

UNITED STATES DEPARTMENT OF LABOR

JAMES J. DAVIS, Secretary

CHILDREN'S BUREAU

GRACE ABBOTT, Chief

# PRENATAL CARE



Bureau Publication No. 4

Revised July, 1930



UNITED STATES  
GOVERNMENT PRINTING OFFICE  
WASHINGTON: 1930

## SEE THAT THE BIRTH OF YOUR BABY IS REGISTERED

It is of the utmost importance to have the birth of your baby promptly and properly registered. This should be done within 36 hours after the baby's birth.

In most States the physician, midwife, nurse, or other attendant is required by law to report the birth to the local registrar, who will see that the date of birth and the child's name, together with other related facts, are made matters of public record. Birth registration is necessary in order to prove, among other things, the child's age and citizenship, his right to go to school, his right to go to work, to inherit property, to marry, to hold office, to obtain passports for foreign travel, and to prove his mother's right to a pension, if she is a widow. Parents should make sure that this protection of fundamental rights is assured to every child born to them. If there is any doubt about whether the birth of a child has been registered, an inquiry may be sent to the State board of health at the State capital, where the records are filed. If the birth has not been reported the board will furnish a blank to be filled out and returned. It is suggested that a memorandum be made below of certain facts recorded in the birth certificate.

Baby's name .....

Father's name .....

Mother's maiden name .....

Sex of baby .....

If twin or triplet, give number in order of birth.....

Date of baby's birth.....  
(Month) (Day) (Year)

Birthplace:

City, town, or village.....

County.....

State.....

Attending physician:

Name.....

Address.....

Baby's registered number.....

## CONTENTS

---

	Page
Letter of transmittal.....	v
Signs of pregnancy.....	1
Duration of pregnancy.....	2
Engaging the doctor and the nurse.....	3
Importance of physical examination.....	3
Importance of medical supervision throughout pregnancy.....	4
Selection of a nurse.....	5
The hygiene of pregnancy.....	6
Diet.....	6
Exercise and rest.....	13
Clothing.....	15
Care of the bowels.....	17
Care of the kidneys.....	17
Baths and care of the skin.....	18
Care of the teeth.....	18
Care of the breasts.....	19
Intercourse during pregnancy.....	20
Mental hygiene.....	20
Home or hospital for the delivery.....	22
Supplies and equipment.....	23
The delivery room and its equipment.....	23
Supplies for the mother.....	24
Supplies for the baby.....	26
Common disorders of pregnancy.....	29
Nausea and vomiting.....	29
Heartburn.....	29
Varicose veins and piles.....	29
Cramps in the legs.....	30
Relaxation of the pelvic joints.....	30
Leucorrhœa.....	30
Complications of pregnancy.....	31
Toxemia.....	31
Miscarriage.....	32
Bleeding in pregnancy.....	34
Birth of the baby.....	35
Precautions that must be taken.....	35
Labor.....	35
Emergencies.....	38
First care of the newborn.....	40
Nitrate of silver for the baby's eyes.....	40
Bathing the baby.....	41
The baby's stools.....	41
Lying-in period.....	42

	Page
Nursing the baby-----	43
Advantages of breast feeding over artificial feeding-----	43
Colostrum-----	43
Position for nursing-----	44
Feeding schedule-----	44
Care of the breasts-----	44
The baby's progress-----	45
Hygiene of the nursing mother-----	47
A day's food plan for the nursing mother-----	47
Healthful living especially important for nursing mothers-----	48
Temporary decrease in milk supply no reason for weaning-----	49
Premature delivery and the care of the premature baby-----	50
Keeping the baby at normal temperature-----	51
Protecting the baby from infections-----	54
Feeding the baby-----	55
Sun baths-----	57
The baby's later development-----	57
Selected books of interest to mothers-----	58
Glossary-----	59
Index-----	63

## LETTER OF TRANSMITTAL

---

U. S. DEPARTMENT OF LABOR,  
CHILDREN'S BUREAU,  
*Washington, September 25, 1930.*

SIR: There is transmitted herewith a complete revision of the bulletin Prenatal Care, originally published in 1913 as the first of the Children's Bureau series on the care of children.

This revision is the work of Dr. Robert L. De Normandie, chairman of the bureau's advisory committee of obstetricians, in cooperation with the members of the committee and with Dr. Blanche M. Haines, director of the maternity and infant hygiene division of the bureau. The members of the committee are: Dr. Robert L. De Normandie, instructor in obstetrics, Harvard Medical School, chairman; Dr. Fred L. Adair, professor of obstetrics and gynecology, University of Chicago; Dr. Rudolph W. Holmes, professor of obstetrics, Northwestern University Medical School, Chicago; Dr. Ralph W. Lobenstine, chairman medical advisory board, Maternity Center Association, New York; Dr. Frank W. Lynch, professor of obstetrics and gynecology, University of California Medical School; Dr. James R. McCord, professor of obstetrics and gynecology, Emory University School of Medicine, Atlanta; Dr. C. Jeff Miller, professor of gynecology, Tulane University of Louisiana School of Medicine, New Orleans; Dr. Otto H. Schwarz, professor of obstetrics and gynecology, Washington University School of Medicine, St. Louis; Dr. Alice N. Pickett, assistant professor of obstetrics, University of Louisville School of Medicine, Louisville. Assistance was also received from Dr. E. V. McCollum, professor of biochemistry, School of Hygiene and Public Health, Johns Hopkins University, who read the manuscript and made valuable suggestions on the diet section.

