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HYGIENE  
*for* MOTHER  
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FRANCIS H. MAC CARTHY, M.D.

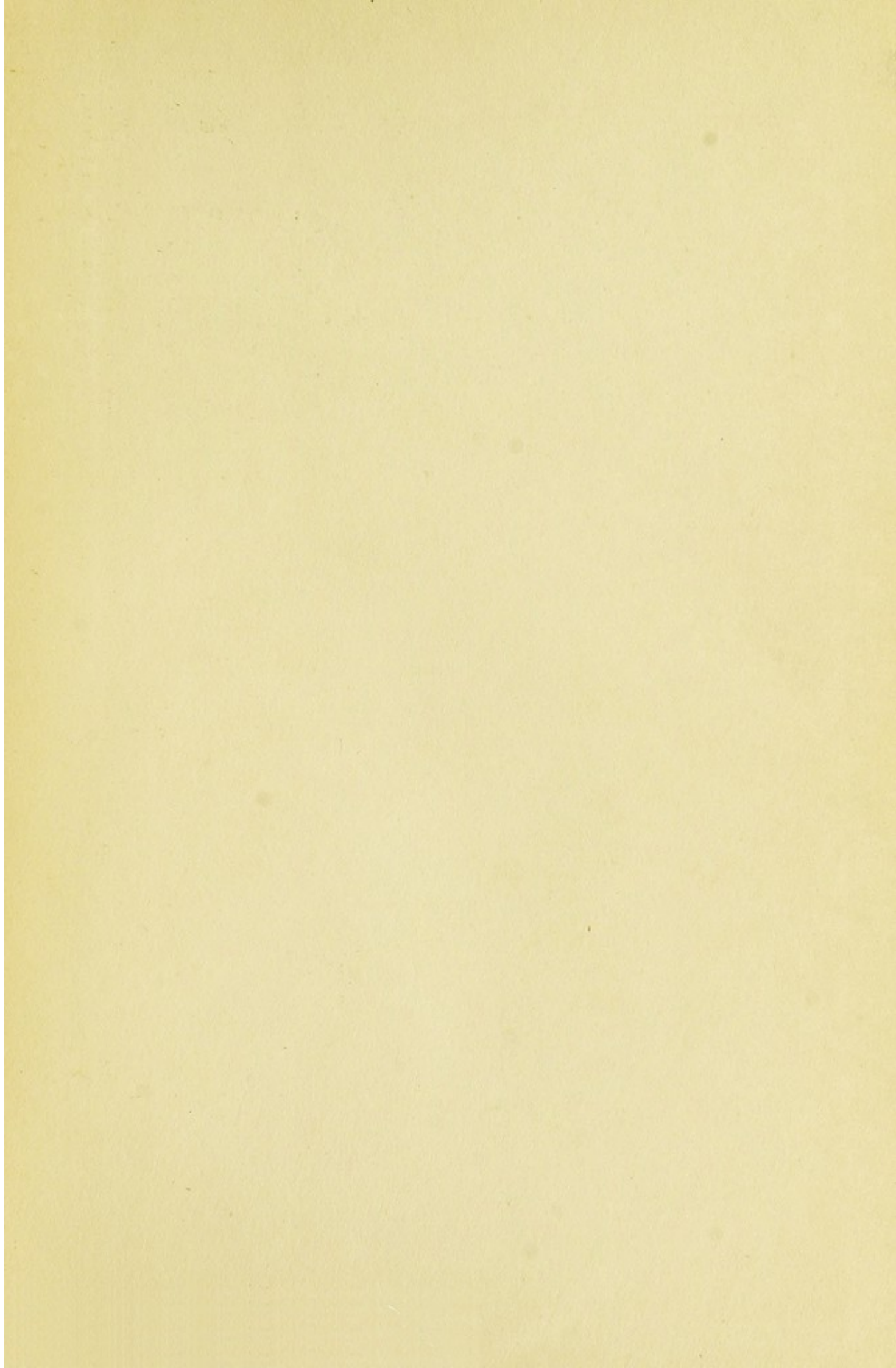
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HYGIENE FOR MOTHER AND CHILD





# HYGIENE FOR MOTHER AND CHILD

A MANUAL FOR MOTHERS AND NURSES

INCLUDING HYGIENE FOR THE PROSPECTIVE  
MOTHER AND PRACTICAL DIRECTIONS FOR  
THE CARE AND FEEDING OF CHILDREN

BY

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## BY WAY OF INTRODUCTION

THERE has developed of late years a wide-spread and ever-increasing interest in all that pertains to the care and well-being of the new-born infant and growing child.

There is also evident at the present time a rapidly growing sentiment that there should be some definite preparation for the high calling of motherhood, and that the time for misdirected effort and haphazard methods of caring for children has passed away.

Prevention is attracting the attention of the world to-day quite as much as the cure of disease, and in this work there is no more attractive or important field than that of improving the conditions which surround childhood.

It has been aptly said that the care of the child should commence before it is born. There is no doubt that the mother can do much during the time before the child is born, by giving attention to such matters as proper food, clothing, exercise, bathing, rest, and sleep, not only to make herself

## BY WAY OF INTRODUCTION

more comfortable, but to insure the healthy growth and development of her child.

To many women the period before the baby is born and during the first three years of the child's life is a time of doubt and perplexity. All kinds of advice from various sources come to the young mother. She is anxious to learn; her difficulty is to know what is right, and in her anxiety she is apt to make mistakes.

The present book is the outgrowth of experience in treating children, and giving counsel to their mothers, in the out-patient department of a modern city hospital.

The first part of the book deals with questions which come to every woman during the time before the baby is born.

In the second part of the book is considered the care and feeding of infants and older children.

The third part of the book commences with a chapter on "Sleep"; this is followed by a chapter on the subject of "Exercise, Out-Door Air, and Play"; the next chapter takes up the subject of "Education and Training—in the Home and School"; in the fourth chapter is considered the "Signs of Illness and Disorders of Childhood," while the last chapter is entitled "Accidents: First Aid to the Injured."

In the preparation of a book of this kind the investigator must constantly recognize his indebted-

## BY WAY OF INTRODUCTION

ness to those writers of wide knowledge and ripe experience who have added so much to our literature concerning infancy and childhood. To all such the present writer wishes to make his grateful acknowledgments.

Since the book is primarily for mothers, technical terms have been rigorously excluded, and every effort has been made to deal with each subject as clearly and concisely as simple language will make it.

It is the earnest desire of the author that mothers and all others who deal with children may find in the following pages that which will help them to see their way more clearly, as they come to meet the many perplexing problems relating to the care and upbringing of children.

F. H. M.

BOSTON, *June*, 1910.



PART I  
HYGIENE FOR THE MOTHER



# HYGIENE FOR MOTHER AND CHILD

## CHAPTER I

### THE SYMPTOMS AND DURATION OF PREGNANCY

PROBABLY the first evidence of the condition observed by the woman herself is the cessation of the monthly periods. Although this is a valuable sign, it is not entirely trustworthy, as various other conditions may cause permanent or temporary cessation of the menstrual flow. It is also a fact that sometimes during the first year of married life there is a pause of two or three months when menstruation does not occur, and yet pregnancy may not be present. The fact remains, however, that occurring in a married woman previously regular, the cessation of menstruation is strong evidence in favor of pregnancy, and is of much practical value, as it probably offers the most reliable date from which to reckon the time of confinement.

**The Signs of  
Pregnancy**

**Cessation of  
the Monthly  
Period**

In many women the next symptom to appear is



## HYGIENE FOR MOTHER AND CHILD

that known as "morning sickness." It is a feeling of nausea often accompanied by vomiting, and usually occurs in the morning or early part of the day. It usually appears in the second month, and fortunately seldom continues beyond the third month.

**"Morning  
Sickness"**

Another symptom which usually appears during the early months of pregnancy is the secretion of an excessive amount of saliva. It does not occur as frequently as morning sickness, and is sometimes noticed in women who are free from that symptom.

**Excessive  
Saliva**

One of the most valuable indications, because it occurs in all pregnant women, is enlargement of the breasts. This often commences as early as the second month, and is accompanied by more or less tenderness. The nipples also enlarge and become sensitive, and are often covered with small branny scales. The pink ring surrounding the nipples becomes wider and of darker color. As early as the third month pressure on the breast may force out a drop of watery liquid.

**Enlargement  
of the  
Breasts**

The enlargement of the abdomen, which marks the progress of pregnancy, is usually first noticed during the fourth month. Coincident with the enlargement of the abdomen and the growth of the child, at about the end of the fourth or during the fifth month, the

**Enlargement  
of the  
Abdomen**

## SYMPTOMS AND DURATION OF PREGNANCY

mother becomes conscious of the movements of the child. They have been going on for some time, but were not sufficiently strong to be felt by the mother. At first they are very slight, hardly more than a mere fluttering, but as the child grows they rapidly become vigorous, until they resemble sudden strokes or kicks. This sign is of some value in calculating the probable date of confinement.

Finally, it should be stated that no one of these symptoms considered separately is positive evidence of pregnancy. When, however, cessation of menstruation is followed by morning sickness and enlargement of the breasts in a woman previously in good health, there is ample reason to believe that pregnancy exists. If, in the progress of time, there also occurs a gradual enlargement of the abdomen, and the mother becomes conscious of the movements of the child, examination by the physician will probably reveal the condition of pregnancy.

**Calculating the Date of Confinement**      Pregnancy is usually estimated as lasting two hundred and eighty days, or forty weeks, which is something over nine calendar months.

There are two well-known rules for reckoning the time of confinement. The first method, which is the most accurate, is to count back three months from the first day of the last monthly period and add seven days. To illustrate: If the last menstruation commenced on the fifth day of Septem-

## HYGIENE FOR MOTHER AND CHILD

ber, counting three months back would make the date June fifth, and adding seven days would bring it to the twelfth of June. It is obvious, however, that any fixed rule cannot govern a matter of this kind. Women differ in physical and mental make-up, and the same conditions and methods of living do not prevail in all households. Again, the months are not of equal length. It is therefore customary to consider the date obtained by the above method as the probable time of confinement, but that it may take place any time within the six or seven days before or after the date estimated.

When for any reason the date of the last monthly period cannot be obtained, it is possible to estimate the date approximately by counting four and a half months from the date of quickening, or five months in a woman who has borne children.

## CHAPTER II

### THE HYGIENE OF PREGNANCY

As has been stated, the duration of pregnancy is a little over nine months, and it is important for the mother to consider how she shall regulate her life during this period, in order to prevent as far as may be the discomforting symptoms common to pregnancy and to favor the healthy development of the growing child.

In order to maintain a condition of what may be called good health and proper building up of the body, it is absolutely essential, first, **Food and Nutrition** that a sufficient amount of nourishing food be eaten at regular times every day; second, that the bowels, liver, kidneys, and skin, whose office it is to dispose of the waste products of the body, shall be thoroughly active.

Much of the discomfort of nausea and vomiting known as "morning sickness," which many women **Regular Hours for Meals Necessary** suffer in the early part of pregnancy, could be alleviated, and even prevented, in many cases, if regular hours for meals were strictly adhered to, and nothing taken between meals except water. The woman

## HYGIENE FOR MOTHER AND CHILD

who has lived a regular life up to this time will have to change her mode of living but little; but it must be evident to those who have eaten at all hours and indulged in pastry and sweets between meals, that they will have to do differently if the annoying stomach symptoms are to be avoided. The stomach needs complete rest between meals in order that digestion may be uninterrupted.

Hours for meals must of necessity vary in different households, and often circumstances may interfere with regularity, but the more regular a woman can make her life in this respect the less liable will she be to stomach disturbances. Many families have breakfast from 7.00 to 7.30, dinner from 12.00 to 1.00, and supper from 5.30 to 6.00. No one rule will suit every household, but regularity of meals can usually be maintained. Some women may feel the need of a lunch between meals. If so, it is best to continue the regular hours of the principal meals, and midway between meals have a cup of milk, cocoa, or gruel.

The point which needs to be emphasized is the necessity of having regular hours for meals, and giving the stomach a complete rest between meals.

While no two people are alike as to the amount of food needed to maintain health, it is well to

<b>How Much Food Is Necessary</b>	remember that most people eat too much. It is a good rule to leave the table feeling that more might be eaten.
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## THE HYGIENE OF PREGNANCY

An adherence to this rule would usually result in a keen relish of the next meal as well as better digestion.

### *What to Eat*

Choice must be allowed to a considerable extent. The woman who has lived a regular life up to this time will have to change her diet but little, while she who has lived irregularly, and eaten all sorts of food at all hours, must change her habits. It is a grievous mistake to eat any one kind of food to excess, hoping thereby to affect the growth of the child. This has been done to the detriment of both mother and child.

The human body needs for its healthy development all the nourishment derived from fresh eggs, fresh, juicy meats, fresh fish, fresh vegetables, and fresh fruits. The important point to be strongly emphasized is that no one of these articles of diet is to be eaten to excess, but a mingling of all is best. Variety is craved by the healthy human appetite, and Nature has amply provided many varieties of food for the healthy upbuilding of her children.

A few definite suggestions in regard to diet may be helpful.

Oatmeal and rolled oats are valuable foods, but are often insufficiently cooked and eaten too fast.

Cereals                      They should be cooked an hour and a half, and preferably in a double boiler.

## HYGIENE FOR MOTHER AND CHILD

The lighter cereals, such as cream of wheat, are to be cooked about forty minutes. Cereals should be eaten slowly with bread, in order that they may be acted upon by the saliva.

Meats should be seldom eaten oftener than once a day, and preferably in the middle of the day.

**Meats** Boiled fish might well take the place of meat two or three times a week. Beefsteak, roast beef, roast lamb, lamb chops, chicken, and game are allowable.

Fresh green vegetables in their season are of value, especially lettuce, spinach, green peas, string-  
**Vegetables** beans, green corn, tomatoes, and potatoes. Cabbage and onions should be very thoroughly cooked, and should be eaten only by those who have good digestion.

Eggs cooked any style pleasing to the appetite, except fried or hard-boiled, is one of  
**Eggs** the most valuable of foods.

Fruits and berries in their season, such as oranges, grape-fruit, apples, peaches, pears, plums, straw-  
**Fruits** berries, blackberries, raspberries, and blueberries, introduce a pleasing variety, and are valuable additions to the diet, as they tend to prevent constipation. Fruit is particularly valuable eaten with breakfast, and should not be eaten between meals. Stewed fruits and berries are often eaten for supper, and usually agree if eaten in moderation.

## THE HYGIENE OF PREGNANCY

Tea and coffee should be very moderately used, and should not be made too strong. One cup a day of each might be a good average, and if there is a tendency to sleeplessness and constipation it would be well to stop them entirely. Cocoa shells make an agreeable beverage, and cocoa is unobjectionable if not made too rich. Milk is a good food, but should preferably be taken at the lightest meal of the day, when no meat is eaten. For those with whom it does not agree, it can often be improved by heating lightly and adding salt to taste, or it may be diluted with Vichy water.

### Beverages

Alcoholic beverages of all kinds are to be avoided, and should never be used except with the advice of the family physician.

One of the most important facts for the prospective mother to remember is that she must drink an abundance of water. During pregnancy there are more impurities thrown off by the body than at other times, and water is needed to flush the kidneys and tends to keep the bowels active. From six to eight glasses per day should be sipped slowly in small quantities between meals. Not much should be taken with or immediately after meals.

### Water

### *Foods Difficult to Digest*

While some women might digest with ease many of the following articles, most women would be apt



## HYGIENE FOR MOTHER AND CHILD

to suffer considerable inconvenience and distress from their use, especially during the first four months of pregnancy:

Pie	Veal
Rich puddings	Pork
Candy	Lobster
Eclairs	Rich salads
Doughnuts	Cabbage
Griddle-cakes	Baked beans

### *Summary*

As an aid to digestion and a prevention of stomach disturbances, the following suggestions are especially valuable to remember:

- A regular time for each meal.
- Do not eat between meals.
- Eat slowly, and chew food thoroughly.
- Do not eat too much at one time.
- Drink an abundance of water between meals.

## CHAPTER III

### THE HYGIENE OF PREGNANCY (CONTINUED)

It is very necessary that all the organs which have to do with throwing off the impurities of the body should act freely. The lungs, **Exercise** the liver, the bowels, the kidneys, and the skin—all have their particular office to perform; and exercise, to a very large degree, helps to maintain a proper activity of these organs.

Some women take too little exercise, while others are apt to take too much. The kind and amount must depend to some extent upon what has been done in this respect before pregnancy. The woman accustomed to active out-door exercise can take more than one who has lived a sedentary life, and what would be proper for the first would be unsuitable for the second. It is a well-established fact that women of the laboring class who work in the open air throughout pregnancy pass through their confinement with much greater ease than those who lead luxurious or sedentary lives.

On the other hand, excessive fatigue, strains, the lifting or carrying of heavy weights, horseback-riding, swimming, bicycling, dancing, and very long

## HYGIENE FOR MOTHER AND CHILD

walks should be avoided, while running the sewing-machine should be limited to the middle months of pregnancy and to very short periods of time.

The woman in average good health and circumstances will get considerable exercise in attending to the duties of the household; but if, without getting too tired, she can go outdoors for a walk or drive every day she will do much to maintain a healthy condition of both mind and body.

During pregnancy the skin is more active than usual, and is continually throwing off impurities; therefore, frequent bathing is necessary to keep the pores open, so that the skin can do its work to the best advantage. By keeping the skin in good condition the kidneys have less to do, and are less liable to get out of order.

A warm tub or sponge bath with plenty of soap at bedtime will serve to keep the skin in healthy condition, and will often insure a refreshing night's rest. A tepid or cool sponge bath in the morning acts as a mild tonic. It should be taken in a warm room, and be followed by plenty of friction. Very hot or cold baths should be avoided.

Clothing should be loose, comfortable, and warm. Very heavy skirts had better be dispensed with, warmth being provided by warmer underclothing, union suits being preferable. The weight of the clothing should be

**Bathing**

**Clothing**

## THE HYGIENE OF PREGNANCY

supported as much as possible by the shoulders, and should be as light as is consistent with the season. There should be no constricting bands about the abdomen and chest.

A corset-waist is to be preferred to the ordinary corset, and will give all the support required. Care should be taken that nothing presses against the nipples, which would tend to flatten and render them unfit for nursing.

The feet should be protected by rubbers when the sidewalks are wet. The high-heeled shoe should be discontinued, and is an evil only second to the tight-fitting corset. A woman at this time should be able to walk erectly and breathe deeply.

Circular garters interfere with the circulation, and stocking-supporters should take their place. Varicose veins should be supported by a properly fitted elastic stocking.

Most mothers want to nurse their babies, and much can be done during the last two months to make this possible. The breasts should be protected by warm, loose clothing, which will allow plenty of room to grow and avoid flattening of the nipples by pressure.

To prepare the nipples for nursing and to prevent the formation of fissures, the nipples should be cleansed night and morning with a borax solution—two teaspoonfuls to a glass of water. After cleansing, sweet-oil may be applied. Once each

## HYGIENE FOR MOTHER AND CHILD

day they should be bathed in a saturated solution of alum, and if they are small or sunken an attempt should be made to develop and lengthen them, so that they can be more readily grasped by the child. This can be done by gently drawing them outward with the thumb and finger, and a still more effective method is putting over the nipple the mouth of a bottle just emptied of hot water. This should be limited to the last month of pregnancy.

The teeth are especially liable to decay at this time, and should be brushed at least on rising in the morning and on retiring at night.

**The Care of the Teeth** While a visit to the dentist may be necessary to guard against formation of large cavities, painful or severe operations should be avoided.

In the multifarious duties of the household and social life, which claim the attention of many women, the matter of proper rest and relaxation is too often left out of consideration, or, if considered at all, it is looked upon as being desirable, but something which should be subservient to everything else.

**Rest and Sleep** The excessive fatigue of body and mind, resulting from overexertion and too much excitement, cannot fail to weaken the vitality of the growing child.

In order that the child shall be strong and healthy, the mother-to-be must have an abundance

## THE HYGIENE OF PREGNANCY

of rest and refreshing sleep. A night's rest of nine hours is not too much, and, in addition to this, there should be a daily afternoon nap or rest in the recumbent position. It would be well also to break up a long forenoon by a short rest.

If exercise is needed at this time to properly develop the muscles, and rest and sleep to renew the vital forces, recreation and change of scene are also essential. Amusement derived from games and entertainments is harmless if it does not interfere with the long nights of sleep which are so necessary at this time.

Overexcitement, great crowds, and late hours are to be avoided. The best forms of recreation are the quiet kinds, like short, easy walks, carriage rides over smooth roads, open-car rides for short distances, croquet, and a small garden where favorite flowers may be cultivated. These afford an easy way of securing moderate exercise, a change of scene, and the fresh air which is so necessary.

### *Medical Care During Pregnancy*

Many women seek medical counsel when the menstrual flow fails to appear. The cessation of the regular monthly period is always a matter for careful consideration. Should it become evident that this is caused by impairment of the general health, then treatment is certainly necessary.

## HYGIENE FOR MOTHER AND CHILD

On the other hand, if subsequent events seem to indicate the condition of pregnancy, then the mother is acting wisely in placing herself thus early under the care of her physician.

The importance of preventive measures in the management of this condition is becoming more and more apparent to those whose duty it is to guard the best welfare of mother and child.

The following symptoms should be reported to the physician:

Urine scanty and dark colored.

Persistent headache.

Blurring of eyesight.

Swelling of feet and face.

Lochial discharge, bloody.

Persistent constipation.

## CHAPTER IV

### DISORDERS OF PREGNANCY

ALTHOUGH pregnancy is a natural condition, there is such a change in the entire organism that most women suffer more or less discomfort during this time. Just how much discomfort a woman may have depends upon her physical and mental condition before pregnancy, and how well she can take care of herself. Many women feel better during this time. These discomforts seldom become serious if simple, regular habits are maintained. They are not to be feared, and much can be done to prevent them. If, in spite of careful living and ordinary measures of relief, a condition becomes troublesome, the family medical adviser should be consulted.

Constipation is one of the most common difficulties which occur at this time, and should receive careful attention, because from it may arise some of the other discomforts of pregnancy.

Preventive measures rather than drugs should be the watchword in the treatment of constipa-



## HYGIENE FOR MOTHER AND CHILD

tion, and the suggestions in the preceding pages in regard to regularity of meals, diet, exercise, bathing, rest, and sleep will do much to prevent this condition from becoming troublesome. Purgatives and patent medicines only aggravate the trouble, and no medicine, however well selected, will do much good unless habits of regularity are maintained.

Laxative foods thoroughly cooked, such as oatmeal, the coarser breads, fresh fruits in their season, such as oranges, peaches, pears, plums, and apples, are excellent in their stimulative effect upon the bowels. They are preferably eaten with the breakfast, and not between meals. Green vegetables, such as corn, peas, string-beans, and lettuce, are also good.

One of the principal causes of constipation is a condition of dryness of the contents of the bowels, brought about by not drinking a sufficient amount of water. It is very important to drink from six to eight glasses of water per day between meals. Some people experience difficulty in drinking water. This can be partly overcome by drinking slowly small quantities at a time and often. A small glass of Hunyadi water about half an hour before breakfast will often prove helpful in this condition.

This condition sometimes becomes annoying but seldom serious, and tends to disappear about

## DISORDERS OF PREGNANCY

the fourth month. It can largely be prevented by lying down two or three times a day, by a simple diet, and drinking plenty of water. Some women are apt to drink less water at this time, thinking it will increase the trouble, but this is a mistake. On the contrary, if the customary drinking of water is omitted, the urine becomes scanty and too concentrated, causing increased irritation and pain.

This painful condition can also be somewhat relieved by assuming the knee-chest position a few minutes two or three times a day, thus removing the pressure of the heavy uterus upon the bladder. If it becomes very troublesome a physician had best be consulted.

Piles are largely due to constipation and straining, with very little out-door exercise, and can often be prevented by maintaining free action of the bowels and assuming the knee-chest position each day. Straining at stool should be avoided. The frequent application of cold-water compresses or compresses saturated with the fluid extract of witch-hazel will often give relief.

During the latter part of pregnancy the veins of the lower extremities sometimes become enlarged, and the legs swollen and painful. Since long standing on the feet aggravates the condition, this should

**Varicose  
Veins**

## HYGIENE FOR MOTHER AND CHILD

be avoided as much as possible. Lying down for a little while several times a day is of much benefit, and when sitting, if the legs can be elevated by resting on a chair, some relief will be afforded.

The application of a soft flannel roller bandage from the toes nearly to the hips before getting out of bed in the morning, or a properly fitted elastic stocking, will support the veins, ease the pain, and tend to prevent the condition from becoming worse. If the veins become very much enlarged, the condition should receive careful medical attention.

Leucorrhœa sometimes becomes excessive and annoying during pregnancy. Injections may help this condition, but should only be used with the advice of the attending physician. The douche-bag should not be more than two feet above the hips. The application externally of a solution made by adding a table-spoonful of boric acid to a pint of warm water will keep the parts clean and allay irritation.

This condition is usually confined to the early months of pregnancy. Although annoying, it seldom affects the general health. Some women do not have it at all, many have it very slightly, while others are affected by it so that they are obliged to seek medical advice.

“Morning  
Sickness”

If plenty of sleep in a well-aired room is obtained,

## DISORDERS OF PREGNANCY

a moderate amount of out-door exercise indulged in, and free action of the bowels is maintained, most women will suffer very little from this condition. Very simple measures will often prevent this difficulty from becoming troublesome. It is often beneficial to sip a cup of hot coffee, gruel, or milk in the morning without sitting up, and then to sleep or lie quiet awhile before moving.

It is very important that the stomach should not be overloaded at any time, and that indigestible food should be avoided. It is sometimes advisable to eat little at a time and at more frequent intervals, and after eating it is well to rest in the recumbent position. The sipping of a small cup of hot water about fifteen minutes before eating may be of benefit.

Before the baby comes is apt to be a time of more or less anxiety to many women. Circumstances, surroundings, and friends have much to do with making or marring the happiness which should be the portion of every woman. The doubts and fears which are apt to assert themselves at this time are often increased by thoughtless acquaintances, and many women suffer much needless mental distress as a result of listening to the experiences of other women.

The prospective mother who has taken good care of herself may feel very hopeful of a favorable and happy outcome.

## HYGIENE FOR MOTHER AND CHILD

Let the mother-to-be, then, try to avoid all such depressing influences as listening to harrowing tales, witnessing unpleasant scenes, emotional plays, or the reading of books of an emotional or depressing character.

It is now definitely stated by scientific men that there is little foundation for the idea that the unborn child is influenced directly by so-called "maternal impressions." Therefore, the mother need have no fear in this direction. There is no doubt, however, owing to the close relationship existing between mind and body, that depressing influences do have a bad effect upon the general health of the mother. For this reason she should endeavor to keep her mind pleasantly occupied with a moderate amount of work about the home, some good reading, the companionship of a few cheerful friends, and out-door walks and rides.

Overwork, overfatigue, and too much care and responsibility should be avoided as far as possible. The importance of out-door life cannot be overestimated. The "blues" will not usually survive very long under the influence of change of scene outdoors in the sunshine and fresh air.

Finally, an atmosphere of cheery hopefulness should pervade the home, and the most tender and thoughtful care should be the daily blessing bestowed upon the prospective mother by those about her.

## CHAPTER V

### PRELIMINARY PREPARATIONS FOR CONFINEMENT

A LITTLE forethought in regard to articles needed will facilitate matters at the time of confinement, and promote the comfort and well-being of both mother and child.

There are two matters which have probably claimed more or less of the mother's attention during the months previous to confinement. First, there is the matter of providing the necessary articles for her own use during and after confinement; second, and what has probably received most attention, is the preparation of the baby's outfit.

### THE MOTHER'S OUTFIT

Paper of large safety-pins.

One dozen hand-towels.

Half a dozen old linen sheets recently laundered.

Three or four dozen soft napkins, or same number of vulval pads bought at surgical-supply house.

One pound of sterilized absorbent cotton for sponging.

Four sterilized bed-pads.

Straight unbleached muslin for binders—two pieces, a yard and a half long by half a yard wide each.

Two pieces of rubber sheeting, each to be one yard

## HYGIENE FOR MOTHER AND CHILD

wide, two yards long. White enamel cloth will do if economy requires.

Bed-pan.

Two china or enamel ware basins.

One earthen jar for waste.

Four ounces tincture of green soap.

A new soft-rubber catheter.

Hot-water bag.

Fountain-syringe.

A piece of oil-cloth, rubber sheeting, or an old rug to protect the carpet.

Longer lists have been prepared, but this will cover the essentials. Many families will already have some of the articles, most of which will be of practical use in every household.

The bed-pads referred to are for the purpose of receiving and absorbing the discharges, and may either be bought wrapped in sterilized packages and all ready for use, or may be made at home by laying quilting cotton between two pieces of cheese-cloth, and when finished should be about a yard square. Each pad should be pinned separately in an old towel and boiled in a wash-boiler for half an hour. They should then be dried without removing the towels, and put away until the confinement.

The soft napkins to be used for vulval dressings should be freshly laundered, pinned half a dozen in a package in coarse towels, and put away until the beginning of labor, when one package can be sterilized at a time by baking in the oven until the

## PREPARATIONS FOR CONFINEMENT

towelling is scorched. Soiled napkins should be burned immediately.

The abdominal binders, made from the unbleached muslin referred to, should be thoroughly washed and pinned separately in freshly laundered towels.

The vulval pads, bed-pads, binders, skein of linen bobbin, and dressing for cord, can now be obtained in sterilized packages ready for use at the surgical-dressing dealers and some of the department stores. Buying them already sterilized saves considerable time and effort, and costs but little more.

It is a good plan to have a separate drawer for the mother's outfit, and as each article is wrapped, a slip of paper on which is written the contents is pinned to the package, which is then put neatly away in the place assigned to it.

During the months preceding the coming of the baby most mothers will have collected together into a separate drawer or basket the baby's clothes and the articles needed for every-day use.

### **The Baby's Outfit**

Although each mother will suit her own taste in regard to the baby's basket, those elaborately trimmed with lace and ruffles are undesirable, as they so soon become soiled and frayed. Various kinds of baskets are to be found in the stores, many of which

### **The Baby's Basket**



## HYGIENE FOR MOTHER AND CHILD

are elaborately and expensively fitted. A very convenient basket is one with a hinged cover, the lower part being used for clothing, while above this is a tray in which can be placed the articles for daily use. A very good substitute for this would be a small trunk with a tray in the top. Whichever method the mother may choose, the more simple the arrangements the easier will she find the work of caring for the baby.

The subject of clothing for the baby will be considered in detail in Part II, Chapter IX.

At the time of confinement the following articles will be needed for the baby:

### THE BABY'S OUTFIT

Skein of linen bobbin for tying cord.

Sterilized gauze for dressing of cord.

Safety-pins—small and large.

Soft linen (previously sterilized by baking).

Four ounces boric acid powder to make solution for cleansing eyes, nose, and mouth.

White Castile soap of good quality in aluminum or celluloid box.

Sprinkle-top box of good quality of borated talcum powder.

Tube or jar of sterilized white vaseline.

A soft wash-rag.

Soft towels.

Diapers.

One flannel band—twenty-two inches long, six inches wide.

Shirt—high neck, long sleeves, weight depending upon season.

White flannel petticoat.

## PREPARATIONS FOR CONFINEMENT

Slip or dress of white nainsook.

Woollen socks.

Woollen shawl, or blanket, in which to wrap the infant at birth.

By no means unimportant is the selection of a properly qualified attendant or nurse. In many households the duties of nurse devolve upon a near relative. If, however, the mother can secure the services of a skilful nurse she will be blessed indeed, for a competent nurse can add to the mother's comfort threefold.

**The Nurse**

The room to be occupied by the prospective mother should be in the quiet part of the house, fairly large, well ventilated, and have plenty of sunlight. It should not be too near drains and water-closets, and the sanitary arrangement of the house should be in good condition. The room should be thoroughly cleaned and aired, and unnecessary furniture and draperies removed.

**The  
Lying-In  
Room**

The bed should be fairly high and narrow, freely accessible from both sides, and so situated that it is out of all draughts. A hair mattress, or one made from other firm material, is preferable to one which is very soft. Across the middle third of the mattress should be placed the first piece of rubber sheeting, which is firmly pinned with safety-pins. Over the entire mattress is then spread a clean

**Preparation  
of the Bed**

## HYGIENE FOR MOTHER AND CHILD

sheet, which is pinned down. This is called the permanent bed, because it remains as it is after the labor. Over this, and placed in the same position as the first strip of rubber sheeting, is spread a second piece of the same size. This is to protect the permanent bed from becoming soiled. Upon this second piece of rubber sheeting is placed one of the absorbent-pads or several folded sheets, to receive and absorb the discharges. During the labor the absorbent-pad can be renewed as often as necessary. At the completion of labor the upper rubber sheeting with the soiled pad is removed, leaving the permanent sheeting for the protection of the mattress. Under the bed is placed the oil-cloth to protect the carpet.

At the time of labor the following articles should be at hand and ready for use:

Hot water in abundance.

Three earthen or enamel ware basins for solutions, washing hands, etc.

Three pitchers.

Earthen jar for waste.

A clean cup with boric acid solution and soft linen or gauze for baby's eyes.

Half a dozen recently laundered old linen sheets, or pads, to receive the discharges.

A dozen freshly laundered towels.

Some ordinary sheets.

An abdominal binder.

A change of night-clothing warmed for the mother.

A blanket in which to wrap the baby.

## PREPARATIONS FOR CONFINEMENT

The bowls, pitchers, and jar should be scalded out before using.

### *When to Send for the Physician*

When labor is about to commence pains are felt either in the lower part of the back or in front, last about half a minute, and come on regularly at intervals of half to three-quarters of an hour. They gradually become more frequent, are more severe, and are felt more and more in the back. At the same time there is often a slight amount of blood in the discharge, which is sometimes referred to as a "show."

Two or three weeks before labor commences there are usually felt transitory pains, mostly in the abdomen. These are called false pains, to distinguish them from the true pains. They are more irregular, and do not tend to increase in severity, as do the true pains.

As labor progresses, rupture of the "bag of waters" takes place. This is the sac of fluid in which the child is suspended. Rupture is recognized by a sudden gush or a steady flowing of a peculiar straw-colored fluid, and the physician should be called without delay, as labor may be well advanced.

At the onset of labor the bowels should be emptied by an enema, unless an action has taken place immediately before.

## HYGIENE FOR MOTHER AND CHILD

Upon the arrival of the physician the patient need have no further care. After the birth of the child the physician will give directions in regard to a suitable diet and proper care of the mother. Later, when she assumes her new duties as mother, her chief concern will be to supply her baby with proper nourishment. The feeding of infants is fully considered in Chapters X and XI, Part II.

PART II  
THE CARE AND FEEDING OF CHILDREN



## CHAPTER I

### THE HEALTHY CHILD

THE healthy new-born infant announces its arrival by a lusty cry, and although it may not always be a pleasant sound, it certainly is at this time, for it means that the function of the lungs is well established and that the child has good vitality.

Later, when the well-being of her baby becomes the mother's daily care, she will observe certain characteristics common to all healthy children, a knowledge of which will prevent misapprehension and enable her to better appreciate any unusual symptoms which may arise.

It is therefore fitting, before taking up the care of the infant, that we briefly consider the appearance and behavior of a healthy baby.

#### *General Appearance*

A healthy new-born infant of good development should be plump, its flesh firm, and the skin varying from a deep to a light shade of red.

The skin is exceedingly delicate in texture, and



## HYGIENE FOR MOTHER AND CHILD

of velvety smoothness and softness. In about seven days the vivid red color gradually changes to a yellowish-red, and in another week assumes a delicate pink color, the cheeks, palms of the hands, and soles of the feet having a more rosy tint, typical of healthy babyhood.

### The Skin

Some morning, perhaps while bathing her baby, the mother's attention may be attracted by the large head compared with the rest of the body. This is quite noticeable but entirely natural, the head measuring nearly as long as the trunk.

### Size and Shape of Head

If the finger is run back from the centre of the upper part of the forehead there will be felt, near the front of the head, a spot somewhat yielding to the touch, where the bones of the head do not come together. This is somewhat diamond-shaped, measures about an inch in diameter, and is covered with the scalp, the pulsation of the brain being felt underneath. It is mentioned here so that the mother may know that it is common to all babies, and that she need feel no anxiety concerning it. As the bones of the head develop the opening becomes smaller until, at about the eighteenth month, it is usually entirely closed.

