

nipple with boric acid solution, using sterile gauze or cotton.

After nursing, if the baby has not fallen asleep, give one or two teaspoonfuls of cool water to wash down any milk left in the mouth. If even a little milk remains in the mouth it is likely to decompose and cause indigestion and sore mouth.

Nurse the baby regularly. Wake it at the regular nursing time if asleep. It will soon follow the schedule and be as regular as the clock. Begin nursings as nearly as possible at 6 or 7 o'clock in the morning, and end near 10 o'clock at night. If a night feeding is found necessary (and it rarely is necessary after four months), it should be given about 2 a. m.

Ten minutes is usually a sufficient time for each nursing, yet sometimes it should be shorter and sometimes longer. Always give one or two tablespoonfuls of cool water between nursings.

Successful breast feeding will be accomplished if the following baby conditions exist: (1) The stools will have a mustard-yellow color, soft in consistency, free from mucus and lumps, and number not less than two or more than four in each 24 hours. (2) The urine will not stain the diaper, will be clear and will not irritate. (3) The baby will sleep after each nursing, will not be cross or restless and will not fret. It may cry a little if its position or diaper should need changing. (4) A steady gain in weight will be shown. This is a very reliable sign that the milk agrees and that all goes

well. During the first week there will be a slight loss in weight, but thereafter the weekly gain should be from four to eight ounces. The weight at birth should be doubled at six months and trebled in one year. If the baby does not increase in weight for two or three weeks, then something is wrong and the physician should be consulted. Weigh the baby once a week.

Ordinary scales as grocers use are better than unreliable spring scales usually sold as baby scales.

Weaning must be done with judgment. No fixed rule can be given as to the age when a baby should be weaned. However, it is usual to wean at about ten or twelve months. If this age comes during the summer time, then especial care must be taken. Mixed feeding, which means the giving of cow's milk to supplement the breast milk, should begin about four to six weeks before final weaning from the breast. Don't begin weaning in summer if it can possibly be avoided. To wean in summer time is to threaten the life of the baby. The first step in weaning is to give about one bottle a day of modified cow's milk (see page 55), and cut out a corresponding amount of breast milk. If the baby thrives, in about ten days give two bottles each day, again cutting down breast milk. About this time begin mixing oatmeal jelly with the bottled milk and also begin teaching baby to take food from a spoon and to drink from a cup. Oatmeal jelly is made by cooking about four tablespoonfuls of oatmeal in one pint of water, replacing the water that evaporates. When

thoroughly cooked, strain through cheese cloth and allow it to "jell." One teaspoonful of this jelly should be carefully beaten into one bottle of milk. Two teaspoonfuls may be used if the baby keeps well and needs more food. One month is full time in which to wean a baby. A few days after milk and oat jelly have been used, let the child have a chicken bone, a little scraped apple or a little prune pulp. Prune pulp is made by stewing prunes until very soft and straining through cheese cloth. Oat jelly must be made fresh every day and kept in a refrigerator in summer time. Prune pulp must not be used after the second day and should be kept covered in a cool place. Keep in a refrigerator if possible. Gradually, and according to judgment and good sense, other articles of food may now be given. Orange juice, baked apple, a little milk toast, yolk of egg cooked soft, cream gravy and baked potatoes. Don't give bananas, pears, grapes, pickles, beans, cake, pie, greasy food, greasy gravy and indeed any food which is distinctly food for adults or which seems in the least to disagree with the child.

Nursing mothers should take a daily sponge bath, and at least once or twice a week a cool or tepid tub bath. They should sleep alone if possible, at least eight hours every night with bed room windows wide open. They should drink not less than two quarts of water daily and eat plenty of fruit and vegetables; they should have their teeth in good condition, keep their teeth and mouths clean; they should chew their food extra well; they should

lie down and rest at least one hour after dinner each day; they should use coffee and tea sparingly or, better, not at all; they should let patent medicines and all alcoholic liquors entirely alone; they should try hard not to worry, fret or become angry, and should cultivate a cheerful spirit.

Bathing never causes one to "catch cold" unless the person is chilled by slow action in drying the body or in dressing, or by a draft. On the contrary, cold baths, if the person reacts quickly, keep colds away. A clean mind demands a clean body.

Intervals for nursing should be carefully followed for they constitute a very important part in infant feeding.

From birth to four weeks nurse every two hours, but not over ten times in 24 hours, and give only one nursing during the night.

From four to six weeks old feed every two hours, not over 9 nursings in 24 hours, and one night nursing.

From six to eight weeks old feed every 2½ hours, not over 8 nursings in 24 hours, and one night feeding.

From 2 to 4 months old feed every 2½ hours, not over 7 nursings in 24 hours, and don't feed in the night at all.

From 4 to 10 months old feed every 3 hours, not over 6 nursings in 24 hours, and don't feed in the night.

From 10 to 12 months old feed every 3 hours, not over 5 nursings in 24 hours, and don't feed in the night.

A baby or a man is what he eats, how much he eats and how he eats it.

VII.

ADVICE TO NURSING MOTHERS.

Don't worry. Cultivate calm.

Get full eight hours' sleep.

Sleep in a well ventilated room.

Take a walk out of doors every day except when the weather is bad.

Take a daily bath. A sponge bath is good.

Eat only plain foods. Avoid salads, pickles, spices. Eat moderately of meats. Eat freely of fruits, vegetables and good bread.

Don't become constipated. Relieve constipation by attending to nature's calls, by cultivating a regular habit, by eating very freely of fruits and drinking plenty of pure water.

Don't take patent medicines, or indeed any medicines except as the doctor directs.

Take a nap every afternoon, or at least lie down and rest for half an hour.

Don't drink tea or coffee. The tannin they contain causes constipation, and the caffeine they contain is a nerve and heart whipper, and is bad for mother and child.