Respectfully submitted.

GRACE ABBOTT, *Chief.*

HON. JAMES J. DAVIS,  
*Secretary of Labor.*

## PRENATAL CARE

---

Prenatal care is that part of maternal care which has as its object the complete supervision of the pregnant woman in order to preserve the happiness, health, and life of the mother and child. What this prenatal care should be is the subject matter of this book.

More important than anything else in planning the best possible care for mother and child is that the mother should go to a doctor for examination and advice just as soon as she thinks she is pregnant and should remain under his constant care until the baby is born. This book is not meant to take the place of this medical care. It is written in the hope that it will be helpful to those expectant mothers for whom medical aid is not at hand, and to those doctors who may wish their patients to have it as a supplement to their instructions.

### SIGNS OF PREGNANCY

Early signs that a pregnancy is probably present are these:

1. Missing a monthly period.
2. Changes in the breasts.
3. Nausea or vomiting—"morning sickness."
4. Desire to pass urine more often than usual.

The first is the most significant. The missing of the monthly, or menstrual, period is especially suggestive of pregnancy in the case of a woman who has always had regular, normal monthly periods, and has had a recent opportunity of becoming pregnant. The missing of two monthly periods, one after the other, makes pregnancy more probable.

At the time of the first skipped period the breasts often get a little larger. They may also be tender to the touch and may have a stinging or prickling feeling. If the breasts have never felt like this before during the monthly period, the feeling is probably another sign that pregnancy exists.

A feeling of nausea, or sickness of the stomach, sometimes with vomiting, is a very common early sign of pregnancy. Most women who are troubled with this nausea feel it in the morning, and it is commonly called "morning sickness." Some women feel it in the

late afternoon or early evening. And some women do not feel it at all.

The desire to pass urine more often than usual is very common early in pregnancy. Women when pregnant sometimes have to get up during the night to pass urine who before had been able to sleep right through the night.

When all four of these signs appear, the woman is probably pregnant. A doctor can give a more definite opinion, however, after he has made an examination by the vagina, which is the lower part of the birth canal. This examination should always be made early in pregnancy, as it enables the doctor to make sure that the pelvic organs—those parts of the body directly connected with child-bearing—are in good condition and position.

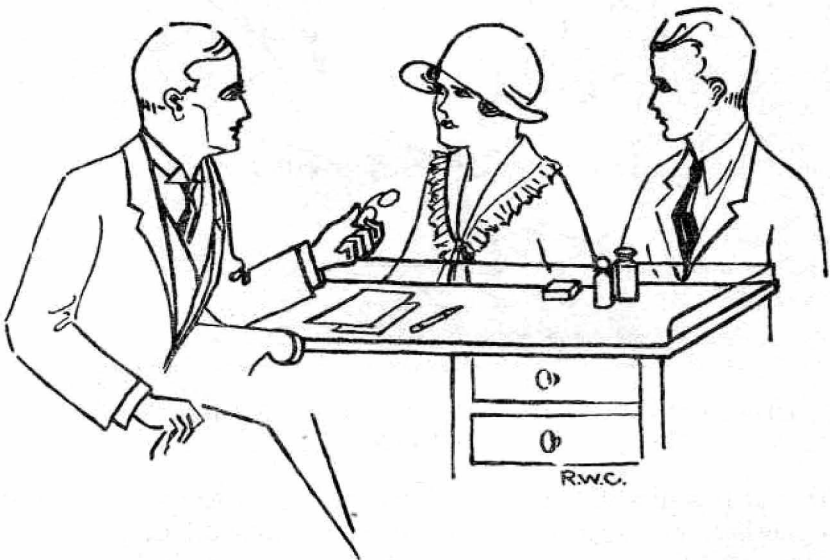
At about four and a half months the mother can usually "feel life"—that is, feel the baby move in the uterus, or womb, the organ in which it develops. This movement, which is also called "the quickening," is a fairly certain sign of pregnancy. The movement of gas in the intestines, however, may cause a feeling so similar that a woman may mistake it for the quickening. The positive signs that a woman is pregnant are feeling the baby move and hearing the baby's heart beat. These can be determined by a doctor's examination about the fifth month or sometimes earlier.

