasioned by too much or by improper food, the best remedy is a dose of castor oil or grey powder. The child should be put to bed and allowed no solid food till the vomiting has ceased, as it usually will in a day or two. Soda-water with milk may be given. If the child is obviously ill and the attack continues, the doctor should be consulted without delay.

**Simple Diarrhoea.**—This is usually an attempt by Nature to get rid of improper food, or it may be due to a chill. Rest in bed, warmth to the abdomen, and an aperient such as castor oil to help Nature in her efforts, will generally effect a speedy cure. Until the diarrhoea ceases milk should be the only food. If the diarrhoea persists and is accompanied by high fever, the stools containing blood and mucus (a transparent jelly-like material), the doctor should be called in.

**Chronic Diarrhoea.**—Diarrhoea should never be allowed to continue without treatment. There is a species of early morning diarrhoea, called hill diarrhoea, to which people, out of condition, are liable when they first go up to the hills. Children, with their delicate organizations, are liable to chills, which may be followed by an attack of diarrhoea. In hill diarrhoea there is a good deal of wind, the abdomen becomes distended,
and the bowels are opened several times in the early morning, the stools being pale in colour, frothy, and liquid. To prevent an attack, plain and light diet should be given, the child should not be allowed to over-eat, and should be warmly clad. The change to the bracing air of the hills may cause a child to be excessively hungry, so discretion must be exercised as to the amount of food permitted. An occasional dose of salts is valuable as a preventive. The condition may continue till the return to the plains, but usually it lasts for a few days only.

**Chills.**—In the tropics to get a chill is no uncommon experience. The sudden transition from the great heat of the plains to the comparative cold of a hill station, the current of air from an electric fan or punkah, the drenching rains or damp clothing incidental to the monsoon may lead to a chill, which may pass off without ill effects or may be the beginning of a serious illness. The effect of a chill is to lower the vitality of the body, so that it is liable to fall an easy prey to the poisonous micro-organisms which everywhere abound. A chill therefore is not to be regarded lightly; it should if possible be prevented; failing this, it should be treated at once.

**Precautions.**—Warm clothing should be available for the journey up to the hill station, and changes should be at hand on arrival. Thick shoes are necessary for walking in the woods, and damp clothes must be removed on return. A warm wrap should be worn when active exercise has been taken and perspiration
is profuse. Cold baths are dangerous if taken when heated. Fans or punkahs must not play directly over the body. The difficulties of airing and drying clothes during the rains must not be allowed to interfere with the provision of dry garments and bedding. For night journeys during the cold weather, an abundance of warm wraps and blankets are required.

_Treatment._—When a chill has been taken, bed with hot bottles and hot drinks are indicated. A watch should be kept on the temperature, for the chill may be the beginning of an attack of malaria or other fever, and these need special treatment.

_Coughs and Colds._—These are more or less preventable. They are caused by chill or infection by germs, which is most likely to occur when the body is over-fatigued and there is a lack of vitality or resisting power. A child in good condition who has an abundance of fresh air, and is warmly but not too warmly clothed, is not likely to be subject to colds. Exposure to sudden changes of temperature, sitting in a draught or under a fan when perspiring after exercise, or close contact with any one suffering from a bad cold, may result in infection to the strongest.

_Treatment._—A cold once developed must not be neglected. The child should be put to bed for a day or two, or if this is not possible, kept in a warm but well-ventilated room. The bowels should be kept freely open. The food should be light and nourishing. The chest may be rubbed with camphorated oil, and a simple soothing cough mixture given.
Bronchitis.—An attack of bronchitis is often the result of a neglected cold. There is usually a rise of temperature, which may be anything from 99 to 103 degrees. The cough is hard and dry. In simple bronchitis the breathing is not hurried.

Treatment.—Bronchitis needs care as it may develop into pneumonia, all forms of which are very serious in children. The child should be put to bed in a warm and airy room, and kept in bed till the condition is relieved and the temperature is normal. A doctor should be called in if available, otherwise careful nursing and avoidance of chill will in most cases be successful in effecting a cure.