Don't allow yourself to become angry. Fits of temper injure the breast milk.

Nurse your baby only five or six times daily, and cut down the milk supply if the baby vomits it.

Don't nurse your baby at night after it is six months old.

See that the birth of your baby is registered at the local health office.

CRYING BABIES.

Baby cries only when there is a cause. Find the cause and remove it.

Perhaps he has had too much food.

Perhaps an enemy has given him candy.

Perhaps an enemy has given him a pickle.

Perhaps he is dressed too warmly.

Perhaps he needs a clean diaper.

Perhaps he needs a bath.

Perhaps his bowels have not moved.

Perhaps a pin is sticking him.

Perhaps a big button is being pressed into his back.

Perhaps he has been trotted or bounced.

Perhaps he has been carried in arms overmuch.

Perhaps he has been taken calling and a cookie given him.

Perhaps catnip or saffron tea has been forced down him.

Perhaps an enemy has given him a pacifier.

Perhaps his feet are cold.

Perhaps some enemy with decayed teeth and a bad breath has kissed him.

Perhaps an enemy has given him soothing syrup.

Perhaps he has not been fed regularly.

Perhaps someone has been smoking in the room.

Perhaps baby has lain too long in one position.

See that the birth of your baby is registered at the local health office. This is commanded in the law.

SLEEP.

Babies under two years old should sleep from 12 to 15 hours in 24.

Babies should sleep alone. Every year a score or more babies are smothered to death in Indiana by their mothers sleeping with them in the big bed.

Babies should sleep in a well-ventilated room or out-of-doors. Bad air makes fretful and sick babies.

Babies should be taught to go to sleep at 6 p. m. until three years old. After that gradually raise the limit to 8 p. m.

Babies should not be put to sleep in the mother's arms. It's bad for mother and baby.

Babies should not be rocked to sleep.

Babies should be protected from all excitement.

Babies should never be given soothing syrup.

See that the birth of your baby is registered at the local health office.

EXERCISE.

Babies should play.

Babies should play in the open air when possible.

Babies should not be tickled.

Babies like to romp. Romp with them but don't excite. It makes a nervous baby.

Babies may be gently rolled and kneaded in the bath for exercise.

Babies like to romp and play on the floor. Be sure to spread a sheet or washable rug on the carpet, for carpets hold dirt and germs tracked in by dogs, cats and human feet.

Babies should not play on the floor in cold weather. Let them play on the bed.

Babies should not be fastened for a long time in their high chairs or go-carts, for then they will not develop.

Babies' playthings should be frequently washed and baked in the oven of the kitchen stove to kill any germs which might be on them.

See that the birth of your baby is registered at the local health office.

CLOTHING.

Babies should be dressed lightly and loosely in clothing fitting the season.

Babies' underwear should be cotton and wool mixed goods.

Babies' feet must be kept dry.

Babies' socks should be knitted or crocheted of soft woolen or cotton and wool yarn.

Babies' throats must not be tied up except in severe weather. Throat protectors make weak throats.

Babies should have broad, soft and loose shoes.

Babies should never have their faces protected with veils except in very severe weather. They need the air, which veils keep away.

See that the birth of your baby is registered at the local health office. This is very important.

VIII.

BOTTLE FEEDING.

Again, serious warning against bottle feeding is given. Don't feed artificially unless forced to. **Eighty (80%) per cent. of the babies that die are bottle fed.** Bottle feeding is unnatural. Cows' milk, when collected from healthy cows in a cleanly way, immediately cooled and kept cool and clean, is the best food when mothers' milk is not available. Patent, drug store baby foods are not recommended; yet, sometimes they are found efficient. Use them only upon recommendation of the doctor. Milk from a herd of cows (mixed milk) is likely to be of average composition and is generally superior for feeding infants to the milk from one cow. **Don't fail to investigate the dairy or creamery from which baby's milk is supplied.** If the cows are dirty, if the stable is dirty, if the milkers and handlers are dirty, if the milkhouse or milkroom is dirty, don't use the milk, for it is certain to contain germs which will probably cause the baby to become sick. Milk and other foods which would kill a baby are sometimes excellent for adults. Babies must not eat the strong foods needed by grown people.

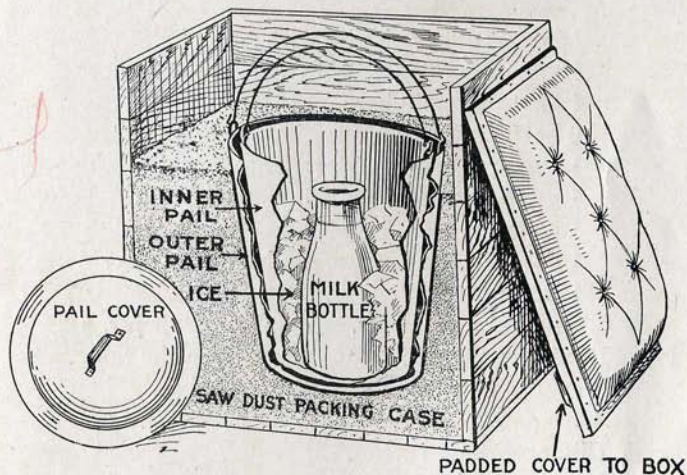
The care of milk after it is brought into the house is of great importance. Keep it on ice if possible. If ice

cannot be had, keep it in as cool a place as can be found. Always keep baby's milk in stoppered bottles. If on the farm, or if the family owns its own cow, take the greatest care to cleanse the cow's flanks, bag and teats before milking, and let the milker see to it that his hands are clean, and never wet the teats with milk to soften them. Milk into a narrow mouth pail, strain, immediately cool on ice or in cold water, bottle without delay and keep cold. Milk bottles either empty or filled should not be left standing open in the kitchen, or, indeed, anywhere. They may become warm, and dust and flies get into them. Milk easily absorbs odors, so keep it in a clean, odorless and cool place. Old or stale milk may be poisonous, It is not necessary for milk to sour to become harmful.

