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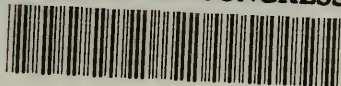
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THE CARE AND FEEDING
OF CHILDREN

L. EMMETT HOLT, M. D.

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UNITED STATES OF AMERICA.

THE CARE AND FEEDING OF CHILDREN

A CATECHISM FOR THE USE OF MOTHERS
AND CHILDREN'S NURSES

BY
L. EMMETT HOLT, M. D.

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NURSERY AND CHILD'S HOSPITAL, NEW YORK



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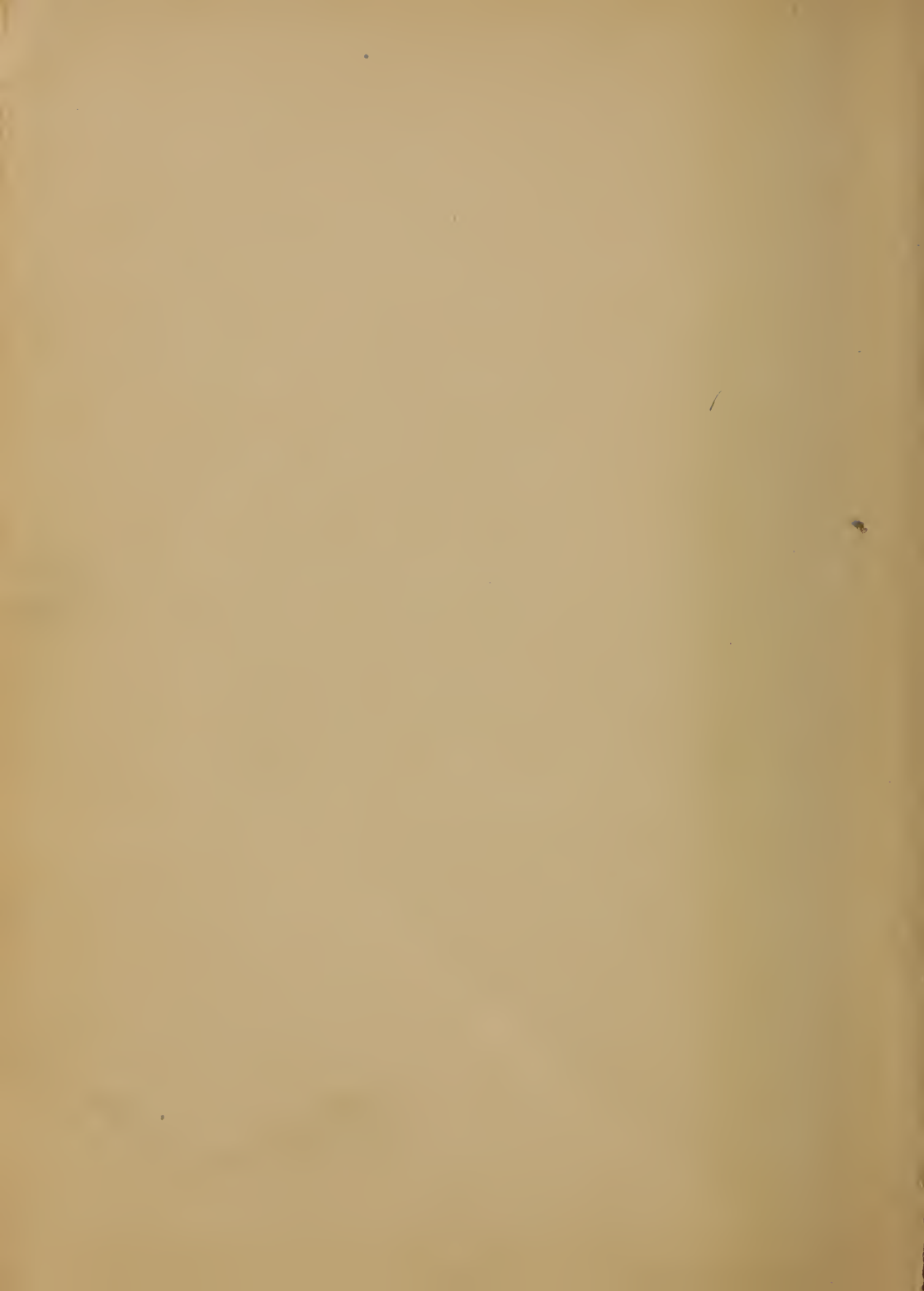
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TO
MRS. ROBERT W. CHAPIN,
THROUGH WHOSE EFFORTS THE FIRST PRACTICAL TRAINING SCHOOL
FOR CHILDREN'S NURSES IN AMERICA WAS ESTABLISHED,
THIS BOOK IS RESPECTFULLY DEDICATED
BY THE AUTHOR



PREFACE.

WHEN in the fall of 1889 the Practical Training School for Nursery Maids was opened in connection with the Babies' Hospital of New York, the need was soon felt for some simple manual to put into the hands of the nurses. None could be found which fulfilled the requirements of simplicity, brevity, and exactness with reference to matters of infant feeding and nursery hygiene.

A series of questions was written out by the author for the purpose of formulating for the nurses under training those things which were matters of daily observation in the practical work of the hospital. From time to time additions have been made to these, until the present size has been reached.

This catechism is now, at the request of many friends, published, with the hope that it may

serve a useful purpose in other institutions where similar schools for training may be established. At the same time, it is thought that it may be of value to many mothers in the care of their own children, or a book which they may safely put into the hands of the ordinary (un-trained) child's nurse.

In the preparation of this catechism everything has been sacrificed to clearness and simplicity. It has been deemed best to emphasize strongly the essentials, without going into many minor details which would have increased materially the size of the book without adding to its usefulness. The style of question and answer has been adopted in order to impress more strongly the facts stated.

15 EAST FIFTY-FOURTH STREET, NEW YORK,

March 6, 1894.

CONTENTS.

I.

THE CARE OF CHILDREN.

	PAGE
Bathing	9
Eyes	9
Mouth	10
Skin	11
Clothing	13
Nursery	14
Napkins	15
Temperature of the Nursery	15
Airing	16
Weight	19
Nursing	20
Weaning	22

II.