Pneumonia.—This may occur as an extension of bronchitis or as a complication of one of the acute infectious illnesses. Pneumonia is a dangerous illness and needs all available skill and care. When a sick child, with or without a cough, has a temperature and a sudden increase in the respiration is noted, the doctor should at once be called in. In broncho-pneumonia the breathing is very characteristic; it is quick and shallow, and each breath is drawn in with a catch or grunt. The child may complain of a pain in the stomach. If there is a cough in the early stages it is hard and dry.

Treatment.—Nursing is of the greatest importance, the bowels should be kept open, and the diet should be liquid and as nourishing as possible. As in other illnesses in which the lungs are affected, the most careful attention should be paid to the condition of
the chest during and after convalescence, and if the general health is not satisfactory, the child should be thoroughly examined by a doctor. The persistence of a cough, however slight, any periodical rise of temperature, or the failure of the child to gain weight and strength, should be regarded as being of serious import and must not be neglected.

**Tuberculosis.**—A few words about tuberculosis may not be out of place. It is one of the commonest germ-caused diseases, and it may affect the lungs, the bones, the glands, and the brain. Though tuberculosis is not inherited, a child may inherit a predisposition to it. There is a condition of poor development and low vitality in which the germs of tuberculosis can easily gain hold in the lungs or other organs of the body and there flourish. When a child is thin, narrow chested, and of poor physique generally, the greatest care is needed. Every effort should be made to increase the powers of resistance. An abundance of fresh air, regular exercise, nutritious but plain food with a generous allowance of fat in some acceptable form, are necessary. The child should be taught to expand its chest and to breathe deeply. The nose and throat should be kept in good condition. Enlarged tonsils and adenoids should not be allowed to develop.

When a child is obviously not doing well and is thin and anæmic with a variable appetite, an examination of the chest is advisable, whether the child has a cough or not. Treatment should be given at an early stage, before the ominous daily rise of temperature
appears. Pains in the limbs or joints, any swelling of arm or leg, pain in the back or enlarged glands should receive immediate attention.

Tropical districts, except those of high altitude, are not good for those suffering from phthisis or tuberculosis of the lungs.

**Croup.**—Croup is a condition characterized by spasmodic attacks of difficult breathing. There are several different varieties of croup; two of them—simple croup and spasmodic laryngitis—are largely of nervous origin and are rarely fatal, though alarming when a child is seen in an attack for the first time. The third variety, diphtheritic croup, is a very serious illness which may end fatally and needs immediate skilled treatment and careful nursing.

**Simple Croup or Child Crowing.**—An attack of simple croup may come on at any time of the day or night. There is no cough and no fever. The child holds its breath, struggles, becomes red in the face, then suddenly a deep breath is taken with a kind of crowing sound. Several attacks may occur during the day. Children subject to croup are generally under eighteen months of age and are often rickety and teething. These attacks happen sometimes when the child has been crossed or scolded, and are only dangerous when they are accompanied by convulsions.

**Treatment.**—The gums should be lanced if necessary, the bowels must be kept open, and the diet simple and light. During an attack the child may be put into a warm bath and his chest sponged with cold water for
a minute or two, or, if the attack is severe, cold water may be dashed in the face.

**Spasmodic Laryngitis.** — This occurs chiefly in children from two to seven years of age. It comes on, usually in the night, with slight fever and a cold in the nose and throat. There is a metallic cough, difficult breathing, and hoarseness of voice. In a spasm the face becomes blue and congested. This condition only lasts for a few minutes, and the child falls asleep in an hour or so. Convulsions are rare. The child generally awakes in the morning feeling quite well. The attacks may be repeated for several nights running.

**Treatment.** — During an attack a dose of ipecacuanha wine may be given. The dose for a child of a year is two drops repeated every quarter of an hour while the attack lasts. As a preventive, care should be taken to avoid damp and cold, and the child’s general health should be attended to. Simple digestible food and plenty of fresh air are necessary. If enlarged tonsils or adenoids are present they should be removed.

**Diphtheritic Group.** — This very dangerous condition may occur at any age. It begins with hoarseness and a croupy cough which suddenly becomes worse, often during the night. Breathing is very difficult, and if the throat is looked at, a greyish membrane will be seen covering it. The pulse is quick, and there is a little temperature; the lips and finger-tips are blue.