A home-made ice box that is efficient may be easily and cheaply constructed. Take an ordinary wooden box, to the cover nail ten or twelve thicknesses of newspaper and over all the paper tack a piece of muslin or cheese cloth. In the middle of the box place a galvanized iron pail and surround it with sawdust. In the center of the pail place a small pail or a piece of stove pipe as high as the outer pail. Between the inner pail or stove pipe and the outer pail, place broken ice. Inside the inner pail or stove pipe place the milk in bottles. Cover with the lid, paper side down.

Regular feeding is important. Haphazard feeding will sooner or later bring trouble. Establish regular hours for feeding and never change them. Be regular from the very first day. Teach the baby regular habits.

It is best for his health and growth, and best for the mother and family. Don't feed baby every time he wakens at night, for doing so will disturb his digestion and he will sleep poorly. Never, never, should babies sleep with their mothers, but should always sleep by themselves in a crib. From ten to twenty babies are



smothered in Indiana every year by mothers who take them to sleep in the big bed. Don't hold baby up after feeding. It is better for him to lie still for a short time.

Preparing the milk for artificial feeding is so important that it is necessary to emphasize the directions. So don't omit or pass over a single point in these directions, for you will not be practical if you do. Impracti-

cal persons are those who do not do the right thing. You will need the articles here listed, and they must be kept clean and sweet and kept in a clean sweet place by themselves. It requires care and trouble to raise a baby, and those who are not glad and willing to take the necessary care and trouble are unfit to be parents.

Articles needed—

- ½ doz. rubber nipples with small holes.
- 1 two-quart double boiler.
- 1 two-quart pitcher.
- 2 bottle brushes.
- 1 one-pint druggist's graduate.
- 1 small enameled funnel.
- 1 cream dipper.
- 1 doz. nursing bottles, graduated on the side.
- 1 Pasteurizer.
- 1 pound milk sugar. Keep in a fruit jar.

Don't use the white cane sugar from the table. It cannot be easily digested by a baby.

Some gauze or cheese cloth for strainers.

1 lb. absorbent cotton.

1 quart soda water.*

1 bundle ordinary cotton.

Keep all of these articles in a separate cupboard or on a special or separate shelf in a big cupboard. Don't use any of them for general purposes. They are for the baby only. Bottles, nipples, double boiler and all of

*Soda water. Have the druggist make twelve powders each containing one drachm of bicarbonate of soda. Dissolve one of these in one quart of water and label "Soda Water."

baby's cooking articles should be washed separately and dried on towels kept separate for baby's use. Or better, after washing scald with boiling water and allow to dry without wiping.

Modified milk is cow's milk modified or changed to be as near like mother's milk as possible. Mother's milk contains on an average of 88 per cent. of water and cow's milk contains an average of 87.4 per cent. In this regard they do not differ materially, but when it comes to sugar (milk sugar) the difference is marked, for mother's milk contains 6.5 per cent, of milk sugar and cow's milk 4.7. There is a wide difference also in cheesy matter, or proteid as the chemists call it. Mother's milk contains 1.5 per cent. and cow's milk 3.5 per cent. There is very little difference in the fat or butter in the two milks, for mother's milk contains 3.75 per cent. and cow's milk 3.7 per cent. The mineral matter in milk is principally phosphate of lime, but there are other minerals, and collectively they are called "ash." The ash in mother's milk is .25 per cent. and in cow's milk .7 per cent. With these facts before us we know what must be done to make cow's milk of near the same chemical composition as mother's milk. It is very necessary to reduce the percentage of cheese (proteid) in cow's milk, because it forms into large hard curds in the baby's stomach, which are hard to digest.

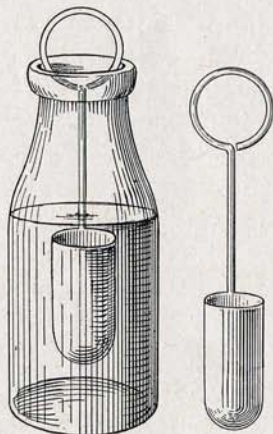
To reduce the percentage of proteid, water must be added. But this also reduces the sugar and fat, which

must not be done; therefore, sugar and fat must be added in sufficient amount to resemble mother's milk.

Preparation of modified milk. Fill an ordinary quart milk bottle with milk. Let stand stoppered in the ice box or in as cool a place as possible, until the cream separates. This will take at least six hours. The top portion is called "top milk" and the bottom portion "bottom milk." Now the problem is to separate them, and this

may most conveniently be done by a special dipper, as shown in the picture, and made for the purpose and holding one fluid ounce.

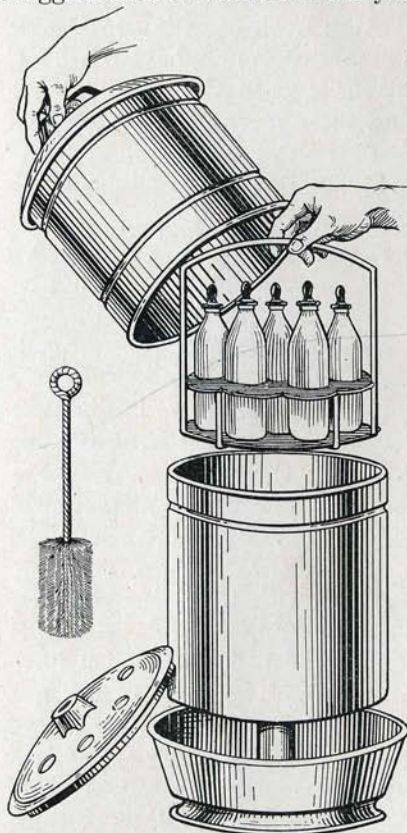
Enough of the top layer of cream is removed by a spoon to permit the introduction of the dipper without causing the milk run over the top. The cream thus removed is put into the dipper. Now push the dipper down slowly until the "top milk" (cream) flows in and fills it. Eight dipperfuls give eight ounces of top milk. Another method is to pour off the top milk as carefully



MILK BOTTLE AND
CREAM DIPPER.

as possible; and still another method is to draw out the bottom milk with a glass siphon. When top milk is poured off with great care, it is never as strong in fat as when separated by a dipper or siphon. A glass cream separator may be used to procure top and bottom milk.