INFANT FEEDING.

Condensed Milk	28
Mellin's Food	29
Malted Milk	30
Imperial Granum	31
Peptonized Milk	32

	PAGE
Sterilized Milk	33
Bottles	34
Intervals of Feeding	35
Regularity in Feeding	36
Feeding in the Second Year	39
Feeding during the Third and Fourth Years	42
Articles forbidden	44
Articles allowed	45
General Rules to be observed in Feeding	47

III.

MISCELLANEOUS.

The Bowels	49
Sleep	50
Cry	52
Teething	55
Walking alone	55
Worms	56
Temperature	56
Playing with Children	57
Nursery Medicine	58
Convulsions	58
Foreign bodies swallowed	58
“ “ in the Ear	59
“ “ in the Nose	59
Colic	60
Earache	60
Croup	61
Contagious Diseases	62
Constipation	63
Bad Habits	64

THE CARE AND FEEDING OF CHILDREN.

I.

THE CARE OF CHILDREN.

BATHING.

At what age may a child be given a full tub bath?

Usually when ten days old.

How should the bath be given?

It should not be given sooner than one hour after feeding. The room should be warm; if possible, there should be an open fire. The bath should be given quickly, and the body dried rapidly with a soft towel.

At what temperature should a bath be given?

For the first few weeks at 100° F. Later, during early infancy, at 95° F. After six months, at 90° F.

EYES.

How should the eyes of a little baby be cleansed?

With a piece of soft linen and lukewarm water to which a little salt has been added.

If pus appears in the eyes, what should be done?

They should be cleansed every two hours with a solution of boric acid (ten grains to one ounce of water). If the lids stick together, a little vaseline from a fresh bottle should be rubbed upon them at night. If the trouble is slight, this treatment will control it; if it is severe, a physician should be called immediately, as delay may result in loss of eyesight.

MOUTH.

How is an infant's mouth to be cleansed?

Always gently, lest the lining membrane should be injured; plain lukewarm water is generally sufficient.

What is sprue?

It appears on the lips and inside the cheeks like little white threads or flakes. It is also called thrush. In bad cases it may cover the tongue and the whole of the inside of the mouth.

How should a mouth be cleansed when there is sprue?

It should be washed carefully after every feeding or nursing with a solution of borax or bicarbonate of soda (baking soda), and four times a

day the boric-acid solution mentioned should be used.

SKIN.

How should the infant's skin be cared for to prevent chafing?

First, not too much nor too strong soaps should be used; secondly, careful rinsing of the body; thirdly, not too vigorous rubbing either during or after the bath; fourthly, the very free use of dusting powder in all the folds of the skin, under the arms, behind the ears, about the neck, in the groin, etc. This is of the utmost importance in very fat infants.

If the skin is very sensitive and chafing easily produced, what should be done?

No soap should be used, but bran or salt baths given instead.

How should a bran bath be prepared?

One pint of wheat bran should be put in a bag of coarse muslin or cheese cloth, and this put in the bathing water. It should then be squeezed for five minutes, until the water resembles a thin porridge.

How should a salt bath be prepared?

A teacupful of common salt or sea salt should be used to each two gallons of water.

How should the buttocks be cared for?

This is the most common place for chafing, as the parts are so frequently wet and soiled; hence the utmost pains should be taken that all napkins be removed as soon as they are wet or soiled, and the parts kept scrupulously clean.

If the parts have become chafed what should be done?

Only bran and salt baths should be used, and in very severe cases even these may have to be avoided for a day or two. The parts may be cleaned with sweet oil and a little absorbent cotton, and the skin kept covered with a dusting powder composed of starch two parts, boric acid one part.

What is prickly heat, and how is it produced?

It consists of fine red pimples, and is caused by excessive perspiration and the irritation of flannel underclothing.

How should it be treated?

Muslin or linen should be put next to the skin; the child should be sponged frequently with equal parts of vinegar and water, and plenty of the starch and boric-acid powder mentioned should be used.

CLOTHING.

What are the most essential things in the clothing of infants?

That the chest shall be covered with soft flannel, the limbs well protected but not confined, and the abdomen supported by a broad flannel band, which should be pinned snugly but not too tightly.

Of what use is the band?

It protects the abdomen, but its most important use is to support the abdominal walls in very young infants, and in this way to prevent the occurrence of rupture.

How long is this band required?

A snug band not beyond four months. In healthy infants the flannel band may at this time be replaced by a knitted band. This may be worn up to eighteen months, although it is not essential after the first year.

What changes are to be made in the clothing of infants in the summer?

Only the thinnest gauze flannel undershirts, with short sleeves and low neck, should be worn, and changes in temperature should be met by changes in the outer garments. The greatest care should be given that children may not be

kept too hot in the middle of the day, while extra wraps are used morning and evening, especially at the seashore or in the mountains.

Should older children be allowed to go with their legs bare?

If strong and well there is no objection to this in very hot weather. In cold weather, however, it is doubtful if any children are benefited by it, particularly in a changeable climate like that of New York. Many delicate children are certainly injured by such attempts at hardening.

What are the principal points to guard against in the clothing of older children?

Not to put on too much thick clothing while in the house. Children are naturally warm-blooded, exercise a great deal, and very easily get too warm at their play. While in the street care should be taken to protect the legs and feet.

NURSERY.

What are the essentials in a good nursery?

As large a room as possible should be selected—one that is well ventilated, and always one in which the sun shines at some part of the day. The nursery should have dark shades at

the windows, but no extra hangings or curtains. About the baby's crib nothing but what can be washed should be allowed.

NAPKINS.

How should napkins be taken care of?

They should be immediately removed from the nursery when soiled or wet. Never should they be dried in the nursery. Soiled napkins should be kept in a receptacle with a tight cover, and washed as soon as possible.

Should napkins which have been only wet be used a second time without washing?

It is no doubt better to use only fresh napkins, but there is no serious objection to using them twice unless there is chafing of the skin.

TEMPERATURE OF THE NURSERY.

At what temperature should a nursery be kept during the day?

Best about 68° F. Never should the thermometer be allowed to go above 70° F.

At what temperature during the night?

During the first two or three months not below 65° F. After three months temperature may go as low as 55° F.