The new-born baby may or may not have much hair. It often happens that there is very little at birth, but it gradually increases until, usually at a year old, there is

### The Hair

## THE HEALTHY CHILD

quite a thick growth, which is soft and silky to the touch. Other babies may have a considerable amount of hair, which later falls out and is replaced by a thicker growth.

As the child grows older the color of the hair is apt to become darker, the greatest change taking place between the seventh and the fourteenth years.

The color of the eyes is usually a light-blue or bluish-gray, tending to change to a lighter or darker hue at the age of six to eight weeks. The alteration in color may be very gradual and almost imperceptible, extending over a considerable length of time.

The face of a healthy child when asleep has an expression of peaceful repose. The eyelids are completely closed, the lips are slightly parted, and only a very faint sound of regular breathing can be heard.

During the first month the face of an infant, when awake and undisturbed, shows chiefly what might be called an expression of wonder. In the second month the baby may show its pleasure by smiling, bright colors may attract its notice, and by the end of the third month the mother may expect to see expressions of pleasure at her approach.

During the first two or three months of life the tongue is more or less coated with a whitish fur. This is not due to indigestion, but is probably the result of the lack of

**The Tongue**

## HYGIENE FOR MOTHER AND CHILD

moisture, the saliva not being abundant at this time.

Another very noticeable characteristic of the young baby is the large, prominent abdomen. This is due chiefly to the size of the liver, which is normally very large in the new-born infant.

The large abdomen is made more prominent because of the small size of the chest, and the fact that the arms, and especially the legs, are very short in proportion to the rest of the body.

It will also be noticed that there appears to be a slight outward curve, or bowing, of the legs. The mother need, however, feel no anxiety concerning these peculiarities of shape. As the child develops there is a gradual change in external characteristics until all parts are in proportion.

When asleep a healthy child lies flat on the back with limbs outstretched in complete relaxation and the head turned slightly to one side, or the baby may be resting quietly on the side, the limbs assuming various positions of ease and comfort. Unless disturbed or not well, breathing is hardly perceptible, and the baby lies in quiet repose.

During the brief waking periods the new-born infant lies quite still, moving little except to clasp tightly any object with which its hand comes

## THE HEALTHY CHILD

in contact. Before many weeks, however, it begins to move its arms and legs, and from this time on the healthy baby is seldom still, except when it is asleep.

Crying is the only audible means the young infant possesses of attracting attention to its discomfort or suffering. The first cry is the natural result of the discomfort produced by the change in the temperature of the air and the handling it receives at the time of birth, but the soothing influence of the warm bath and the comfortable clothing soon causes the child to stop crying.

Under ideal conditions a healthy new-born baby should sleep most of the time, and cry but very little when awake; but many mothers have other household duties to perform, and cannot devote their entire time to the care of the baby. It is therefore to be expected that the baby will cry more or less, depending upon the surrounding conditions and care it receives.

It is important for the mother to remember that a healthy child does not cry without some reason, however slight. It is a peculiar fact that although the young infant may cry long and vigorously, it sheds no tears usually until the third or fourth month.

The cry should be clear, and neither hoarse, muffled, nor nasal in tone. Any departure from the

## HYGIENE FOR MOTHER AND CHILD

usual clear ring is a valuable means of detecting abnormal conditions which may be present. It will be of interest to the mother to know something about the meaning of the changes in the character of the cry and the possible causes for the baby's crying, so that she may be able to detect the reason and apply the remedy. This subject will be considered in detail in the chapter devoted to the signs of illness.

## CHAPTER II

### THE HEALTHY CHILD (CONTINUED)

OUR knowledge of the characteristics of the healthy baby would not be complete without some consideration of the common functions of life, such as the movements of the bowels, the voiding of urine, breathing, the action of the heart, and the body heat or temperature.

During the first week of life the infant should usually have two or three movements daily. For the first two or three days the passages consist of a thick, sticky, odorless, black or blackish-green substance. When the baby begins to obtain the usual supply of mother's milk, the movements gradually assume a light-yellow color, and become soft and smooth in consistency. They are unformed, and may number two to four each day until after the child is a month old, when they diminish in frequency. A healthy baby should have at least one movement each day. Many have two or more, and yet have perfect digestion.

The important point for consideration is not the

## HYGIENE FOR MOTHER AND CHILD

number of stools, but rather that they shall be of the right color and consistency. Some time after a movement of the bowels it often happens that the color changes from the usual yellow color to a slight greenish tinge. This is perfectly normal.

During the latter half of the second year, when diet becomes more varied, the stools are imperfectly formed, somewhat darker yellow in color, and have a more fecal odor. These changes gradually become more marked as additions are made to the diet, until after the age of two years the passages resemble those of adult life.

The urine is generally passed during the first twenty-four hours, but the emptying of the bladder is sometimes delayed until the second day, and if the baby appears to be resting quietly there is no occasion for anxiety.

During the first week of life the urine is usually highly colored, and often leaves a reddish-yellow stain upon the diaper. After the first week the urine is of a pale-yellow color, has but little odor, and seldom irritates the skin or leaves a stain. The bottle-fed infant passes urine of a somewhat darker color than that of the breast-fed infant.

The quantity of urine must necessarily differ from day to day, and depends upon the condition of the baby, the weather, and the kind and amount of nourishment.

## THE HEALTHY CHILD

The quantity is relatively much larger in infants than in older children and adults, on account of the large amount of liquid food which enters into the diet during the first two years. It is also larger in bottle-fed babies than in infants fed at the breast.

The following figures will give some idea of the amounts at different ages:

### AVERAGE DAILY QUANTITY OF URINE IN HEALTH

First twenty-four hours.....	0- 2	oz.
Two to six days.....	2- 8	“
Seven days to two months.....	5-13	“
Two to six months.....	7-16	“
Six months to two years.....	8-20	“
Two to five years.....	16-26	“

Just how many times in twenty-four hours the urine is passed by a healthy infant it is impossible to tell. Not only does it vary in different babies, but in any one infant it will vary from day to day, depending upon the temperature of the air and the amount of nourishment.

During waking hours the urine may be passed as often as once or twice an hour, while during sleep it may be retained from two to four hours. From eight to twelve times a day might be a fair average. As the child grows older the urine is



## HYGIENE FOR MOTHER AND CHILD

passed less frequently until, at the age of three years, it is voided about seven times in twenty-four hours.

### *Breathing*

The breathing of a healthy infant while asleep is very quiet and fairly regular. To hear it one's ear must be quite near the child's head.

While the infant is awake the breathing is so easily affected by the slightest excitement or muscular movement that it is often very irregular. Sometimes the baby will hold its breath for a moment, or may breathe several times very quickly or very slowly. The mother need not be concerned regarding this peculiarity, for it is seen in all children during the first two years of life, after which time the respiration gradually becomes more even and regular.

The number of respirations per minute varies with the age of the child, its bodily condition, and its surroundings. For this reason only average figures can be given. At birth and for the first two or three weeks of life the respirations average about 40 per minute, and during the remainder of the first year about 30. From one to two years the average is about 27 per minute; from two to four years about 24, and from four to fifteen years about 22 to 25.

## THE HEALTHY CHILD

While the child is asleep is the best time to judge of the frequency and character of the breathing, it being remembered that the figures given above are for the waking hours, and that the child breathes more slowly while asleep.

Healthy babies usually breathe so noiselessly that it is difficult to estimate the number of respirations. This can be more easily accomplished by observing the rise and fall of the abdomen as the child breathes, or by counting as the hand is placed lightly on the abdomen.

It is very difficult to count the pulse in an infant. The heart beats much more rapidly in children than in adults. It is also more irregular in its action, and its frequency is influenced very perceptibly by the slightest excitement or disturbance. Therefore, if while she is dressing her baby, or some time after the child has had a crying spell, the mother notices that the heart is beating so rapidly that the beats cannot be counted, she need not be alarmed. She will appreciate the fact that all this is perfectly natural and to be expected if she considers that the nervous system, which controls breathing and the action of the heart, is just in the beginning of its development.

It is on account of the instability and lack of development of the baby's nervous system that nature has ordained that most of the healthy baby's

## HYGIENE FOR MOTHER AND CHILD

time shall be spent in sleep. The mother will do well, therefore, if she assists nature in this respect by maintaining regular intervals between feedings, in which the child shall have the necessary quiet and sleep.

It often happens in the mother's experience that the baby's hands or face seem to be hot, and the question will arise as to whether there is fever or illness developing. For this reason it will not come amiss for the mother to know something about what constitutes the normal heat of the body and how it may be ascertained.

In normal healthy infants the temperature varies from  $98^{\circ}$  to  $99\frac{1}{2}^{\circ}$ . It is elevated by slight causes, such as hard crying, excitement, or exercise. It must also be remembered that the temperature is subject to slight variations at different times of the day. Thus, during the latter part of the forenoon and early afternoon it has its highest range, and varies from  $98^{\circ}$  to  $99\frac{1}{2}^{\circ}$ . It is lowest during the night and early morning, when it ranges from  $97\frac{1}{2}^{\circ}$  to  $98\frac{1}{2}^{\circ}$ .

It is very difficult to estimate the temperature of the body by simply placing the hand upon the skin. A ready and convenient method is by means of the clinical thermometer. This little instrument is made entirely of glass, and is divided into degrees and fifths of a

The  
Temperature

How to

Determine the  
Temperature

## THE HEALTHY CHILD

degree by the Fahrenheit scale. The arrow on the glass points to  $98\frac{3}{5}^{\circ}$ , which is the average normal temperature of the body. There are different kinds and grades of clinical thermometers, but the one for ordinary use should be plainly marked and accompanied by the manufacturer's guarantee. Most thermometers are made with a magnifying-glass in front of the column of mercury, in order that it can be read more easily. The one-minute thermometer is preferable, as it does not take so long to register, although it is better to allow two minutes in order to secure a more accurate reading.

The temperature may be taken in the arm-pit, mouth, or rectum. It should be remembered that the temperature in the mouth and rectum is normally about one degree higher than that of the arm-pit. The temperature obtained by placing the thermometer in the arm-pit is not apt to be accurate, as it is very difficult to keep the child's arm down close to the side, thus bringing the surfaces together and excluding the air.

Before taking the temperature the thermometer should be grasped firmly by its upper half between the thumb and forefinger and shaken until the top of the mercury falls to about  $95^{\circ}$ . Until one acquires the knack, it is better to do this over a

## HYGIENE FOR MOTHER AND CHILD

bed, so that if the thermometer falls it will not break.

If the temperature is to be taken in the arm-pit the child should be held on the mother's lap and the bulb placed sidewise, well up into the space. The arm should be held closely to the side for five minutes, and if the child is old enough its attention should be diverted away from itself to some interesting object.

In infants and young children it is better to take the temperature in the rectum. This can be done quite easily, and much more accurate results are obtained. It is better first to empty the bowel by an injection of warm water, then, after shaking down the mercury as before described, the thermometer is lubricated with sweet-oil or vaseline. With the child on her lap, the mother raises the limbs with the left hand and gently inserts the thermometer with her right for about two inches, and holds it in place for two minutes. If no injection was given, the thermometer should remain for three, four, or five minutes, depending upon the sensitiveness of the thermometer.

In older children who can be trusted not to bite the thermometer and break it, the temperature may be taken in the mouth. Usually this should not be attempted in well children under six years,

## THE HEALTHY CHILD

of age, and even later in sick children. When the temperature is to be taken in the mouth the child should be on its side, and the bulb placed sidewise under the tongue, and the child told to close the lips about it but not to bite it. It is better for the mother to hold the thermometer, which should be left in position from two to four minutes, depending upon whether it is supposed to register in one or two minutes.

After using, the thermometer should always be cleansed thoroughly with soap and cold water, shaken down, and placed in its case.

Although the clinical thermometer may be a valuable aid to the mother, she must learn not to be troubled about what it may show her. Let her remember that we do not speak of fever until the temperature rises to  $100^{\circ}$  or more, and that there is a normal variation at different times during the day.

The subject of fever will be considered more fully in Chapter IV, Part III, entitled "Signs of Illness and Disorders of Children."

## CHAPTER III

### GROWTH AND DEVELOPMENT

THE new-born baby is about as helpless and little more intelligent than a sensitive-plant. Supported in the mother's arms, it cannot hold its head upright, and when placed in the crib it is powerless to change its position. It has little control over its motions, and all its movements are instinctive. Very gradually, however, the little one begins to show signs of growth and intelligence, and as the weeks come and go many changes take place.

**Early  
Helplessness**

To those who have the care of one of these helpless bits of humanity, it will be interesting to watch the different stages of development during this time of transition, and many questions will arise in regard to the life of the infant during these earliest weeks.

#### *Interesting Facts About Weight and Height*

Children vary a great deal in size and weight. A large, plump baby is not always the most robust, while a smaller baby of moderate size, good color, and firm flesh may be the stronger child.

**Size  
and  
Weight**

## GROWTH AND DEVELOPMENT

The weight of the infant at birth is from seven to seven and one-half pounds, but some babies weigh less and are perfectly normal, while many exceed this figure by two, three, and even four pounds.

**Weight  
at  
Birth**

**Length  
at  
Birth**

The length of the infant at birth is from nineteen to twenty and one-half inches, varying from sixteen to twenty-three.

Nothing tells so surely how well the baby is thriving as the weight. It is especially important to keep a record of the weight during the first year. The baby should be weighed every week during the first six months of life. After the first year once a month is usually sufficient.

### *Weight During the First Year*

During the first three or four days of life, before the flow of milk becomes established, the infant usually loses from five to eight ounces. After nursing begins, however, this is soon regained, usually by the tenth day.

**Loses Weight  
First Week**

**Gain in Weight  
First Three  
Months**

**Second  
Three  
Months**

From this time on through the first three months the infant should gain steadily from five to seven ounces a week. During the next three months the gain is slightly less, varying in different children from three and one-half ounces to five ounces a week.



## HYGIENE FOR MOTHER AND CHILD

**Sixth to Twelfth Month** From the sixth to the twelfth month the gain is about three and one-half ounces a week.

The child with an average weight at birth of seven and one-half pounds should weigh at:

Three months.....	12 to 13	pounds
Six " .....	15 to 16	"
Nine " .....	17 to 19	"
One year.....	20 to 21½	"

It is interesting to note that a healthy baby will double its birth weight at five months, and at one year it will weigh almost three times as much as it did at birth.

Babies fed from the bottle seldom gain as rapidly during the first month as infants fed at the breast, for the reason that it takes some weeks for the stomach to become accustomed to cow's milk, and during this time the milk must be weakened or the child's digestion will be disturbed. After this time, however, if the milk is prepared carefully, usually the gain will be about as regular as in nursing infants.

While most healthy babies gain steadily during the first year, it should be remembered that there are certain times when no gain is made and the weight remains about the same. This may occur while the child has a slight cold or is cutting teeth, and sometimes during very hot weather.

After the first year the gain in weight is not so continuous, and there are many interruptions

## GROWTH AND DEVELOPMENT

which often occur without apparent cause. The weight and height of an infant must necessarily depend to some extent upon heredity and the conditions surrounding the mother before the baby is born. It is apparent, then, that no one rule or table of measurements will apply to all children, and that only average figures can be given.

TABLE SHOWING WEIGHT AND HEIGHT OF AVERAGE CHILD

AGE	WEIGHT		HEIGHT
	Pounds	Ounces	Inches
At birth . . . . .	7½		19½
Two weeks . . . . .	7	10	
Three weeks . . . . .	8	1	
One month . . . . .	8	8	21
Two months . . . . .	10	7	22
Three months . . . . .	12	6	23
Four months . . . . .	13	13	24
Five months . . . . .	15	4	24½
Six months . . . . .	16	3	25
Seven months . . . . .	17	2	25½
Eight months . . . . .	18	1	26
Nine months . . . . .	19		26½
Ten months . . . . .	19	14	27
Eleven months . . . . .	20	13	27½
Twelve months . . . . .	21	12	28
Eighteen months . . . . .	23		29½
Two years . . . . .	27	8	33
Three years . . . . .	32		36½
Four years . . . . .	36		38¾
Five years . . . . .	40		40
Six years . . . . .	44	8	44
Seven years . . . . .	48	8	46
Eight years . . . . .	53	8	48
Nine years . . . . .	59	8	50¾
Ten years . . . . .	65		52

## HYGIENE FOR MOTHER AND CHILD

Some children may weigh less than the figures in the table and still be in thriving condition, while it is not at all unusual for many children to exceed these figures. When, however, an infant is very much behind in height and weight the mother should at least suspect that something is wrong, and if in addition to loss of weight the child cries excessively, looks thin and pale, or is constantly sucking its fist, she should seek medical advice.

In order to obtain the correct weight, the most convenient method is to weigh the child when it is dressed, and deduct the weight of its clothes. The entire set of clothes should be rolled together and carefully weighed. After the child is dressed and before feeding, it should be weighed, and the weight of the clothes subtracted.

Scales suitable for weighing the baby may usually be found at hardware stores or in the hardware departments of the general stores. Probably the most frequently used because the least expensive form is the common hand spring-scale, which retails at about thirty-five cents. This is fairly accurate, and much better than not weighing the baby at all. It is well to purchase a fairly good-sized one, so that it can be firmly grasped and held as steadily as possible.

In weighing with the hand-scales the baby should

## GROWTH AND DEVELOPMENT

be placed in a towel on the bed, the corners of the towel being fastened securely by safety-pins, so as to form a loop to fit over the hook of the scales. Grasping the scales firmly, the child is raised just clear of the bed and the weight recorded.

More accurate results are obtained with the balance-scales in which weights are used, such as is commonly seen on the counter in grocery stores. The price varies from three to five dollars.

In many households may be found the standing spring-scales with a scoop, in which the baby is placed; the price varies from two to three dollars. With a basket instead of the scoop, the price is about five dollars. Care should be taken to secure scales marked with ounces.

## CHAPTER IV

### GROWTH AND DEVELOPMENT (CONTINUED)

**Development of the Muscles** As the child increases in size and weight, the mother will notice that her baby is gradually growing stronger.

**Holds Up the Head** During the third month it will begin to try to lift its head, and by the end of the month or during the fourth month it will usually hold its head erect without support.

**Sits Up** The child may begin to attempt to sit up at the end of the fourth or during the fifth month, and during the sixth or seventh month will sit up unsupported, although somewhat unsteady until the ninth or tenth month.

**Creeping and Walking** The average healthy baby will usually begin to creep on its hands and knees at seven or eight months, and will begin to make attempts to bear the weight upon the feet during the ninth or tenth month.

**Stands Alone** During the eleventh or twelfth month it will be able to stand, and will frequently walk a few steps with the aid of some one's hand or by holding to the furniture.

## GROWTH AND DEVELOPMENT

The first attempts at walking alone are usually seen from the twelfth to the fourteenth month, and by the sixteenth month most children can walk with ease.

Children differ a great deal, however, in regard to the time of learning to creep and to walk. They also differ in the method of creeping, and some children do not creep at all, but learn first to stand and then to walk. Some do not use the knees, but creep on the hands and feet, while others never creep, but move about by a sliding or pushing motion while sitting on the floor.

Many children learn to creep so rapidly that they are rather slow in commencing to walk, particularly if they are somewhat heavier than the average child. A child may also be backward in learning to walk as a result of long-continued illness during infancy, especially chronic indigestion, when the baby cannot digest the food sufficiently well to properly nourish and build up the body.

Usually if the baby seems healthy in every other way the mother need not feel troubled if it does not walk until the eighteenth month, and some children do not learn until two years of age, and yet are perfectly normal.

A child should never be urged to walk, nor should any of the contrivances for teaching children to

## HYGIENE FOR MOTHER AND CHILD

walk be used. When the muscles and bones are  
**Should Never** strong enough the child will usually be-  
**Be Urged** gin to try to walk. Forcing the matter  
**to Walk** is apt to produce deformities of the  
ankles and knee-joints which are difficult to correct.

## CHAPTER V

### GROWTH AND DEVELOPMENT (CONTINUED)

THE first teeth—or “milk teeth,” as they are often called—are twenty in number, and the time and order of their appearance vary a great deal in different children. Although the coming of the teeth may cause discomfort and fretfulness in some children, it is not at all uncommon for children to cut a tooth without any one knowing it. When a child is fretful and apparently uncomfortable, the most common mistake made is to ascribe the disturbance to the teeth.

It should be remembered that teething is a normal condition in the course of development, not a disease, and that symptoms of peevishness and restlessness may mean some real disturbance or illness. Many children are overfed, and are much more apt to be suffering from indigestion than from cutting teeth. It is always well to look for some other cause than teething in order that any illness which may be developing shall receive proper treatment before it becomes serious.

The teeth are cut in groups, the cutting of each group being followed by a period of rest.



## HYGIENE FOR MOTHER AND CHILD

First, the two lower central teeth appear some time between the fifth and ninth months  
**First Group** —usually about the seventh month.

Then there occurs a pause of from four to eight weeks, when the second group of four upper central teeth appear between the eighth and  
**Second Group** twelfth months — usually about the tenth month.

There is now a pause of from one to three months when the third group appears—the two lateral of the four lower central teeth, and the  
**Third Group** four front double teeth, which come from the twelfth to the eighteenth month. At about the eighteenth month the baby will have twelve teeth.

After the third group there is a pause of two or three months, no more being cut until the age of eighteen months, or between the eight-  
**Fourth Group** teenth and twenty-fourth months, when the fourth group, the so-called “canine teeth,” are cut. The two upper ones are known as the “eye teeth,” and the two lower as the “stomach teeth.” At two years of age a child usually has sixteen teeth.

There is now another pause of two to four months when the fifth group, the four back double teeth,  
**Fifth Group** appear some time between the twenty-fourth and the thirtieth month, which completes the first set.

## GROWTH AND DEVELOPMENT

At two and a half years the average child will have twenty teeth.

As already stated, the time of cutting the teeth varies in different children. In some the first tooth may appear earlier than seven months, while others may still be without teeth at nine or ten months. Usually, however, a baby who has no teeth at the age of one year is not in a healthy condition. Prolonged illness and rickets are frequently the cause of delay in cutting the teeth.

There is also some variation in different children as to the order in which the teeth are cut. Although the two lower central teeth are usually the first to appear, this is not always so. Indeed, it should be remembered that no two children develop in the same way, and that the facts which have been given in this chapter in regard to development cannot apply to all children, but to the average child.

The milk teeth remain in position for several years. Then the permanent teeth, which have been gradually pushing their way to the surface, begin to press upon the roots of the first teeth, which loosen and fall out. If the milk teeth do not fall out at the right time the second teeth are crowded out of position, thus causing an ill-looking deformity. To prevent such a misfortune it is very important that a dentist should be consulted quite frequently.

## HYGIENE FOR MOTHER AND CHILD

The earliest of the permanent set appear at about six years. They are the back double teeth, which come in next to the last of the double teeth of the first set. Here again it is desirable that the mother should keep a sharp lookout, for the reason that the large back double teeth are apt to be cut and decay without being noticed.

Parents are apt to neglect the care of the children's first teeth. This is a grievous mistake, for decay and loss of teeth not only mar the beauty of the child's face and produce much suffering from toothache, but also cause indigestion, owing to the fact that the food is not properly chewed.

Children should be taught to clean their teeth twice daily, and at the first sign of decay a dentist should be consulted. If the first teeth receive careful attention the permanent set will be more perfect, and if the permanent teeth are watched for the first signs of decay and receive proper care early in life, much humiliation, suffering, and needless expense will be prevented later.

Care of  
the Teeth

## CHAPTER VI

### DEVELOPMENT OF THE SENSES

THE eyes of a newly born baby are very sensitive to excessive light. It has frequently been observed that if a bright light is placed before the eyes they will close. As early as the second or third week of life the eyes will often follow a light about the room. During the second month the baby will often notice bright-colored objects, especially if they are moving.

**Sight**

When it is three months old it will recognize a familiar face, and at six months will recognize its parents apart from strangers. Indeed, it is probable that the baby will recognize its mother earlier than this—during the fourth or fifth month. It is important that the eyes of the new-born baby should be protected against strong light.

During the first day or two of life newly born infants are unable to hear. In a few days the hearing gradually improves, and during the first few months it is very acute.

**Hearing**

The slamming of a door, loud talking, and other noises will often waken the child from sleep. Usually by the end of the third month it will turn

## HYGIENE FOR MOTHER AND CHILD

its head in the direction from which the sound comes.

The sense of touch is not very marked until after the third month, except in the lips and tongue, where, of course, it is very acute for the process of nursing. It is also interesting to note that the young infant can distinguish between hot and cold milk, and will sometimes refuse the bottle if the milk is too warm or too cold.

The sense of taste seems to be fairly well developed in the young infant, for it shows a preference for sweetened milk as compared to unsweetened dilutions of milk, and will often refuse the bottle if there is but a slight difference in the taste of its food. A child will sometimes refuse the bottle of peptonized milk on account of its bitter taste.

The sense of smell is probably not very acute, and is developed much later than the other senses.

Of course babies differ a great deal in regard to the time when they begin to show signs of pleasure and an intelligent interest in their surroundings. Undoubtedly many babies will smile before the third month, but do not really laugh until the fifth or sixth month. Infants often apparently smile before the age of one month, but this is usually due to indigestion.

## DEVELOPMENT OF THE SENSES

By the third month children will often show their interest in bright objects, and when four months of age will begin to look about more.

At five months they will reach for and play with toys, showing much pleasure by smiling and possibly laughing.

As early as the third month children begin to make cooing sounds expressive of their comfort.

**Speech** At about six months they will make sounds like "Ah" and "Oo," and a little later "Mah," "Bah," and "Dah."

By the time they are ten or twelve months of age they will usually say "Mama" and "Papa," and at eighteen months can understand much that is said to them, frequently expressing themselves by a few words aided by gestures.

**Short Sentences** Toward the end of the second year they will often put simple words together into short sentences of two or three words. From this time on progress is very rapid, and although our patience may frequently be somewhat tried by their constant questioning, we must remember that only in this way can our little ones acquire the names of people and objects, and learn to talk as we would have them.

Too much cannot be said against using baby talk when conversing with the baby. It is not

## HYGIENE FOR MOTHER AND CHILD

more easily understood by the child, and certainly can be no easier for the mother. Most mothers want their children to use good English when they reach the age of six or seven. It should be remembered that if they learn the so-called "baby language" when they are two years old, they will be very apt to use it much longer than the mother will want to hear them talk in this way.

## CHAPTER VII

### THE CARE OF THE BABY

FOR the best interest of both mother and child the baby should not sleep in the same bed with its mother. One will disturb the other, and neither will secure the desired amount of restful sleep. A very young baby cannot move itself out of the way, and there is danger lest it be injured by the moving about of the mother while she is asleep.

One of the most common causes of indigestion and colic is too frequent nursing. When the baby is in the same bed with its mother, there is a constant temptation to nurse, and the baby is apt to form the bad habit of nursing a short time, waking up, and nursing again.

During the first two or three weeks while the mother is regaining her strength a desirable arrangement would be to have the baby sleep in an adjoining room, where its wants could be attended to without waking or disturbing the mother, except at the regular nursing-times. When this is impossible the baby's crib may occupy a corner of the room and be surrounded by a screen.



## HYGIENE FOR MOTHER AND CHILD

During the early months of life the most extensively used bed for the baby is the bassinet.

**The Bed** This consists of a wicker basket having high sides and standing somewhat higher than the ordinary bed, thus avoiding draughts near the floor. It is light, easily moved, and without rockers.

A large oval clothes-basket can also be made into a very comfortable bed for the baby, serves the same purpose as the especially constructed and elaborately fitted bassinet, and is much more simple and less expensive. It should measure thirty-two inches long, and be supported by a low stand or two chairs. Such a basket fitted with warm blankets, and its sides protected with a light blanket, will answer very well until about the eighth month, when the child should sleep in a crib.

The cradle is now used so seldom that it has become almost a curiosity. As usually constructed

**The Cradle** the cradle was so low that it placed the child too near the floor, thus exposing it to draughts. Nor could it be so easily moved about as the light basket. Moreover, so much time was usually required to secure sleep that many mothers decided that rocking disturbed the child rather than soothed it to sleep.

On the other hand, very many mothers have proved to their own satisfaction that if the child's

## THE CARE OF THE BABY

appetite is satisfied by proper food, the room in which it sleeps darkened and quiet, the child made comfortable in its crib and left alone, it will go to sleep quickly and naturally.

By the time the baby is eight months of age it will rest and sleep more comfortably in a crib. If

**The Crib** desired the crib can be used from birth, the baby being protected from draughts by light blanketing or sheeting spread over the sides of the crib. The ordinary white enamelled iron crib is the best, as it is so easily cleaned. The sides should be sufficiently high to prevent the child from falling out, and should be on hinges. It is also necessary that the bars of the side of the crib should be sufficiently close together to prevent the child being caught in awkward positions between them.

A woven wire spring is desirable, and a hair mattress is preferable to one filled with feathers, the latter being much too warm.

Over the mattress is spread a rubber cloth, and this covered with a doubled sheet. In winter it

**Arrangement of the Bed** may be well to place over the rubber a piece of quilting for the sake of warmth, and to save sheet-washing many mothers put a small pad under the baby over the sheeting.

For coverings light woollen blankets are best, and in winter a small quilt may be a desirable ad-

## HYGIENE FOR MOTHER AND CHILD

dition. A small, thin, somewhat firm pillow is preferable to one that is large, thick, and too soft.

Elaborate fittings for the baby's bed are undesirable. Too much cannot be said in favor of simplicity, and this should apply to all the baby's belongings. Plain, simple fittings which can be easily kept clean and sweet are much better than ruffled and embroidered trimmings, which catch dust and dirt, and require much hard work to keep them clean.

A screen about the crib to protect from draughts is preferable to curtains. The latter are easily soiled, and prevent free access of fresh air.

## CHAPTER VIII

### BATHING AND THE TOILET

THAT proper care of the skin by suitable bathing is essential to a healthy condition of the body must be evident to every mother. A bath given in the right way cleanses the skin, opens the pores, stimulates the circulation of the blood, refreshes the nerves, and tends to promote restful sleep.

In preparation for the daily care of the baby, most mothers will have collected together into a suitable box or basket the toilet articles and clothing necessary for bathing and dressing the new-born infant.

A description of the baby's basket and a list of articles which should be ready for use when the baby is born have already been given in Chapter V, Part I. The subject of clothes will be considered in the next chapter.

Although bathing the baby is really a very simple matter, and each mother will have her own method, there are many little details which will interest all mothers, and the following suggestions are intended merely as guiding-posts along the way.

## HYGIENE FOR MOTHER AND CHILD

There are several varieties of bath-tubs used for babies. The best, because easiest to keep clean, is one made of heavy tin and well painted, or, better still, one made of enamel ware and oval in shape. Wooden and papier mâché tubs are difficult to keep clean.

**Bath-Tub**

It is well to buy a fairly large size at first, instead of one of the smallest sizes. A tub about thirty-two inches in length will serve very well for the early years and save buying twice.

**Size**

The tub should be placed on a small stand eighteen inches high. This will raise the tub to the height most convenient for the mother, and make it possible for her to sit comfortably in a low chair while she is bathing the baby.

After the mother has been made comfortable, the bathing and dressing of the baby should receive attention. The first bath is necessarily a more lengthy task than those following, since the newborn infant is more or less covered with a whitish, tenacious substance which must be completely removed, especially from places where two surfaces of the skin come together—about the neck and ears, the arm-pits, groins, and under the knees; for if allowed to remain long enough to become dry, it tends to interfere with healthy action of the skin and cause irritating eruptions.

On account of the length of time required for

## BATHING AND THE TOILET

the first cleansing, if the baby seems weakly, or if the room cannot be easily warmed, the entire body should be anointed freely with olive-oil or white vaseline, and the baby wrapped in an old, soft, warm blanket. The oil will soften the pasty material and tend to keep the child warm until the nurse can give it her attention. In a few hours the child's vitality will have increased, and the more thorough cleansing may then be given.

It must be remembered that the new-born baby is an exceedingly tender little object, and very susceptible to cold. For this reason it is very important that preparations for the bath should be made, and all necessary articles ready at hand before the baby is undressed.

The temperature of the room should be  $72^{\circ}$ . Draughts should be avoided by closing doors and windows, and a folding-screen should enclose the space where the bath is to be given. The bath-tub and low chair should be near the fire, except during warm days in summer.

The bathing, drying, and dressing should be done as gently and quickly as possible, the time for the entire process, with the exception of dressing, not exceeding twenty to thirty minutes. A certain deftness is acquired after it has been done several times.

Having all necessary articles conveniently near

## HYGIENE FOR MOTHER AND CHILD

at hand, the first cleansing may be given. The softened pasty material should now be carefully removed with bits of soft linen or flannel. One part at a time only should be cleansed, and the baby should be wrapped in the old blanket to avoid chilling.

### The First Bath

The temperature of the bath water should be 100° F., as registered by the bath thermometer, and some additional hot water should be near at hand so that the temperature may be maintained at this point. Pure unscented Castile soap is preferable to the highly perfumed soaps, the latter being irritating to the skin. For a wash-cloth there is nothing better than a piece of old Turkish toweling, and an old napkin makes a very good towel, being soft and absorbent. Sponges are not desirable, as they are difficult to keep clean.

The scalp, having been thoroughly oiled, should now be well soaped and washed with clean warm water. After carefully cleansing the face, the entire body should be freely soaped and carefully washed with a soft wash-rag, avoiding the eyes. The baby is then placed in its tub, the skin being rubbed constantly but gently during the time it is in the water, which should not exceed two minutes.

In lifting the baby the left hand and forearm should support the infant's head, neck, and back, while the right hand holds the legs. During the bath the baby's

### How to Lift the Baby

## BATHING AND THE TOILET

head, neck, and shoulders should be supported by the nurse's left arm and hand, the bathing being done with her right hand.

When the bath is finished the baby is lifted into a clean, soft, towel large enough to envelop the entire body. The drying should be

**Drying** thoroughly done by gentle patting with the hand over the towel, instead of rubbing the body with the towel. After the body is dry, using a second towel if necessary, the entire surface should be rubbed with the palm of the hand until the skin becomes slightly red.

To prevent irritation and chafing where two surfaces of the skin come together, powder should be applied by gentle friction of the hand, especially about the neck, arm-pits, groins, and buttocks. Highly scented powders are not desirable for the baby's toilet, as they are apt to irritate the skin. Plain unscented talcum powder contained in a sprinkle-top bottle is preferable.

After the first bath it is best not to give a full tub-bath until the stump of the cord has come off,

**Daily Bath** which usually occurs from the fifth to the tenth day. Until this occurs a daily sponging is sufficient for cleanliness, supplemented by the special cleansing about the buttocks, which is necessary each time the napkins are changed. After the cord has separated the



## HYGIENE FOR MOTHER AND CHILD

daily bath may be given as described, with the exception of the oiling.

The importance of commencing the tub-bath thus early in the infant's life cannot be over-estimated. Simple sponging cannot take the place of washing and rinsing the body in the tub. Before pouring the water into the tub it is well to put in a small blanket or soft towel to prevent chilling or fear of the bath. Children will usually have no fear if care is taken not to allow the head to be immersed in the water.

If the dressing of the stump of the cord becomes soiled it should be changed, but unless this occurs

**Care of  
the Cord** it is better to leave the first dressing undisturbed. The cord should be carefully observed each morning, and if it looks inflamed and swollen, or if there is any discharge coming from it, the attention of the physician is demanded. Even after the stump comes off it is well to continue the dry dressing until healing is complete.

The best time for the bath is in the forenoon, about an hour after feeding, and before the nap.

**Time for  
the Bath** It is well to choose the same time every day. In hot weather it may be well to give a bath at bedtime, and the regular bathing may be supplemented by sponging with tepid water.

The temperature of the water for the bath of the

## BATHING AND THE TOILET

new-born infant should be 100° F. during the first two weeks. After this it should be lowered gradually until at the age of six months it should be 95° for winter and 90° for summer bathing. During the second year it may be 85° to 90°, and 80° to 85° for the third year.