Cream separators and dippers may be purchased from druggists or from dealers in dairymen's supplies.



ARNOLD PASTEURIZER.

We are now ready to make modified milk, which is similar to human milk. Take of:

Top milk, $5\frac{1}{4}$ ounces;

Bottom milk, $3\frac{1}{4}$ ounces;

Soda water, 1 ounce;

Milk sugar, 1 ounce;

Cool boiled water; 10 ounces.

Mix in a pitcher.

A dipper level full of sugar of milk weighs about an ounce, but it is better to weigh it.

When the above mixture is made, it must be well stirred, filled into feeding bottles and pasteurized or boiled.

The above general directions produce an average modified milk, that is, such

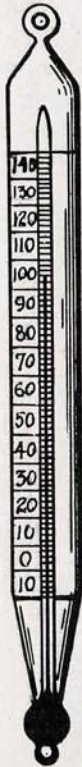
milk is close to the average composition of healthful human milk. Sometimes the doctor finds it necessary on account of the baby's having weak digestion to change the above formula so as to produce a milk having less fat, or less milk sugar. Therefore, when the doctor directs different proportions from those given above, his directions must be followed. Unless the doctor directs otherwise, all milk fed to babies from the bottle should be pasteurized.

To pasteurize milk proceed as follows: Procure an Arnold pasteurizer, or have the tinsmith make a pasteurizer.

A home-made pasteurizer may be made from a galvanized iron, or enameled flat-bottomed pail. The pail should be about 9 inches deep and 8 inches in diameter and must have a cover which is provided with a flange to make it fit tightly. Have the tinner construct a rack out of tin or wire which fits inside the pail and will admit of the cover being put on. The rack should be made like the one holding the bottles on page 57.

The feeding bottles, filled with the prepared milk, are stoppered with plugs of cotton, then placed in the rack, and the rack placed in the pail which must have five or six inches of water in it. The cover is now put in position and the entire apparatus placed over a fire. The milk must not be heated above 145 degrees and to control this a glass dairy thermometer is necessary. It should be inserted through a hole in the lid. The thermometer must be in the hands of the tinner when he

makes the bottle rack and he will make a hole of proper size, which must have a cork to fit it. The bulb of the thermometer must dip into the water.



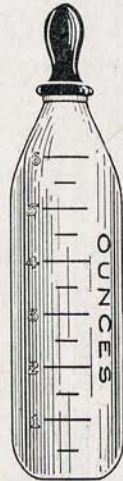
DAIRY THER-
MOMETER.

Rapidly heat the water to a temperature from 150° to 160° in winter and from 155° to 165° in summer. Remove the apparatus from the fire when the required temperature is reached and cover with a blanket, or better, cover with a wooden box lined with felt or thick woolen cloth. It is very easy to construct such a box. Of course, the blanket or felt lined box is to retain the heat. Let it stand fifteen to twenty minutes, then cool the bottles as rapidly as possible to 50° . Hot bottles must not be put into cool water or they will crack, therefore, to cool, lift out the rack containing the bottles and place in a cool place. In about ten minutes the bottles may be put into cold water without danger of breaking them, or they may be put into a refrigerator or ice box, where they must remain until the baby needs milk. If milk thus pasteurized is kept at a temperature not above 60° , it will not spoil, but will keep perfectly for 36 to 48 hours. However, to make sure, a fresh supply, enough to feed the baby should be prepared every 24 hours.

Pasteurization consists in heating milk to about 145° for at least twenty minutes and then cooling rapidly. Heating to 145° kills the disease germs and trouble causing ferments which the milk contains, and it is certain to contain such germs and ferments. If milk is heated to a higher degree it loses some of its nutritive qualities and is not so good for infants.

Mother's milk is sterile, and is taken straight into the child's stomach, not being exposed to the air in the least degree. It does not contain germs and ferments like cow's milk which has been more or less exposed to the air and germ infecting conditions. This is the great reason why breast fed children live and flourish better than those fed by the bottle. They don't get germs.

The care of the bottles and nipples is a matter which concerns the health and life of the baby. When feeding is over do not allow the bottle to stand one minute. First fill with cold water and then clean the nipple both inside and out with clean cold water. Don't leave a trace of milk. When the nipple is thoroughly washed in cold water pour scalding hot water upon it and then place in a tumbler or other receptacle containing solution of borax, or solution of bicarbonate of soda. To make these solutions use one-half teaspoonful of borax or bicarbonate of soda



Proper Nursing
Bottle and
Nipple.

to each cup of water. Don't boil rubber nipples, for boiling softens rubber and develops an unpleasant odor and taste. The cleaning method here given will keep nipples clean and sweet and will not rapidly destroy them. Keep two nipples in use, using them alternately. When they become soft and sticky throw them away and take new ones. Simple black rubber nipples are best.

The best nursing bottle is round, is graduated and has a wide mouth.

Immediately after nursing, clean the bottle by first carefully rinsing in cold water; let it stand filled with borax or soda water for ten minutes; pour off this water and with the aid of a bottle brush wash in hot soapsuds. Finally rinse in hot water and stand upside down on a clean board or plate to drain. Always rinse again in scalding water before using.