At what age may the window be left open at night?

Usually after the second month, excepting in severe weather.

How often should the nursery be aired?

At least twice a day—in the morning after the child's bath, and again in the evening before the child is put to bed for the night. This should be done thoroughly, and the child should be removed meanwhile to another apartment.

What symptoms are seen in a child who is kept in too hot a room?

It becomes pale, loses appetite; shows symptoms of indigestion, occasionally vomits, stops gaining in weight, takes cold readily, and perspires very much. Its condition may be such as to lead one to suspect very serious illness.

AIRING.

At what age may a child go out of doors in the fall and spring?

Usually at one month. In the summer it may go out when one week old.

When in winter?

Airing in the room may be begun when the child is one month old. At three months it may go out on pleasant days, being kept in the sun.

On what kind of days should a child not go out?

In sharp winds, when the weather is extremely cold, and when the ground is covered with slush.

What are the most important things to be attended to when the child is out in its carriage?

To see that the wind never blows in its face, that the feet are properly covered and warm, and that the sun is never allowed to shine directly into the eyes when the child is either asleep or awake.

Of what advantage to the child is the going out?

Fresh air is required to renew and purify the blood, and this is just as necessary for health and growth as proper food.

What are the effects produced in infants by fresh air?

The appetite is improved, the digestion is better, the cheeks become red, and all signs of health are seen.

Is there any advantage in having a child take its airing during the first five or six months in the nurse's arms?

None whatever. A child can be made much more comfortable in a baby carriage and can be

equally well protected against exposure by blankets and the carriage umbrella.

What are the objections to an infant's sleeping out of doors?

There are no real objections. It is not true that infants take cold more easily when asleep than awake, while it is almost invariably the case that those who sleep out of doors are stronger children and less prone to take cold than others.

What can be done for infants who take cold upon the slightest provocation?

They should be kept in cool rooms, and especially when asleep. They should not wear too heavy clothing, so that they are in a perspiration a good deal of the time. Every morning the body, particularly the chest and spine, should be sponged with cold water (about 60° Fahr.).

How should this cold bath be given?

The child should stand in a tub containing a little warm water, and a large bath sponge filled with cold water should be squeezed two to three times over the body. This should be followed by a vigorous rubbing with a towel until the skin is quite red. In the case of infants a little higher temperature (65° to 70°) may be used.

WEIGHT.

Should a healthy child always gain in weight?

During the first week there is usually a loss, but after this time a child that is perfectly healthy should gain steadily throughout the first year.

At what time is the gain most rapid?

During the first four months.

How much should a healthy baby weigh at the end of four and a half months?

About twice as much as at birth.

How much at the end of the first year?

About three times as much as at birth.

What is the average weekly gain of a healthy baby?

From four to eight ounces during the first six months, and from two to four ounces during the second six months.

Why is weighing necessary?

Because nothing else tells so accurately how well the baby is thriving.

NURSING.

How often should children be nursed during the first three days of life?

Usually only four or five times daily, since there is only a very little milk secreted at this time.

When does the milk come in abundance?

Usually on the third day, sometimes not until the fourth or fifth day.

Should the infant be fed anything during the first two days?

Usually not; if much food were necessary, we may be sure Nature would have provided it. Water may be given if the infant shows signs of thirst.

How frequently should an infant be nursed during the first week?

After the third day every two hours during the day, and twice during the night.

How frequently during the later weeks of infancy?

The intervals should be made exactly the same as those given elsewhere for artificial feeding.

How long should the child be kept at the breasts for one nursing?

Not over twenty minutes.

Should the child take both breasts at one nursing?

If the milk is very abundant one breast may be sufficient, otherwise both breasts may be taken.

What are the important things to be attended to in nursing?

First, regularity ; it is just as important as in the case of bottle-feeding. Secondly, the nipples should be kept clean by being washed after every nursing.

What should be the diet of a nursing mother?

She should drink plenty of milk and gruel and eat an abundance of simple food, including meat, vegetables, fruits, but no tea or coffee, and ordinarily no wine or beer.

Are sour fruits likely to disturb a nursing infant?

Never, unless they produce symptoms of indigestion in the mother.

What things in the mother are most likely to cause colic and indigestion in a nursing infant?

Extreme nervousness, fright, fatigue, grief, or passion are the most common causes ; sometimes menstruation.

What symptoms indicate that a nursing infant is well nourished?

The child has a good color, sleeps two or three hours after nursing, or, if awake, is quiet, good-natured, and apparently comfortable. It gains steadily in weight.

What are the symptoms which indicate that a child who is nursing is not nourished?

It does not gain in weight, cries frequently, sleeps irregularly and always in short naps, suffers from colic, and the movements contain undigested food. Often it will nurse a long time at the breasts, sometimes three quarters of an hour before stopping. At other times, if the milk is very scanty, it may take the breast for a moment only, and then turn away in apparent disgust.

Is there any objection to an infant's being partly nursed and partly fed?

None whatever; it is often better to feed the baby during the night, in order not to disturb the sleep of the mother.

WEANING.

At what age should the child be weaned from the breast?

Usually weaning should be begun at nine or ten months by substituting one feeding a day for

one nursing, later two feedings, and thus gradually the child is to be taken from the breast altogether.

At what age should the weaning be completed?

Generally at one year. In summer it may sometimes be advisable to nurse an infant a little longer rather than wean it when the weather is very hot.

How may some of the difficulties in weaning be overcome?

By feeding every nursing infant once a day from beginning. It then becomes accustomed to take its food from the bottle. This is a matter of great convenience during the whole period of nursing when the mother or nurse is from necessity away from the child for a few hours, and when more feeding is required at weaning time the child does not object.

II.

INFANT FEEDING.

What is the best infant's food?

Mother's milk.

What must every infant food contain?

The same things which are in mother's milk.

Of what is mother's milk composed?

Thirteen parts solids and eighty-seven parts water.

What are the solids?

A fat, a carbohydrate, a proteid, and salts.

What is the fat?

The cream.

What is the carbohydrate?

The sugar of the milk.

What is the proteid?

The curd of the milk.

What infant food comes nearest to mother's milk?

Cow's milk.

How does it differ from mother's milk?