**Treatment.** — Medical help should be obtained at once. While awaiting the doctor, the child should lie
in bed in a room at a temperature of 68 degrees if possible. A kettle should be kept boiling in such a position that the air which the child breathes may be moistened with the steam. Hot poultices may be applied to the chest. Liquid food such as milk, strong clear soup or broth, barley and plain boiled water should be given. The child will require plenty of liquid. The bowels should be kept open. Diphtheria anti-toxin is the best treatment, and no time should be lost in giving the injection.

Fits or Convulsion.—These occur in many children, but are often due to some temporary and removable cause, and as a rule there is no tendency to recurrence. Occasionally convulsions or fits are due to more serious and permanent causes; and then special treatment is necessary.

Among the common causes of convulsions in children are weakness arising from poor digestion, teething, indigestible food, overloading the stomach, worms, and rickets. Some acute fevers such as measles, scarlet fever, and pneumonia begin with a convolution. Other serious conditions such as meningitis, paralysis, etc., may begin and be accompanied by fits. In young babies, if convulsions are frequent and lasting, they may be due to injury at birth.

Convulsions generally come on suddenly, though they may be preceded by restlessness. The hands begin to twitch and the eyes are staring or rolled up so that only the whites are seen. The breath is held and the face becomes red. Then twitchings of the
hands, arms, and legs begin. The head is held stiffly back. The convulsion subsides gradually, and the child sleeps or passes into a stupor. The convulsion is usually single if due to a simple cause such as indigestion, but it may be repeated where the cause is more permanent. In rickets the spasms are confined to the hands and feet and the child becomes rigid. If the spasms are limited to one side of the body and limbs, when the attack is over careful note must be taken of the condition of the limbs of that side; if weak or useless, the case is probably one of infantile paralysis, and will require the best of medical treatment.

Treatment.—The child should at once be put in a warm bath, and if there is fever, a cloth wrung out of cold water applied to the head. The bath should not be too hot.

The cause must be removed if possible. If indigestible food has been taken an emetic such as ipecacuanha wine must be given, and this should be followed by an aperient such as castor oil.

The health should receive attention. If the child is rickety the food should be carefully chosen and the deficiency in fat, fruit, juice, etc., made good.

St. Vitus's Dance or Chorea.—This occurs in older children, generally those of a nervous constitution or rheumatic tendency. Chorea may be started by a fright or over-work at school; the child is always in poor condition and anemic.

The beginning is gradual, and the existence of chorea is often unnoticed for some time. The child
is restless and fidgety, irritable, is clumsy, and drops things. There may be pains in the limbs. Then twitchings of the face, jerky movements of the hands or arms come on, and if the condition becomes more severe, these are intensified, so that the child may be unable to feed herself.

It is important to recognize the condition at an early stage, as there is some connection between this and heart disease, which not uncommonly is found in children who have suffered from chorea.

*Treatment.*—In most cases the patient recovers in a few weeks or months if the general health is carefully attended to. Rest in bed is necessary, with absolute quiet and freedom from excitement. Good nourishing food and fresh air are required. A careful overhauling by the doctor should not be omitted.

*Heat Stroke.*—This may be occasioned by direct exposure to the sun or by high temperature, with fatigue, overcrowding, or unsuitable clothing. Heat stroke may occur at any age.

The symptoms may come on suddenly with restless-ness or delirium going on to unconsciousness, and very high fever. Or there may be a preliminary stage with headache, giddiness, sickness, absence of perspiration, pains in the limbs, drowsiness, and thirst; occasionally there is diarrhoea. Malaria and other acute fevers in children may resemble heat stroke in the symptoms. If malaria is suspected quinine should be given at once.

*Treatment.*—The patient should be wrapped in a
wet sheet, placed in a current of air or under a fan, and the sheet kept wet with water as cold as possible until the temperature has fallen to 102 degrees. When this happens he should be wrapped in a dry blanket. Hot coffee or other harmless stimulant, or hot milk may now be given to guard against collapse. Copious perspiration is a good sign.