All utensils used in preparing baby's food should be washed in the same way. Under no conditions neglect the practice of perfect cleanliness, for otherwise the baby will certainly become sick. Prevent sickness if possible, and then the doctor's medicines will not be needed.

Feeding by the bottle must be done with great care. Never, never, use a nursing bottle with a long rubber tube, for they are certainly baby killers. Never use a nursing bottle and nipple a second time until they have been cleansed and purified in the way already described.

Of course, the modified and pasteurized milk in the bottle must be warmed before it is given to the child. To warm, place the bottle, still stoppered with its cotton

plug, in a quart tin cup containing water heated to 105 degrees. Let the bottle stand in this water for about five minutes, then take out, shake well, and place the clean and freshly rinsed nipple in position. Don't touch that part of the nipple which goes into baby's mouth when you adjust it to the neck of the bottle, nor under any circumstances should the mother or nurse test it in their mouths. To see whether the milk is warm, drop a few drops on the back of the hand or wrist. If it is not warm by this test, make it so before feeding. Kissing a baby in the mouth is almost as bad as testing a nipple in one's mouth. In both instances it is possible to transfer germs which may be in your saliva. It may be news to some to be told that diphtheria, tuberculosis and other germs may sometimes be found in the mouths of adults, even when they are well and in good health. Never allow your baby to be kissed on the lips. Don't let anyone fondle it.

Place the baby in a convenient and comfortable position when it is given the bottle. Don't hold it in the arms unless circumstances make it necessary. The baby is far better off in its bed than in its mother's arms when nursing from a bottle. But it is best to hold the bottle.

The quantity of food given must be carefully judged. The stomach of the average newborn baby holds about one tablespoonful. One of the most frequent mistakes made in feeding a baby is giving too much food. If the baby vomits, too much food has probably been

given. Don't believe those who say—"It is natural for babies to vomit a little now and then." If undigested milk appears in the diaper, then surely baby has been overfed. It is more than foolish, it is wicked, to disturb a baby's digestion by overfeeding.

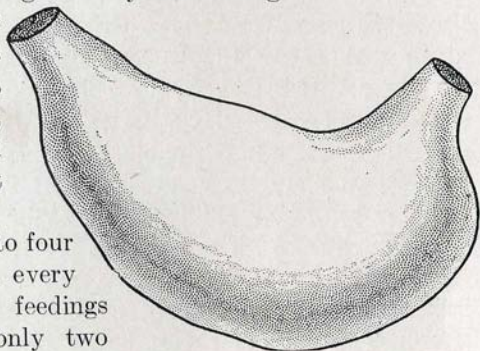
General rules for feeding, as here given, are a good guide, but, as said, good judgment must finally control.

Rules. One to four weeks old—feed every two hours; ten feedings in 24 hours; only two feedings at night and the amount each time 1 to 2 ounces.

Four weeks to two months old—feed every two and a half hours; not more than eight feedings in 24 hours; only one feeding at night, and the amount each time two and a half to four ounces.

Three months to four or five months old—feed every three hours; seven feedings in 24 hours; only one feeding at night, and the amount four to five ounces each time.

Four to five months to one year old—feed every three hours, six feedings in 24 hours; no feeding in the night, and the amount five to eight ounces each time.



Picture of infant's stomach, natural size.

Weaning bottle fed babies must be carefully done. Don't allow even a crust of bread before the baby is seven to nine months old. This is because babies under that age cannot digest bread. After the ninth or tenth month, give the child a small piece of well toasted stale bread twice a day, and after the tenth or eleventh month give a little oatmeal or barley jelly mixed with the milk. To make oatmeal or barley jelly, add four level table-spoonfuls of oatmeal or barley to one pint of water, cook thoroughly in a double boiler, and strain. If the baby is well and in good health at weaning time, the milk need not be modified, but may be given as received after pasteurizing, if milk is not too rich, such as Jersey milk, etc. About this time teach baby to drink its milk from a spoon or cup, gradually laying the bottle aside. The yolk of a soft boiled or poached egg with stale bread broken in it may be given after twelve months of age. Don't feed cooked white of egg to a young baby. Tapioca or rice pudding (no raisins) with a liberal supply of milk, is wholesome. Be careful about giving sugar or candy to babies, for they will likely cause sour stomach. Milk must be the main article of diet for babies and children. It is the best of foods at all ages. A chicken bone may be given to baby when being weaned. Be careful there is no meat on it. Babies should not have meat until after two years of age, and then only a very little. Too much meat causes biliousness and auto-intoxication in infants and adults.

SOME DON'TS CONCERNING BOTTLE FEEDING.

Don't fail to see that baby's milk is from healthy cows and collected and kept in a clean way.

Don't keep the milk in an ice box or refrigerator where other food is kept, unless bottled.

Don't accept milk with even a speck of dirt in it.

Don't strain dead or drowning flies from milk and then feed the baby.

Don't fail to set baby's milk in a cool, clean place, as soon as delivered.

Don't forget to scald the bottles or jars in which you keep baby's milk and let them cool before use.

Don't put off telling the doctor if the baby's food does not agree with it.

Don't use flat feeding bottles. Use round ones, graduated and with wide mouths.

Don't fail to use straight nipples which can be turned inside out for thorough cleaning.

Don't fail immediately after each feeding to wash bottle and nipple in cold water and then in hot water and soapsuds, lastly rinsing in cold water.

Don't fail to keep the nipple in a solution of borax or soda and to rinse it in fresh water before using.

Don't fail to have a separate bottle for each feeding.

Don't forget it should take baby ten to fifteen minutes to empty the bottle.

Don't give your baby a pacifier or comforter, for it is harmful.