It contains nearly three times as much curd and about half as much sugar.

In feeding cow's milk how is the proportion of curd lessened?

By diluting the milk with two parts of water.

What other changes are caused by this addition of water?

There is now too little cream and too little sugar.

What is top milk?

The upper portion, which may be taken off after the milk has stood six or eight hours.

In what does it differ from ordinary milk?

It contains about three times as much cream.

If top milk is diluted with two parts of water, how much cream and curd will it contain?

About the same as mother's milk.

In what does it differ now from mother's milk?

It lacks sugar.

What form of sugar may be added?

Milk sugar is to be preferred, though cane sugar may be used.

How much sugar should be added to the diluted milk?

One heaping teaspoonful of milk sugar to every four ounces of food ; or, if cane sugar, one teaspoonful to every six ounces of food.

What else besides plain water may be used to dilute milk?

Barley water.

How should this be made?

Two tablespoonfuls of barley, and one quart of water ; boil steadily for six or eight hours, adding water as it boils away, then strain through a cloth and add a little salt ; or one teaspoonful of the prepared barley flour of the Health Food Co. (New York) or of Robinson's barley flour and one half pint of water ; add a little salt and cook twenty minutes.

In what respect is this better than plain water?

It prevents the curdling of the milk in large lumps in the stomach.

How long will it keep?

In winter two days. In summer it should be made fresh every day and kept on ice.

How is top milk obtained?

It is to be skimmed off carefully with a spoon from the top of a bottle or jar of milk after it has stood at least six hours.

How much may be taken from a quart of milk?

Usually six ounces; if the milk is very rich, seven ounces; if it is poor, not more than five ounces.

Is there any other way of obtaining the proper proportions of fat and curd than by taking the top milk?

Yes; instead of eight ounces of top milk, four ounces of ordinary cream and four ounces of plain milk may be used.

What would be the proportions required in an infant two months old, getting twenty-four ounces a day?

Top milk.....	8 ounces,
Barley water ...	16 “
Milk sugar.....	6 heaping teaspoonfuls, or
Cane sugar.....	4 “ “

Up to what age should these proportions be maintained?

Usually until the child is seven or eight months old.

What changes may then be made in the food?

Twice as much milk may be taken from the top of the bottle, and this may then be diluted with an equal quantity of barley water.

What would be the proper proportions for a child of eight months?

Top milk	19 ounces,
Barley water.....	19 “
Milk sugar.....	9 teaspoonfuls, or
Cane sugar	5 “

Is the milk from a single cow better for infant feeding than mixed milk from a herd?

The mixed milk is usually to be preferred, since it will vary less from day to day than the milk of one cow.

CONDENSED MILK.

What is condensed milk?

It is milk from which part of the water has been evaporated.

What is the difference between the canned condensed milk and the fresh condensed milk?

The canned condensed milk contains a large amount of cane sugar.

How much should condensed milk be diluted for an infant one or two months old?

Ten or twelve times.

Is it a suitable food?

No, as it contains too much sugar, and when diluted in this way has very little cream, so that it should never be used as a permanent food unless cream is added to it.

How much cream should be added?

About two thirds as much as the amount of the condensed milk before dilution.

MELLIN'S FOOD.

How strong should Mellin's food be made for an infant?

One teaspoonful to two ounces of water.

Is this a suitable infant food?

No, since it is almost all sugar, and contains no fat.

Should Mellin's food be used with condensed milk?

Never, since they both have the same fault, that they are lacking in fat.

MALTED MILK.

What is malted milk?

Very much the same as Mellin's food, excepting that it contains a little fat.

How strong should this be made?

About one teaspoonful to two ounces.

Should it be used for the only food for an infant?

No, for the same reason as condensed milk and Mellin's food; it lacks fat.

What symptoms are seen in children fed upon foods lacking in fat?

The teeth come late, the bones are soft, the muscles flabby.

What symptoms are seen in children fed upon foods containing too much sugar?

They are frequently very fat, but their flesh is very soft, they walk late, and they perspire readily about the head and neck.

When are Mellin's food, malted milk, condensed milk, etc., to be used in infant feeding?

Only as temporary substitutes for cow's milk in cases of illness, or in cases of acute indigestion, but never as permanent foods.

IMPERIAL GRANUM.

How is imperial granum prepared?

Two teaspoonfuls of the flour and six ounces of water. Cook ten minutes, and then add an equal quantity of milk and cook for five minutes longer.

When may granum be given?

After eight or nine months, and then not more than twice daily.

Why is it not to be used for very young babies?

Because it consists of more than three fourths pure starch, and young babies can digest very little starch and very many of them none at all.

What other foods are like imperial granum?

Ridge's food, Robinson's patent barley; Hubbell's prepared wheat; these are prepared and used in much the same way as imperial granum.

PEPTONIZED MILK.

What is peptonized milk?

Milk which has been partly digested.

What part of the milk has been digested?

The curd.

What taste has peptonized milk?

Partly peptonized milk has no especial taste, but completely peptonized milk is quite bitter.

How is milk peptonized?

A peptonizing powder is added to plain or dilute top milk, which is kept at a temperature of 120° F. (or about as warm as the hand will bear easily) for from ten to twenty minutes if it is to be partly peptonized, for two hours if it is to be completely peptonized.

In preparing partly peptonized milk should all the bottles for the day be peptonized at once or for each feeding separately?

Either plan may be followed, but if all are prepared at once the milk should be scalded after peptonizing, or it will gradually become bitter.

In what form is the peptonizing powder sold?

Usually in tubes or as the peptogenic milk powder.

STERILIZED MILK.

Why should milk be sterilized?

In order to kill the germs which are in it.

What harm do the germs do?

Some of them cause the milk to turn sour, and others may be the cause of disease in children.

Should milk always be sterilized when it is used for infant feeding?

In the country, where fresh milk can be obtained directly from healthy cows, it is not necessary. In cities, where the milk is not so fresh, it is always desirable, and in summer it should never be omitted.

How is milk sterilized?

By heating it up to a point sufficient to kill the germs.

What is this point?

About 170° F. is sufficient if kept up for thirty minutes. Milk heated up to this point is sometimes called Pasteurized milk, while by sterilized milk is meant that which has been heated to boiling point (212° F.).