**Temperature  
of the  
Water**

The best guide as to the effect of bathing is the condition of the body during and immediately after the bath. In the bath and after bathing the surface of the body should be warm, and have a healthy, rosy tinge.

**Effect of  
Bathing**

On the other hand, if the surface is cool, and the lips and skin are inclined to be bluish, it is evident that the water is not warm enough. If the child is not allowed to remain in the water too long, and brisk friction of the body is used both during and after the bath, the effect is usually beneficial.

The care of the eyes of the new-born infant is so important that the subject is worthy of special consideration. It is now well proven that inflammation which may lead to blindness may be caused by irritating matter which enters the eyes at birth. It is very important, then, that the eyes should receive careful cleansing when the general bath is given.

**The Care  
of the  
Eyes**

A solution of boric acid is first prepared by dissolving half a teaspoonful of boric acid powder in

## HYGIENE FOR MOTHER AND CHILD

a glass of lukewarm water. The eyelids should now be separated gently with the fingers, and a little of the solution squeezed between them from a piece of absorbent cotton, with which the lids should be wiped free from all secretion. Each eye should be cleansed separately, and a fresh piece of cotton used for each eye. Such simple cleansing may well be repeated at the daily bath for the first two weeks after birth.

Should the eyes become inflamed, the lids stick together, and a yellowish discharge appear, the eyes should be cleansed every hour with the boric acid solution, and to prevent the lids sticking together a little vaseline may be applied to the margins at night. It is better to consult a physician immediately, as delay may result in blindness.

The outer portion of the ear may be washed very gently with a soft wash-cloth and dried with the towel. It is not advisable to use tooth-picks or hair-pins in attempting to clean out the canal. Nature usually takes care of this very well without assistance. Any moisture which gets in during the bath should be removed by inserting just within the entrance of the canal the corner of a soft, dry cloth twisted into a blunt cone. This will absorb the moisture without doing harm. If there is a discharge from the ear, the immediate attention of the physician is needed.

**The Care  
of the  
Ears**

## BATHING AND THE TOILET

The nose may also need attention at times, especially if the nostrils seem to be clogged with mucus. A drop of oil in each nostril will soften the secretion, which can then be removed with the twisted corner of a soft cloth. Sometimes a plug of dried mucus near the entrance of the nostril will prevent easy breathing, and can often be removed by first softening with a drop of oil, then gently drawing it out with the loop end of a hair-pin covered with cloth.

As the baby grows older, if the mother will endeavor as much as possible to train the child to breathe through the nostrils instead of with the mouth open, she may often prevent much discomfort and many disorders which otherwise might occur.

The baby's mouth should receive careful attention, particularly during early infancy, when the normal moisture or saliva is not present in sufficient quantities to properly cleanse the mouth, and when babies are so liable to soreness and inflammation of the mouth.

The cleansing of the baby's mouth should be done with much gentleness. The lining membrane of the mouth during infancy is exceedingly soft and delicate, and considerable irritation can be produced by the slightest roughness or even by a

## HYGIENE FOR MOTHER AND CHILD

coarse cloth. It can best be done by wrapping a bit of absorbent cotton or strip of gauze about the little finger. Dipping the cotton in some lukewarm water in which is dissolved a little salt, the folds between the lips and gums and cheeks may be cleansed gently and carefully twice during the day unless the mouth is sore.

This is a condition of the mouth which appears as white patches on the tongue and inside of the mouth, and resembling curdled milk.

**Thrush,  
or Sprue**

When this condition is present the mouth should be washed carefully after each feeding or nursing with a solution of borax or baking-soda, and four times a day with a boric acid solution—one level teaspoonful of the powder dissolved in a glass of boiled water.

The skin of the baby is so delicate and so liable to chafing that it should receive particular attention. Pure white Castile soap is preferable for the bath, should not be used in excess, and should be entirely removed by careful rinsing.

**The Care  
of the  
Skin**

In drying the body gentle patting over the towel is better than vigorous rubbing with the towel. Gentleness should be the watchword in bathing the baby. It is also important to use a good dusting-powder in all the folds and creases of the skin as already described, especially in fat children.

## BATHING AND THE TOILET

The most common place for chafing is the buttocks, as the parts are so often wet and soiled. It is, therefore, very important that napkins should be removed as soon as they become soiled, and the parts kept thoroughly clean.

### Chafing

If the parts become chafed, soap should not be used, and bran baths be used instead. If the condition becomes severe it may be necessary to stop bathing with water for a day or so, and clean the parts with sweet-oil and a bit of absorbent cotton. After drying with a piece of soft linen or gauze, talcum powder should be sprinkled freely on the skin, and pieces of gauze sprinkled with powder placed between the two surfaces which are chafed.

The bran bath is prepared by placing a pint of wheat bran in a bag of coarse cheese-cloth, and this put in the bath water and squeezed for about five minutes.

## CHAPTER IX

### THE BABY'S CLOTHING

A CHILD'S clothing should be simple, warm, light in weight, and not fit too tightly.

One of the most desirable objects to have in mind when the baby's outfit is prepared is simplicity. Enough clothing should be worn to keep the child comfortably warm. The fewer garments consistent with warmth and protection the better, and the more simple they are made and put together the easier will the mother find the daily task of caring for her baby. Elaborate laces and ruffles not only increase very materially the expense of the baby's clothes, but they are easily soiled, and cause a great deal of unnecessary and expensive laundry work.

It is very important that the clothing should be warm. Although young children should not be overburdened with heavy clothing, they are quite susceptible to cold and rapid changes of temperature. Low-necked dresses with short, thin sleeves which do not protect the chest and arms, and short stockings leaving the legs and knees bare, should have no place in the

## THE BABY'S CLOTHING

dressing of young children. It is well for mothers to know that they are risking much when they dress the baby in this way. It is foolhardy in cold weather, and even in summer most babies would be safer wearing thin stockings.

It is very important that the clothing should not be too tight, lest it interfere with free action of the chest in breathing, and cause vomiting after the child has taken its food.

**Clothing Should Not Be Too Tight**

The material out of which the clothing is made should be soft and light, and of loose texture.

Wool undoubtedly meets the requirements better than any other material, but is so apt to shrink that underwear made from a mixture of cotton and wool is rapidly coming into use. All wool clothing is also very irritating to some babies' skin, especially during hot weather, and silk is apt to be chilling, so that the best all-round garment is the cotton and wool mixture—medium weight for winter and the lighter weights for summer wear.

**Material**

### *Articles of Clothing*

Most of the clothes can be made at home. The mother who is very busy, however, will often find it more convenient to buy some of the clothes ready-made. It is much better to buy all underwear and stockings.



## HYGIENE FOR MOTHER AND CHILD

The actual number of garments comprising a single set of clothing for the baby is not large.

**Garments  
Needed** They are as follows: Abdominal band, diaper, knitted socks, shirt, petticoat, and dress.

The abdominal band, or binder, when properly applied, keeps the dressing of the cord in place, and serves to protect the abdomen against chilling. It is very often pinned too tightly, compressing the abdomen so as to interfere with proper breathing, and to cause the child to vomit after feeding.

For the early months of life a soft flannel band is most commonly used. It should be six inches wide, and about twenty inches long. It is customary to provide three or four, to allow for soiling. The snug flannel band is not usually required more than four or five months, when it may be replaced by the knitted band having shoulder-straps. This may be obtained in different sizes and weights, and either in all wool, cotton and wool mixed, or all cotton. It is usually made with shoulder-straps, and a small tab in front for attaching to the diaper, which serves to keep it in place. This may be worn up to eighteen months. If the baby is subject to diarrhoea or colic, the band may be worn throughout the second year.

Diapers should be made of soft, light, absorbent

## THE BABY'S CLOTHING

material. Bleached cotton flannel meets these requirements very well, is easier to wash, and less expensive than cotton birdseye. For the first three or four months the diapers should be a yard long and half a yard wide, allowing for hemming. After this age it will be necessary to make them larger.

When the diaper is put on it is first folded into a square, then again into a triangle, and a small diaper folded two or three times may be placed inside this to prevent wetting the clothes.

Soiled napkins should be placed in a pail with a tight cover, and washed as soon as possible. It is much easier to give them a rough washing immediately, then put to soak in plain water until they can be thoroughly cleansed with hot water and soap. They should then be rinsed entirely free from soap, and dried in the open air and sunlight when possible. They need be but lightly ironed, and no starch or bluing should be used. It is important that napkins should be thoroughly dried before using, and to prevent irritation and chafing of the skin they should be changed as soon as wet or soiled.

It is essential that the baby's feet should be kept warm, and crocheted or knitted socks reaching half-way to the knee may be worn until the clothes are shortened, when stockings extending above the

**Socks and  
Stockings**

## HYGIENE FOR MOTHER AND CHILD

knee, and long enough to reach the diaper, should be used.

There is some difference of opinion in regard to the method of dressing when we come to consider the remaining garments of the baby's outfit, but mothers and nurses who have the daily care of infants seem to agree that the number of garments should be as small as possible, and that the arrangement should be simple. Looking at the matter from this point of view, then, there are three garments which are essential to the warmth and comfort of the baby—a shirt, a petticoat, and a dress.

The shirt should be made of the cotton-wool mixture already mentioned, of which four grades are usually sold. The heaviest weight is undesirable, the next to the heaviest being warm enough for winter use. The tendency is to put on too much clothing, and to keep the rooms too warm. Children do not need as heavy underwear as their elders. Their circulation is more active, and they perspire easily while at play. Additional clothing may be put on when they go out-of-doors.

The shirt should have sleeves extending to the wrists, and a high neck. It should be long enough to reach below the hips, and neither too loose nor too tight. Shrinking can be prevented somewhat by stretching over a wooden frame while drying.

## THE BABY'S CLOTHING

A thinner garment should be worn in summer, and the thinnest obtainable on the hottest days, a small jacket being worn morning and evening, especially at the sea-shore or in the mountains.

The petticoat should be made of all-wool material. A good quality of white flannel is used for this garment. It is cut after the Princess pattern, having arm-holes instead of sleeves, and low neck. It is open at the back, and fastened by means of small flat buttons. It should be made sufficiently large to go on easily over the shirt. For wear during hot weather, instead of being made entirely of flannel, the garment may be made with a flannel skirt and a muslin waist.

Infants' skirts are often made needlessly long. The petticoat should not extend more than ten inches below the feet. Any length beyond this is useless, cumbersome, and prevents free exercise of the legs, which is absolutely necessary for proper development.

In infancy the dress is usually made of lawn or nainsook. It should be made large enough to fit loosely over the shirt and petticoat, and long enough to extend three inches below the petticoat. It should open at the back, fasten with buttons, and the sleeves should cover the arm to the wrist. The dress may be

## HYGIENE FOR MOTHER AND CHILD

trimmed according to the mother's taste, but the plainer the dress is the less washing and ironing will there be.

The Gertrude suit is made up of three garments which are cut in the Princess style. That next the skin, instead of ending just below the hips, extends from the neck to ten inches below the feet, has sleeves to the wrists, and all seams outside.

The flannel petticoat is half an inch larger around and two to four inches longer than the shirt, and has arm-holes without sleeves.

The dress is made large enough to fit loosely over the petticoat, and is about three inches longer.

The three garments open behind, and fasten with small flat buttons. When dressing the baby the three are arranged sleeve within sleeve, drawn on together, and fastened behind.

The advantages of the suit are evident. It is loose, and gives freedom of movement; the clothes hang from the shoulders, and the process of dressing is much more simple.

The objections to the suit are two—first, the shirt not fitting the body as the ordinary undergarment, does not protect against the cold as well; second, the shirt is so long that it is much more easily wet and soiled, necessitating constant changing, if the baby is to be kept warm and dry.

## THE BABY'S CLOTHING

The plan of the Gertrude suit is excellent, and it is a decided improvement over the older methods. It has undoubtedly been the means of simplifying the process of dressing, and is the basis of most of the other infant suits advertised so extensively.

One of the two above-described suits is much to be preferred to the older suit, which included the pinning-blanket. This garment consisted of a flannel skirt attached to a wide band. In order to support the skirt and not slip down, the band must fit too tightly. It is also cumbersome and difficult to put on.

In addition to the diaper and band, when the child is put in its crib for the night, it will need a shirt and a night-dress. This latter should be longer than the dress worn during the day, and somewhat larger, to allow for free movements of the legs. For winter it may be of outing flannel, and made to close at the bottom with a drawing-string.

For summer wear it should be made of cotton or muslin, and may be open below. Socks will not be needed at night, unless the baby's feet are habitually cold.

There is also needed a small blanket made of soft flannel to throw about the baby's shoulders and over its head when it is carried from a warm into a cold room. A small sack will also prove useful when the weather is cool.

## HYGIENE FOR MOTHER AND CHILD

During hot weather, when the baby has its outing, a thin cap or hood will be needed. During the fall and winter there must be provided a warm woollen cloak and a thick lined hood covering the ears. The hands must be covered with warm knitted mittens, and the legs with leggings.

Out-door  
Clothing

### *How to Dress the Baby*

Most mothers will experience little difficulty in becoming accustomed to the daily dressing of the baby; but there is an easy method of doing it, and a brief description of the different steps may render her task more simple.

After the baby is given the morning bath and properly dried, the band is pinned in place, or if the knitted band is used, it is drawn over the feet. It should be sufficiently loose to allow the hand to slip under easily. The diaper is now placed in position and fastened to the band with a safety-pin, being careful not to fasten it too tightly. The socks come next.

As a young infant is unable to hold up its head, much less to sit up, it is much easier to draw the clothing over the feet rather than to attempt to slip it over the head.

The shirt comes next, after which the petticoat is fitted within the dress, and the two slipped on together over the feet. When the baby can sit up

## THE BABY'S CLOTHING

alone, it is more convenient to slip the clothing on over the head.

As to how many of each article of clothing should be provided, there is much difference of opinion.

**Number of Each Garment Needed** The following list might be considerably enlarged, but it represents what is essential, and can be provided at moderate cost:

### LIST OF CLOTHING NEEDED FOR THE NEW-BORN BABY

Flannel bands.....	3
Diapers.....	3 dozen
Shirts.....	4
Petticoats.....	4
Dresses.....	4
Night-gowns.....	3
Sacks.....	2
Cloak.....	1
Hood.....	1
Mittens.....	1 pair
Veil (dark-colored).....	1
Shoulder-blankets.....	2

When the child is six to eight months of age is usually considered the time to shorten the clothes;

**Shortening the Clothes** but there can be no arbitrary rule in this respect, as it is not wise to change in winter, and some children are not as strong as others.

The long clothes already in use may be shortened, the sleeves lengthened, and seams let out, provided



## HYGIENE FOR MOTHER AND CHILD

the garments have been made large enough in the first place.

It has been said that there is a tendency to make the skirts of the new-born baby unnecessarily long. For some reason there also seems to be a tendency when the skirts are shortened to go to the other extreme, and make them too short. The shortened garments should extend to below the knees, a little above the ankles.

The abdominal band is continued, and usually by this time the one with the shoulder-straps is adopted. The shirt should be of the close-fitting variety with high neck and long sleeves. The night-gown is not shortened.

When the skirts are shortened it becomes necessary to provide stockings long enough to reach well above the knees, so that they can be pinned to the diaper. They may be of thin cotton or silk material in summer, but should be woollen, or at least partly woollen, for winter wear. The toe should not be too pointed, should be of good width, and the entire stocking-foot should not fit too tightly. Black and brown stockings are used a great deal, as they do not show soiling so quickly, but care must be taken to get fast colors.

The stockings may be held in place by pinning to the diaper, or by elastic side-supporters, instead of the round garter, which should never be worn.

## THE BABY'S CLOTHING

Until the baby begins to stand on its feet and walk it does not need shoes. The first shoes should be made of soft kid, have thin leather soles, and no heels. The baby's feet may be very easily deformed by ill-fitting shoes; for this reason the shoes should fit, and be rights and lefts. The toe should be wide and comfortable, and the shoe should be half an inch longer than the foot. This will give plenty of room for the feet to spread out and allow for growth. The instep and heel should fit snugly to prevent turning of the foot.

Flat shoe-laces are much to be preferred to buttons, since it is difficult to adapt the shoe to the foot by moving the buttons. When the child begins to move about, the soles should be thicker and stiffer, and at the age of three or four years the heels should be somewhat thicker than the sole. The so-called "spring-heel" shoe may be worn, and as the child grows older the heel may be thicker. The ordinary heel as found on adult shoes is not usually worn by children until they are eight or ten years of age.

The mother may notice at times after the baby begins to wear shoes that the feet are cold. This may be remedied by frequent

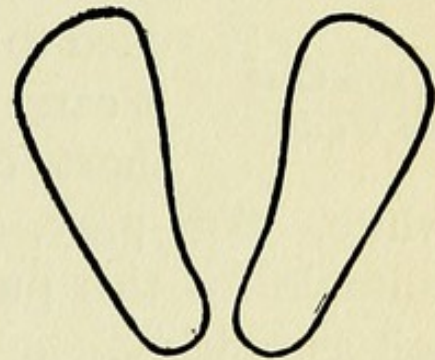


DIAGRAM SHOWING SOLES OF SHOES FOR CHILDREN—NOTICE BROAD TOES AND NARROW HEELS

## HYGIENE FOR MOTHER AND CHILD

rubbing of the feet, and loosening the laces about the instep and ankle.

One of the most useful garments for the ever active, growing child is the romper. This is rapidly coming into favor for common every-day wear

**The Useful Romper** when the child begins to get about on the floor creeping, and later, walking. It is a very simple and comfortable little garment, which may be slipped on over the dress or worn in place of one. It protects the clothes from soiling, and enables the growing child to have a good time without being hampered by skirts.

The romper is usually made of some serviceable colored material, such as gingham or galatea. It can usually be bought in three or four sizes.

When the baby goes out-of-doors a warm coat will be needed. The first long coat may be shortened to serve as a short coat, provided it can also be made large enough. The short coat need not necessarily be white. Soft gray, or some similar quiet color, is suitable for this purpose, and does not show the soil as quickly.

**Warm Coat for Winter** For winter weather knitted leggings covering the whole lower portion of the body, serve to keep that part of the body warm.

The following list gives some idea of clothes needed at this age:

# THE BABY'S CLOTHING

## SHORT CLOTHES

Bands with shoulder-straps.....	3
Diapers.....	3 dozen
Shirts (close-fitting, long sleeves).....	3
Petticoats (flannel).....	4
Dresses.....	6 to 8
Stockings.....	6 pairs
Shoes.....	2 pairs
Rompers.....	3 suits
Sacks.....	2
Bibs.....	4
Night-gowns.....	3
Coat.....	1
Hood.....	1
Mittens.....	1 pair

### *Clothing for Early Childhood*

When control of the bladder is well established diapers may be replaced by drawers. Just when control is acquired depends to a large extent upon care and skilful training, but most children will have acquired it before two years of age.

The abdominal band should be worn throughout the second year. The shirt should always have the long sleeves and high neck, and the weight vary according to season.

The drawers should be made of the same cotton-wool mixture as the shirt, and fit the body snugly. During the summer very thin drawers of the same shape as the long winter garment should be worn.

Long woollen stockings should be worn during

## HYGIENE FOR MOTHER AND CHILD

the winter, and in the summer the thinnest weights of cotton or silk.

It is desirable that the clothes should hang from the shoulders, and to serve this purpose there is nothing better than the ordinary, loose-fitting, sleeveless waist, which can be made in different weights, and is worn over the shirt. To this may be attached supporters for the stockings, drawers, and petticoat. Circular garters should not be worn.

The mother will, of course, have her own ideas as to the color, material, and pattern of the outer dress. It certainly seems, however, as though children should be entirely free from thoughts of style and ruffles and fashion. Elaborately trimmed, heavily starched dresses can never increase the beauty of a little child. Rather do they tend to destroy the simplicity, artlessness, and sweet unconsciousness, which are the natural and most charming qualities of childhood. The more simply a child is dressed, and the less conscious it is of dress, the more attractive will it be.

It is a mistake to make the dresses of little girls too short. Many sensitive children are made to suffer by this practice, and others are made self-conscious.

Neither can a child enjoy life as nature intended with its dresses covered with ruffles and heavily

## THE BABY'S CLOTHING

starched. There is no particular reason why a child should be kept in white dresses the year round. During the hot days in summer such dresses are cooler, but should not be stiff with starch and covered with elaborate trimmings. Simple dresses may be made of such material as gingham and galatea, a very slight amount of trimming serving to make them look neat and attractive. Such dresses will be serviceable, do not show soil, and are easy to wash.

When the child is from two to three years of age the manner of dressing will depend upon whether it is a boy or girl. It is customary at this time for the boy to wear dresses with a large collar, sailor fashion, with box-plaits extending from the neck, and a belt about the waist. Kilts or a blouse suit may also be worn by the small boy.

Some parents prefer to put the boy of two years at once into knickerbockers or sailor suit with trousers. This would depend upon the size of the child.

The little girl continues to wear dresses of the same general character as those worn in babyhood. It is very desirable, however, that the simplicity characterizing the clothes of babyhood should be retained, and that little girls should be dressed as simply as their brothers, and as unconscious of dress.

## HYGIENE FOR MOTHER AND CHILD

For night-wear nothing can excel the combination shirt and drawers provided with feet.

**Night-Clothes** This suit is usually made from Canton flannel for winter, and cotton or outing flannel for summer. The advantage of this garment is that it covers the entire body except the head and hands.

### LIST OF CLOTHES FOR EARLY CHILDHOOD

Abdominal bands with shoulder-straps throughout the second year . . . . .	3
Shirts (close-fitting, long sleeves) . . . . .	3
Drawers (close-fitting) . . . . .	4 pairs
Stockings . . . . .	6 pairs
Shoes . . . . .	2 pairs
Underwaists . . . . .	3
Dresses . . . . .	6 to 8
Rompers . . . . .	4 suits
Night-garments . . . . .	4 suits
Sacks . . . . .	2
Cap or hat . . . . .	1
Coat . . . . .	1
Mittens . . . . .	1 pair
Leggings . . . . .	1 pair
Rubbers . . . . .	1 pair

## CHAPTER X

### THE FEEDING OF INFANTS

FORTUNATE indeed is the baby that can obtain at its mother's breast an abundant supply of nourishing food, for mother's milk is undoubtedly better adapted for the feeding of the new-born infant than any other food. An infant nursed by a mother who is well and strong thrives better, is larger, more robust, and is much less liable to illness than the bottle-fed infant.

**Mother's Milk**

Modified milk preparations, however carefully and skilfully made, can never serve as well during the first year of the child's life. Although some children thrive on modified milk, others fail rapidly.

Most mothers are anxious to nurse their children, and inability to do so is a sore disappointment.

**When Nursing  
Is Not  
Desirable**

There are, however, certain conditions which render nursing unsafe. If the mother is in a weak or run-down condition, has consumption or any chronic disease, or tendency to such disease, or is suffering from any serious acute illness, she should not attempt to nurse her child. This question, however, is of such



## HYGIENE FOR MOTHER AND CHILD

importance that it should in all cases be decided by a physician.

Immediately after the infant is born the mother is tired, and it is best to allow mother and child to rest for some hours. After the infant has been washed and dressed, and the mother refreshed by a long sleep, the baby may be placed at the breast.

### **When Nursing Should Begin**

Although there is very little milk in the breast during the first two or three days, there is usually enough to satisfy the infant until the regular flow of milk becomes established. The first milk is slightly nourishing, and in addition is said to have a laxative effect upon the child's bowels, thus serving to clear them of the blackish substance which they contain at birth.

Most mothers will almost intuitively know how to nurse the baby, and the natural instinct of the infant is to suckle, but it may be somewhat awkward at the beginning. The first attempt may not be very successful, but this need not cause anxiety. The healthy new-born baby sleeps most of the time during the first few days, and needs little nourishment. The infant will usually get all it needs until the next feeding, when, with a little patience, all will go well. No harm will result if a little boiled water is given lukewarm between the regular feedings. Aside from this, nothing should be given.

### **How to Nurse the Baby**

## THE FEEDING OF INFANTS

When the time for nursing arrives let the mother make herself and the baby as comfortable as possible. Nursing the baby in bed, she should support the infant's head by the arm of the same side as the breast from which the child is to nurse, and bending forward in order to bring the breast near the baby, she can control the flow of milk by supporting the breast with the other hand.

During the first two or three days it is customary to place the infant at the breast from four to six times in the twenty-four hours, usually every four hours from 6 A.M. to 10 P.M., and once during the night. By the third day, possibly not until the fourth or fifth day, the milk usually comes in abundance, and the question arises, how often should the baby be fed?

If babies were all alike in size, weight, and capacity for digesting food, and all mothers alike in their general condition and in having a plentiful supply of good milk, some definite rule might be established for all children; but it must be evident that this is impossible, and that only figures for the average baby can be given.

Much of the colic and indigestion so common during the first year may be lessened by endeavoring to regulate the time of nursing and the intervals between nursings to suit the individual child. Many children are nursed too frequently and too long at a time, and as a result suffer from indigestion.

## HYGIENE FOR MOTHER AND CHILD

During the first five weeks after the flow of milk becomes established, the average child will thrive if nursed every two hours from 6 A.M. to 10 P.M. Between 10 P.M. and 6 A.M. one feeding at about 2 A.M. will be sufficient, thus giving the mother two long intervals for sleep.

**First Five Weeks**

From the sixth to the ninth week the child may be nursed every two and a half hours from 6.30 A.M. to 9.30 or 10 P.M.

**Sixth to Ninth Week**

From the third to the twelfth month the infant should be nursed every three hours from 6.30 A.M. to 9.30 or 10.00 P.M., and one night-feeding at 2.00 or 3.00 A.M. until the beginning of the fifth month, when night-feeding should be discontinued.

**Third to Twelfth Month**

TABLE SHOWING HOURS FOR NURSING AT DIFFERENT AGES

FIRST FIVE WEEKS	SIXTH TO NINTH WEEK	THIRD AND FOURTH MONTHS	FIFTH TO TWELFTH MONTH
6.00 A.M.	6.30 A.M.	7.00 A.M.	7.00 A.M.
8.00 "	9.00 "	10.00 "	10.00 "
10.00 "	11.30 "	1.00 P.M.	1.00 P.M.
12.00 M.	2.00 P.M.	4.00 "	4.00 "
2.00 P.M.	4.30 "	7.00 "	7.00 "
4.00 "	7.00 "	10.00 "	10.00 "
6.00 "	9.30 "	2 to 3 A.M.	No night-feeding
8.00 "	2 to 3 A.M.		
10.00 "			
2 to 3 A.M.			

## THE FEEDING OF INFANTS

If there is plenty of milk the child will obtain sufficient nourishment from one breast at a feeding; but if the milk is not very abundant, nursing at both breasts may be necessary. The baby will usually empty the breast in ten to fifteen minutes and go to sleep, when it should be put in the crib. If the supply of milk is scanty ten minutes at each breast may be allowed.

**Nurse from One Breast at a Feeding** The baby should not be allowed to nurse five minutes, sleep five minutes, and so on, nursing and sleeping for half to three-quarters of an hour. The entire nursing should not take over twenty minutes. This is one of the most important points in the feeding of infants. It is much easier to begin right than to break a bad habit and cure a serious indigestion later.

**Time Allowed for Nursing** One of the most common causes of indigestion in infants is due to quieting the infant by nursing every time it cries. This is a very harmful practice. It produces indigestion and colic, causes the child to cry during the night as well as in the daytime, robs the mother of much needed sleep, saps her vitality, and the constant nursing is apt to cause sore nipples.

**Regularity in Nursing Very Important** Because the child stops crying when given the breast does not necessarily mean that hunger is

## HYGIENE FOR MOTHER AND CHILD

the reason for its uneasiness. Very often it is because the baby needs some water. That an infant should require water is usually overlooked by the family. A teaspoonful of water should be given several times a day between feedings, and as the child grows older it is well to teach it to take water from a nursing-bottle. The water should be boiled and cooled if there is any doubt about its purity.

**Babies  
Need  
Water**

The baby will also stop crying when given the breast, because the warm milk entering the stomach may relieve the pain for the time being, only to make the colic much worse later.

It is really a very simple matter to form the habit of regularity in nursing if the mother or nurse will commence in the right way at the first nursing. One reason why mothers are apt to err in this respect is that they do not like to disturb the baby while it is asleep. The mother will observe, however, if the breast is offered at the regular time, the baby will generally commence to nurse at once, and is disturbed but little if at all. If this is persisted in the baby will usually wake at the regular time, take its nourishment, and if made comfortable by dry diapers and loose clothes, will sleep on until the next feeding.

**Training for  
Regularity**

Between the regular hours for nursing the infant should receive nothing but water. When it cries

## THE FEEDING OF INFANTS

between feedings it should not be rocked or nursed. It is surprising how quickly a child learns to cry to be rocked. Very often changing the position, rearranging the clothes, changing if soiled, or giving a little warm water, is all that is needed to quiet the baby.

After looking for possible sources of discomfort and making the baby comfortable, if crying continues it is usually best not to take the child from the crib. A very young baby can move itself but little, and crying will give a little exercise and expand the lungs. From twenty to thirty minutes a day is not too much.

### *Suggestions for the Nursing Mother*

If the baby is to be strong and vigorous, it is important that the mother live a simple, well-regulated life, free from overexcitement and excessive care or worry. She should also have plenty of nourishing food and an abundance of fresh air and sunshine.

During the first three days after the baby is born the mother's diet will usually consist of nourishing liquids, such as milk, gruels made with milk, cocoa, and simple broths. After this there will gradually be added eggs, lamb chops, chicken, tender steak, and roast beef, with fresh vegetables, fruit,

The Mother's  
Diet

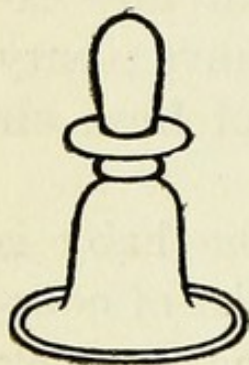
## HYGIENE FOR MOTHER AND CHILD

and simple desserts, until the diet is about the same as before the arrival of the baby, except that the quantity should be less while the mother is in bed.

Very sour fruits, pastry, rich desserts, and salads should be avoided. Meats should seldom be eaten more than once daily; tea and coffee should be used but little, and wine, beer, or any liquors, should not be taken at all. The suggestions given in Chapter II of Part I in regard to food and nutrition are especially applicable at this time, and should be carefully considered by the nursing mother.

Flat or  
Retracted  
Nipples

Sometimes, even though the mother has tried to prepare the nipples for nursing, the child will have difficulty in nursing, owing to very small or flat nipples. If such be the case, an artificial



ARTIFICIAL  
NIPPLE

nipple may be tried. That shown in the illustration serves the purpose well. It has a black rubber nipple which can be removed from the glass base, which makes it possible to keep both parts clean.

The nipples should be carefully cleansed after each nursing, and during the first two weeks this should be followed by the application of a little sweet-oil. If the nipple becomes slightly sore, the

## THE FEEDING OF INFANTS

above-mentioned artificial nipple should be tried. Should the condition tend to become worse, a physician had best be consulted, as nursing may become so painful as to make it impossible to nurse the baby.

**Care of  
the Nipples**

The mother will be much more likely to nurse her child successfully if she can be free from anxiety, worry, overwork, and social cares.

**The Mental  
Condition of  
the Mother**

A mother who is nervously tired out is very apt to have poor milk, lacking in quality and quantity, and, as a natural result, an irritable, peevish, puny child.

It is also true that any great excitement, fright, or anger is apt to so change the quality of the milk that it may produce colic, diarrhoea, or vomiting in the child.

Let the mother, then, so far as possible, be free from all annoyances which tend to cause anxiety and sap her vitality. She should have plenty of restful sleep, and if she can obtain a midday nap, an hour's complete relaxation and rest from household cares, she will be doing a great deal toward keeping herself in good condition, and have the pleasure of seeing her baby thrive.

The quantity of milk is usually somewhat reduced for the time being by the occurrence of menstruation, and the quality of the milk may be affected very slightly, causing a slight colic or indigestion.

**Menstruation;  
Its Effect  
Upon the Milk**



## HYGIENE FOR MOTHER AND CHILD

It is not best, however, to stop nursing entirely should the mother become unwell. The baby's health, and even its life, may depend upon a supply of breast milk. It is not unusual for menstruation to occur and then not appear again for some months. Therefore, if the baby seems well and gains weight between the periods, nursing may be continued. If disturbance of digestion appears the baby may be fed from the bottle for a few days, after which time nursing may be continued as usual. On the other hand, should the flow appear monthly and the mother's health be impaired, the family physician should be the one to decide as to the best course to pursue.

The healthy new-born infant will usually sleep most of the time between feedings. During the short times it is awake, if the napkins that the Baby Is Thriving are kept dry, and the clothing loose and comfortable, the baby is usually quiet, and cries but little. The healthy baby has from one to three movements of the bowels daily of light-yellow color, and there is a regular gain in weight.

If the child is not thriving it is pale, the flesh is soft and flabby, and there is usually a marked loss in weight. It is apt to be peevish, cry a great deal, and sleep poorly. If there is too little milk the baby will often nurse from thirty to forty min-

## THE FEEDING OF INFANTS

utes, and cry when the breast is taken away; or it may nurse but a few minutes, and then let go with a dissatisfied cry.

It is often possible to improve the condition of the baby by supplementing the nursing with feedings from the bottle. If the infant is fed every three hours, a feeding is given from the breast at 6.00 A.M., from the bottle at 9.00 A.M., from the breast again at noon, and so on.

Sometimes the mother's milk seems to cause indigestion, and the baby cries a great deal, sleeps only in short naps, belches considerable gas from the stomach, and has much colic. The bowels may be constipated, but most often are loose, green, contain mucus, are passed much more frequently than usual, and with much gas.

If the breast milk does not agree, as shown by the above symptoms, the mother should consider carefully whether she is conducting her life so that she will have a sufficient amount of good milk. Does she have plenty of fresh air and sunshine? Is she having regular meals of nourishing foods, and are her bowels moving freely every day? Is she drinking plenty of water between meals? Does she obtain a sufficient amount of rest and sleep? If she is living carefully, and the baby is nursed regularly, not too long at a time or too frequently,

**What Can  
Be Done**

## HYGIENE FOR MOTHER AND CHILD

and the child continues to lose weight, it will probably be necessary to take the baby from the breast and feed with modified cow's milk suitable for the age and condition. The artificial feeding of a baby having indigestion is a very difficult task, and much suffering and anxiety can be avoided by consulting a physician.

It often happens that milk which has changed but little comes up soon after nursing. This is usually due to the baby taking too much. The time allowed for nursing should be lessened, and the baby should not be permitted to take the milk so fast. Feeding from one breast only may also be tried.

It happens quite frequently that curdled milk having a sour odor comes up some time after nursing. This is more apt to be due to indigestion, and may result from too rich milk or too frequent feeding. It can often be remedied by lengthening the time between feedings and by giving four or five teaspoonfuls of plain boiled water or lime-water five minutes before nursing. The mother should not eat meat more than once a day.

This very common and troublesome condition of infancy is usually due to overfeeding. The baby may be fed too often, given too much, or possibly the food is of poor quality.

**Colic**

## THE FEEDING OF INFANTS

Chilling of the body and cold feet may also cause pain.

There should first be an attempt made to improve the quality of the milk. The mother should  
**What to Do** try to take short walks and rides in  
**for the** the open air, and eat less meat. She  
**Colic** should cultivate a quietness of mind, and be as free as possible from worry and anxiety. In regard to the baby, the overworked stomach should be allowed to rest longer between feedings, and the time allowed for each feeding should be reduced. The feet and legs should be kept sufficiently warm, and the abdomen protected by a flannel band.

Very frequently when the baby begins to cry from colic the breast is offered. This is a serious mistake. The warm milk may ease the pain for a moment, only to increase the load of undigested milk in the stomach and make the pain worse than ever.

Sometimes a gentle rubbing of the abdomen for a few minutes, or changing the child's position, as by resting it against the shoulder, or having it lie on its abdomen in the mother's lap and patting it on the back, will give relief. The hot-water bag may also give relief, care being taken not to burn the child.

One of the quickest methods to get rid of the gas is to inject into the rectum about a cup of

## HYGIENE FOR MOTHER AND CHILD

warm water into which is dissolved a half teaspoonful of common salt, or an injection of soapy water may be given.