Don't give your baby anything but milk during its first twelve months of life.

Don't use patent drug store baby foods or condensed milk unless the doctor so advises.

Don't trot the baby on your knees, and don't swing and shake it in your arms.

Don't coddle the baby.

Don't fail to give it cool boiled water between feedings, and don't fail to give it fresh air day and night.

Don't give soothing syrup.

Don't kiss baby on the mouth.

Don't permit baby to suck its thumb.

IX.

CLOTHING THE BABY.

The chief requirements of dress for infants are looseness, softness, proper warmth and simplicity. The baby's skin is very delicate and tender, therefore its clothing should be soft and light. The texture should be soft as well as the surface. Unless the material is porous and not too heavy, proper ventilation of the skin will not be secured. Babies must be dressed in a way to allow freedom of motion. Be careful that the binder is not too tight, but is just right. A too tight binder

may cause indigestion, for it compresses the ribs and abdomen. It will be wise for the rich and well-to-do to avoid supplying elaborate clothing. Simple, plain garments are in every way the best. Every unnecessary garment renders the exertion of dressing and the burden of the clothes that much greater. It is certainly distressing to baby to be rolled upon its face and then on its back a great number of times for the purpose of putting on one layer of clothing after another. A new born infant must be kept warm, yet not too warm. If the infant perspires while sleeping, it is too much protected. Overbundling of infants is common and the little defenseless things suffer greatly. All too many mothers seem to think of only two things to do to "protect" (?) their babies, and those two things are bad. The first is to shut baby up in an unventilated and hot room and the second is to bundle it to the point where it perspires profusely. Another wrong thing often done is to cover baby's face when taken out for an airing with two or three thicknesses of veil to "keep it from catching cold." Babies and grown people, too, who have an abundance of fresh air at all times, do not catch cold. Overeating, preceded or followed by the breathing of foul air, will always produce a cold. The vital force of a baby or adult must be high in order to recover promptly from any sickness when shut in a tight room and constantly tempted with dainties to eat. "Colds" are most often caught from being too warm and being held in a poorly ventilated place.

Chilling must be prevented at all times. Enough

clothes to prevent chilling and to keep comfortably warm are needed; more are harmful.

Soft wool material is theoretically the best for garments which go next to the skin, yet there are objections. The first is, they shrink greatly and become harsh when washed; and the second is, they may be irritating to the skin. The use of mixed goods, partly wool and partly cotton, overcome the above objections in great degree. Outing flannel or flannelette should be used when the skin is unusually tender. Linen or cotton undergarments should be used in summer.

The binder is part of the infant's clothing, for it covers part of the body, yet its only object is to keep the umbilical cord from being irritated by the clothes. As a means of support it is quite unnecessary. The binder may be considered an advantage, provided it does not bind.

Diapers should be made of soft, light and absorbent material. A special diaper cloth can be purchased at drygoods stores. Canton flannel is not to be recommended as it soon becomes harsh by washing. The diapers for the early months of life should be a yard long and a half yard wide when hemmed. The material should be washed before it is cut to prevent shrinking afterward. As the child grows the diapers must be made larger. Diapers of a triangular form having a center of Turkish toweling may be purchased in the stores. Large stores supply full baby outfits at varying prices, according to quality and number of articles. A rubber

or waterproof cover for diapers should never be used, for it is heating and liable to produce chafing and eruptions. Change diapers just as soon as soiled. On no account use them again until they have been washed. It is dangerous to dry diapers wet with urine and then use them again. If diapers are not thoroughly washed and aired they become dangerous to the baby's health



A KNITTED BABY SOCK.

and life. Soiled diapers should immediately be placed to soak in cold water and rinsed in plain water several times before being washed in hot soapsuds. Don't put sal soda or concentrated lye in the water used for washing diapers. If, perchance either must be used to soften the water, then rinse and rerinse until you are perfectly sure not a trace remains in the fabric.

Socks are essential for baby. They should be crocheted or knitted and made short. They are recommended even when long skirts are worn. In the summer time socks are not needed. Socks should be made of silk or soft yarn, reach half way to the knee and tie about the ankle with a ribbon or soft knitted cord.



A KNITTED BABY SHIRT.

The shirt should be of soft material and be woven or knitted. Soft shirts of all qualities and all sizes may be purchased at large drygoods stores. For winter, shirts should be heavy enough to keep the child warm; for the summer lighter and for hot weather very light. The shirt should always reach below the hips, should have a high neck and the sleeves should reach the wrists. It is the most convenient if it is a "coat shirt," that is, open the full length in front and fastened by small flat buttons. The shirt must be loose after washing, so that it will not bind the shoulders, arms or chest.

The petticoat should be of white flannel. It may be in one piece or the flannel skirt may be attached to a linen or cambric waist. The linen or cambric waist is recommended for hot weather and is preferred by many for all seasons of the year. The waist of the petticoat should have armholes without sleeves, and be fastened at the back with small flat buttons. Don't pin with safety pins. On very hot days the flannel petticoat should be replaced by one of cool material. Don't make the petticoat too long. It should reach not more than ten or twelve inches below the feet.

The dress may be of any material or style that suits the mother's fancy; the only advice is—make it plain and loose. It is not good taste to dress a baby in rich, fine garments. Let an infant's dress be plain and innocent like the baby itself.

The night clothes should be a complete change from those worn in the day time. Take off every stitch of day clothing and put on fresh night clothes. Unless the conditions are extremely unusual, don't leave the shirt or any other day garment on the child when it is put to bed at night. A night slip and diaper are all the clothes that should be used at night. Of course, the night slip should be of material to suit the season. In very cold weather, soft flannel is the right goods. Canton flannel also makes good night slips. The night gown should have a drawing string at the bottom to keep it in position and to make sure the feet are kept covered. .