### DURATION OF PREGNANCY

The probable length of pregnancy is about 40 weeks, or 280 days. If you count 30 days to the month, the 280 days come to just a little more than the 9 months commonly spoken of as the period of pregnancy. You may determine the probable date of delivery by counting back from the beginning of the last monthly period 3 calendar months and adding 7 days. For example, if the last monthly period began on October 30, counting back 3 months to July 30 and adding 7 days gives August 6 as the estimated date of confinement. Many babies are born a few days earlier or a few days later than the expected date, some as much as 2 or 3 weeks later. In these cases the usual explanation is that the pregnancy began in relation to the period that was missed and not from the last period that appeared. Therefore, if the delivery does not come when it is expected, there is no reason, in by far the majority of cases, to think that anything is abnormal; it usually means that the patient did not become pregnant as early as it was thought.

## ENGAGING THE DOCTOR AND THE NURSE

As soon as a woman thinks she may be pregnant she should choose her doctor and go to him at once for a complete physical examination and for advice as to the hygiene of pregnancy. At this first visit the doctor will ask her many questions about her medical history—what diseases and operations she has had, if any, with special detail for any involving the abdomen or the pelvis; whether her monthly periods have always been regular and normal; whether she has been pregnant before, and, if so, when her pregnancy and labor occurred



Talking it over with the doctor at the first visit.

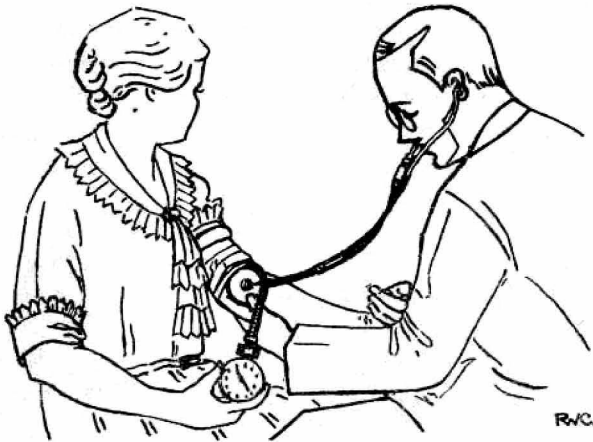
and what they were like. He will also ask her the date and character of her last monthly period, for from this he will estimate the date of delivery.

### IMPORTANCE OF PHYSICAL EXAMINATION

A complete physical examination will include—besides an external abdominal and an internal pelvic examination and measurements of the pelvis, or bony framework—an examination of the teeth, tonsils, throat, thyroid, heart, lungs, kidneys, and digestive organs, taking of blood pressure and weight, and testing of the blood. This examination is most important for the mother's well-being, for it enables the doctor to find out whether her organs are in good condi-



tion and to start treatment at once if anything is wrong. Moreover, if the physician knows his patient's condition early in pregnancy, he will be able to discover slight changes at later examinations if they appear and interpret them intelligently. Pregnancy and labor are normal functions of the body and do not normally interfere with health; in fact, many women are in better health after pregnancy than before. However, pregnancy must be carefully and constantly watched, for it may become abnormal very quickly and will then require special treatment to insure a happy outcome for mother and child.



The doctor taking the mother's blood pressure  
[Many doctors take the blood pressure with the patient lying down.]

### IMPORTANCE OF MEDICAL SUPERVISION THROUGHOUT PREGNANCY

It is at this first visit that the doctor will go over with the expectant mother the hygiene of pregnancy, or prenatal care. He will explain to her why she should go at once to a good dentist. The doctor will tell her when he himself wishes to see her—at least once a month during the first six months, every two weeks or oftener in the next two months, and every week in the last month. He will explain to her what he will do at each visit—look into her general condition, take her blood pressure, analyze her urine, and carefully weigh her.

The plan that will be followed should be carefully talked over by the doctor and the expectant mother, and she should feel free to ask about its cost. If she can not afford to go to a private physician, she should go at once to a prenatal center or clinic. She should report to the clinic as required and should follow absolutely the directions given to her at the clinic just as she would the instructions of a private physician.

If a woman finds it impossible to see a doctor as often as has been advised, it is highly important that she should be in close touch with a district or public-health nurse who will observe her and report any suspicious symptoms to the doctor in charge.

#### SELECTION OF A NURSE

If she has decided to have the baby at home, she will want a nurse; and the doctor can probably suggest one, for most doctors have on file the names of good nurses that have worked with them. A private nurse should be engaged some time before the expected date of delivery; and as this date is uncertain it is well to have a definite understanding when her pay is to begin. The nurse should visit the home a few weeks before the baby is expected and make herself familiar with the rooms and the arrangements for the birth. She will be needed for a longer or a shorter period in different cases; but as it is important that the mother should rest and be relieved of strain for the first weeks after childbirth, it is worth stretching a point financially to keep the nurse as long as she is needed—two weeks at least and three or four weeks in some cases. In many places, particularly in large cities, a nurse from the visiting-nurse association will come as needed and is paid only a small fee for each visit. If the confinement is a normal one and there is some one to do the housework, the needs of mother and baby may be provided for in this way very well and much more cheaply than when a trained nurse is employed for the entire time. Other forms of nursing service may be had in different communities; some are good and some are not so good. But the best nursing that she can have is what the expectant mother should plan for.