A doctor should be sent for without delay.

With children in the tropics, at all times the greatest care should be taken to avoid such a calamity as a heat stroke. Children must always be provided with adequate protection from the sun's rays, and they should not be allowed out of doors after the sun is above the horizon, even in cold weather, without sun hat or topee and umbrella. The topee should be of material sufficiently substantial to ensure safety and of a shape to protect the nape of the neck. No child should ever be permitted to run the very serious risk of spending a hot season, or any portion of it, in the plains of a tropical country. However careful a mother may be, it is quite impossible for her to provide conditions which will make it safe for a child to stand without injury the very high temperatures which prevail.
CHAPTER XI

THE CHILD AND ITS NERVES

From the point of view of their mental equipment children have been divided into four classes: the normal, sub-normal, super-normal, and the nervous.

The Normal Child.—If by a normal child is meant one who strictly conforms to the rules laid down by specialists in health, feeding, and education, such a child is rather a rare specimen. Even average children differ delightfully in character and temperament, as well as in physical characteristics; no two are alike, and the physician and teacher agree with the mother that each child requires special study and management. Rules and regulations must be adjusted accordingly.

The Sub-Normal Child.—There are, however, children who differ widely from the normal, and amongst them is a class that may be described as sub-normal. These, while possessing the faculties of sight, hearing, and speech, fall definitely below the standard of intelligence reached by other children of similar age. They walk and talk late, are often lethargic, their mental faculties are sluggish, and they do not take that keen interest in their surroundings which is natural to children. In other cases of a different type the children are apt to acquire bad
habits, and those of cleanliness are difficult to learn, while their moral sense is undeveloped. In extreme cases there is an obvious lack of intelligence.

There may be an adequate and easily remedied cause for simple backwardness. In some families the children are apt to develop late. The child may have been ailing, or may have become rickety in consequence of injudicious feeding, so that his progress is hindered. An only child may miss the stimulating influence of other children, and the nurse may not have the requisite sympathy and understanding to take her part in the awakening of the child’s faculties.

If a child is constantly left in the care of an ayah without due supervision and is habitually sleepy, lethargic, or dull, the possibility of its having been dosed with opium must be considered. Such things have happened—still are happening in India. Opium is a drug in general use, many Indian mothers give it to their children, who become accustomed to its use: only, occasionally the child receives an over-dose, with tragic results. Some ayahs habitually give their charges a little opium, it may be, in all good faith, believing it to be good for them. Others, however, knowing it to be forbidden, surreptitiously put opium inside the baby’s thumb or finger-nail, so that through sucking it he may become quiet and peaceful. There have also been some sad cases in which a baby has been deliberately poisoned by an ayah, out of revenge for some severity or fancied injustice—this, too, when the ayah has apparently been devoted to her charge.
THE CHILD AND ITS NERVES

In older children the existence of adenoids may have a retarding influence on the mental development, and their removal may result in a striking improvement.

Other causes of backwardness are injury at birth, the effects of which have only become visible later; or a fall, injury to the head, or some natural defect in the brain.

In any case, if a child is backward and apparently below the normal in intelligence and there is no obvious and easily removable cause for this, a doctor who specializes in children should be consulted. A great deal may be done by proper treatment and suitable surroundings to direct the child's development along the right channels. Backward and dull children often have some talent, which if cultivated may help to compensate for other deficiencies. Specially trained teachers undertake the education of these sub-normal children with very marked success, and the earlier the child is confided to the care of such a teacher, the better chance there is of obtaining satisfactory results.

Super-Normal Children.—A child may develop early and appear to be more intelligent than ordinary. This is most satisfactory to his parents, and they are justified in their joy and pride as long as the child is healthy, sleeps well, eats well, and is not unduly irritable. Forwardness, however, may not be evidence of future greatness; for in the majority of cases this period of premature mental activity is followed by one of slow mental growth in which apparently but little progress is made.
If the child who is mentally in advance of his age is also highly strung and nervous, thin and of poor physique, sleeping and taking his food badly, he will require very careful treatment. Sleep, fresh air, and nourishing and tempting food are imperative, with a judicious holding back of his mental growth rather than urging forward. The super-normal child should not begin regular lessons too early; it must be remembered that he is acquiring knowledge all the time; his active mind is working continually, and his insatiable curiosity, having no bounds, should be wisely directed. As a rule, the companionship of children of his own age is preferable to that of older people, and he should not be incited to show off by reciting, acting, and other public displays. The charge and training of an abnormally intelligent child is a serious responsibility, as the quality of future achievements will largely depend on wise guidance during the early years of his life.