Very often the injection causes the gas to escape and relief is obtained, but sometimes the child continues to cry, and shows every evidence of intense suffering. A simple remedy which is often effective is soda-mint, a half teaspoonful in hot water for a child six months of age.

### PREPARATION OF SODA-MINT

Bicarbonate of soda.....	$\frac{1}{2}$ drachm
Aromatic spirits of ammonia.....	$\frac{1}{2}$ fluid drachm
Peppermint water.....	2 fluid ounces

Although not very common in infants nourished at the breast, constipation may occur and prove **Constipation** very persistent. It is frequently caused **in the Nursing** by irregular feeding and overfeeding, **Infant** or the milk may be lacking in laxative properties. Chronic constipation in the mother may also affect the infant. The mother's bowels should be regular, and she should have plenty of out-door exercise. Her diet should consist of fresh meat, milk, vegetables, and fruits. The child should be nursed at regular times, overfeeding should be avoided, and water should be given freely from the bottle between feedings.

## THE FEEDING OF INFANTS

### *Weaning*

It is customary to begin to wean the baby when it is about ten months old. To continue nursing beyond twelve months is detrimental to the child's growth and development. The milk at this time usually becomes scanty and of poor quality. The mother also suffers from nursing the baby beyond this period. She is apt to lose strength, sleep poorly, have headaches and indigestion.

**Time for Weaning**

It is much better not to wean the baby in summer if it can be avoided. If the mother has plenty of milk and the baby is thriving, nursing may continue until the child is a year old. It is often possible to feed an infant successfully during the summer when the mother's milk is becoming scanty by alternating breast feeding with bottle feedings of carefully modified milk, as described on page 109.

**Not Wise to Wean in Summer**

Weaning should, if possible, be accomplished gradually, as sudden weaning is apt to cause indigestion. If the baby has been trained to take water from the bottle, it will have become accustomed to this method of feeding, and little difficulty will be experienced at the time of weaning. A good way is to substitute one bottle feeding a day for one breast feeding, the baby being nursed at the other

**How to Wean the Baby**

## HYGIENE FOR MOTHER AND CHILD

meals. In three or four days, if all is well, another bottle feeding may be given, and later on another, until in about a month's time the child is taken from the breast entirely.

Weaned by this method the child becomes accustomed gradually to the new order of things, and is not apt to suffer from indigestion.

Usually the baby can be weaned gradually, but if the child refuses to take the bottle, it may be necessary to withdraw the breast entirely. Some children will take food from a spoon or cup when they will not take the bottle. A small spoon should be used, and it will facilitate the feeding if each spoonful is fed into the mouth to the right of the tongue and quite far back. Care should be taken not to hurt the mouth with the spoon.

If patience and gentleness do not win, feeding from the breast should be stopped immediately, when hunger and thirst will urge the child to accept the bottle.

When nursing is thus stopped abruptly the mother may have some trouble from distension of the breast with milk. She should drink as little water, tea, or milk as possible, and the breasts should be supported by a broad band. If there is some pain from the distension, they may be emptied by the breast-pump, and "caking" may be prevented by rubbing gently with warm oil.

Care of  
Breasts After  
Weaning

## THE FEEDING OF INFANTS

If the mother contracts some serious acute disease, or is suffering from great weakness or some chronic disease, early weaning will be necessary. Neither should she attempt to nurse her child if she becomes pregnant, as few women can endure such a drain upon the vitality.

**When Early Weaning Is Necessary**

There are other contingencies which may arise, such as failure in the supply of milk, or it may become too poor in quality. Nursing should not be abandoned, however, before the tenth month without very good reason. The question as to whether or not the mother's milk is of good quality is not easily decided, and before depriving a child of its natural food skilled advice should be sought.

When the child is weaned from the breast at ten or twelve months, it is better to train it at once to take food from a spoon or cup. This will save later weaning from the bottle.

By the end of the twelfth month bottle-fed children should begin to learn to take food from spoon and cup. By the fourteenth month the bottle should be abandoned, except possibly at the bedtime feeding. Unless children are thus trained they are apt to cling to the bottle until two or three years of age, and it becomes very difficult to break them of the bottle habit. The child will also lose the training which teaches use of the hands and ed-

**Weaning from the Bottle**



## HYGIENE FOR MOTHER AND CHILD

ucation of the faculties dependent upon such use.

This is not difficult if commenced early. At first the child is taught to drink from a small cup or glass, a little at a time, the bottle being used for most of the feeding. **Teaching to Feed from Cup** In this way most children will learn to take all food from a cup in a week or two, and it will save the mother much washing of bottles and nipples.

On the other hand, if such training is delayed until the second or third year, much more difficulty will be experienced. At this time the best way is to take the bottle away entirely and give food only from the cup. Sometimes a child will skip several feedings without food until hunger compels it to take the food from a cup, but the mother should not yield, for if she does failure is certain.

It must be remembered that a baby just weaned from the breast cannot digest plain cow's milk, or even a milk food prepared for a bottle-fed child of the same age. **Feeding a Newly Weaned Baby** The change is so decided from mother's milk to food artificially prepared that a weaker milk should be given at first, gradually increasing the strength as the baby becomes accustomed to cow's milk.

For a healthy breast-fed baby weaned at four or five months there should be prepared a milk food of about the same strength as for a healthy bottle-

## THE FEEDING OF INFANTS

fed baby of two months, like Table No. V, shown on page 132 in the next chapter. For a baby weaned at nine or ten months food prepared for a bottle-fed baby of four months would be suitable, such as Table No. VII or Table No. VIII, shown on page 135 in the next chapter.

Although the food in each case should be weaker, the quantity may be somewhat larger. The food can be strengthened gradually, until in a few weeks the child is taking food suitable for its age.

When the baby is first weaned it may lose slightly in weight, but as it becomes accustomed to cow's milk there will be a regular gain, and the child may even thrive better than before.

The preparation of food suitable for infants at different ages will be considered in the next chapter.

## CHAPTER XI

### THE FEEDING OF INFANTS (CONTINUED)

#### *The Preparation of Food from Cow's Milk*

No artificial food, however skilfully prepared to imitate breast milk, can compare with the milk of a healthy mother. Unfortunately many mothers are deprived of the pleasure of nursing their children, and the preparation of a nourishing food becomes a very important question.

Good breast milk is especially adapted to the digestive power of the new-born infant, and if the child can only be nourished at the breast during the first month or two, the later task of preparing a suitable food becomes much easier.

In the first place it should be remembered that an infant cannot thrive on almost anything. Al-

**Important Principles**      though there are some children that seem to do well with very little care in the matter of feeding, most infants will fail most miserably unless the food is prepared with some care and especial consideration for the requirements of the individual child.

## THE FEEDING OF INFANTS

Even children that apparently thrive at first on food prepared without especial care very often show signs later of indigestion and ill-health.

Children differ a great deal in digestive power and constitution, and what will nourish one may injure another.

It must also be remembered that certain children never seem to thrive on any food except breast milk. Such children tax the combined care of the mother and the skill of the physician to the utmost. Certainly no mother should attempt the management of the feeding of such a child without the aid of a physician.

It must be evident, then, that no one set of rules or formulas will invariably be successful with all children. It is possible, however, and very desirable that there should be available a simple, practical series of workable tables, by means of which the mother or nurse may easily and quickly make up the day's food for the average healthy baby at different ages.

In considering the question of how best to feed the baby we must have in mind the following points: *First*—The selection of an easily obtained substitute milk. *Second*—A convenient method of home modification of the substitute milk, so that it will approach as near as possible the composition of good breast milk. *Third*—The amount of food to be

Points for  
Consideration

## HYGIENE FOR MOTHER AND CHILD

given at each feeding, and how often the baby is to be fed.

In selecting a food for the baby it is important to bear in mind that children cannot thrive very long on food which does not contain fresh milk. A baby who does not have fresh milk is pale, has soft and flabby muscles, and is apt to develop scurvy or rickets.

Good cow's milk is used most extensively in the preparation of food for infants, on account of the ease with which it is obtained. It has been found that babies do not thrive as well on the richest milk like that obtained from the Jersey cow as they do on the milk of the more common cows. Neither is the milk of one cow preferable to that obtained from several cows and mixed. Mixed milk changes but little from day to day, and is therefore preferable to one cow's milk, which is apt to vary a great deal.

Too much attention cannot be given to the selection and care of the milk which is to be used for the baby. While it is not always possible to investigate the source of supply, reasonable care should be taken that the milk comes from a dealer who has the reputation of furnishing good milk.

In order to give good milk the cows must be

## THE FEEDING OF INFANTS

healthy, and they cannot be healthy unless they  
**Cows Must** are kept clean, well fed, and have  
**Be Well** plenty of pure water. The barn must  
**Cared For** be clean, dry, and well ventilated.

Neither is it too much to expect that the milkers be clean, and that milk-pails, bottles, and cans should be thoroughly washed and scalded out before using.

In order that the milk shall be fresh it is very important that it should be cooled at once after  
**Careful** milking, and kept at a temperature  
**Handling** not above 50° F. It should not be  
**of Milk** placed in bottles or cans, tightly covered, and placed at once on ice. Milk should be cooled by placing the bottles or cans in cold water, kept cold by ice or by adding cold water.

Milk produced under hygienic conditions, with special care in handling and delivering, costs more, but the saying that "The best is none too good for the baby" certainly holds good here, for the saving in time and peace of mind will more than compensate for the difference in price.

When the bottle of milk is received, if it is not already cold from having been on ice, it should be  
**Care of Milk** placed at once in ice-cold water, kept  
**at Home** cold by adding ice or water, and allowed to remain for half an hour before placing on the ice.

Refrigerators or ice-boxes made of metal and enclosed in wood, such as the ordinary metal-lined

## HYGIENE FOR MOTHER AND CHILD

ice-chests, are preferable to all-metal ice-boxes, in which the ice melts more quickly. If the ordinary

**Ice Chests  
and  
Boxes** ice-chest is not available, a metal box or pail may be placed in a wooden box or wrapped in heavy quilting. Quite a satisfactory ice-box is frequently made in the country by sinking the wooden box in the ground in a cool place in the cellar or under the house, and placing the ice therein, wrapped in an old blanket.

The bottles containing the milk must be kept in contact with the ice, so that the temperature of the milk will not go above 50° F. The ice-box should be kept sweet and clean.

Families living in the country and having their own cows are fortunate in that they can have such matters as cleanliness and proper cooling of the milk under their own supervision. When thus obtained fresh from the cow, the milk should be strained through several layers of cheese-cloth into quart glass jars or milk bottles. The bottles should be covered sufficiently to keep out dust, and immediately placed up to their necks in ice-water or cold well-water, and should so remain for thirty to forty-five minutes. The water should be kept cold by adding ice or very cold water. Milk cooled quickly in this way at first, keeps much longer than that which is cooled slowly or laid aside and later put on ice. After the first rapid cooling the bottles of milk should be placed in the ice-chest in contact

## THE FEEDING OF INFANTS

with the ice, and allowed to stand for four or five hours, or overnight, when the top-milk may be removed for the preparation of the baby's food, as described on page 127.

### *Articles Needed for Preparing the Food and Feeding the Baby*

Before considering the changing or modifying of cow's milk to make it a suitable food for the baby, it is desirable to consider briefly the articles needed for preparing the food. The list is as follows:

1. Three-pint pitcher, in which to mix the food.
2. Quart pitcher for top-milk.
3. Chapin cream-dipper<sup>1</sup> for removing top-milk from bottle of milk.
4. Eight-ounce graduate<sup>2</sup> for measuring water and milk.
5. Tablespoon.
6. Glass or enamel-ware funnel for filling feeding-bottles.
7. Half a dozen black rubber nipples.
8. Cotton for stoppering feeding-bottle.
9. A tall quart dish of tin or enamel ware for warming food.
10. Bottle-brushes for cleaning bottles.

The best feeding-bottle is one like that shown in

<sup>1</sup> The Chapin Cream-Dipper, made especially for this purpose, may be obtained in Boston at the Filene store, 463 Washington Street; in New York City, from James Dougherty, 411 West 59th Street; from any of the Walker-Gordon stores, and by mail from The Cereo Company, Tappan, N. Y. Price, 25 cents.

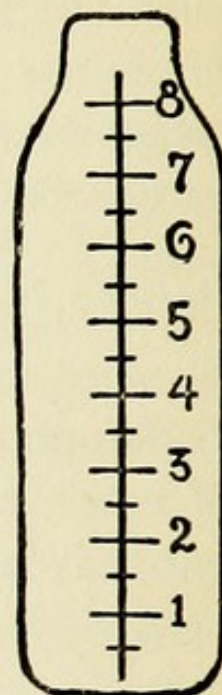
<sup>2</sup> An eight-ounce photographer's graduate can often be more readily obtained than a druggist's graduate, is much less expensive, and is absolutely accurate. It can be bought at any department store or store carrying photographers' supplies.



## HYGIENE FOR MOTHER AND CHILD

the accompanying illustration, holding from eight to ten ounces, and having a wide neck and rounded corners which can be easily washed. It is well to have as many bottles as there are feedings a day. After each feeding the empty bottles should be rinsed in cold water and allowed to stand filled with water, to which is added a little soda, until needed for the next day's feeding, when they should be thoroughly cleansed with the bottle-brush and soapy water, and then scalded out with hot water.

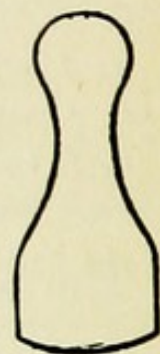
### Feeding-Bottles



FEEDING-BOTTLE

Nipples made of black rubber which slip over the neck of the bottle are to be preferred to those with a glass or rubber tube, the latter kind being difficult to keep clean. The openings in the end should not be too large, so that the baby will get the milk too fast, but just large enough, so that when the bottle is inverted the milk will drop easily from the nipple, but not too rapidly or in a stream. It is well to have several nipples on hand.

### Rubber Nipples



RUBBER NIPPLES

For the average healthy baby, nipples having the smallest holes should be bought. If the openings are found to be too small,

## THE FEEDING OF INFANTS

they may be made larger with a hot needle. Usually, however, for vigorous infants, the difficulty is to obtain nipples having openings sufficiently small, so that the baby will not get the food too rapidly. As the nipple is used more and more it becomes softer, is liable to collapse, and the holes become too large. A new nipple should then be used.

Before being used new nipples should be boiled for five minutes. They need not be again boiled,

**The Care of Nipples** but after using should be rinsed with cold water, and placed in a covered glass of borax water. Once a day they should be thoroughly cleansed inside and out with soap and hot water.

Cow's milk being the most available for the feeding of infants, we must now consider how it

**Points of Difference Between Cow's Milk and Mother's Milk** differs from mother's milk, and how it must be changed or modified so that it will resemble mother's milk as nearly as possible. Cow's milk

contains nearly three times as much proteids or curd as woman's milk, and only a little more than half as much sugar. It is evident, then, that in order to prepare a food from cow's milk which shall resemble mother's milk, it is necessary to diminish the proteids by diluting the milk with water, and to increase the sugar. Milk thus diluted contains too little of the creamy portion or fat, and this is supplied by using what is commonly known as

## HYGIENE FOR MOTHER AND CHILD

top-milk instead of plain milk. Top-milk is simply the top or creamy layer of milk which has stood for some hours.

### *Daily Method of Preparing the Food from the Following Formulas*

The preparation of the baby's food must necessarily be a daily task for some months, and it may be accomplished more easily and quickly if the same time and same method for doing the work is chosen each day. It will also facilitate matters to keep everything which has to do with the preparation of the baby's food in its place near at hand.

It is of the greatest importance that the table, pitcher, glass graduate, spoons, bottles, and the hands should be kept clean. A little care in this respect will amply repay the mother.

The entire amount of food required for twenty-four hours should be prepared at one time.

By examining the following formulas it will be seen that each formula, or table, calls for a certain amount of boiled water to dilute the proteids in the top-milk, milk-sugar to make up for the deficiency of this ingredient, and lime-water to reduce acidity.

Milk-sugar is used instead of cane-sugar because it is the form naturally found in milk. If cane-sugar is employed only half as much should be used. Milk-sugar can be bought much more reasonably if purchased in quantity by the pound.

## THE FEEDING OF INFANTS

First, then, it is best to prepare the solution of boiled water and sugar, which can be cooling while the top-milk is being skimmed from the top of the bottle of milk.

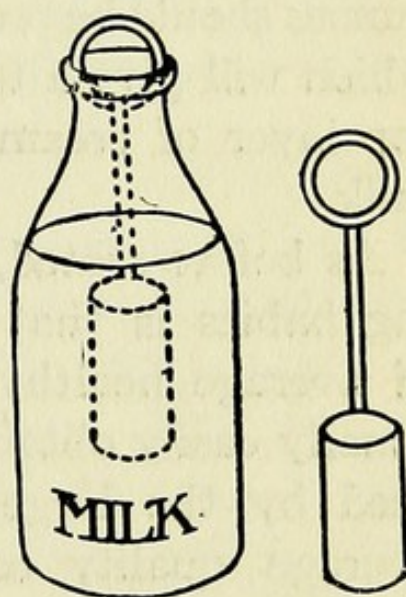
### First Step

With the eight-ounce graduate the amount of boiled water called for in the formula should be measured into the large pitcher in which the food is to be prepared. Into this is measured the required amount of milk-sugar,<sup>1</sup> which is readily dissolved by stirring. The pitcher containing the sugar solution should then be covered and set in a dish of cold water to cool while the top-milk is being skimmed from the bottle of milk.

As already stated, top-milk is the upper layer or the creamy portion of the bottle

**Second Step:** of milk, which can  
**Obtaining the** be skimmed from  
**Top-Milk** the top of the

bottle after it has stood four or five hours or overnight. Any quart jar with straight sides may be used, but the ordinary glass bottle is now almost universally used by milk-dealers. The best way to remove top-milk is by means of the small



CHAPIN'S DIPPER FOR REMOVING TOP-MILK

<sup>1</sup> The milk-sugar may be measured by tablespoon or a small box holding an ounce obtained at some drug store. Two and a half level tablespoonfuls may be reckoned as an ounce.

## HYGIENE FOR MOTHER AND CHILD

cream-dipper already described, which is coming rapidly into general use, and which will be more generally sold as the demand for it increases.

Just how much of the upper part of the bottle of milk should be removed will depend upon how rich the milk is in fat or cream. If the milk is very rich in cream, like that obtained from the Jersey cow, it is necessary to skim off more than from average milk, in order that the top-milk shall not contain too much fat. The upper seventeen ounces would be about the right amount to skim from such rich milk. On the other hand, should the milk be very poor in quality and lacking in fat, about nine ounces should be removed from the top of the bottle, which will give a top-milk containing more of the top layer of cream and less of the lower layer of milk.

As before stated, the best milk for use in feeding babies is that obtained from a mixed herd of average healthy cows. Good average milk is usually easily obtained, and is the most frequently used by the large majority of people. Milk of average quality contains about four per cent. fat.

From a bottle of good average milk it is customary to skim off the upper third, or about ten and a half ounces. The ten and a half ounces of top-milk thus

**Good Average  
Milk the Best**

## THE FEEDING OF INFANTS

obtained gives about the right proportion of fat and proteids for the first three months of life.

Before using the cream-dipper it is necessary to pour very carefully from the top of the bottle of milk three ounces of the top layer of cream into the graduate. The cream-dipper may then be used to skim off the remaining seven and a half ounces without spilling.

It is very important to remember that the entire ten and a half ounces should not be used at one time, but only as many ounces as is called for in any one formula.

The sugar solution in the large pitcher having cooled, the required amount of top-milk as called for in the formula should be added to the solution.

After stirring the sugar solution and top-milk together, the amount of lime-water mentioned in the formula is added to the mixture, which completes the preparation of the food for twenty-four hours. The amount of food to be given the child at each feeding is then put into freshly cleaned bottles, there being as many bottles as there are feedings in the twenty-four hours. After stoppering the bottles with clean bits of cotton, they should be placed on the ice until needed at feeding-time.

## HYGIENE FOR MOTHER AND CHILD

*Tables Showing Amount of Each Ingredient Required in the Food for Infants During First Eleven Months*

TABLE NO. I

Fat, 1.00                      Sugar, 5.50                      Proteids, 0.33

*For Infants from Second to Fifth Day*

Boiled water . . . . .	12 $\frac{3}{4}$ ounces
Milk-sugar (two level tablespoonfuls)	$\frac{3}{4}$ ounce
Top-milk . . . . .	1 $\frac{1}{2}$ ounces
Lime-water . . . . .	$\frac{3}{4}$ ounce
Total, 15 ounces for 24 hours	

To illustrate the daily method already described in general, the food should be prepared, using the first table, as follows:

Dissolve the three-quarters of an ounce, or two level tablespoonfuls, of milk-sugar in the twelve and three-quarters ounces of boiled water. Stir until the sugar is all dissolved, and set aside to cool. While this is cooling the ten and a half ounces of top-milk should be skimmed from the top of the bottle of milk, as already described. Stir the ten and a half ounces of top-milk slightly, and from this amount take the one and a half ounces called for in the first table, and add to the boiled water and milk-sugar solution, which should now be cool. To this add the three-fourths of an ounce of lime-water. This will make fifteen ounces

## THE FEEDING OF INFANTS

of food for the twenty-four hours. It should be bottled, as already described, and put on the ice.

The above method may be used for preparing food from the following tables, except that the amount of each ingredient will vary according to age.

TABLE NO. II

Fat, 1.50                  Sugar, 5.50                  Proteids, 0.50

*For Infants from Fifth to Eighth Day*

Boiled water . . . . .	16 ounces
Milk-sugar (2½ level tablespoonfuls) . .	1 ounce
Top-milk . . . . .	3 ounces
Lime-water . . . . .	1 ounce
Total, 20 ounces for 24 hours	

From the second to the eighth day the average healthy infant will require ten feedings during the twenty-four hours, each feeding to consist of one to one and a half ounces. **Amount of Each Feeding** During the second week the amount of feeding may be increased, and the child may be given one and a half to two ounces at a time. During the third and fourth weeks the baby may be given two to three ounces at a feeding.

At this time, and throughout the first five weeks of life, the average healthy infant will need to be given a feeding every two hours from six in the morning to ten at night, and once during the night at two in the morning. **Hours for Feeding**



# HYGIENE FOR MOTHER AND CHILD

TABLE NO. III

Fat, 2.00                  Sugar, 6.00                  Proteids, 0.66

*For Second Week*

Boiled water.....	18 $\frac{3}{4}$	ounces
Milk-sugar (3 level tablespoonfuls) ..	1 $\frac{1}{4}$	“
Top-milk .....	5	“
Lime-water .....	1 $\frac{1}{4}$	“
Total, 25 ounces for 24 hours		

TABLE NO. IV

Fat, 2.50                  Sugar, 6.00                  Proteids, 0.80

*For Third and Fourth Weeks*

Boiled water.....	22 $\frac{1}{2}$	ounces
Milk-sugar (4 level tablespoonfuls) ..	1 $\frac{1}{2}$	“
Top-milk .....	8	“
Lime-water .....	1 $\frac{1}{2}$	“
Total, 32 ounces for 24 hours		

TABLE NO. V

Fat, 3.00                  Sugar, 6.00                  Proteids, 1.00

*From Fifth to Tenth Week*

Boiled water .....	22 $\frac{3}{4}$	ounces
Milk-sugar (4 $\frac{1}{2}$ level tablespoonfuls) ..	1 $\frac{3}{4}$	“
Top-milk .....	10 $\frac{1}{2}$	“
Lime-water .....	1 $\frac{3}{4}$	“
Total, 35 ounces for 24 hours		

From the fifth to the tenth week the baby should be given three to four ounces of the food every two and a half hours from 7 A.M. to 10 P.M.,

## THE FEEDING OF INFANTS

and one night-feeding at 3 A.M., making eight feedings in all.

### *Food for Infants from Tenth or Twelfth Week to Seventh Month*

When the baby reaches the age of three months it is necessary to use a different top-milk from that used during the first ten or twelve weeks of life. It is customary at this time to commence to prepare the food from what is known as seven-per-cent top-milk.

Good average milk obtained from several cows and mixed is more suitable for this purpose, but if a milk lacking in fat or cream is the only one obtainable, only about one-third, or the upper ten and a half ounces, should be removed from the bottle of milk. If a very rich milk like that obtained from the Jersey cow happens to be the one most available, a larger quantity must be removed, about two-thirds, or the upper twenty-one and a half ounces.

Probably, however, most families will find a milk of good average quality most easily obtainable. Such milk may now be obtained almost everywhere, being delivered at the door in cities, towns, and country villages.

From a quart bottle of good average milk it is customary to skim off the upper sixteen ounces,

## HYGIENE FOR MOTHER AND CHILD

or one-half, after standing four or five hours or overnight.

One quart of good average milk will yield sixteen ounces of seven-per-cent top-milk. Commencing with Table No. VIII, it will be seen that the amount of top-milk required in each formula steadily increases. Therefore, commencing with Table No. VIII, it will be necessary to skim off the upper sixteen ounces from two of the quart bottles of milk in order to obtain a sufficient amount of seven-per-cent top-milk to meet the requirements of the steadily growing child.

Again, it is desirable to call the attention of the one who prepares the baby's food that care must be taken not to use the entire amount of top-milk removed from two quart bottles of milk, but only such quantity as is called for in the formula used.

The food may be prepared according to the following tables by the same method used in making up the food for the early months.

### *Tables Showing Amount of Each Ingredient Required in the Food for Infants from Third to Seventh Month*

TABLE NO. VI

Fat, 2.50      Sugar, 6.50      Proteids, 1.25

#### *During Eleventh and Twelfth Weeks*

Boiled water.....	20½	ounces
Milk-sugar (4½ tablespoonfuls).....	1¾	“
Seven-per-cent top-milk.....	12½	“
Lime-water.....	2	“
Total, 35 ounces for 24 hours		

## THE FEEDING OF INFANTS

During the eleventh and twelfth weeks the baby will usually need four to five ounces of food every three hours from 7 A.M. to 10 P.M., and one feeding during the night at 3 A.M.

TABLE NO. VII

Fat, 2.75                  Sugar, 6.50                  Proteids, 1.37

*First Half of Fourth Month*

Boiled water.....	22	ounces
Milk-sugar (5 level tablespoonfuls)....	2	"
Seven-per-cent top-milk.....	16	"
Lime-water.....	2	"
Total, 40 ounces for 24 hours		

TABLE NO. VIII

Fat, 3.00                  Sugar, 6.50                  Proteids, 1.50

*Last Half of Fourth Month*

Boiled water.....	21	ounces
Milk-sugar (5 level tablespoonfuls)...	2	"
Seven-per-cent top-milk.....	17	"
Lime-water.....	2	"
Total, 40 ounces for 24 hours		

During the fourth month the amount of each feeding should be four and a half to five and a half ounces, and the interval between feedings increased to three hours, from 7 A.M. to 10 P.M., with one night-feeding at 2 A.M.

# HYGIENE FOR MOTHER AND CHILD

TABLE NO. IX

Fat, 3.50                  Sugar, 6.50                  Proteids, 1.75

*During Fifth Month*

Boiled water.....	19	ounces
Milk-sugar (4 level tablespoonfuls)...	1½	"
Seven-per-cent top-milk.....	21	"
Lime-water.....	2	"
Total, 42 ounces for 24 hours		

TABLE NO. X

Fat, 4.00                  Sugar, 6.50                  Proteids, 2.00

*During Sixth Month*

Boiled water.....	17	ounces
Milk-sugar (4½ level tablespoonfuls).	1¾	"
Seven-per-cent top-milk.....	25	"
Lime-water.....	2	"
Total, 44 ounces for 24 hours		

During the fifth and sixth months the amount of each feeding should be from five to seven ounces. The food should be given every three hours from 7 A.M. to 10 P.M.

The night-feeding can usually be discontinued at the beginning or middle of the fifth month. It should not be continued beyond the fifth month.

*Food for Infants from Seventh to Eleventh Month*

By the time the baby is seven months of age it can usually digest a weak barley or oatmeal gruel,

## THE FEEDING OF INFANTS

and such a gruel may now be used in the food in place of some of the boiled water.

The gruel can be prepared much more quickly from flour than from the whole grain. For the preparation of barley gruel Robin-  
**How to Pre-prepare Barley or Oatmeal Gruel** son's Barley Flour is used, and an oatmeal flour made by the Health Food Company is used for the preparation of oatmeal gruel.

There is very little difference in the nutritive value but oatmeal gruel is somewhat more laxative, and may be used to advantage when there is constipation.

An even tablespoonful of either flour is stirred into about half a cup of cold water until a thick, creamy mixture is obtained. This is added, stirring, to one pint of boiling water, and cooked for twenty minutes to half an hour, preferably in a double boiler. After cooking it should be set aside to cool.

TABLE NO. XI

Fat, 4.00                  Sugar, 6.00                  Proteids, 2.00

*From Seventh to Eleventh Month*

Boiled water.....	6½	ounces
Milk-sugar (4 level tablespoonfuls) ..	1½	“
Barley gruel.....	11½	“
Seven-per-cent top-milk.....	27½	“
Lime-water .. . . . .	2½	“

Total, 48 ounces for 24 hours

## HYGIENE FOR MOTHER AND CHILD

To prepare the food from Table No. XI, the sugar solution should first be made by stirring the **Directions for Preparing Food from Table No. XI.** four level tablespoonfuls of milk-sugar into the six and a half ounces of boiled water. The water should be hot, and if the sugar does not dissolve readily, it will do so if heated over the fire a few minutes while stirring.

To this is added the eleven and a half ounces of gruel. When the mixture becomes cool the twenty-seven and a half ounces of seven-per-cent. top-milk is stirred into it, and the two and a half ounces of lime-water added, which completes the preparation of the food.

The amount of the food thus prepared to be given at each feeding is put into a separate bottle, the bottles stoppered with cotton, and placed on ice.

Milk modified with gruel seems to agree with many infants much better than milk diluted with water. The gruel seems to break up the curd of milk and make it more digestible.

If the baby suffers from indigestion, barley gruel might well be used to dilute the milk during the sixth month. Table No. X, which is for use during the sixth month, calls for seventeen ounces of boiled water. If it is desired to use barley gruel, ten ounces of gruel may take the place of ten of the seventeen ounces of water.

## THE FEEDING OF INFANTS

On the other hand, if the baby is gaining steadily in weight from three to four ounces per week, there is not so much need for using the gruel, and the food may still be prepared from the milk and boiled water. The following table shows how to prepare the food without the gruel:

TABLE NO. XII

Fat, 4.00	Sugar, 7.00	Proteids, 2.00
Boiled water..... 18 ounces		
Milk-sugar (4½ tablespoonfuls) . . . . . 1¾ “		
Seven-per-cent. top-milk . . . . . 27½ “		
Lime-water..... 2½ “		
Total, 48 ounces for 24 hours		

From the seventh to the eleventh month the average healthy child will need from six to eight ounces of food every three hours from 7 A.M. to 10 P.M.

### *Food for Infants During the Eleventh and Twelfth Months*

When the baby reaches the age of ten months, or at the beginning of the eleventh month, it is desirable to begin the use of plain milk diluted with gruel, and by using less and less of the gruel and more of the milk, to gradually accustom the child to take whole milk.



## HYGIENE FOR MOTHER AND CHILD

The gruel is prepared as already described. Whole milk should now be used; that is, the milk need not stand four hours, and the cream should not be removed. After standing, the milk should be stirred slightly, so that the milk and cream may be well mixed. It may then be used for the preparation of the food.

The milk-sugar is dissolved in the barley gruel while hot, and the milk and lime-water added when the mixture becomes cool.

TABLE NO. XIII

Fat, 2.40                  Sugar, 5.50                  Proteids, 2.10

*First Half of Eleventh Month*

Barley gruel.....	16 ounces
Milk-sugar (2½ tablespoonfuls).....	1 ounce
Whole milk.....	27 ounces
Lime-water.....	2     “
Total, 45 ounces for 24 hours	

TABLE NO. XIV

Fat, 2.80                  Sugar, 5.50                  Proteids, 2.50

*Last Half of Eleventh Month*

Barley gruel.....	11½ ounces
Milk-sugar (2½ tablespoonfuls).....	1 ounce
Whole milk.....	31½ ounces
Lime-water.....	2     “
Total, 45 ounces for 24 hours	

# THE FEEDING OF INFANTS

TABLE NO. XV

Fat, 3.20                      Sugar, 5.50                      Proteids, 2.80

## *Food During the Twelfth Month*

Barley gruel . . . . .	7 ounces
Milk-sugar (2½ tablespoonfuls) . . . . .	1 ounce
Whole milk . . . . .	36 ounces
Lime-water . . . . .	2 “

Total, 45 ounces for 24 hours

## *Other Food than Milk During Eleventh and Twelfth Months*

There are but three additions to the baby's diet during this period—namely, the white of egg, beef-juice, and orange-juice.

During the latter part of the tenth or beginning of the eleventh month half the white of one egg may be given at the midday feeding. In a week or ten days the entire white of an egg may be given. This is best prepared by placing the egg with shell on in boiling water. Remove at once to the back of the stove, where the egg may cook slowly for five minutes, when the white part of the egg will appear like jelly. This is known as coddled egg, and is a good way to cook eggs for young children.

A good plan is to alternate the white of egg and beef-juice, giving the egg one day, the beef-juice the next, and so on. A teaspoonful of beef-juice

## HYGIENE FOR MOTHER AND CHILD

may be given just before the midday feeding. This may be gradually increased a teaspoonful each week, giving it with an equal amount of water up to eight teaspoonfuls, reaching the latter quantity at the end of the twelfth month.

If curds constantly appear in the stools, the white of egg may with advantage be given much earlier—about the sixth month. Beef-juice may also be given about the same time if the child is pale and not very strong.

Orange-juice is very useful in the feeding of children, and acts as a mild laxative. It may be given at the beginning of the eleventh month, **Orange-Juice** two teaspoonfuls an hour before the second feeding. This may be increased two teaspoonfuls every two weeks until at twelve months the baby is having one to two ounces.

### *Schedule for Feeding a Healthy Child During Eleventh and Twelfth Months*

6.30 A.M.—Seven to nine ounces of the milk-and-gruel food, prepared from Tables XIII, XIV, or XV, depending upon age of child.

9 A.M.—Orange-juice, two teaspoonfuls to two to four tablespoonfuls, depending upon age.

10 A.M.—Same as at 6.30 A.M.

2 P.M.—Half of white of egg during first half of eleventh month. Later, the whole of the white of one egg. Five to six ounces of the milk-and-gruel food. Another day,

## THE FEEDING OF INFANTS

at 2 P.M., beef-juice, commencing with one teaspoonful with equal quantity of water, and increasing a teaspoonful each week, until, at the last week of the twelfth month, eight teaspoonfuls are given. After the beef-juice may be given six to eight ounces of the milk-and-gruel food, depending upon the age.

6 P.M.—Same as 6.30 A.M.

10 P.M.—Same as at 6.30 A.M.

### *Preparation of Beef-Juice*

Cut into small pieces a pound of steak and broil until slightly brown. Cut into smaller pieces and press out the juice with a lemon squeezer. This will yield from three to four ounces of juice. Seasoned with salt, it may be given warm or cold. It should not be heated enough to coagulate the albumen.

#### **First Method**

After broiling very slightly, as in the first method, chop fine, then place in a covered jar with five ounces of cold water and a bit of salt. Stir well and leave standing on ice about six hours or over night. After standing, strain through cheese-cloth, twisting very hard so as to express all the juice. It may now be given in the same way as juice prepared according to the first method. Prepared in this way, beef-juice is said to be more nourishing, and it also has the advantage that much more may be obtained.