## THE HYGIENE OF PREGNANCY

Simple rules for keeping well during pregnancy are given by the doctor at the first visit of the expectant mother. The details that he would tell her about if he had all the time that he would like are set down here for her to read and refer to. She must remember that she is like an athlete in training for a race or a swimming contest, who lives according to rules worked out with the test that he will have to meet in mind. Her test is her confinement, and the goal is health for the baby and herself.

### DIET

During the pregnancy nature is building a new person. The mother supplies the building materials in the form of nourishment which passes through the placenta (afterbirth) to the growing baby. Therefore her diet must have in it the foods which contain the proper kinds of building materials. A woman may live in fair health on a diet upon which she can not nourish an unborn baby and keep her health. If the baby can not get what he needs from the mother's food, he will take it from her body. This means that the mother will be undernourished and, perhaps, her teeth will suffer. Neither of these things needs to happen if she eats properly and was in good health at the time of conception.

#### ESSENTIAL ELEMENTS IN THE DIET

The diet at all times should contain sufficient amounts of tissue-building substances (proteins), starches (carbohydrates), fats, mineral matter, and the essential food elements known as vitamins. During pregnancy the diet should contain an extra amount of minerals and vitamins. The foods that are needed for building bones and other body tissues are milk, whole-grain cereals, eggs, fruit, and green vegetables like spinach and lettuce. These essential growth foods, which safeguard the bones and teeth, brain, and muscles of the baby, can be increased in the diet without necessarily increasing the total amount of food taken daily. Many persons in this country live mainly on a faulty diet of bread, meat, potatoes, and sugar. Milk, green vegetables, and fruit are needed to supply the defects of such a diet, which is especially poor in vitamins and minerals, the food elements in which the diet of the expectant mother should be especially rich.

**THE VALUE OF MILK**

If plenty of green leafy vegetables are eaten daily, a quart of milk a day (including what is used in cooking and on cereal) will give the mother enough calcium (lime) to insure her own bones and teeth against injury in supplying the baby's needs. It seems practically impossible for the pregnant woman to get enough calcium in her diet unless she takes daily at least a pint of milk or its equivalent. Milk is superior to any other single food in its combination of protein value, abundance of calcium and variety of other minerals, and richness in vitamins. The use of milk in cooking cereals, soups, white sauce, custards, puddings, and cocoa helps to put the needed quart in the daily food. Skimmed milk, buttermilk, or cottage cheese made with rennet may be used instead of whole milk if butter or cream is used. When good fresh milk is not available, milk powder or evaporated milk may be taken. Some women who dislike milk may find mixing milk powder with other foods the easiest way in which to obtain the required amount.

Butter (not butter substitute) or cream served on food adds greatly to the vitamin as well as the fuel value of the diet.

**WHOLE GRAINS**

Whole grains have a high mineral and vitamin content. For this reason, and also because they help to regulate the bowels, it is well for the pregnant woman to have at least part of her breads and cereals made of whole grains.

**GREEN LEAFY VEGETABLES**

The green leafy vegetables, such as spinach, chard, lettuce, endive, cress, cabbage, kale, collards, cauliflower, Brussels sprouts, string beans, dandelion greens, turnip tops, and beet tops, have a greater value in the diet than tubers (such as potatoes), or root vegetables (such as carrots), or legumes (such as peas and beans).

**SAMPLE MENUS**

If all expectant mothers are divided into three groups according to their weight at the beginning of pregnancy, they may be called underweight, average, and overweight. Their diets should vary in fuel value, which is measured by a unit called calories, from 4,000 calories a day for the underweight woman to 2,000 calories for the overweight woman. What may be called the first 1,000 calories should be the same for all, however, as they constitute the daily dietary essentials for growth: One quart of milk, one raw-vegetable

salad, one egg, one-half grapefruit or an orange or tomato, one cooked green leafy vegetable, and one serving of cereal or bread. If meat or fish, potato, sugar, fruit dessert, and bread and butter are added to these essential foods, the diet will be sufficient in calories and adequate in the growth essentials for the average expectant mother. A sample day's menu for the expectant mother of average



Essential foods for the expectant mother

weight who is not doing especially hard work may be given as follows:

**A SAMPLE DAY'S MENU FOR THE AVERAGE PREGNANT WOMAN**

[The "dietary essentials" and 2,000 calories more]

*Breakfast*

- Raw fruit: One-half grapefruit or whole orange.
- Cereal: Oatmeal, or any whole-grain cereal, with whole milk and sugar.
- Bread and butter: One slice of toast with one pat of butter.
- Milk: One cup of cocoa made with whole milk.