What are the relative advantages of sterilized and Pasteurized milk?

Pasteurized milk is very little or not at all altered in taste ; it is quite as easily digested as plain milk, but it will keep for two or three days only. Sterilized milk has the taste of boiled milk ; it is not quite so easily digested, but it will keep much longer.

BOTTLES.

How should bottles be cared for?

As soon as they are emptied they should be rinsed with cold water and allowed to stand filled with borax water. Before the milk is put into them they should be thoroughly washed with a bottle brush and hot soapsuds and then placed for twenty minutes in boiling water.

What sort of nipples should be used?

Only simple straight nipples which slip over the neck of the bottle. Those with a long tube are too complicated and too difficult to keep clean. Nipples made of black rubber are to be preferred.

How should nipples be cared for?

When not in use they should be kept in a solution of borax and carefully washed three or four times a day.

How should the food be prepared for a single day?

The entire quantity should be made at one time. The sugar should be dissolved in the barley water and mixed with the top milk in a pitcher and an equal quantity put into each one of the feeding bottles—seven bottles if the child is having seven meals a day, and ten bottles if the child has ten meals; the bottles should then be stoppered tightly with absorbent cotton and placed on ice, or sterilized and then placed on ice. When the infant is to be fed, the milk should be warmed by placing the bottle in warm water and not poured from the bottle into a saucepan.

INTERVALS OF FEEDING.

How often should a baby be fed during the first month?

Every two hours during the day, twice during the night, or ten feedings during the twenty-four hours.

At what age may the interval be made two and a half hours?

At six weeks old.

When may it be increased to three hours?

Usually at three months.

Why should not a child be fed more frequently?

It takes the stomach nearly two hours to digest a meal at two months, and about two and a half hours at five or six months, and if the meals are made too near together the second one is given before the first has been digested and vomiting and indigestion result. The meals should be far enough apart to give the stomach a little time for rest just before each feeding.

SCHEDULE FOR FEEDING AN AVERAGE CHILD IN HEALTH.

AGE.	No. of meals.	Interval by day, between meals.	Night feedings (10 P. M. to 6 A. M.).	Quantity for each meal.	Quantity for twenty-four hours.
1 week	10	2 hours	2	1 oz.	10 oz.
2 to 3 weeks	10	2 "	2	1½ "	15 "
4 weeks	9	2 "	1	2¼ "	20 "
6 "	8	2½ "	1	3 "	24 "
3 months	7	3 "	1	4 "	28 "
5 "	6	3 "	..	5½ "	33 "
6 "	6	3 "	..	6 "	36 "
9 "	5	3 "	..	7½ "	37½ "
12 "	5	3 "	..	8 "	40 "

REGULARITY IN FEEDING.

How can a baby be taught to be regular in habits of eating and sleeping?

By always feeding at regular intervals and putting to sleep at exactly the same time every day and evening.

When should regular training be begun?
During the first week of life.

Should a baby be wakened to be nursed or fed if sleeping quietly?

Yes, for a few days. This will not be required long, for regular feeding soon teaches an infant to awaken regularly for his meal almost upon the minute.

Should regularity in feeding be kept up at night as well as during the day?

Only up to nine or ten o'clock; after that time a baby should be made to sleep as long as possible.

At what age may a well baby go without food from 9 p. m. to 6 or 7 a. m.?

Usually at four months, and always at five or six months.

What are the principal causes of wakefulness at night?

Night feeding and overfeeding.

What symptoms indicate that a baby is getting too much food at once?

Vomiting very soon after taking the bottle, and the appearance of undigested food in the stools.

What signs show that a baby is getting too little food?

The bottle is emptied quickly and ravenously, the child cries when it is taken away, sucks violently at his fingers, and cries before the next feeding is due.

Why do infants vomit?

Because too much food has been given, or because there is indigestion.

If a large part of the meal is vomited what should be done?

Omit the next bottle altogether; for the second bottle afterward, make the food much weaker and give only half the usual quantity.

How soon is anything besides the bottle or breast milk to be given to an infant?

Usually at ten months you may begin with a little beef juice or a portion of a soft-boiled egg. If the bottle is given, arrowroot or farina may be added to one feeding each day.

When should a child be weaned from the bottle?

Always as early as eighteen or twenty months. It can easily be done at twelve or fifteen months.

FEEDING IN THE SECOND YEAR.

How many meals a day does a healthy child require during the second year?

Never more than five, and some do better with four meals during the latter half of the year.

What are the best hours if five meals are given?

Seven A. M. and 10 A. M., and 1 P. M., 4 P. M., and 7 P. M., with nothing whatever during the night; sometimes 7 A. M., 11 A. M., 2 P. M., 6 P. M., and 10 P. M. will suit the child better; but whichever schedule is adopted, the hours should always be regular.

Should all these meals be of the same size?

It is better to make the 10 A. M. and 4 P. M. meals rather smaller than the others.

Give a sample diet for a child eighteen months old.

First meal: A tablespoonful of some cereal with salt and one tablespoonful of cream, one half pint of milk.

Second meal: One half pint of milk.

Third meal: One tablespoonful of scraped meat, two small pieces of dried bread, half a pint of milk.

Fourth meal: Milk.

Fifth meal: Milk with farina or arrowroot.

Which of the cereals are most useful for children?

Oatmeal, barley, wheat, rice, hominy.

How should these be prepared?

Hominy, rice, and the others, if the grains are used, should be soaked for from four to six hours and then cooked steadily for three hours in a double boiler, and for all infants under two years old they should be strained.

If the prepared (steamed) oats or wheat are used, they should be cooked at least one hour and strained.

How is the meat to be prepared?

It should be broiled and then scraped to a pulp. Only roast beef, steak, and mutton chops should be used.

May anything else take the place of meat at the midday meal?

Yes, either beef juice or egg may be substituted.

How is beef juice made?

A piece of round beefsteak should be broiled for a few minutes and then squeezed in a meat

press or lemon squeezer, and the juice salted and given warm.

How much should be given to a child eighteen months old?

From one to three tablespoonfuls at a time.

In what form should eggs be given?

They should be either soft boiled or poached—never fried. They should not be given every day, as children easily tire of them.