The baby should have a warm shawl or shoulder blanket made of soft flannel to protect it when carried from one room to another in cold weather, or when it is taken up at night. A cap or hood is needed, but only to wear out of doors. Never protect baby's head while in the house, unless perhaps the fire is out and the room cold. If you take baby on the cars, be sure to remove its head covering and all outer wraps. If you do not, it will be overwarm, will be sweaty and uncomfortable, and when taken outdoors will chill and take cold.



Baby in Night Gown
with Draw-string.

It is common to see infants and young children made to keep on their hoods and wraps while in warm cars. This is very wrong and sometimes cruel, and liable to bring illness. Never use a veil, handkerchief or other protection for baby's face. If there is glare out of doors, protect the eyes by adjusting the top and curtains of the baby cab, or if carried in the arms turn the face away from the sun and glare. It would not be objectionable to place a neutral-tinted veil over the eyes to protect them, but never cover nose and mouth in the least. Let baby have air. It is the first and most important thing that it needs.

Shortening the clothes is to be done when the baby is about six months old. This should never be done in the winter time. The number and material of the garments remain nearly the same as before. It is best to make new short clothes, but the long ones may be cut down if it is necessary. The long clothes are generally too loose and if made shorter must also usually be made to fit closer. The feet and legs must be better protected where short clothes are adopted. Don't leave the legs bare in cold weather as is sometimes done by admiring mothers. The plump pink legs are very pretty, but the comfort and health of the child, not vanity, should control.

Shoes come with short clothes. The first coverings for the feet must be very soft. They should be moccasins of chamois leather, felt, or kid. They must be high on the ankle to be kept on securely. The first real shoes should be of soft kid, with thin leather soles and

without heels. The shape of the shoes is important, for the soft and growing feet must not be deformed. The shoes must be longer and wider than the feet. Don't let foolish vanity interfere in this matter and cause shoes to be used which are not roomy. Button shoes are not for infants. Use laced shoes, for they allow of more proper adjustment. The infant foot is fat and plump but is built on the same lines as the adult foot, therefore, let the baby's shoes be rights and lefts. To get a true idea of the natural shape of the bottom of a baby's foot, rub the sole slightly with lampblack which has been mixed to a creamy consistency with any oil, and then press it against white blotting paper. Rub off most of the lampblack from the foot, leaving just enough to secure a plain imprint. A look at this imprint will teach almost any person much concerning the kind of shoes babies and adults should wear. Pointed and otherwise wrongly shaped shoes deform the feet and in so doing lessen the walking power and affect the nerves.

Sometimes a baby suffers from cold feet shortly after beginning to wear stockings and shoes. It is easy to discover when baby cries because of cold feet by simply taking them in the hand. To remedy cold feet rub them with the hand and wrap for a short time in warm flannel. Rubbing will stimulate circulation, while simply warming at the fire or wrapping in warm flannel will bring only temporary benefit. Be sure, too, when cold feet occur, to see that the shoes are loose, not fitting

tightly but only snugly even at the heel and over the ankle.

When the child begins to walk, the stiffness of the soles of the shoes must be increased. Changing from the clothing of infancy to that of childhood depends not upon the age so much as upon the time when the baby learns to do without a diaper. Never suspend stockings by elastic garters around the leg. Always suspend them from a loose-fitting, sleeveless, high-neck waist made for the purpose.

X.

THE SECOND SUMMER.

Much is heard in regard to "getting the baby through its second summer." For years, people thought there was some mysterious force or forces to be combated during the second year of life of infants. Now the old-time mystery is solved; the trouble is not in teething as was long believed, but in wrong feeding. A normal child, properly fed and properly cared for, will pass through its second summer as free from sickness as it did its first summer. To avoid "second summer troubles," feed the infant nothing but milk well into the second year. The mother's milk if possible, otherwise modified and pasteurized milk. If potatoes, butter, candy, pickles, cake, and like foods are given to a baby

even in minute amounts before it is fully one year old, its digestion will be injured, and then look out for trouble. The digestive disturbances of the second summer, evidenced by vomiting, colic, diarrhoea, etc., as said, are, principally caused by wrong feeding. The directions for weaning have already been given, see page 43, and if closely observed, and if sensible care in giving the baby only the simplest foods are given, then the "second summer troubles" will not appear.

If baby is doing well, then at the ninth month a very little oatmeal jelly or barley jelly may be added to the milk. Directions for making these jellies will be found on page 64. At the twelfth month, in addition to the daily milk ration and cereal jellies, a small piece of well-toasted stale bread may be given twice daily between feedings. Beware of giving sugar, it makes "sour stomach." Meat broth with toasted stale bread crumbs may also be given in very small quantities. Prune pulp, made by stewing prunes without sugar until soft and passing through a sieve, may be given in small quantity. Be sure the prune pulp is fresh and does not contain sugar. A little scraped raw apple is good. At the fifteenth month, the baby should only have four feedings daily. The same foods are given as above recommended, but the amounts should be increased.

At the eighteenth month the pulp of baked apples, also baked potatoes and well cooked beets, also vegetable soups may be given. To give an infant pickles is to give it poison.

Beginning at the second year, only three meals a day of milk and carefully selected plain, unseasoned foods should be given. Be sure to keep spices, sugar and vinegar out of infant's stomach. Between meals, a slice of well-baked bread thinly spread with butter, or toasted crackers may be given. At this time, well-ripened raw fruits may be given, excepting bananas. Bananas are liable to cause irritation if given to young children. Make the evening meal light for the two-year old child. Beware of overfeeding and also beware of underfeeding. If the stools contain undigested matter, if the tongue is coated, if the breath has a bad odor, then most probably the child is overfed and the food must be decreased in quantity. Underfeeding is indicated by failure to increase in weight, by weakness and by the signs of failure to grow properly.