*10 a. m. luncheon*

- Milk: One glass of whole milk, with or without egg.

*Dinner*

Meat, fish, or egg: Two beef balls, or scrambled eggs.  
 Potato: Baked potato with one pat of butter.  
 Green vegetable: Creamed spinach.  
 Bread and butter: One slice of bread with one pat of butter.  
 Dessert: Baked custard made with whole milk.

*Supper or luncheon*

Soup or other hot dish (made with whole milk):  
 Creamed pea soup, or macaroni, or rice and cheese.  
 Salad: Raw-vegetable and nut salad on lettuce with mayonnaise dressing.  
 Bread and butter: Two date bran muffins with one and one-half pats of butter.  
 Cooked fruit: Baked apple with whole milk.

The pregnant woman of average weight who is doing hard work and the underweight pregnant woman will require more food—a total of 4,000 calories. The following may be suggested as a sample day's menu for either of these women:

**A SAMPLE DAY'S MENU FOR THE UNDERWEIGHT PREGNANT WOMAN**

[The "dietary essentials" and 3,000 calories more]

*Breakfast*

Raw fruit: One-half grapefruit or whole orange.  
 Cereal: Oatmeal, or any whole-grain cereal, with whole milk and sugar.  
 Bread and butter: Two slices of toast with two pats of butter.  
 Milk: One cup of cocoa made with whole milk.

*10 a. m. luncheon*

Milk: One glass of whole milk, with or without egg.

*Dinner*

Meat, fish, or egg: Two beef balls, or mutton stew.  
 Potatoes: Two baked potatoes with two pats of butter.  
 Green vegetable: Creamed spinach.  
 Bread and butter: Two slices of bread with one pat of butter.  
 Dessert: Baked custard made with whole milk.  
 One cup of tea or coffee with cream and sugar.

*Afternoon luncheon*

Fruit or milk: One raw apple or other fresh fruit, or glass of milk.

*Supper or luncheon*

Soup or other hot dish (made with whole milk):

    Creamed pea soup, or rice and cheese.

Salad: Raw-vegetable and nut salad on lettuce with mayonnaise dressing.

Bread and butter: Two date bran muffins with two pats of butter.

Cooked fruit: Baked apple with top milk or cream.

The overweight woman must get her "dietary essentials," but she will need less of additional foods, so that her total must not exceed 2,000 calories. She must reduce her use of sugar, potato, bread, and cereal. The following sample day's menu shows how she can take the dietary essentials and some additional foods without necessarily having a fattening diet:

*A SAMPLE DAY'S MENU FOR THE OVERWEIGHT PREGNANT WOMAN*

[The "dietary essentials" and 1,000 calories more]

*Breakfast*

Raw fruit: One-half grapefruit or whole orange.

Bread and butter: One slice of toast with one pat of butter.

Milk: One cup of cocoa made with whole milk.

*10 a. m. luncheon*

Milk: One glass of whole milk.

*Dinner*

Meat, fish, or egg: One beef ball, or small serving of fish.

Green vegetable: Creamed spinach.

Bread and butter: One slice of bread with one pat of butter.

Dessert: Baked custard made with whole milk.

*Supper or luncheon*

Salad: Raw-vegetable and nut salad on lettuce.

Bread and butter: Two date bran muffins with one-half pat of butter.

Cooked fruit: Baked apple with whole milk.

Milk: One glass of whole milk.

*A LAXATIVE DIET*

The mother's body not only must supply food for the baby's development but must carry off the baby's waste products as well as her own. The accumulation of waste products in the system is the cause of various minor ailments in pregnancy and of some serious ones. Since liquids help the bowels, kidneys, and skin to throw off these waste products, and thus do away with some of the sources

of danger at this time, it is most important that liquids form a large part of the diet of every pregnant woman. The proper amount to be taken varies, but it should usually be about 3 quarts. Much of this should be water, of which the average expectant mother should drink 8 glasses a day. If she does this, the milk, cocoa, soup, and other liquids included in the diet will supply the remaining quantity. If one is accustomed to the daily use of tea and coffee, it is unnecessary to stop their use altogether, but they should be used in moderation.

A laxative diet will include fresh fruits. One kind or another can be had at all times of the year in most parts of the country. Cooked fruits, such as prunes, figs, apples, peaches, and apricots, may be freely eaten, but it is well to have fresh fruit, uncooked, at least once a day. Vegetables, especially the green ones, and whole-grain breads and cereals also have a laxative effect.

In addition to drinking liquids and eating laxative foods it is well to limit the amount taken of the foods that give the kidneys much waste to dispose of—meat and fish. Meat should be taken only once a day, and during the last two months of pregnancy less often. Eggs or cottage cheese may be substituted for meat several times a week.