Can a child at one year old take plain milk?

Many children can, but the majority do better when the milk is modified by the addition of cream and water, or by the use of diluted top milk.

How should the top milk be prepared for a child of one year?

After standing six hours, six ounces should be taken off with a spoon from the top of a milk bottle, and ten ounces more should then be poured off and the two mixed. This may be diluted with an equal quantity of water or barley water.

How much milk at once should be allowed at a single feeding for a child during the second year?

From eight to ten ounces during the first half,

and from ten to twelve ounces during the latter half of the year.

FEEDING DURING THE THIRD AND FOURTH YEARS.

How many meals should be given?

Four in most cases.

Should children be fed between meals?

Under no circumstances should anything but water be given between the regular meals.

What are the best hours when four meals are given?

Usually 7 A. M. and 10.30 A. M. ; 1.30 P. M. and 6 P. M.

Give a sample diet for a child four years old.

First Meal.—Half an orange, one and a half tablespoonsful of oatmeal or hominy, well salted, with two tablespoonfuls of cream, but no sugar, and one glass of milk.

Second Meal.—A glass of milk or cup of broth with one slice of stale bread.

Third Meal.—Meat—either steak, chop, or chicken—one green vegetable (e. g., spinach), one starchy vegetable (e. g., potatoes), water to drink, stewed prunes for dessert.

Fourth Meal.—Bread and milk or milk toast.

In what form should bread be given to young children?

Always stale and preferably dried until it is quite crisp. Butter may be given after the third year.

What fruits may be given to young children?

First, orange juice, prune pulp and baked apple. These may be allowed after the fifteenth month.

How much should be given and how should they be prepared?

The juice of one fourth or one half an orange or the pulp of three or four stewed prunes which have been put through a sieve to remove the skins, or half of a baked apple without sugar.

What fruits may be given to a child of three or four years?

Nearly all the fresh fruits in season, except bananas.

Are fruits an important part of a child's diet?

Yes; they help the digestion of other food and keep the bowels regular.

ARTICLES FORBIDDEN.

The following articles of food are improper for a healthy child under four years of age in all circumstances. Nearly all of them should be prohibited in the case of children under seven years :

Meats.—Ham, sausage, pork in all forms, salt fish, corned beef, dried beef, goose, duck, game, kidney, liver and bacon, meat stews, and dressings from roasted meats.

Vegetables.—Potatoes except when roasted, cabbage, raw or fried onions, raw celery, radishes, cucumbers, tomatoes (raw or cooked), beets, egg-plant, and green corn.

Bread and cake.—All hot bread, biscuits, or rolls ; buckwheat and all other griddle cakes ; all sweet cakes, particularly those containing dried fruits and those heavily frosted.

Desserts.—All nuts, candies, dried fruits ; all canned or preserved fruits ; pies, tarts and pastry of every description.

Drinks.—Tea, coffee, cocoa, wine, beer and cider.

Fruits.—Bananas ; all fruits out of season ; all stale fruits, particularly in cities and during

the summer. Grapes are objectionable only on account of the seeds. With most of the other fruits it is excess in the quantity which makes them injurious.

ARTICLES ALLOWED.

The following list of articles of food may be given to healthy children from eighteen months to four years of age. From these a daily diet list may be made up in the manner indicated on page 42.

Milk.—Always the basis of the diet, one quart daily; without dilution unless very rich; always warm.

Eggs.—Soft-boiled or poached, never fried, not oftener than three times a week.

Meats.—After eighteen months if most of the teeth are present, once daily; finely bruised or scraped; rare roast beef, roast lamb, broiled mutton chop or beefsteak, white meat of chicken or turkey; fresh fish, boiled or broiled, bones the only objection.

Vegetables.—Potatoes (not till two years) roasted, peas, asparagus tops, spinach, string beans, boiled onions, stewed celery; all should be very well cooked, in season, and fresh.

Cereals.—Oatmeal, wheaten grits, hominy, barley, rice, farina, and arrowroot; all should be cooked at least two hours, and given with milk or cream, well salted, without any sugar.

Broths, etc.—Beef juice expressed from broiled round steak (one half to one pound); mutton, or beef, or chicken broth, as follows: one pound of finely chopped lean meat, one pint of water, stand on ice four to eight hours, cook slowly one hour, strain and season with salt, cool, and skim off fat.

Bread and Crackers.—In some form to be given with each meal; only stale bread (well baked), toast, zwieback; Graham, oatmeal, and gluten crackers, with meals only.

Desserts.—(After two and a half years) plain custard, ice cream (not oftener than once a week), rice pudding (no raisins), baked apple, stewed prunes.

Fruits.—(After fifteen months) oranges; (after two and a half years) apples, pears, grapes, berries, etc. In the country, almost all varieties in moderate quantity; give very cautiously in cities and during the summer.

GENERAL RULES TO BE OBSERVED IN
FEEDING.

Whether the child feeds himself or is fed by the nurse, the following rules must be observed :

1. Plenty of time must be taken. On no account should the child bolt his food.

2. The child must be taught to chew his food.

3. Children should not be continually urged to eat if they are disinclined to do so at their regular hours of feeding, or if the appetite is habitually poor, and under no circumstance should a child be forced to eat.

4. Indigestible food should never be given to tempt the appetite when the ordinary simple food is refused ; food should not be allowed between meals when it is declined at meal-time.

5. If a child refuses its food altogether, or takes less than usual, the food must be examined to see if this is right. Then the mouth must be inspected to see if it is sore. If neither of these things is the cause, the food should be taken away and not offered again until the next feeding time comes.

6. In any acute illness the amount of food should be much reduced and the food made more

dilute than usual. If there is fever, no solid food should be given. Milk should be peptonized if there is difficulty in digestion.

7. In very hot weather the same rules hold—give less food, particularly less solid food, and more water.

III.

MISCELLANEOUS.

THE BOWELS.

How many movements daily should an infant have during the first few weeks of life?

Usually three or four a day for the first week, and then two or three each day.

How many after a child is a month old?

Usually two each day, but often only one.

What is the appearance of a healthy movement from a child who has taken nothing but milk?

It is soft, yellow, and smooth, containing no lumps.

When are the stools dark brown or black?