#### **Second Method**

## HYGIENE FOR MOTHER AND CHILD

### *Directions for Feeding the Baby*

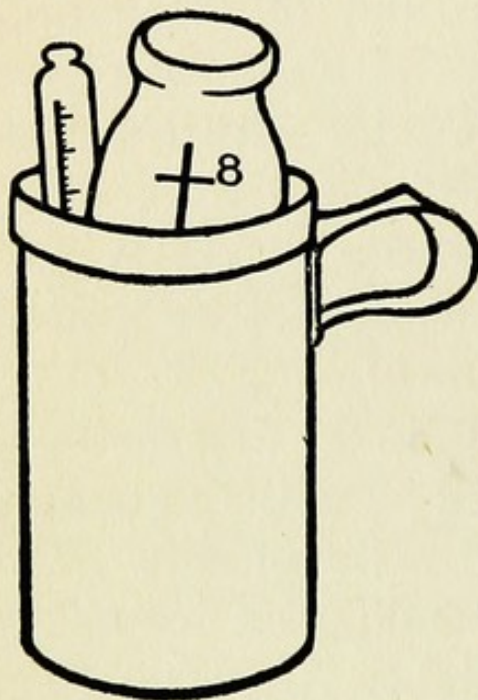
When it is time to feed the infant the bottle of milk should be warmed by standing in warm water. This is best accomplished by

#### Warming the Milk

using some vessel like a quart measure, which is tall and deep. The water in the bottle-warmer should come up above the milk.

The milk should be quite warm, but not hot. It should not be tested by putting the nipple in the mouth. Before the nipple is

adjusted a teaspoonful of the milk may be tested. Another way is to use a dairy thermometer in the water in which the bottle of milk is warmed. The temperature of the water should be about 99° F. Such a thermometer having markings in red and showing correct temperatures for heating milk, the baby's bath, and for pasteurizing and sterilizing milk, may now be



FOOD-WARMER WITH  
DAIRY THERMOMETER

purchased at a reasonable price at department stores and many drug stores.

To keep the milk warm while feeding, a small flannel bag, with a draw-string made so that it will slip over the bottle, is very useful.

## THE FEEDING OF INFANTS

The baby should take the entire feeding in about fifteen minutes, never over twenty minutes.

**Time Allowed for Taking a Feeding** The infant should never be allowed to sleep with the nipple in its mouth, and thus form the bad habit of alternately sleeping and sucking for an hour or more. This is one of the most common causes of indigestion and colic. The child should be kept awake until all the food is taken, or the bottle be taken away entirely.

To prevent bad habits of prolonged feeding, it is better to hold the child while the food is being taken in much the same way a child would be held while taking the breast.

**Position of Child While Feeding** The mother can in this way support the child with one arm, while the bottle is held and controlled with the other hand.

When the baby is three months old it may lie in the crib and take its food, provided the mother is near by, so that she can keep the bottle tipped to favor an easy flow of milk through the nipple and prevent the baby from falling asleep.

After feeding, the more quiet the baby is the better. Playing or romping immediately after a feeding is apt to cause vomiting.

If a child is to keep well and free from indigestion and colic, absolute regularity in hours of eating and sleeping is essential. This regularity should begin with the first feeding of the infant. A

**Regular Habits of Feeding and Sleeping Necessary**

## HYGIENE FOR MOTHER AND CHILD

healthy infant sleeps most of the time during the early months, and at first it may be necessary to wake the baby at regular intervals for feeding. If this is done the child will soon become accustomed to having its meals at regular times, and will usually wake of itself.

The following table shows plan for feeding healthy infants during the first year:

PLAN FOR FEEDING HEALTHY INFANTS DURING THE FIRST YEAR

AGE	Hours for Feeding	Number Feedings in 24 Hrs.	Quantity in Ounces of Each Feeding	Total Amount in Ounces for 24 Hours
Second to eighth day	During the first four weeks feeding every two hours from 6 A.M. to 10 P.M. and one night-feeding at 2 A.M.	10	1 to 1½	10 to 15
Second week		10	1½ to 2½	15 to 25
Third and fourth weeks		10	2 to 3	20 to 30
Fifth to tenth week	Every two and one-half hours, 7 A.M. to 10 P.M. Night-feeding at 3 A.M.	8	3 to 4	24 to 35
Eleventh and twelfth weeks	From eleventh week to the beginning of the fifth month, feeding every three hours, 7 A.M. to 10 P.M. Night-feeding at 3 A.M.	7	4 to 5	28 to 35
Fourth month	From eleventh week to the beginning of the fifth month, feeding every three hours, 7 A.M. to 10 P.M. Night-feeding at 3 A.M.	7	4½ to 5½	31½ to 38½
Fifth and sixth months	From fifth to eleventh month, every three hours, 7 A.M. to 10 P.M. No night-feeding	6	5 to 7	30 to 42
Seventh to eleventh month	From fifth to eleventh month, every three hours, 7 A.M. to 10 P.M. No night-feeding	6	6 to 8	36 to 48

In using the plan given above, it is important to keep in mind that all infants cannot take

## THE FEEDING OF INFANTS

the same amount of food, and that the amount of each feeding must depend upon the infant's age and digestive power. After each table and in the plan for feeding infants is given the smallest and largest amount of food suitable for a child at the given age. For a small child, or a child whose digestion is weak, the smaller amount may be given, and gradually increased as the child grows and digestion improves.

**Suggestions  
as to Amount  
and Strength  
of Food**

**Food Should  
Be Weak  
During First  
Month**

It is necessary to be very careful at first. It should be remembered that the child's stomach is not adapted to cow's milk, but to mother's milk. For this reason the tables given for the first weeks of life are for weak dilutions of milk. It is also very important to commence with a weak food in feeding an infant who has been breast fed, and is to be weaned or partly fed with food made from cow's milk. Such infants must have weaker food than is often given to children of the same age, as the stomach must first become accustomed to cow's milk. After three or four days, if it is seen that the weaker food is digested well, the food may be prepared from the next formula. It is much better to commence with a weak food and go slowly than to begin with a stronger food and the baby have indigestion.

When commencing with a new formula it is not



## HYGIENE FOR MOTHER AND CHILD

best to increase the strength and quantity at the same time. It is well to give a little less at first until it is seen how the baby digests the stronger food. A good way is to alternate, increasing first the strength, next time the quantity, again the strength, and so on.

**Strength and Quantity of Food Not to Be Increased at the Same Time**

Some children who are large, and whose digestion is good, may be able to take the next stronger food before a smaller baby with weak digestion.

It may also be best to feed some babies during the early weeks every two and a half hours instead of every two hours, or every three hours instead of every two and a half hours.

It is well to keep in mind that most infants are given too much rather than too little food, and fed too often rather than not often enough. No child should be given food oftener than every two hours, except by special direction of the physician.

When the baby does not seem satisfied, but is free from symptoms of indigestion, the amount of food may be increased. The infant that is not satisfied shows hunger by draining the bottle at each feeding, by crying, and often sucking the fingers and hand when the bottle is removed. The child will also fret and cry thirty to forty minutes before the next feeding. When a child acts this way, and seems

**When to Increase the Food**

## THE FEEDING OF INFANTS

perfectly well otherwise, it is best to make up the food according to the next formula.

In case of illness or acute indigestion the food should be reduced. If the trouble is very slight the food should be prepared from the weaker formula, or, if the food is already prepared, one-third to one-half should be poured off from each bottle and boiled water take its place. If the trouble is severe and acute, the regular food should be stopped at once, and boiled water given until the physician can be summoned.

**When and  
How to  
Decrease  
the Food**

Sometimes there is slight discomfort after an increase in the strength of the food, and it may be a question whether to persist with the new formula or go back to the weaker food. Usually the baby will become accustomed to the stronger food in a few days and digest it, but if the symptoms of indigestion are marked, it is better to go back to the weaker food, and the next increase should be more gradual.

When the food has been weakened during a severe attack of indigestion, return to food of the original strength should be very gradual. At first the food should not be more than a fourth as strong as before the attack. It may gradually be increased until in about fourteen days it is up to the ordinary strength.

It frequently happens that during the first two

## HYGIENE FOR MOTHER AND CHILD

weeks of feeding with the milk food that the baby does not gain in weight, but remains about the same. Usually this need not cause anxiety if the baby does not lose weight, seems comfortable, cries little, sleeps well, and is free from vomiting, diarrhoea, or colic. It is in such cases that the mistake is often made of increasing the strength and quantity of the food too rapidly, with the result that the baby has an attack of acute indigestion.

It is seldom advisable to increase the food more rapidly than shown in the preceding tables. The baby must be given time to become accustomed to the food. In a few weeks, when digestion becomes stronger, there will be a steady gain in weight.

One of the most common causes of illness in babies is feeding too much and too often. Because the baby takes the breast or bottle eagerly is not always a sure sign of healthy appetite. If food is given a baby every time it cries, an artificial appetite is soon developed, and colic, vomiting, and diarrhoea, with longer and louder spells of crying, is sure to follow.

It frequently happens that a baby cries on account of colic. If milk is given the crying may cease for a brief period because of the warm food entering the stomach, only to commence again louder than ever. The plan given on page 146 will

## THE FEEDING OF INFANTS

serve as a guide as to quantity of food to be given at each feeding and how often to feed the baby. While this plan will serve as a guide in feeding most infants, it must be remembered that there are exceptions to all rules, and that some children may not need or be able to digest as much food as shown in the plan, and should therefore be given less.

Sometimes children seem to lose their appetite and take too little food. Being anxious lest the infant lose weight, the mother will often increase the strength or quantity of the food and feed too often, with the result that the baby loses appetite entirely or has an attack of acute indigestion.

More children lose appetite from overfeeding than from any other cause. If the child seems well in every other way, food should be given at regular times, but not so often. The food should not be made stronger but weaker, and if the baby is having a feeding every two and a half hours, the interval between the feedings should be increased to three hours. Plenty of water should be given between feedings.

Children often lose appetite from being too much indoors. Plenty of out-door air is desirable, and free access of fresh air to the sleeping-room is absolutely necessary. Usually if the number of feedings is reduced,

**Lack of  
Appetite**

**Less Food,  
Not More**

**More  
Out-Door  
Air**

## HYGIENE FOR MOTHER AND CHILD

and plenty of fresh air allowed, the appetite will return. A child should never be urged to take more food than it desires, should not be given anything but water between feedings, or allowed to have any other food but that prepared for it especially.

One of the most common causes of loss of appetite and indigestion is allowing the child to taste different kinds of food between feedings and at the table. It is often difficult to refuse a child if a cookie, candy, cracker, a bit of banana or apple is asked for, but it is mistaken kindness to indulge the baby in this way. If the child is given its regular food at regular intervals, the stomach will need the time between feedings to properly digest the food especially prepared for the child. If it is given other food between feedings loss of appetite and indigestion will result.

### *Changes in the Food Necessary for Infants Having Weak Digestion*

Babies with weak digestion and those having different forms of indigestion often have trouble in

**The Use of Plain Milk** digesting food prepared from top-milk, as shown in the tables already given.

Top-milk is rich in fat, or cream, and some children cannot seem to digest the creamy part of milk. For such children food may be pre-

## THE FEEDING OF INFANTS

pared from ordinary plain milk instead of top-milk. Before using plain milk after standing in a quart bottle, it should be gently shaken, in order that the cream may be well mixed with the milk.

### *Tables Showing Preparation of Food from Plain Milk*

TABLE NO. I

Fat, 1.00	Sugar, 6.00	Proteids, 0.85
Boiled water.....	14	ounces
Milk-sugar (2½ even tablespoonfuls)..	1	ounce
Plain milk.....	5	ounces
Lime-water.....	1	ounce
Total, 20 ounces for 24 hours		

TABLE NO. II

Fat, 1.20	Sugar, 6.00	Proteids, 1.00
Boiled water.....	16	ounces
Milk-sugar (3 even tablespoonfuls)..	1¼	ounces
Plain milk.....	7½	ounces
Lime-water.....	1½	"
Total, 25 ounces for 24 hours		

TABLE NO. III

Fat, 1.40	Sugar, 6.00	Proteids, 1.20
Boiled water.....	17½	ounces
Milk-sugar (4 even tablespoonfuls)..	1½	"
Plain milk.....	10½	"
Lime-water.....	2	"
Total, 30 ounces for 24 hours		

# HYGIENE FOR MOTHER AND CHILD

TABLE NO. IV

Fat, 1.60	Sugar, 6.50	Proteids, 1.40
Boiled water.....	19	ounces
Milk-sugar (4 even tablespoonfuls)..	1½	"
Plain milk.....	14	"
Lime-water.....	2	"
Total, 35 ounces for 24 hours		

TABLE NO. V

Fat, 1.80	Sugar, 6.00	Proteids, 1.60
Boiled water.....	12	ounces
Milk-sugar (2½ even tablespoonfuls).	1	ounce
Barley gruel.....	8	ounces
Plain milk.....	18	"
Lime-water.....	2	"
Total, 40 ounces for 24 hours		

TABLE NO. VI

Fat, 2.00	Sugar, 6.00	Proteids, 1.80
Boiled water.....	11	ounces
Milk-sugar (2½ even tablespoonfuls)..	1	ounce
Barley gruel.....	9	ounces
Plain milk.....	22½	"
Lime-water.....	2½	"
Total, 45 ounces for 24 hours		

TABLE NO. VII

Fat, 2.20	Sugar, 6.00	Proteids, 2.00
Boiled water.....	6	ounces
Milk-sugar (2½ tablespoonfuls).....	1	ounce
Barley gruel.....	12	ounces
Plain milk.....	24½	"
Lime-water.....	2½	"
Total, 45 ounces for 24 hours		

## THE FEEDING OF INFANTS

### *Suggestions as to the Use of Tables Showing Preparation of Food from Plain Milk*

The first question which will occur to the mother will be: From which formula should the milk be prepared? This will depend upon the condition and age of the baby.

For an infant one month old the food may be prepared according to the first formula. From five to ten weeks the second or third formula may be used. For a baby three or four months old the food may be prepared from the fourth or fifth formula. An infant five or six months of age may be given food prepared as shown in the fifth or sixth formula. For a baby seven to nine months of age the food may be prepared as shown in the sixth or seventh formula, and from nine to eleven months, Formula VII of this series or XIII, on page 140, may be used.

The plan shown on page 146 gives hours for feeding and quantity of food to be given at each feeding. The only safe guide is the child's condition.

If a baby vomits or spits up small amounts of sour milk between feedings, the food is too rich in fat, and it is advisable to make up the food from the plain milk formulas shown on the preceding pages. As to which formula should be used will depend upon the condition. It is well to commence

**Vomiting and  
Spitting Up  
Food Between  
Feedings**



## HYGIENE FOR MOTHER AND CHILD

with a weak formula. When the spitting and vomiting cease the food may be made stronger, following the next formula.

Too much sugar may also cause the spitting, and it may be desirable to use less than shown in the tables. One tablespoonful to each twenty ounces of food would be about right, and in severe cases none at all.

It may be necessary to make the intervals between feedings three or four hours instead of two or three, thus giving the stomach a longer time to digest the food, and usually a small amount of a fairly strong food is better taken care of than a large amount of diluted food.

Foods containing malt or very much sugar are apt to make the symptoms worse.

Colic is usually caused by the formation of gas in the bowels. The remarks in regard to colic on page 110 may be read at this time with advantage.

The trouble being due to poor digestion of the proteids or curd of milk, it is desirable to reduce or render the proteids more digestible. They may be reduced by using a weaker food. For instance, during the first three months, if the food is being prepared as shown in Table No. IV, on page 132, it may help matters to use Table No. III, or possibly No. II, for a short time. If during the next three months

## THE FEEDING OF INFANTS

the food is being prepared as shown in Table No. VIII, on page 135, Table No. VI or No. VII may be tried. When this is done the fat or cream is also reduced. The infant may be able to digest the fat, but only a small amount of proteids. To reduce the proteids without reducing the fat, the food may be prepared from Table No. V, as shown on page 132.

Another method of changing the food to relieve colic is the use of barley water to dilute the food instead of plain boiled water, as described on page 137.

Milk partially peptonized, as described on page 170, may also be used for short periods.

The constipation of early infancy usually becomes less as the baby grows older and the ingredients in the food are made stronger, but chronic constipation during later infancy often becomes very troublesome.

It can be helped somewhat by careful changing of the ingredients in the food. Sometimes the use of milk of magnesia (Phillips'), one-half to one teaspoonful to each twenty ounces of food, will be helpful. In other cases common brown sugar may be used instead of milk-sugar. As this is much sweeter than milk-sugar, only about half as much should be used. In still other cases Mellin's Food or malted milk will prove helpful when used instead of milk-sugar.

**Chronic  
Constipation**

## HYGIENE FOR MOTHER AND CHILD

Another expedient which will often relieve constipation is the use of oatmeal water instead of plain water in the food. Prepared according to directions on page 137, it may be used in place of the barley gruel in the formulas for the later months, and may take the place of a certain amount of the boiled water in the weaker formulas for the early months, the proportion of gruel being a fifth of the entire amount of food for twenty-four hours. If the twenty-four-hour amount is thirty ounces, six ounces of oatmeal gruel would be substituted for six ounces of boiled water. This may be used as early as the sixth month.

One of the most common causes of constipation is feeding infants with plain milk which has simply been diluted once with water. Such a food would contain too little fat or cream. If the child has been given a food prepared from plain milk, relief from constipation will very often follow a change to food prepared from a ten-per-cent. or seven-per-cent. top-milk—that is, milk containing more cream, and consequently richer in fat. Such a change, however, needs to be made very carefully, too much fat producing intestinal indigestion and diarrhoea. The percentage of fat should never be higher than four per cent. Indeed, it is seldom advisable to give food stronger in fat than is shown in the tables giving amount of each ingredient at

## THE FEEDING OF INFANTS

different ages. In constipation the food should not be boiled.

Orange and prune juice may be given infants at nine months. A teaspoonful may be given an hour before the second feeding of the day. This may be increased a teaspoonful every week, until at twelve months between two and four tablespoonfuls may be given.

### *Intestinal Indigestion and Diarrhæa*

Looseness of the bowels is often caused by too much fat in the food. When there is a slight looseness only, with two or three stools during twenty-four hours, the food may be prepared from the plain milk Formulas Nos. I to VII, beginning on page 153, and should be boiled for five minutes. If curds appear in the stools the food should be diluted still more. If the bowels move much more frequently, the stools being offensive and slimy, and the infant seems feverish, showing that the attack is more severe, the milk food should be stopped at once, and one to three ounces of boiled water given every one or two hours. In ten to twelve hours, two to three ounces of barley water may be given every two hours. Barley water may be prepared by stirring two teaspoonfuls of Robinson's Patent Barley Flour into a cup of cold water

## HYGIENE FOR MOTHER AND CHILD

until it forms a creamy paste. This is then stirred into a pint of boiling water, cooked for twenty minutes, and strained.

Milk food should not be given for twenty-four to forty-eight hours after the symptoms have disappeared, and then only very little at a time. It is advisable to commence with milk prepared from plain milk, which is weak in fat. If the infant is four months old it would be well to commence with the second formula on page 153. This formula calls for sixteen ounces of boiled water. Six ounces of barley water may take the place of the same amount of boiled water.

Increase in strength and quantity of the food should be very gradual, never increasing both at once. The full amount and strength proper for the age should not be given before two and possibly three weeks after the attack.

### *Acute Gastric Indigestion and Vomiting*

If the baby has an attack of acute indigestion of the stomach with repeated vomiting, pain, and seems to have fever, the milk food should be stopped immediately, and boiled water given, and later barley water, as described on page 159 under "Intestinal Indigestion."

Depending upon the severity of the attack, milk food should not be given for twenty-four to forty-

## THE FEEDING OF INFANTS

eight hours after vomiting stops, when the same plan may be followed as given under "Intestinal Indigestion," and, in addition, the amount of lime-water may be doubled.

### *Feeding the Sick Baby*

During very slight troubles, such as colds and discomforts incident to teething, the food may be diluted for three or four feedings by pouring from the bottle an ounce or two of food just before the feeding and replacing it with boiled water. The bottle should be shaken before the food is removed. If it is necessary to dilute the food for some days, it is easier to prepare the food from a weaker formula.

**Slight  
Disturbance**

When the baby is acutely ill with some disturbance, such as acute bronchitis, pneumonia, or measles, food should be given very sparingly, especially at first, when there is usually fever and loss of appetite. Neither should it be given as frequently as in health, and feeding should be at regular intervals. Between the feedings plenty of cool water should be given the sick child.

**Feeding Dur-  
ing Acute  
Illness**

The sick baby must also have a weaker food than when in health. The food should be prepared from a weaker formula, and not as rich in fat. If a child of three months or over is having food pre-

## HYGIENE FOR MOTHER AND CHILD

pared from seven-per-cent. top-milk, it would be well to prepare the food from plain milk, as shown in the tables commencing on page 153.

It is especially important to feed the baby at regular intervals during the hot days of summer.

**Feeding Dur-** Overfeeding or making the food too  
**ing Hot** rich at this time is almost sure to  
**Weather** cause severe indigestion. An abundance of pure cool water should be given between feedings. It should usually be boiled, especially if there is the slightest doubt of its purity.

The food should be weaker than during cool weather. The tables shown on pages 173 and 174 are suitable for use in preparing the baby's food during the hottest weather instead of the tables shown during the early months. If the baby is having food prepared from the tables commencing on page 134, it may be desirable to give a weaker food prepared from plain milk, as shown in formulas commencing on page 153.

### *Management of Difficult Cases of Feeding*

In spite of the most careful preparation of the food to suit the individual child, there have always been certain infants who have chronic indigestion, and continue to lose weight. It is no easy task to provide suitable nourishment for such infants.

## THE FEEDING OF INFANTS

It is very difficult to secure the services of a competent wet-nurse. The expense is usually large, and there are many troublesome questions which arise. However, for a young baby under five or six months of age, a wet-nurse will most often succeed, and if such a nurse is available, much trouble and anxiety may be saved the parents.

### The Wet-Nurse

Sometimes much difficulty is experienced in getting the infant to take the breast after being nourished from the bottle. In such cases the milk may be obtained by the breast-pump and fed to the baby. Even though an infant with weak digestion can have breast milk for two to four weeks only, much improvement will often take place, and the baby will be started on the right road.

Care should be taken that the wet-nurse is free from disease, is strong and robust, and that her own child is well nourished.

If such a nurse can be found in the neighborhood she could help a great deal, were she so inclined. Even two or three feedings of breast milk per day alternated with a properly prepared milk food, might be the means of starting a baby toward recovery. If one of these thin, weak, half-starved little ones could have a breast-feeding every two and a half to three hours for the first week or two, the improvement would be much more marked. Then the breast-feedings might be alternated with



## HYGIENE FOR MOTHER AND CHILD

one of plain milk and barley water, making the food very weak at first, being guided by such formulas as are shown on pages 153 and 154.

Most babies whose mothers cannot nurse them must be nourished by some artificial food. The average infant will thrive on cow's milk if it is sweet and pure and carefully prepared, but very frequently no special care is taken to make the food resemble mother's milk. To give a young infant plain milk simply diluted once, with cane-sugar for sweetening, or to feed it with Jersey milk, which is very rich in fat, is to invite chronic indigestion of the worst type.

Such are the most common mistakes at first; then as the baby grows worse, neighbors and friends begin to recommend different prepared foods on the market, several of which are tried, one after the other, in rapid succession. It is well known that, in feeding these infants, changes should be made very carefully and not too often. Very frequently, therefore, when the infant is finally brought to the physician, the condition is discouraging indeed.

### *Food for Infants Having Chronic Indigestion and Who Do Not Thrive*

If the baby is spitting or vomiting sour milk between feedings, and having white or gray stools, there is usually too much cream, or top-milk, being

## THE FEEDING OF INFANTS

used in the food, and the fat should be reduced according to instructions on pages 152 and 153.

On the other hand, if the baby is suffering from colic with curds in the stools, there is usually an excess of proteids in the food. This is the most common cause of trouble, especially in young infants. In such cases it is advisable to reduce the proteids by preparing the food from the tables commencing on page 130, and the directions given on pages 156 and 157 may be suggestive.

Food prepared from a small amount of cream diluted with a large amount of whey is especially valuable for feeding children with weak digestion, and has frequently succeeded after other preparations have failed.

**The Use  
of Cream  
and Whey**

With the small cream-dipper already referred to skim off the upper four ounces from a bottle of milk which has stood at least five hours. This is known as twenty-per-cent cream. It will be noticed that each of the last three of the following formulas calls for more than four ounces of the cream; it will therefore be necessary to skim off the upper four ounces from two quart bottles of milk when preparing the food according to these formulas. Care should be taken, however, to use only the amount of cream called for in each formula.

**How to Obtain  
Twenty-Per-  
Cent Cream**

## HYGIENE FOR MOTHER AND CHILD

To forty or forty-five ounces, or a quart and a half pint to three pints of fresh milk heated to 100° F., or about lukewarm, should be added five teaspoonfuls of any good liquid rennet, essence of pepsin, or two and a half junket tablets. Rennet is preferable. Keep covered in a warm place until set; then break up the curd with a fork, and strain through fine muslin, using moderate pressure. The whey should then be heated to 155° F., in order to destroy the action of the rennet. After it has become cool it is ready for use.

Forty to forty-five ounces of good average milk used in this way will yield about thirty-five ounces of whey, which is the largest amount called for in any of the following formulas. The milk from which the upper four ounces have been removed may be used for the preparation of the whey.

Having obtained the twenty-per-cent cream and the whey, the amount of food necessary for twenty-four hours may be prepared as shown by the following tables. The milk-sugar should first be dissolved in the whey while it is hot. After cooling, the amount of cream and lime-water called for in the formula should be added. As many bottles as there are feedings should then be filled with the food, corked with cotton, and placed on the ice until needed.

## THE FEEDING OF INFANTS

The percentages given are approximate only, but are sufficiently correct for all practical purposes:

TABLE NO. I

Fat, 1.75	Sugar, 6.00	Proteids, 1.00
Twenty-per-cent cream.... 3 ounces		
Whey ..... 35 “		
Milk-sugar ..... 3 even teaspoonfuls		
Lime-water ..... 2 ounces		
Food for 24 hours, 40 ounces		

TABLE NO. II

Fat, 2.25	Sugar, 6.00	Proteids, 1.00
Twenty-per-cent cream.. 4 ounces		
Whey ..... 34 “		
Milk-sugar ..... 3 even teaspoonfuls		
Lime-water ..... 2 ounces		
Food for 24 hours, 40 ounces		

TABLE NO. III

Fat, 3.00	Sugar, 6.00	Proteids, 1.10
Twenty-per-cent cream. 5½ ounces		
Whey ..... 32½ “		
Milk-sugar ..... 3 even teaspoonfuls		
Lime-water ..... 2 ounces		
Food for 24 hours, 40 ounces		

# HYGIENE FOR MOTHER AND CHILD

TABLE NO. IV

Fat, 3.35	Sugar, 7.00	Proteids, 1.15
Twenty-per-cent cream 6½ ounces		
Whey . . . . . 33½ “		
Milk-sugar . . . . . 2½ level tablespoonfuls		
Lime-water . . . . . 2 ounces		
Food for 24 hours, 42 ounces		

TABLE NO. V

Fat, 3.80	Sugar, 7.00	Proteids, 1.21
Twenty-per-cent cream 8 ounces		
Whey . . . . . 34½ “		
Milk-sugar . . . . . 2½ level tablespoonfuls		
Lime-water . . . . . 2½ ounces		
Food for 24 hours, 45 ounces		

As has been stated in giving directions for the use of other tables, the directions here given are mainly suggestive. How often to feed the baby and how much at each feeding is shown in the plan for feeding on page 146. Infants having chronic indigestion have usually been given several different kinds of food, and need special care and skilful feeding. If, however, the mother must depend upon her own resources, the following suggestions may prove helpful.

For an infant five to eight weeks of age, it is

## THE FEEDING OF INFANTS

well to commence with a food prepared from the first formula.

An infant two to three months of age may commence with a food prepared from the first or second formula, depending upon the severity of the indigestion.

For an infant of four months we may commence with food prepared from the second formula.

For an infant five or six months old food prepared as shown in the third formula may be suitable, and even at seven or eight months, if the indigestion is severe, it may be advisable to commence with the third formula; and if there is vomiting and regurgitation of food, even the second or first formula may be useful to commence with.

Although the child may be nine or ten months of age, if suffering from severe intestinal indigestion, accompanied by spitting or vomiting sour milk between feedings, it is well to commence with a very low formula like the second. If the infant improves and the food seems to agree, in about ten days the food may be prepared as shown in the next formula.

Whey and cream mixtures may be continued two or three months if the baby thrives. After the last formula the food may be prepared as shown in tables commencing with No. VI, on page 134.

## HYGIENE FOR MOTHER AND CHILD

In certain cases of chronic indigestion caused by inability to digest the proteids or curd of milk, peptonized milk, or milk in which the curd is partially digested, may be of benefit. This is accomplished by adding to the plain or modified milk a peptonizing powder. This is sold in tubes or tablets, and is a combination of pancreatic extract and bicarbonate of soda.

It is more convenient to peptonize the entire day's supply of food at once. If it is desired to peptonize food made from any one of the first six formulas commencing on page 130, there will be required a little less than half a tube of powder to one pint of food, half a tube for twenty ounces, three-fourths of a tube for twenty-five ounces, and a whole tube of powder for thirty-five or thirty-six ounces.

For the stronger formulas like those shown on pages 134 and 135, there will be required about two-thirds of a tube of powder for each pint of food, so that forty ounces would require one and two-thirds tubes of powder, and forty-eight ounces would require two tubes. Plain milk will require one tube of powder to a pint of milk.

After the food is prepared it is placed in a glass jar. The amount of peptonizing powder to be used is then dissolved in a tablespoonful of the food and added to the mixture, and the bottle shaken. The

**Method for  
Peptonizing  
Milk Food**

## THE FEEDING OF INFANTS

bottle must then be placed in water kept at 110° F., which is about as hot as the hand can bear without discomfort. If it is to be partially peptonized it will need to remain ten minutes, when it should be removed, and the food poured into a clean saucepan and brought quickly to boiling-point. Boiling stops further peptonization, and prevents the milk from becoming bitter like completely peptonized milk.

If the bottle of milk is to be completely peptonized, it should remain in the water at 110° F. much longer—about an hour and a half.

Partially peptonized milk may prove helpful in feeding infants who cannot seem to digest the curd of milk, but should not be used more than two or three months. It should be gradually discontinued by using less and less of the powder, and by peptonizing five or ten minutes instead of ten or fifteen. Completely peptonized food is used during severe attacks of indigestion.

Condensed milk should not be used for the baby as a permanent food. The proportion of fat and proteids is very low, and it contains an excessive amount of cane-sugar. Many children digest it easily, and often become quite plump. They are, however, usually pale, have flabby muscles, possess little resistance, and are apt to develop rickets and scurvy.

**Condensed  
Milk**



## HYGIENE FOR MOTHER AND CHILD

Occasionally, however, condensed milk properly diluted may prove useful, especially if the infant is suffering from inability to digest the curd in cow's milk. Such a child may have colic and curds in the stools.

For an infant three to five months old two ounces of condensed milk may be diluted with  
**How to Use** thirty-four ounces of boiled water. If  
**Condensed** there is diarrhoea, barley-water may  
**Milk** take the place of half the amount of  
boiled water. As improvement takes place the proportion of milk may be very gradually increased, as three ounces to forty-two of water, four ounces to forty, five ounces to forty, and so on.

Condensed milk should only be used to tide the child over a difficult place, and should seldom be continued over a period of two or three weeks. As soon as possible the food should contain fresh cow's milk. One feeding of a weak solution of cow's milk may be substituted for a feeding of condensed milk for a few days, then another for a few days more, and so on until the infant is again taking food prepared from cow's milk.

A weak preparation of cow's milk would be one rather low in both fat and proteids at first. This can be obtained by using the seven-per-cent top-milk diluted with a solution of milk-sugar and boiled water, with the customary addition of lime-water. To obtain seven-per-cent top-milk, skim

## THE FEEDING OF INFANTS

off the upper half, or sixteen ounces, from a bottle of milk after standing five hours, or overnight. From the sixteen ounces of top-milk take whatever amount is required for the food.

For the first feeding the mixture may be prepared as follows: Dissolve three even teaspoonfuls of milk-sugar in four ounces of boiled water. Allow to cool and add one ounce of the seven-per-cent top-milk, and one teaspoonful of lime-water.

When the infant is taking three or four such feedings a day it will be easier to prepare the amount of food required for the entire twenty-four hours at one time.

### *Tables Showing Amount of Each Ingredient for the Preparation of Food to Be Given After Using Condensed Milk*

TABLE NO. I

Boiled water . . . . .	18½	ounces
Milk-sugar . . . . .	3	even tablespoonfuls
Seven-per-cent top-milk . . . . .	5	ounces
Lime-water . . . . .	1½	"
Quantity for 24 hours, 25 ounces		

TABLE NO. II

Boiled water . . . . .	30	ounces
Milk-sugar . . . . .	5	even tablespoonfuls
Seven-per-cent top-milk . . . . .	8	ounces
Lime-water . . . . .	2	"
Quantity for 24 hours, 40 ounces		

# HYGIENE FOR MOTHER AND CHILD

TABLE NO. III

Boiled water . . . . .	28 ounces
Milk-sugar . . . . .	5 even tablespoonfuls
Seven-per-cent top-milk . . . . .	10 ounces
Lime-water . . . . .	2 “
Quantity for 24 hours, 40 ounces	

TABLE NO. IV

Boiled water . . . . .	31½ ounces
Milk-sugar . . . . .	5½ even tablespoonfuls
Seven-per-cent top-milk . . . . .	11½ ounces
Lime-water . . . . .	2 “
Quantity for 24 hours, 45 ounces	

TABLE NO. V

Boiled water . . . . .	29½ ounces
Milk-sugar . . . . .	5½ even tablespoonfuls
Seven-per-cent top-milk . . . . .	13½ ounces
Lime-water . . . . .	2 “
Quantity for 24 hours, 45 ounces	

TABLE NO. VI

Boiled water . . . . .	28 ounces
Milk-sugar . . . . .	5½ even tablespoonfuls
Seven-per-cent top-milk . . . . .	14½ ounces
Lime-water . . . . .	2½ “
Quantity for 24 hours, 45 ounces	

If the baby does well on the first of the above formulas, in three or four days the food may be prepared as shown in the next formula, and so on, the increase in strength of the food being very

## THE FEEDING OF INFANTS

gradual. After using the last formula, the food may be prepared as shown in formulas commencing with No. VI on page 134.

There are times when the baby is not hungry, and there is no apparent reason for it. It is here the mistake is often made of urging the baby to take different kinds of food which the child is unable to digest. Instead of catering to a child's appetite for food which the stomach is unable to digest, or making the feedings more frequent, it is desirable to feed less frequently. If the baby has its food every two and a half or three hours, the time between feedings should be increased to three or four hours.

It also happens sometimes that a child apparently well in every way gains but little in weight.

Here again the mistake is often made of tempting a baby with food other than the regular diet, or feeding too often or too much. If the child has a good appetite, a little more of the regular food may be given, being careful not to overfeed. If the maximum amount is already being given the food may be made stronger by preparing it according to the next formula.

Such changes should be made very cautiously, especially in hot weather. In summer a baby is not apt to be as hungry as in cool weather, and the

## HYGIENE FOR MOTHER AND CHILD

weight may remain about the same for a while. At this time special care should be taken that the baby is not too warmly clad and given too much food. Plenty of fresh air, regular hours for feeding, plenty of boiled water between feedings, and an abundance of sleep in a cool, dark room are all important.

In the cooler months especially, children often lose their appetite for lack of fresh air and from living in rooms which are too warm.

### *Pasteurized and Sterilized Milk*

It is becoming more and more possible to obtain milk that does not need to be heated to kill germs. This is as it should be, for milk pure and clean enough to feed the baby without heating is much to be preferred to pasteurized or sterilized milk.

Milk heated to the point of sterilization— $212^{\circ}$  F. for over an hour—is rendered much more difficult to digest than unheated milk, and is more constipating.

Whenever it seems impossible to obtain fresh milk, or when the milk is to be kept two or three days, and during epidemics of typhoid fever, bowel troubles, scarlet fever, and diphtheria, it is well to consider the question of sterilizing the food. Milk thus

**When Steril-  
ized Milk May  
Be Useful**

## THE FEEDING OF INFANTS

heated will keep on ice for two or three weeks, and might be useful when it is to be used on long journeys, when fresh milk is not available. Sterilized milk should be modified in the same way as fresh milk, and should never be used over long periods.

Milk heated to 155° F. for thirty minutes is known as pasteurized milk, and will keep on ice two or three days. Pasteurized milk differs little in taste from fresh unheated milk, and can be used for longer periods of time. After milk is brought to high temperatures it should always be cooled rapidly by placing the bottles in cold water, not by leaving to cool in a room or ice-chest. After it has cooled it should be placed on ice.