#### IODINE

A small amount of iodine is necessary for normal growth and health. If this is not provided, the thyroid may enlarge and form a goiter. In certain regions, especially around the Great Lakes, in the Northwest, and in some of the eastern mountainous regions the water and soil have lost their iodine, so that foods grown in these localities may not provide the necessary amount. At least in these regions, throughout pregnancy, iodine should be given to prevent goiter in the baby as well as in the mother. Iodized table salt may fill this need. Its use or the taking of the iodine itself should be directed by a physician or the local health authorities.

#### COD-LIVER OIL<sup>1</sup>

Cod-liver oil is excellent in many instances for the mother to take, not only during pregnancy but during the nursing period. It is of special value in climates without much sunshine and in the last six months of pregnancy when the baby's teeth are being formed. The amounts taken, however, should be regulated by the doctor.

---

<sup>1</sup> Viosterol is sometimes ordered by the doctor instead of cod-liver oil; it should never be taken except under a doctor's direction.



**AVOIDANCE OF TOO MUCH SALT**

The amount of salt commonly used in cooking is sufficient for the expectant mother. She should not add salt at the table.

**SUITING THE DIET TO THE DIGESTION**

No matter how generally suitable the diet, the mother and the baby are not getting its full benefit unless the food is properly digested. A healthful, happy life, with plenty of outdoor sunshine, enables the mother to use her food to the best advantage. She may find four or five small meals better than three large ones, especially in early pregnancy if she is troubled with nausea. Eating too much, eating in a hurry, or eating at irregular hours is harmful.

Every woman must realize that any food or drink which she does not digest should be avoided, though she should not omit from her diet any of the foods called the "dietary essentials" unless the doctor so advises. She may find certain meats and vegetables easier to digest than others, however, and it would be wise to leave out any that constantly trouble her. Early in pregnancy, if she is feeling nauseated, she may find that fats increase her discomfort; in this case she should cut down their amount at least for the time being. Fried foods or highly seasoned dishes may upset her stomach, and it is well during this period at least to prepare the foods in other ways.

**AVOIDANCE OF CHOCOLATES AND RICH DESSERTS**

Chocolates and rich desserts should be excluded from the diet to a great extent, especially if the expectant mother is gaining weight rapidly.

**DANGER OF OVEREATING**

The pregnant woman may eat freely but should at no time overeat. Overeating during this period is dangerous. The woman of average weight should not gain more than 20 pounds during pregnancy. The overweight woman will be better for gaining less, or not at all. Excessive increase in weight can always be stopped by the doctor through careful attention to details of the diet. A sudden marked gain in weight may be a danger signal and should be reported at once to the doctor.

**CRAVINGS FOR INDIVIDUAL FOODS**

Now and then an expectant mother wants to eat nothing except one or two articles of food. Such a craving should not be indulged, because the diet would be very unbalanced and inadequate. But

there is no reason why a craving for a particular food should not be satisfied in moderation if a balanced diet is being followed and the food desired is not harmful.

#### TOBACCO AND ALCOHOLIC DRINKS

The use of tobacco in any form should be greatly restricted, and alcoholic drinks should be avoided entirely.

#### EXERCISE AND REST

Daily exercise is important for health. The expectant mother should spend at least two hours each day (more if possible) in the open air and sunshine, and she should be getting some exercise during at least part of this time out of doors unless necessary household or other tasks have already tired her.

Violent exercise and excessive hard work should be avoided during pregnancy. Avoid reaching and lifting or pushing heavy things around. Most husbands will be glad to take over the heavier tasks during this time if they understand that this kind of work may injure the mother and the baby.

Less exercise should be taken at the time the monthly period ordinarily would be due, as there is more danger of miscarriage at this time. Marking these dates on a calendar will help the mother to plan a quiet life during these times.

#### WALKING AND OTHER OUTDOOR EXERCISE

A woman who has been used to an active outdoor life will probably be able to continue active exercise, but she should avoid very tiring and dangerous sports. If the mother has been used to a quiet indoor life, she should plan to take regular exercise and to take it out of doors, but she will find it wise to begin it very moderately. In pleasant weather walking is a valuable exercise. The length of the walk will depend on how soon the mother tires. It may be 2 miles or more if she is accustomed to walking; but if she finds that she is tired after half a mile, she should not try to go so far the next time. Easy gardening work is a good and a pleasant form of exercise; but it should be not a task that must be finished, but a diversion that may be stopped at will. If the day is too cold or too stormy for the mother to go out, she should take a walk on the porch or at least in a room with the windows wide open.

There is nothing that takes the place of outdoor life. Sunshine, besides being good for the general health, has a special value for the pregnant woman, because it enables the baby to make use of the

calcium (or lime) in the food for building bones and teeth. Pleasant open-air occupations strengthen the muscles, stimulate the sweat glands and other organs that get rid of the body's wastes, benefit the circulation, and help digestion and assimilation of food. The sight and sounds of the open, too, often take the pressure off overworked nerves.