Infants must have plenty of pure water to drink. Water from a dug well is always suspicious, and if even slightly polluted will cause diarrhoea. It will pay to boil and cool all the water given to infants. Whole families have suffered continuous slight poisoning from drinking slightly polluted water, and whole families have acquired typhoid fever and been swept away by bad water. Cook your water.

Cooking or boiling water is a simple process. First, procure a five-gallon stoneware jar with a cover, to store the water in. See that it is perfectly clean. Now place 6 gallons of well water in a clean wash boiler or kettle, place over the fire and boil hard for ten minutes.

Pour the hot boiling water into the jar, cover and let stand. When cold, it will be found that more or less sediment has fallen into the bottom, but a few flakes of lime may be suspended in the water. Strain the top water through a freshly scalded double Canton flannel strainer in order to remove suspended flakes of lime. It's best to strain into quart fruit jars which must be perfectly clean and thoroughly scalded and have scalded tight covers. These jars of pure water may be placed in a refrigerator, ice box, cellar, or a spring house, and used as wanted.

We say again, it pays to cook the drinking water. Thousands of cases of diarrhoea, indigestion, typhoid fever and other intestinal disorders have been traced to polluted water; and thousands have so lost their lives. Don't trust a dug well or a spring. They supplied good water in early days, but the ground has become polluted by the dense population, and now we must be careful. Don't mind those people who point to themselves as evidence that polluted water does not cause sickness and death. They forget that while they did not go down, thousands of others have gone down. Not every man who goes into a battle is killed, some come out unscathed; indeed, the greater number are unscathed, yet bullets fired from guns are dangerous.

Cook all water given to the baby by all means, and cook it for the family if it is from a dug well or spring.

The State Board of Health will analyze water without charge. Simply write to the board at Indianapolis about the matter and it will be attended to.

XI.

TEETHING.

The first tooth is always an interesting event in the life of a baby, and it is popularly believed that teething may cause sickness. As teething is a natural process, it is certainly true if it occurs naturally, no illness can be produced. Sickness proceeds from unnatural, not natural conditions and processes. It is true that a mother's teeth are more given to decay during pregnancy than at any other time. This is due, not to pregnancy as is so often believed, but to mal-nutrition, which is the result of wrong feeding. In pregnancy, the mother needs to eat more bone forming materials than usual, and also to eat foods which do not disturb digestion. Pregnant women should always have their teeth put in good condition by the dentist. To neglect this is to invite illness for themselves and for their babies.

Concerning the teething of the infant, remember that it is a normal process and not a disease. Teething does not cause sickness, yet many and many a mother has allowed her baby to suffer and even to die, because she supposed that the evident distress of the helpless one was the result of a coming tooth. It is a common thing for a tooth to be cut without anyone knowing anything about it. Sometimes teething does not pro-

ceed naturally and then the doctor must be consulted. At birth a baby has smooth, firm gums of a light pink color with narrow and rather hard edges. When the teeth begin to approach the surface, the edges of the gums grow broader and more prominent, but they do not become red or inflamed unless something is wrong. This condition may exist for four or five weeks before any teeth are cut. There are twenty temporary or milk teeth, ten upper and ten lower. The lower teeth usually come first. At from 5 to 7 months the first four front teeth (central incisors) appear. Then at about 6 to 10 months four more appear, two above and two below, immediately adjoining the central incisors, and these are called the lateral incisors. Now at about 11 to 16 months, come the four first molars, two above and two below, next to the lateral incisors, but having a small space between. In this space at about 14 to 21 months two "eye teeth" and two "stomach teeth" called cuspids or canines appear.

The second set of four molars appear at about 20 to 30 months. The above order does not go off like clockwork, but more or less variation occurs. The two lower front teeth are not always the first to appear and even a healthy baby must cut its first tooth at less than 5 months of age, or may even be born with one front tooth. The baby teeth last until the child is 5 or 6 years old and are then replaced by 32 permanent teeth. Too great a delay in teething is a sign of ill health. If, at the age of one year a baby has no teeth, then it is sick, no matter

how plump and well nourished it may be. When at the age of 5 or 6 years the permanent teeth push forward in the jaw, the roots of the milk teeth become partially or entirely absorbed and they loosen and fall out in much the same order in which they came in. Sometimes they do not loosen and fall out as soon as they should, and as a result the incoming second teeth are pushed out of position and are ugly and sometimes painful conditions result. If babies are kindly and rightly treated, they will be taken to the dentist, who will preserve their milk teeth as long as possible and see to it that no deformity of the mouth occurs when the second teeth come. At five years of age, take the child to the dentist and have him look carefully after the so-called "six-year molars." Much trouble frequently comes from neglect of the six-year molars. These molars are very liable to decay and if they do and are lost, deformity of the mouth is sure to result.

Look after the milk teeth carefully. They should be cleansed every morning when the daily bath is given. A small pledget of cotton attached to a little stick should be used. With this wash the teeth front and back' using a very little tooth powder. As the child grows older, a small, soft tooth brush should be used. The teeth should be examined by a dentist every six months after the age of two years, and sometimes earlier and oftener.

The teeth are the first organs concerned with digestion and nutrition. A great force for the child's success and

happiness in life lies in good teeth. To be well nourished depends upon good food, well masticated. Decayed teeth furnish poisons. The decayed part is poisonous. True, only slightly so, but a child with rotten teeth, constantly swallowing these poisons cannot be well and strong. It is cruel indeed for parents to neglect their children's teeth. If the mother's teeth are decayed her health must suffer. It certainly is foolish to undermine one's health by neglecting one's teeth.

Be sure the name and date of birth of your baby is registered with your health officer.

A physician who fails to report a birth he attends, forfeits his legal right for pay for his services.

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