The Nervous Child.—A nervous child may be above or below the average in intelligence. The nervous system of a child, which is always specially susceptible to stimulation during the period of rapid growth, is in some children more than ordinarily sensitive, and a small stimulus may produce a disproportionate effect. This is evidenced by such symptoms as irritability of temper, an excessive display of emotions, such as rage or even affection, night terrors, screaming fits, fear of the dark, of strangers or of animals, lack of control over the bladder
especially at night-time, bad habits, twitchings, etc. Nervous susceptibility may manifest itself in very many different ways, all requiring careful management.

A child may be nervous from birth, but when in a normal child some or any of these symptoms appear suddenly, there is always a definite mental or physical cause, such as shock, fright, accident, or unsuitable surroundings. The cause should be ascertained, removed if possible, and the child treated without loss of time. Habits are very easily formed in children, and every outburst or manifestation of nervous irritability only increases the liability to other attacks; cause and effect act and react, and may result in the formation of what is termed a "vicious circle" which is more quickly formed than broken.

It is not always realized that heredity is a most important factor in the production of a nervous temperament. Children who inherit from either parent a tendency to nerve trouble are prone to develop nervous symptoms from slightly exciting causes which, in ordinary children, would have only a transitory effect. The way in which highly strung children are brought up frequently tends to aggravate the condition. It may happen that one or other or even both of the parents may be temperamentally most unsuitable to be constantly with him. Intense affection, especially if accompanied by emotional outbursts, may have an injurious effect, and an atmosphere of irritation or of friction between the parents may be most harmful to the child.
A sensitive and nervous child should be with calm, self-controlled people, who by their very personality exert a soothing effect. The nurse in charge should be sympathetic, but firm, and should possess the confidence and affection of the child; harshness and severity will only increase the mischief. Much patience will be needed in correcting bad habits and replacing them by good ones, as well as in the teaching of self-control. The general health should receive attention; fresh air and an outdoor life are essential. The child should live, as it were, the life of a vegetable until nervous stability is re-established. Naturally he should not be allowed to suffer from boredom, but his mind should not be over-stimulated, especially towards evening. Complete change of surroundings and sometimes of people is often the most successful means of cure. A child in the tropics who is born with a nervous temperament or develops nervous symptoms is not likely to do well there, and should be sent home at an early age.

Bad Habits.—Amongst the bad habits which neurotic, injudiciously brought up, or sub-normal children are apt to contract, are thumb sucking, dummy sucking, nail biting, bed wetting or enuresis, dirt eating, and masturbation.

Thumb Sucking.—In quite young babies sucking the thumb, fingers, or fist may be a sign of hunger, older children acquire the habit while teething. It is an objectionable habit, and may be injurious to the child in several ways, for he may pick up infection from
dirty hands, or constant sucking may result in deformities of the jaw, such as prominent front upper teeth, as well as in the growth of adenoids. If the nurse patiently removes the fingers from the mouth each time as soon as the habit is noticed, it will be easily broken. When of long continuance the difficulty is greater and, if persistent, a folded newspaper may be lightly bandaged round the bend of the elbow, allowing freedom of movement to the arms but prevention of access to the mouth.

*Dummy or Comforter Sucking.*—In no case should this be allowed. The remedy lies with the mother, who must never permit the nurse or ayah to put anything of the kind in the child’s mouth. It is curious how very resentful a small baby can be when deprived of his accustomed “comforter.” He usually protests with rage and tears; but these should be sternly disregarded.

*Nail Biting.*—This habit is sometimes acquired by older children, mostly those of a nervous temperament, when out of sorts, dyspeptic, or in the early stages of chorea or St. Vitus’s Dance. The general health should be attended to, and the child constantly reminded of the habit. The fingers may be smeared with bitter aloes or other bad-tasting drug, as a preventive. The elbows may be bandaged or gloves tied on at night-time.