#### AVOIDANCE OF STRENUOUS SPORTS

There is some tendency to-day, with increased interest in sports for women, to forget that a pregnant woman, though needing exercise, must build up her strength, not tear it down. Some sports that she may have been used to are too strenuous for her when pregnant and may cause miscarriage. Golf may be indulged in moderately during the first half of pregnancy. Bathing and swimming also are permissible during the first half if the water is not too cold and if there is no chilling or other unfavorable effect; diving and stunt swimming should not be permitted. Horseback riding and tennis are to be forbidden. Motoring over rough roads or for long distances should be avoided if possible. Driving an automobile involves an additional risk and should be done moderately and cautiously. A long railroad trip or a long sea trip may cause a miscarriage or a premature delivery; journeys should be avoided unless absolutely necessary.

Exercise should be taken in some form throughout pregnancy under the direction of the physician. It should never be carried to the point of fatigue.

#### IMPORTANCE OF FRESH AIR

Fresh air, day and night, is required by all persons if they are to be healthy. None needs it more than the expectant mother, who breathes in from the air the oxygen for herself and the baby. She should sleep with the windows open or out of doors at all seasons of the year. In the living rooms, too, the air should be kept fresh, even in cold weather.

#### ADEQUATE SLEEP AND REST

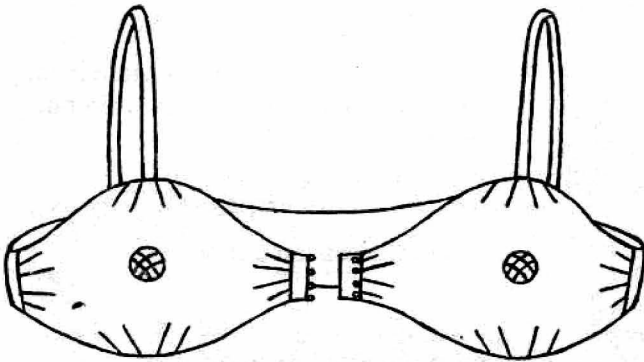
Every pregnant woman should have at least eight hours' sleep at night and an hour's nap or rest lying down during the day. Many women may think that they have no time for this rest period; but it is essential to health during pregnancy, and they will find that it enables them to do their work to better advantage.



Abdominal binder

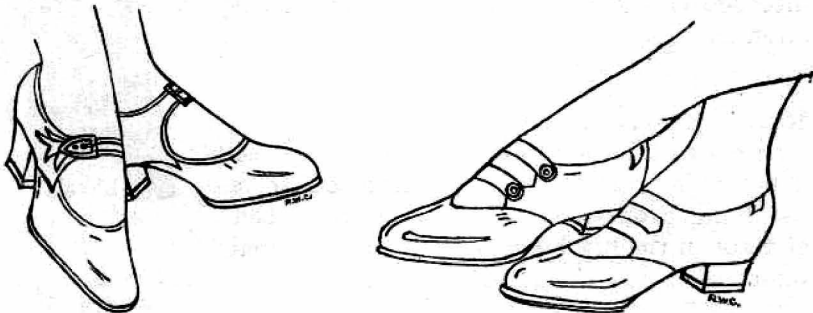
**CLOTHING**

The clothing worn by the expectant mother should be loose enough not to interfere with the breathing, the circulation, or the increase in size of the baby. It should hang from the shoulders,



Brassière that supports the breasts

not from a waistband, and should be as light in weight as it can be and still be warm enough in winter. She should wear sufficient clothing in cold weather to keep her comfortably warm, for it is



Two styles of suitable shoes with low, broad heels

important that she avoid getting chilled. The amount needed to make her comfortable will vary with the individual and will also depend upon the climate, the season, and the extent to which the

house is heated in cold weather. In an evenly warm house or apartment much lighter clothing may be worn with comfort and safety.



Maternity house dress

#### DRESSES

Dresses for the pregnant woman can and should be attractive as well as practical. The present-day dresses hanging from the shoulders can be readily adapted by means of tucks, pleats, or buttons and loops to allow for growth about the waist and hips. The dress should be worn with a slip and a one-piece undergarment that will vary in weight with the season.

#### BRASSIÈRES

A brassière or breast binder may be worn that will support the breasts but not flatten them. It should be loose over the nipples. A good model is shown on page 15.

#### CORSETS OR ABDOMINAL SUPPORTS

A maternity corset or an abdominal support relieves back strain and usually makes the mother more comfortable. An abdominal support may be made of two thicknesses of muslin, with darts as needed to make it fit the abdomen. (See illustration on page 15.)

#### GARTERS

Round garters or any tight bands should not be worn, for they interfere with the circulation. Side garters may be attached to a waist hung from the shoulders, or to a belt that rests on the hip bones, or to the abdominal support.

#### SHOES

Shoes should be comfortably large and have low, broad heels. High heels should not be worn. They are dangerous not only because they may cause tripping and falling but because they throw the body out of the natural position and put undue strain on the muscles of the back.