**Pasteurized  
Milk**

## CHAPTER XII

### FEEDING DURING THE SECOND AND THIRD YEARS

SPECIAL care in the preparation of the baby's food, and in regard to regular hours for feeding, should not cease at the end of the first year.

Probably the most common mistake at this time is allowing the child to have certain kinds of solid food from the table which it is unable to digest. Acute and chronic indigestion are almost certain to follow such indiscretions in diet. The best way is to give only the regular diet allowed at this age. If the child is not allowed to taste different articles of food, it will learn not to ask for them.

#### *Dietary for the Second Year*

It is still advisable to dilute the milk with gruel for the average baby during the thirteenth and  
**Diet During** fourteenth months. The use of lime-  
**Thirteenth and** water and milk-sugar in the food may  
**Fourteenth** now be discontinued. At the two-  
**Months** o'clock feeding the yolk of the egg  
may now be given, adding a little each day until  
the entire egg is given. Chicken and mutton broth  
may also be added to the diet.

## FEEDING DURING SECOND AND THIRD YEARS

It is advisable to prepare the food for the entire day at one time. The gruel is prepared as described on page 137. The oatmeal flour or granum may be used instead of barley flour if desired.

Forty-five ounces of food should be prepared—thirty ounces of which should be milk and fifteen ounces gruel.

### DIET FOR AVERAGE HEALTHY CHILD DURING THE THIRTEENTH AND FOURTEENTH MONTHS

First Meal, 6.30 to 7 A.M.—Eight to ten ounces of the milk and gruel mixture.

9 A.M.—Orange or peach juice, two to four tablespoonfuls with one to two tablespoonfuls of water.

Second Meal, 10 A.M.—Eight to ten ounces of milk and gruel mixture.

Third Meal, 1.30 to 2 P.M.—White of one coddled egg, with small amount of yolk, increasing in a week until the whole egg is given. Four to six ounces of milk and gruel mixture.

Another Day—Chicken or mutton broth, five to six ounces, and four to six ounces of the milk and gruel mixture.

Another Day—Beef-juce, two to four tablespoonfuls, and four to six ounces of the milk and gruel mixture.

It is best to alternate, giving the egg one day at 2 P.M., broth the next, beef-juice the next, and so on.

Fourth Meal, 5.30 to 6 P.M.—Eight to ten ounces of milk and gruel mixture.

Fifth Meal, 10 P.M.—Eight to ten ounces of milk and gruel mixture.

It is desirable to begin to train the child to take its food from the cup or spoon by the fourteenth



## HYGIENE FOR MOTHER AND CHILD

month. With most children this can be done with comparative ease; with others it can still be done if some care and patience is given to the matter. (See page 116.) The feeding at 10 P.M. may be given from the bottle.

Whole milk may now be given, and should form a large part of the child's diet. Cereals may also be given. They should be very thoroughly cooked and strained. The baby should take food from a cup or spoon except the night-feeding at 10 P.M., which may be given from the bottle.

### DIET FROM THE BEGINNING OF THE FIFTEENTH TO THE END OF THE EIGHTEENTH MONTH

6.30 to 7 A.M.—Glass of warm milk.

9 A.M.—Orange, peach, or prune juice, two to five tablespoonfuls, with two or three tablespoonfuls of water.

10 A.M.—Oatmeal cooked at least three hours, salted to taste and strained. One to three tablespoonfuls with two or three tablespoonfuls of thin cream, but no sugar. Small slice of dry toast, and from half to one cup of milk to drink.

Another Day—Malted breakfast food, which is much like cream of wheat. Cook thirty to forty minutes. Two to four tablespoonfuls with same amount of thin cream. One piece of zweiback, and half to one cup of milk.

1.30 to 2 P.M.—Four to five ounces of chicken or mutton broth, in which is thoroughly cooked rice. Dry toast or zweiback, and a cup of milk.

## FEEDING DURING SECOND AND THIRD YEARS

Another Day—Beef-juice, two to four tablespoonfuls, or beef-tea, four to six ounces, with one or two small slices of dry toast or zweiback, and a cup of milk.

Another Day—One coddled egg, one or two slices of dry toast or zweiback, and a cup of milk.

Fourth Meal, 5.30 to 6 P.M.—Two tablespoonfuls of cream of wheat, farina, or malted breakfast food, cooked thirty to forty minutes, salted to taste, but no sugar. Cup of milk.

Another Day—Two slices of zweiback with milk poured over it, and a cup of warm milk.

Fifth Meal, 10 P.M.—Eight to ten ounces of warm milk.

Whether the 10 P.M. feeding should be continued will depend upon the child. Some children will sleep from 6.30 P.M. until 6 or 7 A.M., but many children of this age will wake very early in the morning unless they have milk at 10 P.M. Of course the baby should not be disturbed at 10 P.M. if it will sleep through until the hour for rising.

### DIET FROM BEGINNING OF NINETEENTH MONTH TO END OF SECOND YEAR

6.30 to 7 A.M.—Ten ounces of warm milk.

9 A.M.—Orange, peach, or prune juice, two or three ounces, given in an ounce of water.

10 A.M.—Rolled oats cooked three hours, or malted breakfast food cooked thirty to forty minutes, two or three tablespoonfuls, served with thin cream. Toast or zweiback and cup of warm milk.

2 P.M.—Rice, thoroughly boiled until very soft, with two ounces of beef-juice and a slice of dry toast. For dessert, the pulp of prune may be given, cooked without sugar until very soft. Strain to remove the

## HYGIENE FOR MOTHER AND CHILD

- skin. A tablespoonful may be given at first. Later, two tablespoonfuls. Also a half cup of milk to drink.
- Another Day—Chicken or mutton broth with boiled rice and some bits of the soft meat very finely cut up may be allowed. Piece of dry wheat or rye bread twenty-four hours old, or zweiback, or Huntley and Palmer biscuit. For dessert the soft part of baked apple without skin, one to two tablespoonfuls. Water but no milk may be given to drink at this meal.
- Another Day—Small portion of finely minced rare beefsteak, roast beef, or chicken. With the beef may be given some of the beef-juice without fat. Any of the crackers or biscuits already mentioned. Prune pulp or apple-sauce, tablespoonful to two tablespoonfuls. Water to drink, but no milk.
- Another Day—A soft-boiled egg may be given instead of the meat or broth.
- 6 P.M.—Cream of wheat, farina, or malted breakfast food cooked thirty to forty minutes, salted to taste, with thin cream.
- Another Day—Milk toast and a cup of milk.
- Another Day—Zweiback soaked in warm milk.
- 10 P.M.—Ten ounces of warm milk.

An abundance of water should be given between feedings during the second and third years. If the child never asks for water, it should be given two or three times between feedings in quantities of one to two ounces. If there is doubt as to the purity of the water it should be boiled fresh each day, and kept covered. Half a glass of water at a meal is usually sufficient. A child should not be allowed to wash down its food with copious drinks of water.

## FEEDING DURING SECOND AND THIRD YEARS

### *Dietary for the Third Year*

At the end of the second year feeding at 10 P.M. should cease.

White potato and the green vegetables may now be added to the diet. All vegetables should be very thoroughly cooked, and given in mashed form.

#### DIET DURING THE THIRD YEAR

Breakfast at 7 or 7.30 A.M.—Oatmeal or rolled oats, two or three tablespoonfuls served with milk or cream and a small amount of sugar. A slice of bread twenty-four hours old, with butter. A glass of milk.

Another Breakfast—Soft-boiled egg, bread-and-butter, and a glass of milk.

Another—Malted breakfast food or wheatina, cooked thirty minutes, served with milk or thin cream and a small amount of sugar. Slice of rye bread and butter or zweiback, and a glass of milk.

At 10 A.M.—Glass of milk with Graham cracker, rusk, oatmeal cracker.

Dinner at 1.30 or 2 P.M.—Roast beef or beefsteak, cooked through, but not overcooked, lamb chop, roast lamb, chicken. Meat must be very finely cut or minced, as children seldom chew food well. Mashed white potato with dish-gravy, but no brown or rich fatty gravy. Green vegetables, such as fresh green peas, string-beans, spinach, asparagus tips, thoroughly cooked and mashed. Two teaspoonfuls at first.

Dessert—Baked apple without skin, apple-sauce, stewed prunes. No milk at this meal.

Supper at 6 P.M.—Cream of wheat, served with milk or cream and a small amount of sugar. Glass of milk.

Another Supper—Milk toast, or Graham, oatmeal, or soda crackers, or scones, or rusk, with glass of milk.

## CHAPTER XIII

### THE FEEDING OF OLDER CHILDREN

AFTER the third year children need to be fed with the same care as to regular meals and proper food as during the second and third years. It is a mistake to suppose that as children grow older they may be allowed to choose their own food, and to eat whatever and whenever they please.

If a child is allowed to eat freely of everything on the table, it is very apt to choose what it likes best, not that which is most nourishing and easy to digest. Children from two to eight years of age are often asked what they would like to eat, and very frequently are given whatever they desire. If this is persisted in, children are very apt to develop a dislike for nourishing food, such as bread, milk, and eggs, and call for rich preserves, pastry, cakes, etc.

One of the most pernicious practices of childhood is eating between meals. Children frequently spend their pennies for candy, bananas, cakes, and pickles, which they eat between meals. Children of this age cannot be trusted to spend money wisely. It is better to discourage the giving of

## THE FEEDING OF OLDER CHILDREN

pennies to children. Not only are they apt to buy sweets, but they are prone to look for pennies from older people, which may become embarrassing both to parents and guests.

Some of the results of eating improper food and eating between meals are: Loss of appetite for regular meals and nourishing food, chronic indigestion and constipation, early decay of the teeth, "worms," bad dreams, and wetting the bed. Children who eat in this way are also more apt to develop colds and acquire the contagious diseases.

After the third year the principal meal or dinner should be in the middle of the day, and the supper light, such as bread-and-milk, or milk toast and a cup of milk.

It is advisable to have regular times for meals—breakfast from 7 to 7.30 A.M., dinner from 12.30 to 1 P.M., and supper at 6 P.M. Until the seventh or eighth year a cup of milk may be allowed at 10 A.M., although if the child does not seem hungry at the regular meals, no milk or lunch should be given between meals. No other eating of any kind should be allowed between meals, but water should be given freely. Milk should still form a large part of the child's diet.

The following lists give some idea as to what constitutes a well-balanced diet for children after the third year and up to the seventh year:

## HYGIENE FOR MOTHER AND CHILD

Breakfast, 7 to 7.30 A.M.—Soft-boiled egg, slice of wheat, Graham, or rye bread buttered sparingly. A cup of milk.

Another Day—Rolled oats cooked at least two hours, salted to taste, served with thin cream or top-milk, and slight amount of sugar. Graham crackers or bread. Pulp of two or three stewed prunes without skin, and a cup of milk.

Another Day—Poached egg on toast. Baked apple without skin. Cup of milk.

Another Day—Malted breakfast food, cooked thirty minutes, served with the top of the milk or thin cream, and small amount of sugar. Oatmeal cracker, or zweiback, or rusk. Small dish of apple-sauce and cup of milk.

Lunch at 10.30 A.M. (if it does not take away appetite for regular meals)—Cup of milk and a piece of zweiback or Graham cracker.

Dinner, 1 to 1.30 P.M.—Two to three tablespoonfuls of finely cut up beefsteak, roast beef or lamb, baked potato with dish-gravy, tablespoonful of asparagus tips or spinach, bread-and-butter, baked apple, and water to drink in small quantity. No milk at this meal.

Another Day—Tender lean meat from lamb chop or white meat from chicken, finely cut up, baked potato with dish-gravy, green peas thoroughly cooked and mashed. Pulp and juice of stewed prunes for dessert.

Another Day—Boiled whitefish or halibut, mashed white potato, green peas, or string-beans, or asparagus tips. Stewed apple-sauce or stewed peaches for dessert.

Another Day—Chicken, beef, or mutton broth with boiled rice or barley in it. Crackers or toast. Dessert, rice-pudding without raisins. Small cup of milk.

## THE FEEDING OF OLDER CHILDREN

Supper, 6 P.M.—Graham bread, twenty-four hours old, and glass of milk, or oatmeal or Graham crackers, rusk or zweiback, and glass of milk.

Another Day—Milk toast and a glass of milk.

Another Day—Cream of wheat, cracker, and glass of milk.

### *After Six Years of Age*

When the child is six years old certain articles of diet may be given at dinner, such as vegetable purées of peas, asparagus, celery, or spinach.

Onions may also be added to the diet, but should be boiled until they are soft and mushy.

Lettuce may also be given at dinner. It should be cut up very fine and served with salt and a bit of sugar, but no vinegar.

For desserts at dinner, the pulp of half an orange or peach may be given, but not when child has custard for dessert.

### FOODS TO BE AVOIDED

Meats—Pork in any form, ham, veal, sausage, salt fish, liver, kidney, bacon, rich meat stews, dressings or rich gravy from roasted meats, duck, goose, or game. No fried meats.

Vegetables—Cabbage, raw or fried onions, raw celery, cucumbers, tomatoes, radishes, beets, green corn, turnips, parsnips, carrots, egg-plant, cauliflower, potatoes (except when baked or boiled). No fried vegetables. No salads of any kind.

Desserts—Nuts, candy, pies, tarts, doughnuts, éclairs, frosted cake, nut or fruit cake, syrups, rich jellies or preserves.



## HYGIENE FOR MOTHER AND CHILD

Bread—No hot bread or rolls, buckwheat or any kind of griddle cakes. Muffins.

Beverages—No tea, coffee, cider, beer, wine, or liquor of any kind.

Fruits—No bananas, cherries, berries, pineapple, grapefruit, preserved fruits or jams. Grapes, unless seeds and skins are removed.

### *Cooking of Food*

Vegetables should be very thoroughly cooked until soft. Lamb should be thoroughly cooked, and beef cooked through, but rare. No raw meat should be given. Cereals are often insufficiently cooked for children. It is not best to go by the rules given on packages. Oatmeal or rolled oats should be cooked three hours or overnight; cream of wheat, wheatina, and malted breakfast food thirty to forty minutes.

### *Important Essentials in the Feeding of Children*

First—It should be remembered that it is much easier to prevent illness by careful training of children to eat properly than it is to cure some of the ills dependent upon bad habits of eating.

Second—A child who is not taught to eat proper food in the right way misses a large part of that early training which has so much to do with the early education of the well-bred child, and which is the birthright of every child.

## THE FEEDING OF OLDER CHILDREN

Unless a child is trained in these fundamentals of proper eating and table manners, training in other important essentials of common every-day life will be much more difficult.

The following rules are very important:

1. Have meals at same time each day.
2. Do not allow children to eat between meals, except as mentioned in schedule, but give water freely between meals.

3. Children should be taught to eat slowly, and not to swallow half-chewed food with much water or milk.

4. Teach children to chew food thoroughly. Even with the greatest care, children chew their food but little; therefore, all meats should be cut into the smallest bits, and vegetables should be cooked until very soft, and mashed before serving.

5. Children are very apt to form the habit of eating only certain articles and leaving others. When food is placed before a child, if certain wholesome articles are refused, such as milk, bread, cereals, meat, or potato, and the child asks for the dessert, the wholesome food should be given first, and unless this is eaten the dessert should not be given. It is often advantageous to keep the dessert out of sight until the main part of the meal is eaten.

6. If a child refuses food at the regular meal-time, it is best not to urge or tempt to eat by offering sweets, pastry, or especially prepared food. If this is done the child will surely lose appetite for wholesome food, and will gradually form the habit of calling for different kinds of rich food, and soon loses appetite for anything.

It is best to allow the appetite to assert itself naturally. A child should never be asked what it wants to eat. The less said about food the better, but what is most nourishing and best for the child should be set before it, and

## HYGIENE FOR MOTHER AND CHILD

if the simple food is refused, nothing should be allowed until the next meal except water. If this plan is persistently and patiently followed, almost invariably the child will form the habit of eating what is placed before it at each meal, will have better digestion, a good appetite, and will be stronger and more robust.

7. During the hottest days in summer it is best to give less food, especially meats, and the child should be given more water between meals.

### *Indigestion in Children Over Three Years of Age*

In the preceding paragraphs are considered some of the causes of indigestion and other troubles common during childhood. If the suggestions there given are carefully followed out, children will have very little indigestion, and certainly much less trouble in other ways. It is a matter of common observation that when bad habits of eating are corrected, other troubles, such as wetting the bed, "worms," chronic constipation, and nervousness, are very much improved, and the last two mentioned often cured entirely.

When a child is suddenly seized with an attack of vomiting, loose movements of the bowels in which is undigested food, and accompanied by pain and oftentimes fever, it is very often the result of eating too much, eating some special article of unsuitable food, or eating too much when very tired. Sometimes an acute illness may commence this way.

**Acute  
Indigestion**

## THE FEEDING OF OLDER CHILDREN

In the first place, it should be remembered that the vomiting and diarrhoea is an effort on the part of the system to rid itself of the undigested food. Two things are necessary. First, the digestive organs should be given a complete rest. No food of any kind should be given for twelve to twenty-four hours, depending upon the severity of the attack. Second, plenty of boiled water should be given—four to six tablespoonfuls every hour. At first this should be as hot as can be taken comfortably, especially if there is vomiting. Sips of cool boiled water may be given between, but no ice-water.

At the beginning of the attack it is advantageous to give one to two teaspoonfuls of castor-oil, swallowed with a little very hot water. If the bowels have not moved in two hours this might well be followed with a soap-water enema.

The regular diet should not be given immediately at the end of the twenty-four hours of fasting or as soon as the child is better. At first only a very thin gruel of granum, arrowroot, or barley flour should be given—about half a glass every two hours; then a glassful every three hours; then a small piece of dry toast may be added to one or two of the feedings. Later, milk may be added to the gruel, and in a few days some milk toast once a day, and later broth, may be added to the diet, until gradually, in

## HYGIENE FOR MOTHER AND CHILD

about a week, the child is taking nearly the regular amount of food.

When a child is habitually constipated, has a coated tongue, with foul breath, grinding of the teeth while asleep, loss of appetite, hungry one day and loss of appetite the next, there is very often a condition present which might be called chronic indigestion.

### **Chronic Indigestion**

This condition is usually brought on by eating between meals, imperfect chewing, and bolting of the food with large quantities of liquid, and eating improper food, such as candy, nuts, cakes, pies, and rich puddings. It may also be caused by food which is not cooked enough.

### **Causes**

Of course, the first thing to do is to withhold all improper food and stop all eating between meals.

Unless this is done nothing else will avail. This alone will, in most cases, produce marked improvement in a week or two, and will cure many cases; but careful feeding must be continued over a long period. Indeed, the rules already given for the proper feeding of children should be observed with all children. Careful observance of the rules will as surely be rewarded by having less illness in the family as a departure from the rules will cause it.

### **What to Do**

PART III

OTHER MATTERS PERTAINING TO THE  
CARE OF CHILDREN



## CHAPTER I

### SLEEP

THE baby's bed and how to arrange it has already been considered in Part II, Chapter VII, **Infants Should Not Sleep with the Mother** commencing on page 67. Reasons are there given in detail why an infant should not sleep with its mother, and the objections there given cannot be too strongly emphasized.

It is also much better for older children to sleep alone. Besides sleeping more soundly, there is much less opportunity for the formation of bad habits or contracting contagious diseases from each other.

A healthy new-born baby having good digestion and proper food will usually sleep eighteen to nineteen hours out of the twenty-four. **Hours of Sleep Required** The bath and toilet should be as simple and brief as possible, and aside from such necessary care, and the regular times for feeding, nothing should interfere with the baby's sleep.

As the baby grows older it will lie awake for short periods, but will still sleep most of the time up to five or six months, when it should have six-



## HYGIENE FOR MOTHER AND CHILD

teen hours every day; and this amount of sleep is required until the baby is a year old, when it will require about fifteen hours. During the third and fourth years thirteen to fourteen hours is little enough; from the fifth to the eighth year, eleven to twelve hours; and from the ninth to the fifteenth year, ten to eleven hours' sleep out of the twenty-four is not too much.

If the child is to obtain the requisite number of hours' sleep, it is necessary to have regular times for feeding and sleeping. As already stated, during the early months the baby will sleep most of the time aside from that spent in bathing, dressing, and feeding.

Before the evening feeding, from 5.30 to 6 P.M., the infant should be changed and prepared for bed.

**Regular Hours for Sleep Important** After feeding it should sleep until the 10 P.M. feeding. Up to the fifth month there will be one feeding between 10 P.M. and 6 A.M., which is usually given between 2 and 3 A.M. From the fifth month on there should be no feeding or nursing between 10 P.M. and 6 A.M., and this should be a period of unbroken sleep for the baby. Up to the end of the tenth month, most infants, given the proper conditions, will sleep twelve hours during the night, and from three to four during the day, usually in two naps, one in the forenoon and one in the afternoon.

## SLEEP

It is best to place the baby at the breast or give the bottle of milk-food at the regular hours for feeding. If this is done regularly the baby will obtain the required amount of sleep between feedings, and will soon learn to wake of itself.

Beginning with the eleventh month and throughout the second year it is a good plan to feed the baby at 6 P.M. and put to bed for the night. The 10 P.M. feeding should not be given after the second year, and many children will sleep from 6 P.M. until 6 A.M. after the eighteenth month.

The best time for the daily nap is soon after the 10 A.M. feeding. The baby should be undressed, put in its crib in a darkened room, and left alone for its sleep. If this is done regularly from the beginning, many children will sleep from 10.30 A.M. until 1 to 1.30 P.M., when, by the time they are dressed, they will be ready for dinner at 1.30 or 2 P.M.

During the third and fourth years the child should have the daily nap of one and a half to two hours some time between 10.30 A.M. and 1 P.M., and an unbroken night of sleep from 6.30 or 7 P.M. until 6 to 7.30 A.M.

One of the principal signs of good health is quiet, restful sleep. Most children, if given proper food at proper times and not between meals, who have plenty of fresh

**Conditions  
Favorable to  
Sound Sleep**

## HYGIENE FOR MOTHER AND CHILD

air and a comfortable bed, will sleep *if the room is made dark*, and they are taught in early infancy that darkness is as friendly as the light. A light should not be left burning in the sleeping-room. A child will soon learn to depend upon it, and will not go to sleep without it.

During the spring and summer months, when daylight and bright sunshine come as early as four o'clock in the morning, many children will wake very early unless the room is properly darkened by outside blinds. Slatted blinds, painted a dark color, will allow plenty of fresh air, but will darken the room so that the children will sleep until time for the family to rise.

During cool weather it is well to remember that cold feet may keep a baby awake, and the feet should be covered with warm socks, and if necessary a hot-water bottle provided for extra warmth. Care should be taken that the bottle is so placed and wrapped up as not to burn the baby.

During the hottest days of summer a sponge-bath before the nap and at bedtime is refreshing and conducive to sleep.

There should be no such thing as *putting* the baby to sleep. After feeding, making the child comfortable, and darkening the room, it should be left in the crib or bed to go to sleep of itself, which it will do if the habit is formed in early infancy. On no ac-

**Putting  
the Baby  
to Sleep**

## SLEEP

count should the baby be rocked to sleep. Once commenced, this habit is very difficult to break. To walk the floor and sing a child to sleep every night is a useless practice, and one which is apt to become a great burden to a mother, for a child will soon learn to depend upon it, and will not go to sleep without it. Neither should a child be allowed to suck a rubber nipple. Any such practice is a bad habit, and is also apt to cause indigestion.

Although the rules here given may seem to some mothers rather strict, they do not preclude all those little attentions that mothers like to give, or that gentleness and tenderness which is every child's due.

As quiet, restful sleep is a sign of good health, restless nights mean that either the child is not well or that the conditions surrounding the child are not favorable to sleep.

If a child is put to bed in a light room, habitually rocked or sung to sleep, or picked up every time it cries or wakes, the habit of wakefulness and crying is thus easily acquired.

**Conditions Unfavorable to Sound Sleep** Another cause of wakefulness is exciting games at bedtime, and children are often made afraid of the dark and of being alone by certain stories.

Probably the most common cause of wakefulness in children is indigestion, caused by improper food or overfeeding—especially feeding often during the night.

## HYGIENE FOR MOTHER AND CHILD

Still another condition which is very unfavorable to sound sleep is obstructed breathing, due to enlarged tonsils or adenoid growths.

If the child loses much sleep night after night, something is wrong. The remedy is not to give soothing syrups, but to seek for and remove the cause. Soothing syrups are dangerous, and many children have been seriously affected by them. If the baby wakes at 4 A.M., it is often surprising to find how late it will sleep if the room is properly darkened.

Correction of bad habits of feeding will also very frequently change matters for the better. Chronic indigestion and enlarged tonsils or adenoids call for special medical attention.

Many children, after the fourth year, do not have sufficient sleep. As a result they are peevish, irritable, lose appetite and vigor, become thin and pale, and those who are attending school are frequently sent home suffering with headache. Children from five to fifteen years of age need a great deal of sleep. The child who sleeps too much is very much of an exception. During childhood the nervous system is very unstable, and overstimulation and lack of sleep are sure to result in nervous irritability.

From the fifth to the ninth year children should be in bed by 7 or 8 P.M., and sleep until 7 A.M. It is an excellent plan, also, to have them take a

## SLEEP

short nap of thirty to forty minutes just before dinner, or some time in the middle of the afternoon. Even though sleep does not come, the rest in the recumbent position will relax and quiet the nerves.

After the seventh year most children will have commenced to attend school, and it becomes even more important that the full amount of sleep should be insisted upon. Nothing should be allowed to interfere with sleep. Nothing is so productive of clear eyes and rosy cheeks as plenty of sleep, and children from nine to fifteen years of age should have ten hours every night. How can children spend their time to better advantage than entering upon a long, refreshing night's sleep at 8 P.M. and sleeping until 6 or 7 A.M.? What reserves of strength will thus be obtained to fall back upon in later life!

With most children of this age it is advisable to encourage lying down a half-hour during the two-hour interval between school sessions, or an hour after the one session. Especially is this desirable for girls and boys who take their studies very seriously, and are too much inclined to read and study while other children are outdoors.

At the first sign of wakefulness at night, nervousness, or loss of appetite, it is well to consider carefully whether the child is not reading or studying too much out of school hours, and if so, less reading and more out-door exercise should be insisted upon.

## CHAPTER II

### EXERCISE, OUT-DOOR AIR, AND PLAY

THE young infant obtains its exercise by moving its arms, kicking, and crying. It is important that the garments should be sufficiently loose to permit of free action of the limbs.

Twice a day for about fifteen minutes, after the morning bath and again during the afternoon, it is a good plan to allow the baby to lie upon a bed in a comfortably heated room with the long outside garments removed, leaving only the shirt, napkin, and stockings, thus giving opportunity for freer exercise of the limbs.

When the baby is about four months old and is beginning to sit up, it may be placed upon a blanket or quilt in some part of the room which is away from draughts, and allowed to move about freely as much as it will. This will give plenty of chance to learn to creep. The baby should not be allowed to sit up too long at a time during the first year. If the child has a cold it is advisable to keep it off the floor.

A very good contrivance for use at this time to

## EXERCISE, OUT-DOOR AIR, AND PLAY

prevent the baby from getting into trouble in different parts of the room is a fence about two feet high forming a pen, inside of which a thick quilt is placed. In such an enclosure a child will learn the use of its arms and legs, and make its first attempts at creeping and walking, besides amusing itself with a few toys for half an hour at a time.

The child is better left to itself as regards learning to walk. No urging is necessary with a healthy

### Learning to Walk

child. Children differ a great deal in the matter of learning to walk. Some children who are perfectly well are late, while others are very early in making attempts to walk. When the baby has learned to walk, over-exercise of the legs must be carefully guarded against.

At this time the baby should have its daily airing in a suitable go-cart or carriage. When it has learned to walk and seems strong, it may have a short daily walk out-of-doors of about ten minutes' duration. Such a walk should be only very gradually increased, and the go-cart should still be used most of the time until the baby is three years old.

There are two kinds of exercise which are often given the baby which are decidedly objectionable, and should be avoided. First,

### Objectionable Exercise

trotting on the knee. While this may seem innocent enough, it is often done so vigorously that it causes the child to vomit its



## HYGIENE FOR MOTHER AND CHILD

food. Second (still more objectionable and even dangerous), is the practice of tossing infants and young children into the air and catching them in the arms. Not only is this injurious to the child's delicate nervous system, but serious accidents have been known and are liable to occur.

Just when the young infant shall have its first whiff of out-door air will depend very largely upon the season. In summer a child may go out when it is a week old, care being taken to protect the eyes from bright light. The first outing should be short, not over fifteen minutes, and the carriage should not be wheeled over rough places. The time may be gradually lengthened as the baby grows older and stronger.

In early spring and late autumn it is advisable to wait four weeks. In winter it is best to wait about three months, and then only on quiet, sunny days.

During the winter the baby may have a daily airing as early as one month if properly protected against draughts. For such an airing the baby should be dressed in a warm hood and coat, and placed in its carriage. The best time is between 10 and 11 A.M., and the best place is a sunny room with windows wide open. All doors should be closed to prevent draughts. The first time the airing should last

**Out-Door  
Airing**

**Out-Door  
Airing in  
the House**

## EXERCISE, OUT-DOOR AIR, AND PLAY

about fifteen minutes, and may be lengthened ten minutes each day until it is two or three hours. On fine days in early spring and late autumn the baby might be given two airings in this way—one between 10 and 12 A.M., and one between 3 and 4 P.M.

Properly protected with warm clothing, such an airing will do a child much good. It will be less liable to take cold, its sleep will be more refreshing and sound, and appetite and digestion improved.

During the summer and early autumn the baby may be out at any hour between seven in the morn-

**The Best**                   ing and sundown. On very hot days,  
**Hours to Be**               however, it is better to choose the  
**Outdoors**                 early forenoon or late afternoon hours.

In winter and early spring the hours between 10 A.M. and 3 P.M. are the best, depending upon the climate. The two or three hours before 1 P.M. are usually to be preferred, for the reason that so many days in winter which are bright and sunny in the forenoon become cold and cloudy in the afternoon.

The baby should not go out on raw, windy, damp, or very cold days. Neither is it advisable

**Weather Un-**           to take a very young baby—that is,  
**suitable for the**       during the first four or five months—  
**Baby's Outing**       out-of-doors when the temperature is  
below freezing-point, and even up to ten months it  
is better that a baby should not go out when the  
temperature is below 20° F.

## HYGIENE FOR MOTHER AND CHILD

During the airing out-of-doors it is very important to see that the sun does not shine in the baby's eyes when asleep or awake. Neither should the wind blow in its face, and care should be taken that the legs and feet are well protected and warm.

There are some important points for consideration in regard to baby carriages and go-carts.

**Carriages and Go-Carts** Many of the carriages on the market are made too high and top-heavy, while others are too elaborate and fancy. The best carriage for the baby is one of some dark color, having a hood and simple furnishings of some dark tint of brown or green. Elaborate light-colored linings are easily soiled, and reflect the glare of the sunlight.

Carriage or go-cart should not be too high from the ground, and the front and back wheels, which should have rubber tires, should not be so near together that the vehicle is rendered top-heavy and easily tipped over. There should also be a movable seat for use when the baby begins to sit up.

An adjustable hood of dark color is preferable to the sunshade. The latter is more difficult to adjust, and does not protect against cold as well as the hood. It is also very liable to slip and fall on the baby's face or tip over, allowing the sun to shine in the infant's eyes.

Suitable pillows and coverings should be provided, depending upon the season. During the

## EXERCISE, OUT-DOOR AIR, AND PLAY

winter the feather pillow and warm coverings will be needed; in the summer a pillow filled with hair is preferable, and the coverings light. The carriage should also be provided with a wide strap in front to prevent the baby from falling out.

An abundance of out-door air is almost as necessary in keeping the baby well as plenty of sleep and nourishing food. A child can hardly have too much fresh air and sleep. If the baby is housed too closely, digestion and appetite become poor, the cheeks pale, eyes dull, and manner listless.

**Benefits** On the other hand, if the baby has an  
**Derived from** abundance of fresh air, digestion and  
**Out-Door Air** appetite improve, the cheeks become rosy, eyes bright, and playfulness and activity return.

There are no objections to the baby sleeping out-of-doors when the weather is suitable. Indeed, children who sleep out-of-doors are nearly always more rugged and less apt to take cold than those who are more closely housed. Of course, the carriage-hood should be brought well forward to protect the eyes from bright light, and during the fly season a netting should be arranged over the top and front to keep away flies and mosquitoes.

**Sleeping**  
**Outdoors** It is a common occurrence to see babies sleeping peacefully in their carriages on some quiet porch or in some sunny, protected place out-of-doors.

## HYGIENE FOR MOTHER AND CHILD

There has come into use of late years a vehicle which has proved a blessing indeed for children and parents. This is made in various designs and shapes, and is called the **The Folding Go-Cart** go-cart. It has been much improved lately, and the best one is strongly and simply built of dark brown, green, or black color, has wheels with rubber tires, an adjustable hood and seat, and will fold compactly to about the size of a dress-suit case of fair dimensions. Easily opened up, it becomes a useful, durable vehicle for use, especially after the first year.

### *Toys and Play*

During the first six months the young infant does little except sleep and take its food. Toys and play are not needed at this time, and, indeed, this is as it should be. Parents cannot do better than to allow the young animal to simply sleep, eat, and grow. A judicious letting alone is a good rule to go by in the care of infants. Proper nourishment at regular intervals, much sleep, fresh air, and keeping clean and dry, is about the order of the baby's life during these early months.

The baby should not be played with until six months of age, and even then it is better to allow the little one to amuse itself. It is, indeed, interesting to play with the baby, but young children do

## EXERCISE, OUT-DOOR AIR, AND PLAY

not thrive as well if constantly subjected to the excitement of play. They become irritable and sleep poorly. They should never be played with just before bedtime. The best time, if at all, is in the morning or after the daily nap.

The natural instinct of most infants to put everything into the mouth makes it necessary to give  
**Toys** careful attention to the selection of suitable toys. While children differ somewhat in regard to amusing themselves, many infants are entirely contented with two or three very simple toys.

Small articles, such as buttons, beads, marbles, safety-pins, or coins, should not be left within the  
**Toys Unsuit-  
able for  
the Baby** baby's reach. They are apt to be swallowed or thrust into the nose or ear. Toys covered with wool or hair are undesirable, on account of the possibility of the infant's swallowing bits of hair or wool; also those which can be easily broken into small bits, or have small parts which are apt to be broken off and swallowed.

Sharp-pointed or painted toys are also undesirable, as well as those which might frighten the baby by sudden movements or loud noises.

What remains, then, are those toys which will not be injurious if put into the mouth. Such are the  
**Toys Suit-  
able for the  
Young Infant** various kinds of rubber rattles, balls, animals, and dolls. After buying, and before giving to the baby, they should

## HYGIENE FOR MOTHER AND CHILD

be washed and scalded in hot water. Being constantly put into the mouth, they should be cleansed frequently with soap and hot water.

Some mothers have successfully trained their children as they grew older not to carry everything to the mouth. This has been done not so much by punishment as by gentle firmness and admonition.

### *Toys, Exercise, and Play of Older Children*

The chief occupation of the child is to play. In choosing a child's playthings and playmates it should be borne in mind that much of the child's early training and education must necessarily be acquired while playing. Without any parental instruction whatever, the child will learn as it plays. It becomes an important parental duty, then, not only to endeavor to simply amuse the children, but to exercise a wise supervision over their play and sources of amusement, in order that they may learn that which shall help and not retard growth of mind and body.

Those who have had the opportunity to watch children must have noticed two characteristics  
**Toys for**            common to most young children while  
**Young**            at play. First, a child will seldom  
**Children**        occupy itself with any one toy for a  
very long time, no matter how attractive it may  
be. Second, that it is not always the most expen-

## EXERCISE, OUT-DOOR AIR, AND PLAY

sive or most elaborate toy that claims a child's attention the longest. On the contrary, it is very often the least expensive and most simple of all; and very frequently when given a new and very attractive toy, the child will soon toss it aside for an old spool, a bottle, a cardboard box with a cover, or even an old shoe, with which it will amuse itself much longer than with the finest toy obtainable.