*Enuresis.*—Enuresis or bed-wetting may arise from several different causes, some simple and easily remedied, others more serious, requiring medical treatment.
Well-trained babies pass water automatically at regular periods when held out or placed on a chamber. A child of two and a half years should have acquired control over the bladder at night if taken up late in the evening. A child over three years of age who persistently wets the bed is abnormal, and there must be some real reason for the habit. If the child is merely indifferent or lazy, punishment may be of use, but in most cases it is not effective, stimulation by praise or reward being more successful.

Fluids should be given in the earlier part of the day, in the form of milk and water—no tea or coffee should be allowed. After four o'clock no fluid should be taken, the last meal being dry or semi-solid and unstimulating. At ten o'clock the child should be taken up regularly to pass water. The general condition of the child should be attended to, fresh air and regular exercise are important.

The doctor should be consulted if simple measures are unsuccessful. The condition may be due to the presence of adenoids, irritation from worms, the kidneys and bladder may be at fault, or other reasons for the habit may exist, and medical examination of the child will probably reveal the cause of the trouble, which must be cured at an early stage.

Dirt Eating.—The unpleasant habit of dirt eating is acquired by some neurotic children, others take to nibbling their doll's plaster legs, or chalk in any form available. This habit is especially dangerous in India or other tropical countries where the soil is
frequently contaminated by micro-organisms, ova of worms, etc. Mild punishment is generally successful in the prevention of this habit. Its presence indicates usually that there is something wrong in the diet of the child, and this should be rectified.

*Masturbation.*—This is one of the most serious of bad habits which are acquired by children. Its unconscious object is stimulation of the very sensitive external genital organs, either male or female; this is attained by fingering, rubbing, or playing with them, by rubbing the thighs together, or by sitting on the floor crossing the thighs and rocking backwards and forwards. Masturbation is a dangerous habit, easily acquired and very persistent. It is not confined to young children or to one sex. Its continuance may do real harm, which may affect the after life of the child, and it must at all costs be prevented. The tendency may have its origin in some local irritation, which must be got rid of, so medical advice should be obtained at once and the child examined. He should be watched before going to sleep at night and in the early morning, for at these times the child is most likely to indulge in the practice; and constant vigilance and patience must be exercised until the habit has been discontinued.
CHAPTER XII

THE NURSE AND THE NURSERY

India

The choosing of a child's nurse is no easy matter. A well-recommended, experienced English nanny is perhaps the best solution of the difficulty, especially where the husband's official position demands a good deal of entertaining and the time of his wife, if she is a helpmeet to him, is very fully occupied. In such cases she is not able to exercise the constant supervision required by a less competent nurse. Good English nannies are in great request, and when disengaged are eagerly snapped up by friends of their former employer. A really capable woman is often autocratic in her methods and may resent interference, but tact and understanding will work wonders. The knowledge that her children are in good hands during unavoidable absences is a great comfort to a mother.

A trained child's nurse is perhaps the next best thing, especially one with some previous Indian experience. There is risk in taking out a young untried girl; as she may not be able to stand the climate or adapt herself to new conditions. It is not a rare occurrence for a girl to announce suddenly her intention of leaving to get married, or even to accept another
engagement where she is to receive a larger salary or have a better time—this in spite of having signed an agreement to remain for a definite period. Unfortunately only the few appear to regard agreements as binding, but a kind considerate mistress who pays a fair salary is seldom badly treated. It must be remembered that there are obligations on both sides, and a young girl has just as much right to have what she considers a good time, as her mistress has to enjoy herself. Girls far away from home and country are often desperately homesick, and in a small station the life of the nurse and nursery governess may be a very lonely one. Naturally a great deal will depend on the point of view of the mistress as well as on the personality of the girl.