While taking bismuth, iron, and sometimes when taking much meat or beef juice. They may be dark brown or black from blood. This last is a condition which may indicate serious illness.

How may a child be trained to be regular in its bowels?

By endeavoring to have them move at exactly the same time every day.

At what age may an infant be trained to use the chamber or chair for its movements?

Easily by the third month if training is begun early.

SLEEP.

Should a child sleep in the same bed with its mother or nurse?

Under no circumstances if this can possibly be avoided; nor should older children sleep together.

How should an infant's bed be prepared?

The mattress should be firm but soft, the pillow very thin, and the covering should not be excessive. A child should not be allowed to sleep always in the same position, but should be changed from side to side. Hair pillows are useful in summer and for children who perspire very much.

How much sleep is natural for a newly born baby.

Most infants will sleep at this period about nine tenths of the time.

How much should a child sleep at one year ?
About two thirds of the time.

Up to what age should an older child take a nap during the day ?

Always until four years old, and if possible longer.

At what age may an infant go all night without feeding ?

At five months a child should not be fed or nursed between 10 P. M. and 7 A. M. At one year a child will usually go from 7 P. M. to 7 A. M. without feeding or nursing.

How should a child be put to sleep ?

The room should be darkened and quiet, the child's hunger satisfied, and the child made generally comfortable and laid in its crib while awake.

Is rocking necessary ?

By no means. It is a habit easily acquired, but hard to break, and a very useless and sometimes injurious one.

What are the principal causes of sleeplessness ?

The most frequent one is indigestion from overfeeding ; often it is feeding too frequently at

night. A child who is fed three or four times at night is invariably a bad sleeper.

What are some other causes of wakefulness?

In nervous children it may come from excitement, like romping and playing just before bedtime. Bad sleep is also one of the earliest and most frequent signs of illness. In older children sleep may be disturbed by fear excited by the stories told just before bedtime.

When are children likely to sleep too much?

Too much sleep is rare, excepting from serious illness, or from the use of soothing sirups or other drugs. These should never, under any circumstances, be given.

CRY.

When is crying useful?

In the newly born infant the cry expands the lungs, and it is necessary that it should be repeated for a few minutes every day in order to keep them well expanded.

How much crying is normal for a very young baby?

From fifteen to thirty minutes a day.

What is the nature of this cry?

It is loud and strong. Infants get red in the face with it; in fact, it is a scream. This is necessary for health. It is the baby's exercise.

When is a cry abnormal?

When it is too long or too frequent. The abnormal cry is rarely strong, but it is a moaning or a worrying cry, sometimes only a feeble whine.

What are the causes of such crying?

Pain, temper, hunger, illness, or from habit.

What is the cry of pain?

It is usually strong and sharp, but not generally continuous. It is accompanied by contraction of the features, drawing up of the legs, and other symptoms of distress.

What is the cry of hunger?

It is usually a continuous, fretful cry, rarely strong and lusty.

What is the cry of temper?

It is loud and strong and accompanied by kicking or stiffening of the body, and is usually violent.

What is the cry of illness?

This is usually more of a fretfulness and worrying than a real cry, although crying is excited by very slight causes.

What is the cry of indulgence or from habit?

This is often heard even in very young infants, who cry to be rocked, to be carried about, sometimes for a light in the room, for a bottle to suck, or for the continuance of any other bad habit which has been acquired.

How can we be sure that a child is crying to be indulged?

If it stops immediately when it gets what it wants, and cries when it is withdrawn or withheld.

How is an infant to be managed that cries from temper or to be indulged?

It should simply be allowed to cry it out. A second struggle is rarely necessary.

Is it likely that rupture will be caused from crying?

Not in young infants if the abdominal band is properly applied, and not after a year under any circumstances.

TEETHING.

When do the first teeth appear ?

Usually from the fifth to the eighth month.

What symptoms are commonly seen in teething ?

There is very often great fretfulness and poor sleep for two or three nights ; there may be loss of appetite, so that only one half the usual amount of food is taken, and there is salivation or drooling, and often a slight fever. There may be some symptoms of indigestion, such as vomiting or the appearance of undigested food in the stools.

How long do these symptoms last ?

Usually only two or three days.

What is the cause of most of the other symptoms attributed to teething ?

Nearly all of them come from indigestion due to bad feeding.

At what age does a child usually sit alone ?

At seven or eight months.

When should a child walk alone ?

From thirteen to fifteen months.

Should children be urged to walk?

No, for they are always ready to do so as soon as their muscles are strong enough.

How should a child be lifted?

Always by placing the hands under the child's arms, and never by grasping the wrists.

What injury may be inflicted by lifting the child by the wrists or hands?

Often serious injury is done to the elbow joint, or even to the shoulder.

Are worms common in infants?

They are extremely rare in children under two years old, and even in those over two years they are not at all common.

What is the explanation of most of the symptoms supposed to be due to worms?

They are nearly all from indigestion, the result of bad feeding.

What is the normal temperature of an infant?

Ninety-eight and a half degrees to 99° F. in the rectum.

How much does it vary in health?

Between 98° and 99·5° F.

How long should the thermometer be left in the rectum to take the temperature?

Three minutes.

Is the temperature of an infant a good sign as to the severity of its symptoms in illness?

As a rule it is. A temperature of 100° to 102° F. commonly means a mild illness. From 102° to 104° F. a more serious one.

At what age may playing with babies be begun?

Never until four months, and better not until six months. The less of it at any time the better for the infant.

What harm is done by playing with very young babies?

They are made nervous and irritable, sleep badly, and suffer in other respects.

When should children be played with?

If at all, in the morning, or after the midday nap. Never just before bedtime.

NURSERY MEDICINE.

What should be done for a child in convulsions before a doctor arrives?

Keep the child perfectly quiet, with ice at the head, put the feet in a mustard bath, and roll the entire body in large towels which have been dipped in mustard water.

How should the mustard water be made?

Two heaping tablespoonfuls of mustard to one quart of tepid water.

What should be done for a child with bleeding from the nose?

The child should sit upright, the nose should be compressed tightly with the fingers, and iced cloths applied to the nose. The child should not blow his nose for some time afterward.

What should be done if a foreign body has been swallowed?