It is a mistake, then, to give a child a great many expensive toys. It is much better to allow only two or three at a time, and that these few should be very simple. Others may be put away and brought out at different times—perhaps on rainy days or as a reward for good behavior.

A child should also be taught to put away its playthings, and it is a good plan to have a box or shelf for this special purpose. The child will then learn that the box is special property, and will be more apt to put away the toys. It is certainly a part of a child's training to learn this useful lesson of having a place for everything and everything in its place. If the habit is acquired early in life, it is very apt to go with the child always.

Some of the best toys for boys are: blocks, upon which are printed pictures of the more common animals; picture-books, showing the domestic animals, birds, and flowers; balls; toy carts, engines, and cars. Girls will also like picture-books, blocks,



## HYGIENE FOR MOTHER AND CHILD

and balls, as well as small sets of dishes and dolls. The little girl's first doll, if of china with movable limbs, will not last long. A rubber or rag doll will probably be treasured just as much, will not break from ill-treatment, and is much less expensive. By the time the child is five or six years of age a better doll of medium size will be more appreciated.

As children grow older they naturally turn to more active games and exercise. Most healthy children like to be out-of-doors, and those living in the country are fortunate indeed, for nowhere can child-life develop so naturally and beautifully as in a well-ordered household in the country, learning to know and to love the birds and their songs, the wild flowers, the trees, and animals.

No less fortunate is the child who lives by the sea, for much is here to charm and amuse. The sand, stones, and shells afford a great variety of amusements.

If, then, a child lives in the country or by the sea, there is no lack of wholesome play and healthy development of body and mind. This is the time when every boy and girl should learn how to swim. Aside from the splendid exercise it gives the different muscles, it may be the means of saving life.

The bicycle is another valuable means of outdoor exercise, if the machine is adapted to the

## EXERCISE, OUT-DOOR AIR, AND PLAY

child instead of the child being required to adapt itself to the machine. The bicycle should be so adjusted that the saddle and handle-bar are at the right distance from each other, and the handle-bar arranged so that the child will not bend over too much. This form of exercise should not be followed to excess, and competitive races can only do much harm to a growing boy.

Tennis is a valuable out-door game for developing the muscles.

Too much cannot be said in favor of encouraging girls to play out-of-doors. They should enjoy the active out-door life with their brothers. Skating on ice and coasting is healthful sport for both girls and boys.

The child born and reared in the city loses much unless extensive parks are available. Fortunately  
**The City Child** most cities have now within easy reach large park areas where the out-of-door life may be indulged in. There are also available in many cities out-door playgrounds and gymnasiums under careful supervision, where children have the benefit of wholesome amusement.

Although conditions are not as favorable, it is possible to rear healthy children in the city. Good milk is now available in the large cities, and if children are given proper food at regular intervals, are not allowed to eat between meals, have plenty of fresh air in living and sleeping rooms, and go

## HYGIENE FOR MOTHER AND CHILD

out-doors every day, they can keep well and robust in the city. If to this good care at home can be added an annual sojourn in the country or at the sea-shore, much benefit will be derived therefrom. The gain will not only be in health, but also in much useful knowledge about animals, birds, flowers, and trees.

## CHAPTER III

### EDUCATION AND TRAINING IN THE HOME AND AT SCHOOL

THE proper development and education of a child are matters of supreme importance, and worthy of the most thoughtful consideration of every devoted father and mother.

Children come into the home helpless and dependent. They are entirely plastic, having possibilities for good, but also for evil. Whether the possibilities for good will have the largest development in their lives, or those which are evil, will depend not upon the children, but upon the common sense and good judgment of the parents, and the general atmosphere of the home.

If education of children means a training which will best cultivate their powers of understanding and appreciation of objects and people about them; teach them to choose the right over the wrong; to be cheerful, courteous to all, thoughtful and unselfish, gentle and deferential to old age—then it is of the utmost importance that such training should commence in

**What Does  
Education  
Mean?**

## HYGIENE FOR MOTHER AND CHILD

early infancy. The parents should be the teachers and the home the training-school.

Certain elementary matters relating to the early training of young children have been considered in detail in preceding chapters, and will be mentioned here only to be emphasized.

It is very important that there should be some definite, orderly plan in the care of young children. Not only is this necessary for the maintenance of good health, but it has much to do with early training, and establishing foundations for later training.

As soon as the child is born, regularity in feeding and sleeping becomes an important factor in its daily care. From the beginning it should be trained to go to sleep in a dark room without rocking or singing.

**Earliest Training to Establish Regularity** A healthy child should have no fear of the dark. It is better not to tell stories to children which have any note of fear or sadness. Children are very impressionable, and imagination may magnify apparently innocent tales of goblins, giants, bears, and wolves into terrifying dreams of frightful monsters. Such stories might well be replaced by those concerning the stars and the beauty of the heavens at night, of the sunshine and blue sky, of birds, flowers, and trees of forest and field.

As children grow older they should learn the

## EDUCATION AND TRAINING

lesson of neatness by being taught to put away their playthings and clothes in the right places.

The home must mean more to the growing child than a lodging and eating-house, and the relations of the parents to the child much more than mere providers of food, clothing, and shelter, however important these may be.

Children come to us knowing nothing of life. In a very large sense the several years before school-life commences are more important than any of those which follow. This is the period when the foundations of character are established.

Children acquire knowledge from their play, surroundings, and parents. To a very large extent they reflect the life about them. If the home is untidy, and there is strife and vexation of spirit, children living in such a home can hardly be expected to be orderly in habit or sweet in disposition.

The child nature is very much like the sensitive photographic plate. The lights and shades of home life are quite faithfully reproduced. If there is a spirit of unselfishness, cheerfulness, kindness, and reverence in the home, the child will be very apt to absorb and reflect these qualities in its own life.

Do parents wish their children to develop into men and women of personal charm, and power to do effective work in the world? Then the training

## HYGIENE FOR MOTHER AND CHILD

of these early years must be wisely directed. No amount of later training will entirely compensate for any lack at this time.

The quality of the home life then, and the influence of those who are most concerned in the care of the child, will to a large degree make or mar the character of the child. In this business of character-building it is very important that only those deeply interested in the moral and spiritual development of the child should have a part.

It is hardly conducive to the best development of the child that its closest and most frequent companion during the most impressionable years should be a nurse-maid. This is sometimes encouraged in order that a child may learn a foreign language from close association with a German or French maid. It must not be forgotten, however, **The Influence of the Nurse-Maid** that less desirable qualities may also be acquired, and that after the child has learned the language, parents may find that the child lacks many of the finer qualities which are only acquired by close companionship with its mother.

Certainly the character and habits of the nurse-maid should be subjected to the closest scrutiny **The Mother's Influence Most Desirable** before she is given such responsibility. Far better would it be to give the mother all needed assistance for the more laborious duties which require physical

## EDUCATION AND TRAINING

strength, and let her give a large portion of her time to caring for her child. She may feel her own lack of knowledge and unfitness, but the care and attention which she gives out of the full measure of her own love will be superior to the services of the average paid nurse-maid.

Parents should not lose sight of the fact that with the growth and development of the body goes also the formation of character. This goes on, anyway, even though nothing be done to direct it.

All great achievements have grown out of high ideals, so in this matter of the training of children it is well from the beginning to have an ideal, and to keep this ideal constantly in mind. Although difficult to realize, better have a high standard with earnest endeavor to attain than none at all with stagnation and indifference.

### High Ideals Necessary

Are ideals of home-life and parenthood sufficiently high, and is the matter of character-building given proper consideration in the home? Parents are seldom lacking in affection, and are usually as lavish as their means allow in providing for the bodily needs of their children and in the bestowal of gifts for their pleasure; but do they devote sufficient time to real companionship with their children in the quiet of the home? There is more possibility of children being overdressed and overfed than there is that they will be overtrained.



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Although they may not give expression to their aspirations for their children in words, most parents have some idea of what they would like them to be. They want them to have all the graces of character, and to be trained to do some effective work in the world.

To lead children during their early years in such a way that the best part of their natures will unfold will continually test the love and patience of parents to the utmost. The task will be less difficult if parents will endeavor to understand the characteristics of the undeveloped child nature.

First of all let us take into consideration the fact that we are dealing with an untrained mind.

**The Untrained Mind**      There is no sense of proportion, and ideas of right and wrong are unformed; the powers of understanding are not developed; judgment is lacking, and comes only by experience, which is also lacking; a child reasons but little; even when we try to explain, perception is slow, and precepts are quickly forgotten.

What, then, does govern the child in its relation with others? In the light of what has been said we can come to only one conclusion—namely, that children are governed very largely by what appeals to them the most for the time being.

Another factor for consideration is the element of change which takes place in the child's nature from week to week. Those who have much to do

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with children will notice certain phases of development. Certain mannerisms will assert themselves which often cause parents much anxiety and discouragement. A child may assume a peculiar manner of shaping its mouth or closing its eyes while talking. Such peculiarities are usually but transitory incidents along the way, and very often disappear while parents are trying to decide what to do.

### **Transitory Mannerisms**

Parents will also notice what seems to be certain stages in the advancement of children. One week the child will be sweet-tempered, docile, and will learn easily; the next week, wilful, difficult to control, and learn but slowly, or forget what was learned the week before. A few weeks hence, however, parents are just as likely to notice greater improvement than ever, and so the child makes progress in adjusting itself to the world about it. This is characteristic of advancement in other arts as well as in the training of children, and should not be a source of discouragement.

### **Children Advance by Stages**

One of the most important matters for consideration in the training of children is the question of the child's temperament. No two children are alike in their capacity for learning. Each child will need individual consideration. What one child will easily understand another will comprehend with difficulty.

### **The Child's Temperament**

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A child's temperament must largely depend upon the mental and physical capacity of parents and grandparents. "We are the omnibuses in which all our ancestors ride." We know not to what extent the actions and moods of children may depend upon inherited tendencies. For this reason, while we should exercise a gentle firmness in our dealings with children, we should be gentle in our judgments and ever patient in spirit. It is encouraging to know that such tendencies can to a large degree be overcome by favorable surroundings and wise training.

Taking into consideration all the facts, what do they suggest in the way of practical assistance? As already stated, the undeveloped child nature is governed largely by what it likes best. This natural inclination is unrestrained by reason and judgment, and the sense of right and wrong is undeveloped. When the child's desire meets opposition there is a natural resistance, and so the child comes to its first lessons in learning the difference between right and wrong, and in submitting to authority.

Every child should learn the great lessons of obedience and self-control. Unless they are learned in the home during the early years, the child's way through life, in school, college, business, trade or profession will be marked by humiliation and discouragement.

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An uncontrolled or unbalanced life is always at a disadvantage.

One of the greatest and most important lessons of life, submission to authority, is one of the most difficult to learn and one of the most difficult to teach.

Children learn more by imitation than from precept. Therefore, if they constantly see exemplified in the lives of their parents such qualities as respect for authority, reverence, self-control, and consideration for the rights of others, they will in a large measure unconsciously absorb some of these lessons in their daily contact with their parents. The more they can learn in this way the less occasion will there be for constant admonition, persuasion, command, or punishment.

A very essential factor in teaching the lesson of obedience is the natural affection of children for their parents. While this makes obedience less difficult, parents must also inspire the admiration, respect, and confidence of their children if they would have the fullest measure of success in leading them along the upward way.

One of the meanings of the word "*educate*" is to lead forth. This well expresses the duty of parents. They should be guides for the safe leading of their children, endeavoring to understand the child nature, and to point out and explain the dangers

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as well as to interpret the use and beauty of objects in the world about them, all of which, great and small, are so new and wonderful to children.

In dealing with children it is hardly ever wise to demand implicit, immediate obedience. If some attempt is made to appeal to the child's reason by careful explanation before obedience is expected, considerable disturbance may be avoided. This is simply treating children as we would like to be treated ourselves, and we should be even more patient with them than we might with each other, as they cannot comprehend as quickly, and forget more easily.

It is never wise to argue with a child. With gentleness and patience, and with as few and simple words as possible, we may try to make everything clear to the childish comprehension, but argument is useless and never advisable.

A very common mistake is to threaten punishment and then to overlook. This can only result in ultimate failure. Children soon learn that the threats are never carried out, and ignore them entirely. It is better not to threaten with a certain punishment. The child may be made to understand that punishment will follow disobedience, but should not be told what the punishment is to be.

It is also a serious mistake to bribe children to do what is right. It weakens their moral sense,

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and can only result in sore disappointment. They should be taught to do right because it is right, not with the hope of reward. Once commenced, this practice is apt to make children little tyrants, their demands becoming more frequent and more exacting each time.

While firmness and decision are necessary in the training of children, there are certain other qualities which will often save the situation. There should be a well-balanced sense of justice, abundant good-nature, self-control, and the saving sense of humor. Annoyance or loss of temper can but result in hopeless confusion and humiliating defeat.

On the other hand, an endeavor to lead rather than to force, to meet each situation with quiet  
**To Lead** good-nature and gentle firmness, and  
**Rather than** an appeal to the child's reason, will  
**Force** often be met by responsive good-nature and smiling compliance with our wishes.

Keeping the child's mind pleasantly occupied will to some extent do away with the necessity  
**Give the** for frequently repeated "don'ts." It  
**Child Some-** is a good plan to provide each child  
**thing to Do** with some small household duty. Children may assist in bringing in coal and wood for the kitchen, making the beds, wiping dishes, and saving the mother steps in many different ways.

It is also an excellent plan to allow each child the use of a small bit of ground in the garden, and

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encourage the planting of seeds and caring for flowers. If there is a cat or dog in the house, the child may learn to be kind to animals by giving them food and water.

Most children are naturally industrious and helpful, and if their restless energies are wisely directed will not only find amusement for themselves, but will learn to be unselfish and thoughtful for the welfare of others, which is one of the most attractive attributes of character.

Thoroughness should also be learned by teaching the child to do well whatever is undertaken.

In the course of the child's experience it will gradually learn that wrong action brings some  
**Punishment** sort of punishment. It may be told that contact with heat or fire will burn and cause pain; that if it goes away from the yard it may not be able to find the way back, and this would mean the lack of food, and maybe the loss of home and mother.

Thus, it is well to explain in simple language the meaning of punishment, and that wrong-doing may bring unpleasant results of some kind.

Parents will differ in regard to the method of punishment. Certainly it should be given only after careful consideration, never when angry, and should be tempered with justice.

For misconduct at the table the withholding of some article of food of which the child is very

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fond may be helpful. Very often leaving the child alone in a room away from the family, where no harm can come to it, will give opportunity for reflection and change of disposition.

It frequently happens that children are cross and wilful on account of tired nerves and indigestion. In many households the daily nap is discontinued too soon, children are allowed to remain up too late at night, are given improper food, and allowed to eat sweets between meals. Children will often sleep an hour or half hour during the day, even up to the age of puberty, if conditions are favorable. Even if they do not sleep the relaxation of the nerves is beneficial.

Loud tones in reprimanding a child can only do harm, and arouse the child's opposition and anger. A quiet, well-controlled manner, in which there is some firmness, will accomplish better results.

After punishment it is well to have a kindly talk with the child, trying to make everything clear. Criticism of children or of other people in their presence should be avoided.

Mothers often complain about their children being "nervous"—that is, irritable, cross, and restless. This is very often the result of overfeeding, eating between meals, loss of the daily nap, and remaining up too late at night. Young children are frequently kept up until 8 or 9 P.M., in order that the father

"Nervous"  
Children



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may see and romp with them after supper. Although this may give pleasure, parents should think first of the welfare of the children. They need much sleep; if much is lost, they are very apt to become irritable and restless.

Children are so impressionable and susceptible to the power of suggestion that nothing should be said before them concerning their condition. Talking to or before them about being nervous, or calling their attention to themselves, is apt to make them self-conscious, irritable, and peevish.

In this chapter little has been said about the father's part in the training of children. While **The Influence of the Father in the Home** much of the father's time must necessarily be given to earning money for the support of the family, he should endeavor to be with them as much as possible. In some households it is not unusual to find that the entire burden of training the children is left with the overworked, weary mother. This is not only an injustice to the mother, but it is unfair to the children, for they need the best influence of both father and mother to make their training complete.

The influence of the father should be that of a kindly, generous, helpful friend and older brother. He should enter into their childish sports and games, as well as sorrows and troubles, and ably second the mother in her efforts to develop all that is best in their natures.

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### *Instruction Concerning Sex and Reproduction*

A chapter devoted to the training of children would hardly be complete without some consideration of a subject which is at this time attracting the earnest attention of thoughtful parents—namely, that of giving suitable instruction to boys and girls concerning sex and reproduction.

Instruction in regard to or even any reference to this important matter has hitherto been carefully avoided by many parents. The results of parental silence, and ignorance on the part of boys and girls, have often been sad, many times disastrous, and frequently tragic. A very frequent reason given by parents for withholding such knowledge from their children is that they dislike to introduce any subject which might mar what seems to them the natural innocence of children.

Parents are also apt to think that *their* children can never be influenced to do wrong, and even are proud in their belief that their children are entirely innocent in regard to such matters. They are firm in their belief that this innocence will protect, and that knowledge might excite curiosity.

Another reason is that the subject is one which requires very skilful handling, and although the wisdom of imparting such knowledge is apparent,

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parents often feel their inability to enlighten their children in the best way.

Those who have much to do with boys and girls can but recognize these reasons as delusions of fond and indulgent parents who are blinded by their love.

It must be evident to mothers, if they give the matter careful consideration, that children cannot

**Children Cannot Always Be Kept in the Seclusion of the Home** always be kept in the seclusion of the home, that they must necessarily gradually come in contact with other boys and girls, form new companionships, and unfortunately cannot always

be kept from meeting some undesirable people. As boys and girls enter more and more into the life of the world about them, at school and on the playground, they are bound to hear of matters which will arouse curiosity, and at the present time, when all kinds of reading-matter is so easily obtained, and the art of making and exhibiting pictures so largely developed, young people have ever-increasing opportunities to learn about such matters.

Let not parents be deceived! Children will acquire some sort of knowledge about this matter in

**Facts Are Best Given by Parents** some way. Is it not more fitting, then, that the parent should be the one to enlighten rather than servants, young companions, or chance acquaintances? However

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faulty the method of imparting this knowledge may be, the parental love will at least clothe explanations in clean language and the facts will be much nearer the truth than that derived from school-mates and acquaintances.

Now when the mother approaches her girl of ten, or the father his boy of eight or ten years, both parents may be surprised to find that the children already possess an appalling amount of spurious knowledge which has been derived from various unclean sources, and as the children tell their stories the parents will be fortunate, indeed, if the language in which the stories are told is not vulgar and offensive. Is this overdrawn? Not in the least! It is a matter of common observation with those who come close to the lives of school-children.

One very deplorable result of parental neglect in this respect is an inevitable lack of understanding between parent and child, and the consequent drawing apart. Once repulsed by their parents, the curiosity of children is excited all the more, and information is secretly obtained from servants, older acquaintances, and cheap and unfit books. When children arrive at this stage of investigation, and begin to hide their thoughts and desires from their parents, they are in danger, and parents lose that which is priceless above all else—the complete confidence and trust of their children.

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There is nothing wrong about this curiosity. Indeed, it is only natural. As the young girl approaches puberty, nature is forcing this knowledge of self upon her. The mother should have the child's confidence, and gently lead her to an understanding of the ways of nature. Nothing can be much more pathetic than the coming of this knowledge to a young girl unawares, at some critical moment, without having been prepared. It might even prove to be a distinct shock to the nerves, which are none too stable at this time.

**The Mother Should Prepare Girls for Puberty** mothers should never forget that it is the little girl's ignorance or innocence in regard to these matters which makes her the more easily led astray. If her questions are turned aside at home, she seeks information from undesirable sources. Never having been told what is right, her ideas become distorted. Taught to regard such ideas as wrong, she hides them from her mother, and at this point is in danger.

And what about the boy of the household? He is, if anything, more easily susceptible to suggestion in regard to such matters than his sister. He is very apt to derive all sorts of information from boy companions. Information wisely given by the father will prevent misconception, and tend much more to purity of

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thought and life than an ignorance which is bound to become enlightened in ways undesirable.

In regard to the difficulty of rightly informing children in this respect. However unprepared parents may feel themselves to be, they surely ought to have what outsiders lack—that is, the love, respect, and confidence of their children. Having these, the duty should not be a very difficult one. Better to make the attempt than lose their respect and confidence.

As to the method of imparting this information, probably most parents will find a good way for themselves, but others may be at a loss as to how to proceed, and all parents will be glad to read something of what other people are thinking concerning this matter at the present time.

Elementary instruction should commence during the early years before school age, and the parents should be the teachers. Children should be taught to bring all questions to father and mother. If all questions are met with honesty and sincerity, and answered as frankly and fully as possible, the subject will be robbed of much of its dangerous secretiveness, and children will come to feel that they need not go outside to learn, but that they can find out much more at home. When such questions demand information which is beyond the child's comprehension, children should not be told

**Questions to  
Be Answered  
as Fully as  
Possible**

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to go away, or that they should not talk about such matters, but in a kindly manner they should be told that when they are older and better able to understand, the question will be answered more fully.

Many lessons may be taught by drawing examples from the natural world, and if this is done more frequently, the less need will there be of giving evasive answers. As early as three or four years children may be told that all animals are created in pairs, from which come their young. The common birds and animals familiar to every child may be used for illustration.

The fundamental principles of reproduction may be taught by explaining, first, the development of plants; then of fishes; then of birds, with more detail; then of animals; and finally of human beings. With some care the subject can be presented not only in a wholesome manner, but the child's mind may also be impressed by the love and devotion of its mother.

Finally, the home should be made such an attractive place for the growing boy and girl that they will not wish to seek entertainment elsewhere. Parents should become acquainted with their companions, invite the best to the home, and enter into the pleasures of the children.

Children should be made to feel that father and mother are the best of friends and companions,

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from whom they may always expect the heartiest welcome, the truest sympathy, and the most complete understanding.

### *The School: Its Place in the Training of Children*

Since the purpose of all education is to train children so that they may meet the problems of life successfully, such training should not be deferred until children enter school, but commence at birth and continue throughout the entire period of school-life.

There appears to be ample ground for the belief that many children are placed at a disadvantage at the beginning of school-life by a lack of early home-training, that many parents are in too much of a hurry to send their children to school, and are apt to transfer too much of the responsibility of training their children to the school.

Parents should not lose sight of the fact that school and teacher can never take the place of home and parents, that the home is the real training-school, and that the public school should simply supplement the work of the home. The earliest training is fundamental. Children learn by observation and by imitation. Gradually they must be led to recognize the difference between right and wrong; they must learn the lessons of obedience, self-control, respect for authority, truthfulness,

**School Cannot  
Take the  
Place of  
Home Training**



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courage, and cheerfulness. As time goes on their powers of observation and understanding must be developed, so that they may comprehend and appreciate the world about them.

Such training does not require the tiresome routine of school-life, and is much better acquired

**Earliest Training to Be Acquired at Home** in the home and out-of-doors with the parents as teachers. The basis of an attractive personality is a sound physique. Good health, quiet nerves, and a sunny temper are of more importance than a smattering of many different subjects.

Long confinement indoors is unnatural to the child nature, is not conducive to laying foundations for vigorous health, and does not lead to the best mental development of children. They need to be much out-of-doors in the open, to have much sleep, and teaching of the most simple nature.

In primary school there are too many subjects forced upon the child's attention, and the subjects

**Too Many Subjects in the Primary School** are not well chosen. The power to reason and to concentrate the mind is not natural to young children. To cram a child's head with facts, most of which he cannot use and are soon forgotten, does little toward the development of the best traits of a child's character.

The demands of the school should be simple, and the number of subjects small. All children

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cannot be treated alike, and some effort should be made to understand the individuality of the child.

The wisdom of encouraging the spirit of competition by giving ranking marks or prizes to children is questionable. It would seem **Stress Is Not Desirable for Children** to introduce an element of stress and possible jealousy that is not in harmony with the simplicity of the child nature, and is abnormal and unhealthy. Let the number of subjects be small but well chosen, and children will learn enough without being stimulated to artificial and unnatural effort.

What is worth doing at all is worth doing well. Much better would it be, and tending more to a healthy development of the child's character, if this **Fewer Subjects Well Covered** could be the standard rather than the desire to excel others. It is more important that children should learn the meaning of work and the joy of work well done than that they should strive to obtain the highest marks.

When children enter the grammar grades this spirit is still more in evidence. School duties press too strenuously upon many children at this time.

It may be said that many children, especially boys, will never take school-work too seriously, **Studies Should Not Interfere with Out-Door Life** but there is plenty of evidence to show that some boys and many girls of grammar-school age are injured by school-work. Five hours per day, de-

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voted to school-work indoors, is sufficient for all practical purposes, and is as much as most children can do well. The remaining hours of the day had much better be spent out-of-doors and in the home, developing the body by healthy out-of-door exercise and enjoying the home-life. Children will be much fresher for the next day's school-work if when they leave the school-building they also leave their studies behind them.

Those who have much to do with school-children graduating from grammar school are frequently at a loss to understand how they have reached the age of fourteen or fifteen years with so little real culture. They have acquired a smattering of many subjects, but their ideas are confused, not well defined, and there is a lack of thoroughness, as well as a lack of appreciation of what work means, and the joy of work

### *The Relation of Parents to the School*

Next in importance to parental and home influence comes that of the teacher and school.

**Parents and Teachers Working on the Same Problem** Each in their separate sphere, both parents and teachers are working on the same problem—the cultivation of the graces of character and preparation of boys and girls for the duties of life. Having the same purpose in view, parents and teachers should work together.

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There would probably be less cause for dissatisfaction on the part of parents in regard to the school if they would more often visit and get acquainted with the teachers. It can hardly seem strange or out of place to any teacher or principal that mother or father should desire to visit the school, and become acquainted with the surroundings and teachers of their children. It seems more strange to them that there is not much more of such personal interest on the part of parents.

High marks are not so desirable as thoroughness, and the child's health should not be impaired by striving to obtain high rank or secure prizes. Many children of delicate organization are injured in this way.

No two children are alike in temperament and ability, and parents should not judge either teacher or pupil too harshly when the regular report shows low marks. Matters may often be amicably adjusted by a quiet conference with the teacher. Such an interview will not only show the mother what is being done for children in general, but will appeal to her own children. They will feel that their mother takes a personal interest in their studies in school, and will endeavor to do better work.

One of the most common complaints one hears from parents is that children bring home so much school-work that there is little time left for out-

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door air and exercise, and that children are obliged to study so much in the evening that sleep is interfered with.

Here again is the time for parental investigation and a talk with the principal. To a large degree parents have this matter under their own control. Left to themselves and without suggestions from parents, school committees and superintendents must plan some system of education. Unless parents show their interest by honest investigation and friendly criticism, they must not judge school authorities too harshly. Teacher and principal desire the best good of the individual boy or girl. Let the father or mother, then, take the matter up with them. Talking with the children about it will do no good, and will tend to make them discontented with both school and teacher.

In any event, if a child is worrying over studies, dreams about them, and does not obtain restful sleep, something must be done. The **Robust Health the First Consideration** child's health should be the first consideration. If a child is unable to handle the required amount of school-work without injuring the health, it would be much better to stop all home study, and, if necessary, allow the child an extra year before graduation.

Closely related to the question of the child's health as affected by school-work is that of amusements and

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social life. Parents are more concerned with such matters than teachers. Proper home-training must go hand in hand with school-training. There is much lack of wise supervision and regulation of the social pleasures of boys and girls. Parents should interest themselves in what their boys and girls are doing, both in and out of school.

Amusements  
and Social  
Pleasures to  
Be Wisely  
Regulated

The best place for children in the evening is at home. Here the family should come together in kindly conference over the day's doings. Pleasant home games may be enjoyed, as well as reading aloud, one of the best of pleasures on long winter evenings. There are many books, soothing and wholesome in their influence, which may be enjoyed by both children and their elders. There is far too little of this pleasant family intercourse when parents and children meet together in the home after the busy day outside. Instead of such restful influence, there is often a spirit of restlessness and a desire for outside entertainment.

Children frequently come to school in the morning worn and tired, and unfit for their school duties after a long evening at the theatre or some entertainment. The theatre or modern vaudeville show is seldom all that can be desired for adults. Children, then, must certainly be overstimulated and receive harmful impressions from such entertainments, besides losing much-needed sleep.

## CHAPTER IV

### SIGNS OF ILLNESS AND DISORDERS OF CHILDHOOD

#### *Signs of Illness*

IN Chapters I and II of Part II we have considered the characteristics of a healthy child. Having some acquaintance with the appearance of the healthy baby, the mother will readily perceive any departure from normal conditions.

One of the most valuable means of recognizing an approaching illness is the baby's cry. This is the only way it has of voicing its discomfort. As already stated, a certain amount of crying in the young infant is not necessarily to be regarded as abnormal. During the day most babies will cry from twenty to thirty minutes. This cry is loud and strong, and is the baby's exercise. When, however, crying continues for some time, or is too frequent, something must be wrong. Instead of rocking or trying to amuse the baby, a simple examination should be made for possible sources of discomfort.

The causes of crying are pain, hunger, illness,

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habit, and temper. The cry of pain is usually loud and strong, and is apt to be accompanied by drawing up of the legs and other signs of distress. The cry from earache is one of the most persistent and difficult to pacify. The pricking of a pin may cause a loud, persistent cry until the source of discomfort is removed.

Colic is usually the cause of a cry which is very severe for a time, then stops suddenly, only to commence again worse than ever. If the child is nursed or fed the warm milk entering the stomach eases the colic for a short time, but soon the pain is worse than ever, and the cry is correspondingly loud.

The cry due to hunger is usually very persistent, fretful, and sometimes quite strong.

The sick child, if not very ill, is apt to be peevish and fretful, and cries from slight causes. If very ill the cry is more like moaning.

Children frequently cry from overindulgence or habit. This is the result of bad training, and is noticed even in young infants, who cry to be carried about, to be rocked, for a light in the room, or for a bottle or "pacifier" to suck. This cry is usually loud and persistent, but stops immediately when the baby is picked up or amused.

The cry of temper usually comes suddenly, is loud and strong, and is accompanied by straighten-



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ing of the body and kicking. When the baby appears to be crying from habit, temper, or to be indulged, it is better to leave it alone in the crib. The child may cry for an hour or longer, but the next time it will cry less, and the third time still less or not at all. Of course, all possible sources of discomfort should first be ruled out. The need of such discipline, however, can be avoided if the infant is taught from birth to sleep in a dark room, to lie quietly in the crib between feedings without being amused, and to be contented to go to sleep without walking or rocking.

Rupture is seldom caused from crying if the abdominal band is properly adjusted.

When the baby cries at night somebody should see that the hands and feet are warm, and a clean, dry napkin applied if necessary. The clothing should be arranged smoothly under the baby. After arranging for the child's comfort, and it seems to be crying to be taken up, it should be left in the crib.

Under no consideration should breast or bottle be offered the child except at the regular time. Feeding the baby whenever it cries will surely cause indigestion, and eventually cause more crying.

### *The Appearance of the Sick Child*

Most acute illnesses are ushered in by fever of greater or less degree, depending upon the severity

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of the attack. The skin is hot, the face flushed, and the child is usually very restless. When awake it wants to be carried about or held quietly in the arms. Sometimes, however, instead of being restless, the child lies heavy and stupid, and the attack may commence with vomiting.

When breathing is interfered with, as in pneumonia and acute bronchitis, the child may show a desire to be raised up on a pillow, to sit up, or be carried in its mother's arms.

Breathing is easily affected by very mild conditions. Even when the baby is well, breathing is often irregular and very rapid from the slightest excitement (see page 44, Chapter II, Part II). During acute illness, accompanied by fever, especially in pneumonia, breathing may be exceedingly rapid, as high as sixty respirations a minute, and the child still not be in danger.

The pulse-rate or heart-beat is much increased during illness accompanied by fever. This symptom is of less value to the mother, as the pulse-rate is so easily affected in children. Even in healthy babies the heart beats rapidly, and often cannot be counted. The subject of the child's temperature and how and where to take it has been fully considered in Chapter II, Part II.

It is important to remember that in all children

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slight causes produce high temperature which may last but a few hours. Although  
**Temperature and Fever** a decided rise demands an investigation, it need not cause great alarm unless it continues high, and other signs of illness are present.

A temperature of  $100^{\circ}$  to  $102^{\circ}$  usually means a mild fever,  $102^{\circ}$  to  $103^{\circ}$  a moderate fever,  $104^{\circ}$  to  $105^{\circ}$  a high fever, and over  $105^{\circ}$  very high.

A fairly high fever in a child is not apt to be as serious as a corresponding fever in an adult. The temperature is usually higher in the evening.

In the newly born infant the tongue is usually coated white, but clears when the saliva comes  
**The Tongue** more freely. It is usually coated white or grayish-white in acute disorders.

In many illnesses the baby nurses without any difficulty, but sometimes the nose and air passages  
**Nursing Interfered With** are obstructed by mucus, as in pneumonia and bronchitis. The baby nurses a few moments, then has to let go for breathing. If the baby nurses a few moments, then lets go and cries, the mouth is probably sore. When it coughs and swallows with difficulty the throat may be sore.

When there is fever the urine is highly  
**Urine** colored, decreased in amount, and stains the napkin.

## ILLNESS AND DISORDERS OF CHILDHOOD

### *The Care of Sick Children*

The care of a sick child will be easy or difficult, depending upon how well it has been trained in regard to such matters as regularity in feeding, sleeping, and taking medicine.

Under no consideration should children be compelled to take medicine by threats of what the doctor will do when he comes. This makes the task of helping the child very difficult. Children should be taught to regard the doctor as a good friend, and to look forward to his visits as pleasant events. They should be taught to show the throat and tongue, to wash out the throat, to take liquid medicine from a teaspoon, and to swallow pills.

All these lessons should form part of a child's early training. A child of four years may be taught to take pills by first having it swallow bread rolled into small pills; and usually children will show the tongue and throat at two years, if not frightened at first.

When a child shows symptoms of acute indigestion accompanied by diarrhoea or vomiting, fever and pain, or what appears to be a severe cold with a cough, difficult breathing and fever, or is taken suddenly with vomiting, and has flushed cheeks and fever, it should be undressed, put to bed, and the physician called. Until the doctor

## HYGIENE FOR MOTHER AND CHILD

arrives no food should be given, but small amounts of cool boiled water may be given frequently, and the face and hands may be bathed in lukewarm water. In many cases of approaching illness this is all that is required during the interval before the doctor arrives. The room should be quiet, not too light, and other children, friends, and neighbors excluded from the room. A sick child should not be covered too warmly or held very long in the lap in hot weather. Usually the best place for the child is in the crib. When the baby is taken up it should be wrapped in a small blanket.

When there is diarrhœa the parts should be thoroughly but gently cleansed after each movement of the bowels with starch-water, then thoroughly dried, dusting-powder applied, and a clean, dry, warm napkin put on. Starch-water may be prepared by stirring into a quart of boiled water four level teaspoonfuls of powdered starch. The starch should first be stirred into a cup of cold water until it forms a paste.

This subject has already been considered on page 161. In acute illness it is better to wait for the doctor's directions, giving small quantities of boiled water frequently until his arrival. In acute indigestion, accompanied by vomiting or diarrhœa with fever, nothing should be given except boiled water, as directed on page 159. During an acute illness

**Feeding**

**Sick**

**Children**

no change should be made in the food without directions from the physician.

*Common Disorders of Childhood*

Chronic constipation has been considered on page 157. It is very important to establish the habit of having the bowels move regularly at the same hour every day. This early training may commence as early as the third month. Twice a day, after the morning and mid-afternoon feeding, the child should be placed upon a small chamber held between the mother's knees, the mother supporting the baby by having its back rest against her chest. This should always be done at the same hour. At the first few trials it may be necessary to introduce a bit of Castile soap just within the anus, but with most children the position will soon be all that is necessary.

Regularity is one of the most important factors in maintaining health in infancy and childhood. If the habit is formed in infancy, the child is very apt to always be regular in this respect.

Another practice which is beneficial in constipation is massage. This is best done just before placing the child on the chair. With the warm hand dipped in a little sweet-oil, the abdomen is gently rubbed,

**Prevention of Constipation**

**Massage of the Bowels**

## HYGIENE FOR MOTHER AND CHILD

using a circular motion and commencing just above the right groin, the hand is carried up to the edge of the ribs; then across to the left side and down to the left groin. The purpose of this is to follow the course of the large intestine, and to stimulate it into action. The massage should last about eight minutes.