A girl born and bred in India, and brought up in an institution or orphanage, may make a very satisfactory nurse, if well supervised. Some of these are of pure English extraction and some are of mixed parentage. To both the objection of accent applies, for the Eurasian accent is very infectious and small children quickly adopt it. This may seem to be a minor point, but it should be taken into consideration. These Indian-born girls are usually very good with children, readily learn to adapt themselves to their surroundings, and carry out instructions willingly. The difficulty of social life is greater with them than with European-bred girls; in the large stations they are likely to find friends of their own class, in the mofussil they are more isolated.
The Indian ayah has many good points; she surrounds her charges with an atmosphere of love and devotion and has infinite patience. They make a charming picture—the fair-haired English child and the swarthy-faced ayah with her voluminous white draperies, tinkling silver bangles, and gay scarlet coat, as she sits soothing him with magnetic touch, crooning an old-world lullaby. Taking into consideration her home surroundings, her entire lack of training in European customs, and the great difference of her outlook on life, it is wonderful that she is as satisfactory as she is found to be, but too much should not be expected of her. Her standard of truth and sincerity is as much her own and differs from ours as much as her standard of personal cleanliness. The training in obedience, straightforwardness, and self-control, so essential to a child in the earliest years of life, is not to be obtained from her. Consequently the responsibility of the mother or of the European nurse is all the greater. An Indian ayah is almost indispensable in India; it is physically impossible for mother or nurse to be with the children all the time and to do all that is necessary for them.

The best ayahs are Madrasis, who understand and speak English. Other ayahs may be Christian or Mahommedan, and sometimes Hindu. They all talk to the children in their own language, so children left much with ayahs and the other servants learn to speak Hindustani earlier and more fluently than their mother tongue. It is not uncommon on board ship to come
across children who literally have to learn English during the voyage, while their tongues wag merrily in Hindustani. It is fortunate that most mothers do not neglect their children to this extent, for in leaving them to pass the main portion of the day in the companionship of ayah and bearer, they are losing an opportunity of character-formation which can never come again. The plastic young minds are receiving impressions which are indelible. The Indians themselves live very near to nature, and the events of birth, marriage, and death, as well as the primitive emotions, are discussed openly and without reticence. Children see and hear things which perhaps at the time may appear to make little or no impression, but may have a far-reaching influence on character and temperament.

The Nursery.—The nursery should be the happiest and most cheerful corner in the house. The most suitable set of rooms having been selected and put in good repair, the walls should be freshly distempered some soft pale shade of colour. The rooms should not be crowded, only the necessary articles of furniture being allowed and superfluous drapery dispensed with. Almirahs or cupboards of good insect and dust-proof wood for clothes, a medicine and first-aid cupboard fixed out of reach of the children, a good firm screen filled in with washable material, chairs, tables, beds, and other indispensable articles, should all be strong and not flimsy or rickety. The beds for the children should be light and portable, so that they can easily
be taken out on to the verandah, and the baby should have a folding cot available for travelling. All the beds should have mosquito curtains of ample size, so that they may be well tucked in. Punkahs are not necessary in the cold weather, but it is well to have one in readiness, so that it can be easily fixed in case of illness or unavoidable delay in going up to the hills at the onset of the hot weather.

It is useful to have an ice chest in which the sealed bottles of sterilized milk, and other articles of food or drink, can be kept cool. Ice should never be put directly into the cup or glass, but the receptacle containing the liquid may be cooled in the chest. A wire safe, which can be raised or lowered at will, should be suspended from the roof in a draught of air. This will serve as a larder.

Where oil is used for illuminating purposes, a good strong safety lamp which cannot be overturned should be provided. For cooking purposes one of the modern blue-flame oil stoves will be found to be most efficient and cleanly.

For a young child a baby carriage is indispensable. It should not be too elaborate, as it may be subjected to rough usage in travelling, but it should be strong and comfortable with good springs, for in the hills many of the roads are very bad.
CHAPTER XIII

DURATION OF STAY IN THE TROPICS

India

The objections to bringing up and educating children in India are largely based on reasons of climate, but of equal importance are the domestic and social conditions of life.