First, examine the throat with the finger to see if it has lodged there, and if so, remove it. If it has passed from the throat it has usually gone into the stomach.

What should be done in this case?

Give the child plenty of dry food, like bread, potato, etc., but under no circumstances either an emetic or cathartic. An infant may have its usual food.

What harm would a cathartic do?

It is likely to hurry the foreign body too rapidly through the bowels, and in this way do harm; otherwise it becomes coated with fæcal matter and passes the intestine usually without doing injury.

What should be done if a child gets a foreign body into the ear?

Unless this can easily be removed with the fingers it should not be meddled with, for it is likely to be pushed farther into the ear. The child should be taken to a physician.

What should be done if there is a foreign body in the nose?

The child should blow his nose strongly while the empty nostril is compressed. Unless this removes it a physician should be called. Meddlesome interference is always harmful.

What are the symptoms of colic ?

There is a strong, hard cry, which comes suddenly and returns every few minutes. With this there is drawing up of the feet, contraction of the muscles of the face, and other signs of pain. The abdomen is usually tense and hard.

What should be done for a case of colic ?

First, see that the feet are warm. Place them against a hot-water bag, or hold them before an open fire ; apply a hot flannel to the abdomen, or let the child lie upon its stomach across a hot-water bag. If the colic continues, a half teacupful of warm water containing ten drops of turpentine may be injected into the bowels with a syringe ; at the same time the abdomen should be gently rubbed so as to start the wind. If the gas is in the stomach, a teaspoonful of Vichy with five drops of gin or brandy may expel it.

What are the symptoms of ear-ache ?

The pain is generally severe and accompanied by a sharp scream ; the child puts the hand to the affected ear, or cries whenever it is touched. The pain is likely to be prolonged and continuous.

How should a child with ear-ache be treated ?

Twenty drops of warm water should be put

into the ear, and a poultice of flaxseed applied warm, but not too hot, or the hot-water bag may be held against the ear.

What are the symptoms of croup?

There is a hollow, dry, barking cough, with some difficulty in breathing.

When is this likely to come on?

Usually at night.

Is simple croup dangerous?

The ordinary croup of infants is spasmodic croup, and is very rarely dangerous, although the symptoms seem very alarming.

What is the dangerous form of croup?

Membranous croup.

How does this develop?

Gradually; very rarely does it come on suddenly.

What should be done for a baby who has spasmodic croup?

The room should be very warm, hot cloths or poultices should be applied over the throat, and either a croup kettle or an ordinary tea kettle kept boiling in the room. If the symptoms are

urgent, ten drops of the sirup of ipecac should be given every fifteen minutes until free vomiting occurs.

CONTAGIOUS DISEASES.

How does measles begin?

Gradually, like an ordinary cold in the head, with cough, sneezing, running eyes and nose. The eruption usually appears on the fourth day, first on the face and neck.

How does scarlet fever begin?

Generally it comes suddenly, with vomiting, high fever, and sore throat. The eruption appears upon the second day, first upon the neck and chest.

How does diphtheria begin?

Sometimes suddenly, but usually very gradually, with sore throat and often swelling of the glands of the neck, with white patches upon the tonsils, or a very free discharge from the nostrils.

At what period are these diseases contagious?

From the very beginning of the symptoms. Measles and scarlet fever are quite as likely to be communicated in the early stages as when the eruption is fully out.

How long should a child with any of these diseases be kept away from other children?

In measles, two weeks after the rash has gone; in scarlet fever, at least four weeks after the rash has gone, and longer if the peeling is not over or if the ears are running; in diphtheria, at least three weeks after the throat is well, and four weeks if the case has been severe.

What should be done if a child shows the first symptoms of serious illness?

The child should be put to bed. If it is an infant, the food should be diluted to one half the usual strength. If an older child, only fluid food should be given. If the child seems feverish take the temperature. If the bowels are constipated give a teaspoonful of castor oil, but no other medicine without the doctor's orders. Send for the doctor at once, and until he comes carefully exclude all other children from the room.

CONSTIPATION.

In children who are upon milk diet what is the principal cause of constipation?

The milk has too much curd and too little fat.

How is this difficulty overcome?

By adding water and cream.

When it is necessary to move the bowels immediately, what is the easiest method?

An injection of one tablespoonful of sweet oil may be given, or half a teaspoonful of glycerin in two teaspoonfuls of water, or a glycerin suppository. These should not be continued excepting under the physician's directions.

What is the most essential thing in preventing or overcoming constipation?

The formation of the habit of having the bowels move every day regularly at the same hour.

What is the best hour?

In most cases immediately after the first meal in the morning.

How is constipation to be treated?

The most important thing is the regulation of the diet, the giving of fruits, especially orange juice and stewed prunes.

When should these be given?

To very young children best about one hour before meals.

BAD HABITS.

What are the most common bad habits of children?

Sucking, nail-biting, bed-wetting, and masturbation.

What do children suck ?

Most frequently the thumbs, sometimes the fingers, the hand, the clothing, or the blanket, often a rubber nipple or a sugar rag.

When is this habit usually seen ?

It begins in quite early infancy, and if not broken up may last until children are six or seven years old.

At what age is the nail-biting seen ?

Usually in children from two to five years old.

At what age may an infant generally be expected to go without wetting during the night ?

Usually at two and a half years if it is taken up late in the evening.

What is masturbation ?

It is the habit of rubbing the genital organs with the hands, with the clothing, against the bed, or rubbing the thighs together. It may be seen in children as young as a year old.

What should be done when one of these habits is discovered ?

The fact should be brought immediately to the notice of the mother and physician, and every means taken to break up the habit while the child is young and before it becomes deeply seated.

In the case of sucking or nail-biting confining the hands to the sides during sleep or the wearing of mittens will often succeed if persisted in. On no account should the habit of sucking be allowed as a means of putting children to sleep or of quieting them while restless or suffering from indigestion.

Bed-wetting is more of a disease than a habit, and the child should never be whipped for it; it should receive medical treatment.

Masturbation is the most injurious of all these habits, and should be broken up just as early as possible. Children should especially be watched at the time of going to sleep and on first waking. Punishments are of little avail and usually make matters worse. Medical advice should at once be sought.

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