Some of the most common causes of constipation in older children is lack of water, eating between  
**Causes in** meals, irregularity in regard to meals,  
**Older** lack of variety in the diet, too much  
**Children** white bread and potato, and not enough fruit and green vegetables. Improvement will often manifest itself as soon as regular habits of eating are established and the child is given a well-balanced diet. Many children are given the same kind of food for breakfast morning after morning. Graham and rye bread should be eaten as well as white, and fruit should be given with the breakfast.

When it is necessary to move the bowels at once, an injection of half to one pint of lukewarm soapy  
**To Move** water is one of the simplest and most  
**Bowels** effective methods. Either the infant's  
**at Once** bulb - syringe or the fountain - syringe should be used, depending upon the size of the injection. Another useful injection is half a teaspoonful of glycerine in two tablespoonfuls of tepid water. A tablespoonful of sweet-oil may also be

## ILLNESS AND DISORDERS OF CHILDHOOD

used for this purpose, and it is more effective if followed in about two hours by a soap-and-water injection.

Glycerine suppositories are often useful, as well as small suppositories made of Castile soap. None of these methods should be used indefinitely without the advice of the family physician.

Many children will sleep through the night without wetting the bed at two and a half years if taken up at about 10 P.M. Some do not acquire control of the bladder until three years of age, while others seem to lack control until four, five, and six years, and still others even later. If a child wets the bed every night after three years something is wrong. Many children wet the bed two or three nights a week until much later than this, but not usually every night.

Very frequently the trouble is the result of eating too largely of sweets, too much rich and highly seasoned food, and eating between meals—all of which are apt to change the character of the urine. Another cause is drinking too much water the latter part of the day. In some cases it is due to general debility, while in others the trouble may be found in the genital organs.

Punishment is seldom beneficial. Indeed, it



## HYGIENE FOR MOTHER AND CHILD

often makes matters worse; especially is this so in regard to corporal punishment.

First, the child's general condition should be improved in every way possible. This means simple, nourishing food at regular times; no eating between meals; cutting down allowance of sweets; have child chew food thoroughly. Second, plenty of water between meals, but none after 5 P.M.; very little or no milk at supper. The child should be taken up about 10 P.M.

Sometimes it is possible to appeal to the child's pride, although this should be done with considerable tact and gentleness, as it is possible to hurt the feelings of a sensitive child, and make him stubborn and sullen. Very frequently tact, gentleness, and diplomacy will win where harsher measures fail.

In some cases a new doll, a set of toy dishes, or a rocking-horse may be promised the child on the condition that the bed is dry in the morning, and taken away if wet. Another plan which has been successful in several cases has been that of placing where the child can see a glass jar of bits of pure maple sugar or pure white stick candy. For a dry night the child is rewarded by a bit of the sugar or candy at the morning meal. The refusal of this treat on account of a wet bed often seems to impress the child's mind as nothing else has done.

## ILLNESS AND DISORDERS OF CHILDHOOD

Should the above simple means fail, a physician should examine the child for possible irritation of the genital organs.

This disorder is much too common. Those most frequently found are the small thread or seat worms, which resemble bits of white thread, and are less than half an inch long. They occupy the lower portion of the bowel, and often occur in great numbers.

In some they cause few if any symptoms, but in most children they cause itching at the opening of the bowel, picking the nose, coated tongue, bad breath, loss of appetite, restless sleep, grinding of the teeth, and sometimes convulsions.

Since overeating, eating irregularly and between meals, overindulgence in sweets, eating too rapidly, all tend to produce an unhealthy condition of the bowels which favors the production of the worms, it is essential at the beginning of treatment to stop all eating between meals, to cut down sweets to a minimum, and to persuade the child to eat slowly and chew food thoroughly. Medicine will do little good as long as the child is allowed to eat candy and fruit between meals, and bolt its food. Food should be simple and wholesome.

Cleanliness is absolutely essential, and the child's hands, including the finger-nails, should be kept

## HYGIENE FOR MOTHER AND CHILD

clean, as children are apt to reinfect themselves by putting the fingers in the mouth.

An injection of warm salt solution every other night, two teaspoonfuls to a pint of water, may be of benefit in clearing the bowel of the worms, but usually the help of a physician is necessary, in order to get rid of them entirely. Every effort should be made to prevent the growth of these worms, as they may cause serious injury to a child's nervous system.

The pain from earache is usually very severe, and accompanied by loud, continuous crying.

**Earache** Sometimes the child will place the hand on the ear, and cringe or cry if it is touched. In attempting to relieve the pain it is not advisable to use oils or medicines in the ear, nor should poultices be applied. Much relief will often follow the application of water warm as can be borne, the mother first testing the water on her own face to avoid using it too hot. To apply the warm water it may be slowly poured into the ear from a spoon. To be of much service it needs to be frequently repeated. The water should then be allowed to run out, and any drops remaining taken up with a bit of absorbent cotton. Should there be a discharge from the ear, such irrigation is not advisable.

After the use of warm water, dry heat should be

## ILLNESS AND DISORDERS OF CHILDHOOD

applied. This may be done by binding over the ear a small cloth bag filled with hot salt, a small butter-dish heated in hot water and wrapped in a cloth, or by means of a very small hot-water bag, which may be held against the ear, or the child may lie with the aching ear resting upon the bag, care being taken not to burn. Should the pain continue, or pus be discharged from the ear, a physician should be consulted, as there is always possibility of inflammation extending to the brain.

When convulsions occur the first duty of the mother is to send for a doctor. Keeping her presence of mind, she may then do what she can until he arrives. Undress the child as quickly as possible, and place up to its neck in a warm bath, while the head is kept covered with cloths frequently wrung out in cold water. The temperature of the bath should be 100° F., and small quantities of hot water should be added to keep the bath warm. If a bath thermometer is not at hand, the mother may immerse her bared elbow and forearm in the water to test the temperature. The water should be just comfortably warm. The child should be kept in the bath eight to ten minutes, then wrapped in a warm bath-towel without drying. It is well to keep the cold cloths on the head.

Convulsions are frequently the result of in-

## HYGIENE FOR MOTHER AND CHILD

digestion, and if they still continue, the bowel should be cleaned out by an injection of warm soap-water.

Although the symptoms appear alarming, this form of croup is seldom dangerous. An attack is more liable to come on at night, but **“ Spasmodic ”** it may be preceded by hoarseness **Croup** during the day. When the attack is light the breathing is not very difficult but somewhat noisy, and accompanied by a dry, hollow, barking, “croupy” cough. When the attack is severe, breathing is much more difficult and loud.

Keep the room warm, and apply cloths wrung out in hot water to the throat. Although the air should be warm it should also be **What to Do** moist, and this may be accomplished by boiling water in a flat, shallow dish—or a croup kettle, if handy. This will help still more if the child is placed in a tent, which may be quickly devised by arranging a blanket over a raised umbrella, leaving an opening at the side. A kettle half full of water can be kept boiling on a small oil or gas stove placed on a table near the crib, and the spout turned toward the opening. Of course, ordinary care should be taken against burning by hot water or fire, and the steam should not be too near the child’s face.

## ILLNESS AND DISORDERS OF CHILDHOOD

Should the symptoms become alarming, ten drops of syrup of ipecac should be given, and repeated every fifteen minutes until free vomiting occurs. Before this, however, if breathing becomes loud and difficult, a physician should be called.

Many children breathe with the mouth open, and snore at night. Such children are constantly having colds, running from the nose, thick speech, and bad breath. They are very apt to have bronchitis, and inflamed and enlarged tonsils. The general shape of the face changes as time goes on, and gradually the child's health becomes impaired.

Mouth-breathing is usually caused by an overgrowth of tissue, similar to the tonsils, which is situated out of sight and back of the nostrils. This is called adenoid tissue, and when it becomes enlarged, interferes with breathing, and causes mouth-breathing, early treatment becomes a necessity.

Scurvy is a disease usually caused by feeding children improper food, especially the prepared foods for infants. Healthy children demand fresh milk. Long-continued use of infant's foods given without fresh milk is very apt to cause this trouble. The use of con-

## HYGIENE FOR MOTHER AND CHILD

densed milk is also liable to produce the disease.

This disease is frequently mistaken for rheumatism. Usually the first symptoms noticed are

**Signs of Scurvy** soreness and pains in the legs, which may become very severe. The child is pale, and there is swelling of the gums, which bleed easily and appear purple in color. There may be bleeding from the nose and bowels, and dark-blue spots on the legs; the knees and ankles are often swollen. As the disease progresses the child loses appetite, becomes pale, thin, and sleeps poorly.

The food should be changed immediately for one that contains fresh milk prepared to suit the child's

**Care of Children Having Scurvy** digestive powers. The food should not be sterilized. Fresh orange-juice should be given, one or two teaspoonfuls at a time, an hour before feedings, five times a day.

When a child hesitates or stammers in its speech it should not be punished, scolded, or noticed in

**Stuttering or Stammering** any way to cause embarrassment or self-consciousness. This will only make matters worse, and cause the child to become discouraged and sullen, for children often feel the affliction sorely, and are very sensitive in regard to it.

In the first place, it should be remembered that

## ILLNESS AND DISORDERS OF CHILDHOOD

children learn by imitation, and therefore should not be allowed to associate with those who stammer. Since stammering is largely a disorder of the nerves, the child's general health must be carefully guarded. There should be long nights of sound and refreshing sleep, an abundance of out-of-door life, simple, wholesome food at regular times, no eating between meals, and a daily nap.

**How Parents  
May Help**

The child should be taught to talk very slowly, pronounce each word distinctly, and to take a full breath before speaking. If the child commences to stammer it should be stopped, and told to repeat each word slowly and distinctly.

Deep breathing is also beneficial. The child should be taught to take a deep breath, hold it a moment, then let it out slowly, repeating the process several times during the day.

Daily drill in pronouncing the letters of the alphabet will also be of some use. First, the vowel sounds should be practised, teaching the child to pronounce them slowly and distinctly. Then the consonants may be used with the vowels, making one-syllable words. As there is less tendency to stammer when whispering, it is well to commence by having the child whisper the vowel sounds. Another help is to teach the child to speak as though reciting with other children, bringing out each word clearly and distinctly.



## HYGIENE FOR MOTHER AND CHILD

Helping a stammering child to overcome the difficulty will require most painstaking effort, perseverance, and infinite patience. If there is no improvement, parents may well consider the advisability of seeking aid from some institution where especial attention is given to the cure of the trouble.

The sucking habit usually begins in early infancy, and unless broken may continue until children are seven or eight years of age. When practiced continuously, as it is by many children, it is apt to cause a permanent deformity of the face. Repeated introduction of the fingers into the mouth stimulates the salivary glands to excess, and is very apt to injure the delicate membrane, and cause thrush or other diseases of the mouth. It cannot be excused on the ground that it is a means of quieting the child's nervous system. It is an unnecessary, unwholesome, and unhealthy practice. Children should be prevented from forming the habit, and if already commenced it should be broken up as soon as possible. Under no consideration should children be allowed to suck a "pacifier" in order to quiet them or put them to sleep.

At the very beginning the thumb or finger should be gently removed from the mouth whenever seen there, and the child's attention turned elsewhere. The question as to whether the child is receiving

## ILLNESS AND DISORDERS OF CHILDHOOD

sufficient nourishment must be considered, for a hungry child will suck as much of its hand as it can crowd into its mouth.

Applying medicine which has a disagreeable taste to the baby's fingers is seldom effective. The habit may often be controlled by putting the child's hands in small flannel bags or mittens without thumbs. It may be necessary in some cases to fasten the child's hands to the sides during sleep, and also in the daytime.

This habit is usually seen in children over three or four years of age, and often persists into adult life. It is seen especially in those children whose general health is not very good, and is frequently a manifestation of an irritable or unstable condition of the child's nerves.

### **Nail-Biting**

The habit should be broken at its beginning, and every effort should be made to improve the child's health by wholesome food, out-of-door life, and plenty of sleep.

This is the most harmful of all bad habits, and should be broken up as soon as possible. It is accomplished by friction of the genital organs with the hands and clothing, or by rubbing the thighs together. Although the habit is more common among older children, it has been seen in young children of one

### **Masturbation: Self-Abuse**

## HYGIENE FOR MOTHER AND CHILD

or two years of age. Infants should be closely watched, the hands being forcibly restrained if necessary. With older children punishment is of little use, and may aggravate the trouble. If the parents have the child's confidence, kindly explanation and some reasoning will often help matters.

Although children should be closely watched, such oversight should be carried on without their knowledge. They should be observed especially while in bed, and in other places where they are left to themselves.

The general health of children should be carefully watched, and in obstinate cases careful medical examination should be made for some local trouble which may be causing irritation.

### *Contagious Diseases*

Measles comes on very much like a cold in the head, from nine to fifteen days after exposure.

**Measles** There is much sneezing, running of the nose, the eyes are apt to be sensitive to light and watery, there is some fever, and the child soon commences to cough.

The rash appears in a few days, first upon the face and neck as small red spots which run together and form blotches. The face appears swollen, and the day after the rash appears it is usually spread

## ILLNESS AND DISORDERS OF CHILDHOOD

over the entire body. Sometimes the onset of the disease is much milder and the child is only slightly ill, the rash being very faint and the catarrhal symptoms not at all marked. The child should be kept away from other children until there is no doubt of the nature of the disease.

The disease is contagious from the time when the cold-in-the-head symptoms first appear, some days before the rash appears, and is usually carried from a child sick with the disease to another. It is seldom carried by a third person, and second attacks are not common.

In infants and older children who are not very robust it is likely to be serious, as it renders them more susceptible to bronchitis or pneumonia. Children over four who were well before the attack usually come out as well as ever if well cared for during the illness. All children, however, should be protected against the disease. Children who have had measles should be kept away from other children for two weeks after the disappearance of the rash.

Ordinary measles does not protect against this disease. It occurs more frequently in winter-time, seldom more than once in the same person, and is very contagious, the first symptoms usually appearing from the tenth to the eighteenth day after exposure.

**German  
Measles**

## HYGIENE FOR MOTHER AND CHILD

The disease is not usually as severe as ordinary measles, the symptoms frequently being quite mild. The rash resembles that of measles, but does not last as long. Children are seldom very ill with it, but should be carefully guarded against cold after an attack. The sick child should be kept away from other children for a week after the rash disappears.

The onset of this disease is usually very sudden, with vomiting, sore throat, and high fever, the first symptoms appearing in from three to seven days after exposure. The eruption generally appears within twenty-four hours as an intense, bright-red blush, first upon the neck and chest, then spreads rapidly over the body.

### Scarlet Fever

Although the disease is very contagious, it is not so much so as measles. The mildest case can give the most severe type of the disease to other children. It is most contagious when all the symptoms are at their worst, and during the time when the skin is peeling. It may be transmitted by healthy people, and by clothing or bedding from the room where the child is sick.

A child who has had scarlet fever should be kept away from other children for five weeks after the rash disappears, until all peeling has ceased, and as long as there is any running from the ears.

## ILLNESS AND DISORDERS OF CHILDHOOD

This disease is common, very contagious, and seldom occurs twice in the same person. The eruption will probably be the first symptom noticed by the mother. It consists of red pimples, which frequently come out first on the neck, then the trunk, then the scalp and face. Soon after coming out the pimples change into vesicles which look like blisters. These dry up, and there can often be seen pimples, vesicles, and dried-up vesicles at the same time.

There is some itching. There is seldom much fever, and the child is not usually very sick. It should be kept away from other children until all scabs come off, or about three weeks after the rash appears.

The first symptoms of this disease appear in from seven to fourteen days after exposure. It is one of the most common diseases of children, and is very contagious, equaling measles in this respect. It is most frequently seen during the first five years of life, and is very common during the first year. It may be very severe, or so mild that it seems more like a slight cold.

The disease begins like an ordinary cold in the head and with an irritable cough, which is worse at night. When the attacks of coughing become so severe that the child gets red in the face, short of

## HYGIENE FOR MOTHER AND CHILD

breath, and vomiting occurs, the mother may suspect whooping-cough.

The attacks of coughing gradually lengthen, and become very characteristic. The sharp cough is repeated many times in one attack, then at the end the breath is drawn in, making a peculiar sound known as the "whoop." The attack is accompanied by much stringy mucus.

In the lightest cases there may be only six or seven paroxysms in twenty-four hours, while in the severest attacks there are often as many as thirty or more. The disease lasts from six to ten weeks, and may be transmitted to other children as long as the whoop lasts.

This is an inflammation and swelling, usually commencing about twenty days after exposure, below and just behind one ear, rapidly increasing and extending forward and upward on the cheek in front of the ear. There is usually some fever.

**Mumps** The swelling is tender to touch, and talking, chewing, and swallowing are sometimes painful and difficult. In a few days the other side of the face frequently swells in the same way, the entire attack lasting from seven to ten days.

The disease seldom attacks young infants, is seldom dangerous, and generally does not occur twice in the same person. A child who has had

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the mumps should be kept away from other children for seven days after the swelling has entirely disappeared.

This is a very common, contagious disease, the first symptoms appearing as early as the first or second day, or as late as six to twelve days after exposure. It is rather uncommon in new-born infants, but is seen more frequently as the months go on, and is most frequent from two to six years. It is, however, quite frequent after this age, and all children should be rigidly protected from it. One attack does not protect from a second.

Usually the first symptoms noticed will be feverishness, loss of appetite, pain when swallowing, swelling of the glands of the neck, throat red, inflamed, and showing grayish-white patches on the tonsils and uvula. Sometimes, instead of the throat symptoms, the nose will show most of the trouble, there being a bloody discharge from the nostrils and difficult breathing; or it may develop first in the larynx with hoarseness, soon followed by difficult and noisy breathing, and a croupy cough. This is sometimes called "membranous croup," and the child may be in danger very soon unless relieved.

A child who has had diphtheria should be kept



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away from other people for two weeks after the throat is entirely well in mild attacks, and four weeks if more severe.

Since it is not always easy for the mother to be sure in regard to the contagiousness of the disease, it is well at the beginning to put the child to bed and keep other children away. The doctor should be sent for at the first signs of illness. Until he arrives make the child as comfortable as possible. If he is coming very soon, nothing further need be done until he arrives, except to give small quantities of cool water. If, however, he is apt to be delayed some hours, a small quantity of liquid food may be allowed—about two-thirds of a glass of warm milk every two or three hours. No solid food should be given. If there is vomiting or diarrhoea, it is better to give simply boiled water in small quantities frequently. Food should be diluted one-half for infants.

There is such overwhelming proof of the value of this procedure as a preventative of smallpox that few parents nowadays have the hardihood to deprive their children of this protection against a disease so dangerous. The ravages of the disease before the practice of vaccination, and its rarity at the present time when

## ILLNESS AND DISORDERS OF CHILDHOOD

the practice is so common, is indicative of its protective value.

As to the time for vaccination, it may be done as early as the latter part of the first year, although

**When It Should Be Done** if there are circumstances arising when the child is apt to be exposed to small-pox it may be done during the first six months of life. Unless in times of urgent necessity, it is better not to have it done during the hot summer months. It may also be postponed in those children who are very delicate or who have some disease of the skin.

Vaccination is usually performed on the upper and outer part of the arm just below the shoulder.

**Place for Vaccination** In young infants, before creeping-time, it is sometimes performed on the leg, this being the part most at rest and more easily protected. When children are vaccinated on the leg they should not be allowed to be about on the feet while vaccination is at its height.

In two or three days after vaccination which takes, a red pimple appears; this increases in size,

**The Appearance of Vaccination** and in two or three more days becomes a vesicle containing a watery fluid.

This gradually increases in size, the fluid becoming yellowish in color, and is surrounded by a red ring. While the process is active there is some swelling and redness about the site of vacci-

## HYGIENE FOR MOTHER AND CHILD

nation, and there may be slight fever, restlessness, and pain.

By the twelfth day the swelling and redness gradually decrease, the yellowish fluid commences to dry up, and by the end of two weeks there is a scab which usually comes off in three weeks, leaving a scar. The arm or leg should be guarded carefully against injury, and the shield or protective covering placed over the vaccination by the physician should be watched to prevent the child removing it.

If the vaccination is not successful, it should be repeated in two or three weeks.

Carefully done, with every precaution taken to insure cleanliness, and to secure the best and purest vaccine obtainable, only good results should follow vaccination.

## CHAPTER V

### ACCIDENTS: FIRST AID TO THE INJURED

CHILDREN are more often burned than scalded. Probably the two most common accidents are burning from playing with matches and fireworks.

Young children should not be left alone in a room where there is a fire. Matches should be kept in a place high up out of reach of all children. Severe and often-times fatal accidents from burning, caused by playing with matches, are reported in the papers almost daily.

The long list of serious and fatal injuries which take place each year on the Fourth of July as the result of firing off firecrackers and pistols of different sizes must certainly cause parents to question the wisdom of the present method of celebrating the national holiday.

If children are allowed to play with fireworks it should be under the direct supervision of their elders. Much better would it be, however, if children were taught to derive pleasure from less dangerous sources. The holiday may be made

## HYGIENE FOR MOTHER AND CHILD

entertaining by out-door games, excursions into the country and to the sea-shore, and picnics.

When a child's clothes are on fire, it is very important to think and act quickly, but *keep cool*. Immediately put the child on the floor, and smother the flames by wrapping about the child whatever heavy woollen material is at hand—a rug, piece of carpet, a woollen blanket, shawl, or overcoat, beginning at the head and neck.

Nothing can be much worse than to lose control of one's self and run about with the child, since in this way the flames are fanned and the fire spreads more quickly.

Only the slightest burns should be treated by the mother. To prevent pain, air must be kept from the burned surface and the clothes must be prevented from irritating. One of the best and usually the most available solution for burns is made from baking-soda—a heaping teaspoonful to a glass of water. Soft linen cloth should be soaked in the solution and applied to the burn. When the pain is relieved, vaseline or boric acid ointment may be applied.

When burns or scalds are severe, a physician should be summoned immediately. Until he arrives the child should be put to bed. Much care should be taken not to tear the blisters. The clothing should not be pulled

## ACCIDENTS : FIRST AID TO THE INJURED

off, but cut away piece by piece. Small places only should be exposed at a time, and linen cloths soaked in the soda solution applied. The exposure of large areas causes much pain. Unless the physician is considerably delayed, it is better to leave these matters for his attention.

**Burns from Acids and Alkalies** When the burn is from an acid, it should be washed quickly with water or baking-soda solution. A burn resulting from alkalies or lye should be washed with vinegar and water.

**Wounds** Wounds of all kinds, cuts, tears, punctured or poisoned wounds, unless very slight, should receive the immediate attention of a physician. In almost every home may be found a bottle of some simple antiseptic solution containing boric acid, eucalyptus, thymol, etc. Such a liquid antiseptic prepared ready for use can now be obtained at any drug store.

**Small Wounds** A small cut should be bathed gently with a bit of absorbent cotton or soft linen soaked in hot water if obtainable, or cold water, then with the antiseptic solution. Bleeding from a small wound will usually stop if the wound is pressed firmly for a minute with the finger. A small compress of clean linen or gauze soaked in the antiseptic solution should then be bound over the wound, preferably with a small

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gauze bandage. If the wound continues clean, and there is no pain, the first bandage may be left undisturbed. A finger-cot is of service to keep the bandage clean.

If the wound becomes painful and swollen, a physician should be consulted. When the cut is deep, leaving a gaping wound, bleeding may be very profuse. If an artery is cut the blood may spurt in jets. Such bleeding may be stopped until the physician arrives by maintaining firm pressure in the wound with the fingers. When a child is thus wounded, make it as comfortable as possible in a quiet place until the doctor arrives. The wound should be bathed quickly with an antiseptic solution or clean water, and then a piece of absorbent cotton or a clean piece of linen soaked in the solution should be placed over the wound, maintaining pressure to stop bleeding if necessary.

A tear or jagged wound should be treated by the doctor unless very slight, as such wound is apt to leave a scar. It should be bathed carefully in warm water and antiseptic solution, washing out as much dirt as possible. The ragged edges should be brought together as smoothly as possible, covered with a compress soaked in the antiseptic solution, and loosely bandaged. If the wound remains clean, the bandage may be left until healing takes place.

## ACCIDENTS : FIRST AID TO THE INJURED

Punctured wounds are made by needles, pins, tacks, nails, fish-hooks, splinters, etc. If a needle or a piece of a hook has broken off in the flesh, or if the wound is deep from a tack or nail, surgical assistance is needed, as serious trouble may result. Immediate care may be given by removing the object as gently and carefully as possible, after which the wound should be squeezed in warm water so the blood will wash out any dirt. It may then be covered with a wet compress as already described, and bandaged. If pain and swelling follow a physician should be consulted without delay.

**Punctured  
Wounds**

The bites of animals may cause serious trouble. The wound should be squeezed thoroughly in warm water and carefully cleansed with an antiseptic solution, after which a compress soaked in the solution should be applied and a physician consulted.

**Dog-Bites**

A broken bone, and bones which are dislocated or put out of place, are very painful, and usually the injury produces a deformity. The purpose of the child's friends should be to fix the limb in as comfortable a position as possible, to prevent pain and possible injury of the flesh by the broken bone, until the arrival of the physician.

**Broken Bones  
and  
Dislocations**



## HYGIENE FOR MOTHER AND CHILD

Moving the child must be done with the utmost care, and the broken limb continually supported, since the slightest movement of the limb causes severe pain, and jagged ends of the broken bone tear the flesh.

If the child must be carried some distance after the accident, it is well to provide something in the way of a splint. A broken leg may be bandaged to its sound companion or the arm to the side. This should be done very gently. At the house a broken arm or leg may be supported by two pillows, one on each side of the limb.

A child with nose-bleed should rest in a recumbent position with the head and shoulders elevated, and the head held slightly back; then press firmly with the fingers on the upper lip at the outer edge of each nostril, and at the root and on each side of the nose. If pressure is maintained for some minutes the flow will very often stop. Sometimes, by observing from which nostril the blood flows, the finger may be pressed firmly on that side just above the edge of the nostril, and thus stop the bleeding.

Should pressure fail to stop the bleeding, the nostril may be plugged with a cone-shaped piece of absorbent cotton soaked in peroxide of hydrogen or a solution of alum and water. Leave the cotton

## ACCIDENTS: FIRST AID TO THE INJURED

protruding from the nostril, and keep up pressure with the fingers at the same time.

Sometimes the application of ice-cold water in the nostrils and cloths soaked in ice-water, or ice wrapped in cloths applied over the nose and at the back of the neck, will stop the bleeding. A hot mustard foot-bath is often of value, taking the blood away from the head.

The child should not be allowed to blow the nose. If the bleeding continues a physician should be summoned.

If the obstacle is not too far from the edge of the nostril, it may sometimes be expelled by the child blowing its nose vigorously while firm pressure is maintained over the empty nostril. Should this not prove successful a physician should be consulted, since unskilful interference may do harm.

Young children sometimes put small objects, such as peas or buttons, into the ear. Unless they are in the outer portion, and can be easily grasped by the fingers, it is better to wait until the child can be taken to the doctor. Unskilful interference is apt to push it farther into the canal, which might seriously injure the ear-drum.

## HYGIENE FOR MOTHER AND CHILD

It is surprising how frequently the tears and movements of the eyeball itself will remove particles of soot or dirt. Rubbing the eye does not help, but rather makes matters worse, causing irritation and inflammation. A useful method is to gently lift the upper lid away from the eyeball downward and forward over the lower lid, then let go, and repeat the operation two or three times if necessary, which will often brush away the particle, the lower lash acting as a brush. Should this not be successful, the eyeball and under surface of the lids must be examined. It is an easy matter to pull down the lower lid and examine its inner surface, the front of the eyeball, and the inner corner of the eye. If the particle is seen it may be removed with the corner of a handkerchief or a bit of cotton twisted about the end of a match, or by a moistened camel's-hair brush.

If the particle is not found and the irritation still persists, the inner surface of the upper lid must be examined. After drying the lid it is drawn downward and forward, and then turned upward and over a blunt-pointed object, such as a thin lead-pencil, the child being told to look downward during the procedure. It may be necessary to try three or four times. If the particle is thus disclosed to view, it may be removed as already described.

## ACCIDENTS: FIRST AID TO THE INJURED

Usually there is considerable irritation even after the particle has been removed, and for this the eye may be bathed very gently with warm water. The best way to do this is to saturate a bit of absorbent cotton or linen in the warm water and allow the water to trickle from the outer to the inner corner of the eye.

Sometimes accidents occur where acid or lime enters the eye. For this a doctor should be seen at once, but until this is possible something may be done to relieve the pain. When lime is causing the trouble, a solution of vinegar or lemon-juice may be used, a teaspoonful to a glass of water, allowing it to flow freely over the eyeball.

When acid has entered the eye, the eye should be bathed with a solution of baking-soda, four teaspoonfuls, or a tablespoonful, to a glass of water. Sweet-oil may also be used for relief of pain from either lime or acid.

If one or both eyes are wounded, cold compresses should be applied and a physician summoned.

**Wounds of  
the Eye** For burns of the eye, sweet-oil or vaseline should be applied, and the eyes covered with a light, soft, clean handkerchief until the arrival of the doctor.

If the object has lodged where it can be seen and felt, a cautious attempt may be made to grasp and

## HYGIENE FOR MOTHER AND CHILD

remove it with the fingers. Where a piece of meat or some object fails to pass along and causes choking, the child should be held by the feet, head downward, and slapped upon the back between the shoulder-blades. This may dislodge the object. If not, a doctor should be summoned.

Usually such objects as coins or buttons pass through into the stomach. Under no consideration should a cathartic or an emetic be given, as it is liable to force the object too rapidly through the intestinal canal and cause injury. The best way is to give the child plenty of bread to chew and swallow. This covers the object and carries it along through the canal without doing injury. Infants should be given their ordinary food. The object is usually evacuated in the regular stool without doing harm.

When this accident occurs prompt and efficient action at the time may save life. Immediately after the child is removed from the water the clothes should be made loose about the neck, and the child turned upon the face with the lower part of the body elevated. This will allow the water to run out of the mouth, which should be swabbed out with a handkerchief wrapped about the fingers. To prevent the tongue falling back and thus interfering with breathing,

## ACCIDENTS : FIRST AID TO THE INJURED

it should be wrapped in a handkerchief and held well out of the mouth.

Artificial respiration is an imitation of natural breathing. To carry this out, after clearing the mouth, throat, and nose as much as possible of water and mucus, and pulling the tongue forward, a rolled-up coat or pillow is placed under the shoulders, the head falling backward. Kneeling behind the child, its arms near the elbows should be grasped and swept around horizontally away from the body, until they meet above the head. This movement raises the chest, causes it to expand, and allows the air to enter the lungs. The arms are then brought down to the sides and pressed against the lower part of the chest, which expels the air from the lungs. The arms are held in this position a few seconds, when the movements should be repeated.

The whole procedure—that is, artificial inspiration and expiration—should be repeated slowly and carefully from twelve to sixteen times a minute, endeavoring to imitate the regular breathing of a healthy person. It should be kept up for several hours if necessary. Sometimes life has been restored in apparently hopeless cases.

While this is in progress the clothes should be removed, the body dried, and warmth applied by means of hot-water bottles or stones heated in a fire

## HYGIENE FOR MOTHER AND CHILD

built near by. The limbs should be rubbed toward the heart, and as breathing commences the movements of artificial respiration should keep with it so as to help as much as possible. Stimulants should be given in small quantities as soon as the child can swallow.

Poisoning can easily be prevented if parents and nurses will endeavor to keep medicines and anti-septics of every kind under lock and key, and whenever one is in use by

**Swallowing  
Poisons**

keeping it out of the reach of children.

After an illness all medicines should be destroyed. All patented medicines should be kept out of the reach of children, and soothing syrups of any kind should not be given them.

When it is suspected that a child has taken some poison the doctor should be sent for immediately, informing him of the accident and the nature of the poison swallowed if possible. This will enable him to bring the needed antidote to counteract the influence of the poison.

After sending for the doctor, treatment should be commenced without delay. When there is doubt as to the nature of the poison, the first thing to do is to empty the stomach by causing the child to vomit, or if vomiting has commenced, to encourage it by giving large amounts of lukewarm water. To start vomiting a teaspoonful of syrup

## ACCIDENTS : FIRST AID TO THE INJURED

of ipecac may be given every fifteen minutes. As soon as vomiting commences lukewarm water in large amounts should be given repeatedly, in order to wash out the stomach and to dilute any poison which may remain.

If the syrup of ipecac is not handy, a half teaspoonful of mustard dissolved in a glass of warm water may be used to excite vomiting. Some children vomit with difficulty. Tickling the back of the throat will often excite vomiting, especially after an emetic has been given. It is well to save the matter vomited for the doctor's inspection.

When the stomach is well emptied soothing drinks should be given, such as the whites of raw eggs in water, milk, flour and water, or barley-water.

In all cases of poisoning, if the child becomes cold and weak, it should be put to bed, stimulants given, and warmth applied to the body. Brandy or whiskey is usually most available, but should not be given in too large quantity. For a child of one year, not over a teaspoonful should be given at one time, and this should be diluted with three or four teaspoonfuls of hot water if handy; if not, cold water. Half of this should be given, and the other half in five minutes. A child of two years may be given a teaspoonful in three or four teaspoonfuls of hot water. If breathing seems to stop, artificial respiration may be practised, as in drowning.



## HYGIENE FOR MOTHER AND CHILD

### *Common Accidents from Poisoning, and What to Do*

**Acids** If a child has swallowed a strong acid, such as carbolic acid, large amounts of Epsom salts should be given, if at hand; if not, then baking-soda and water, lime-water, Rochelle salts, or soap and water.

**Nitric,  
Hydrochloric,  
Sulphuric, or  
Acetic Acids** For poisoning from these acids, large amounts of soap-water or soda, followed by sweet-oil and milk, should be given.

**Alkalies:  
Ammonia,  
Lye, Caustic  
Potash** For alkalies there should be given lemon-juice or vinegar and water, followed by sweet-oil or milk.

**Alcohol,  
Whiskey,  
Brandy, Etc.** Produce vomiting; apply cold compress or ice-bag to head, warmth to extremities; artificial respiration.

**Arsenic,  
Paris Green,  
Rough on Rats** Produce free vomiting; then give washing or baking soda, or water of ammonia. Follow with whites of raw eggs, milk, or sweet-oil. Give castor-oil to open bowels, and a soap-and-water enema.

**Belladonna** Produce vomiting; then give hot, strong coffee. Stimulants and warmth if necessary.

## ACCIDENTS : FIRST AID TO THE INJURED

<b>Chloral, Opium, Morphine, Laudanum, Paregoric, Soothing Syrups</b>	Produce free vomiting; then give strong coffee. Keep child awake and breathing by applying cold water to head and spine, and walking about, but not until child is exhausted. Artificial respiration if necessary.
<b>Corrosive Sublimate, Antiseptic Tablets</b>	Produce free vomiting; then give white of egg or milk, strong tea. Castor-oil to open bowels, and a soap-water enema.
<b>Gas: Illuminating or Coal Gas</b>	Plenty of fresh air; artificial respiration; ammonia to nostrils; cold douche.
<b>Iodine</b>	Produce vomiting; starch or flour mixed with water; give freely, and follow with milk or raw whites of eggs.
<b>Phosphorus: Match-Heads, Roach and Rat Poisons</b>	Produce vomiting; Epsom salts or magnesia to open bowels. Give no milk or oil of any kind.
<b>Tobacco, Poisonous Mushrooms</b>	Produce vomiting; then give strong coffee, brandy, or whiskey. Ammonia to nostrils, warmth to the body; artificial respiration.
<b>Silver Nitrate, Lunar Caustic</b>	Strong solution of common table-salt and water. Provoke free vomiting; follow with white of eggs or milk.

## HYGIENE FOR MOTHER AND CHILD

Strychnine,  
Nux Vomica      Provoke vomiting, then give strong  
tea.

Tartar Emetic,  
Antimony      Provoke free vomiting, then give strong  
tea. Later, give milk or white of egg.  
Still later, castor-oil and enema.

Decayed  
Meats and  
Vegetables      Provoke free vomiting; then give  
castor-oil, followed by an enema of  
soap-water.

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