European children who are resident in the north during the cold weather, go to the hills for the summer, and like those who live in a hill station all the year round, are healthy and well grown, for the bracing cold of Northern India is an admirable tonic. The short and mild winter of places further south has no stimulating properties, and the children living in them are very white-faced little beings when they first arrive at the hill station in the spring. Consequently, parents living in northern stations are justified in keeping their children with them in India for a longer period than those living in the south, provided always that they are able to provide suitable domestic surroundings and educational facilities.

Stress must be placed on the character of the home environment, for children left to the care and companionship of native servants run a serious risk of acquiring bad habits, of becoming unmannerly, and of
developing in undesirable ways. Indians almost always love European children and are extremely indulgent to them. Children are as a rule happy with their ayah and bearer, who are wonderfully good at amusing and interesting them. Their animal stories and their tales of gods, demons, and ghosts are fascinating and often blood-curdling. Their gossip about the doings of their sahibs and mem-sahibs, and their discussion of all kinds of unsuitable topics, however, are not conducive to the moral welfare of the children.

It is only in rare cases that the mother herself, who is necessarily occupied with social duties, can give enough time to her children to create for them a suitable atmosphere, in which they can develop in the right way and keep the naturalness of childhood. The typical Anglo-Indian children, precocious and self-possessed, are the product of an artificial life spent with their elders, listening to and often joining in conversations most unsuitable to their years.

It is another matter when the children are in charge of a judicious English nurse or governess who realizes the importance of education in obedience, self-control, self-dependence, and truthfulness, who teaches them courtesy and consideration towards servants, and habits of orderliness and system.

English children in India may suffer from too great isolation, often being completely cut off from the society of children of their own age and condition; or, as is likely to be the case in the hills during the hot weather, they may have more social life than is good
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for them. The innumerable parties, dances, and elaborate entertainments for children, which are a striking feature of fashionable hill stations, make the children blasé and dissatisfied with simple pleasures; and they become over-tired and over-excited. Further, they are apt to acquire infectious diseases, which are always prevalent in centres occupied by a floating population of children coming from all parts of the country. No doubt the companionship of other children is good, especially in the case of an only child. Most children love acting, dancing, and singing, all of which are natural and healthy instincts, very strongly developed in some. There should, however, be strict moderation in the number of social functions which a child is allowed to attend, especially in the case of nervous and excitable children, who should not be permitted to act, dance, or sing in public. Only exceptionally should a young child take part in any performance outside the nursery.

There is no doubt that children can be brought up healthily in some parts of India, but it is doubtful if the hot-house atmosphere of social life is anything but injurious to them. Taking all things into consideration children between the ages of six and eighteen, except in the rarest of cases, are better at home. When the greater part of the year is spent in the enervating south they should not remain in India after they are four years of age, and when a child does not thrive the advisability of taking him home earlier has often to be debated. As a matter of fact, no rule can be laid
down, each case must be judged on its own merits; the climate, the constitution of the child, and the domestic conditions have all to be taken into consideration.

Education.—In families blessed with a competent governess the education of children is ensured until they are of an age to go home. Where the mother is not so fortunate, some provision must be made for, the very simple education such children are likely to need. The mother herself may be able to undertake the task, a daily nursery governess may perhaps be obtained in a large station, or some other resident, who has a good governess, may be willing to share the lessons of her own children with others. Music lessons and dancing classes are available in most stations of any size.

In special cases in which it is considered necessary to keep them in India, older girls may be sent either as day girls or as boarders to one of the hill-station schools in which a good ordinary education is to be obtained. It is, for many reasons, most unwise to keep boys out in India after they have attained the age of five or six years.

The Tropical Colonies

In a good climate with moderate temperature, children who lead a simple and healthy life continue to do well for a much longer period than those who live under the conditions which usually prevail in the tropics. A periodical bracing up in an invigorating and cold climate is, however, desirable in all cases;
unless this can be obtained, children should be sent home as soon as they become pale and anaemic.

Whether it is intended to make a permanent home in the colonies, or the stay is likely to be for a limited period, it is wise to send children home to be educated, even though it may be, in exceptional cases, possible to provide a good education on the spot. Most children need the stimulating companionship of their contemporaries, and, failing this, are apt to become narrow and limited, and, in later years, incapable of holding their own in the battle of life. They miss training in co-operation and the give-and-take of school and college life.