Maternity street dress

### CARE OF THE BOWELS

The body casts off waste material through the bowels and the kidneys, the lungs, and the skin. These are called the excretory organs. They have extra work to do during pregnancy and should be kept in the best possible condition to do it.

Many women suffer more or less from constipation during pregnancy. There is a tendency to constipation from the pressure of the enlarging uterus on the intestines; but this tendency can usually be overcome by proper health habits, drinking plenty of liquids, eating laxative foods, and taking regular exercise. Throughout pregnancy it is most important that the bowels should move freely at least once a day. Try to form the habit of emptying them, or trying to empty them, at the same hour each day. This should be done without fail, whether the attempt is always successful or not. Drinking plenty of water is important; a glassful just after getting up and just before going to bed may help. A laxative diet (see p. 10) will include considerable fruit, raw or cooked; plenty of fresh vegetables, especially the green ones, eaten with olive oil; and the dark-colored breads and cereals. The roughage in these "whole-grain" breads and cereals increases the activity of the intestines. Too much of it may cause colicky pain in the abdomen; and if this occurs, the amount of these foods should be reduced.

If, in spite of all these health measures, the expectant mother is still troubled with constipation, she should see her doctor. No medicines or enemas should be taken except upon his advice.

### CARE OF THE KIDNEYS

In order to know whether the kidneys are performing their functions normally, the expectant mother should measure the quantity of urine passed in 24 hours and should take a specimen of it to the doctor for examination. If there is less than 3 pints, she is not drinking enough fluid; if the color is dark amber, she is probably not drinking enough water. Certain more serious conditions of the kidneys can be found only by chemical tests. That is why it is important for the doctor to make these tests regularly.

The method of collecting a 24-hour specimen of urine is as follows: Use a perfectly clean and scalded vessel or jar with a cover. Put in a teaspoonful of boric-acid crystals to keep the urine from decomposing. Beginning at some convenient hour in the morning, say 8 o'clock, empty the bladder and throw the urine away. Thereafter empty the bladder into the jar each time until the next morning at

the same hour. Keep the jar tightly covered and in a cool place. Measure the amount of urine passed and, after shaking it well, fill a perfectly clean 6-ounce bottle, cork tightly, label with the name, date, and quantity passed in 24 hours, and take it at once to the doctor.

#### BATHS AND CARE OF THE SKIN

The skin should be kept in good condition at all times and especially during pregnancy, when the work of the excretory organs, of which the skin is an important one, is increased. In order to keep the skin in health, the entire body should be washed every day. A brisk rubbing of the body with a rough towel after the bath stimulates the circulation. The bath may be a sponge, shower, or tub bath, except that the tub bath is not safe near the end of pregnancy. A morning bath in cool water is a more effective stimulant, but the warm bath is necessary for the thorough cleansing of the skin. Warm baths, with soap, should therefore be taken two or three times a week, even if the cool bath is taken regularly in the morning.

A pregnant woman should never take a very hot bath. If she has been used to the daily cold bath, there is no reason why she should give it up at this time, provided she feels a healthy glow afterward; but she may find it advisable to have the water cool, rather than cold.

Taking a tub bath when labor begins is dangerous and should never be done. Germs in the water may enter the birth canal and cause blood poisoning. There is some slight danger of such infection even before labor begins.

#### CARE OF THE TEETH

A mother's responsibility for the teeth of her baby begins long before he is born. The baby's teeth begin to form as early as the third month of pregnancy. All of the first set of 20 teeth are in the jaw at birth, and the quality of these teeth as well as the formation of the jaw, therefore, is determined largely in the prenatal period. Later, if the baby is fortunate enough to be nursed at the breast, he will be preparing the way for well-spaced regular teeth. Nursing tends to strengthen the muscles of the jaw and to widen the dental arch. The substances needed to build teeth are mineral salts (lime and phosphorus) and certain vitamins. The baby will take them from his mother's body if he does not get them through her food; but the milk, eggs, fresh vegetables, fruits, and whole grains that the expectant mother is taking are the very foods that supply these materials for the teeth. Outdoor sunshine and cod-liver oil help to utilize these food materials for the baby's growing teeth and bones.

The old saying, "For every child a tooth," shows only that in the past expectant mothers did not have the proper food. For it is true that in case of food shortage or a poor selection of food the mother suffers first. But if she is on an adequate diet and is under the care of a good dentist, the old saying need no longer be true.

It is true, however, that during pregnancy the mother's teeth will be especially affected by any deficiency in diet and are thus peculiarly susceptible to decay during and just after this period. For these reasons it is essential for every woman, as soon as she knows that she is pregnant, to go to a good dentist and have such repairs made to



Sunshine and fresh air

her teeth as are needed and to receive instruction in mouth hygiene. In addition to this, the teeth should be brushed after each meal and the mouth well rinsed. This brushing should be from the gums toward the biting edge and not crosswise. Excellent washes for the mouth are made with a teaspoonful of milk of magnesia or a tablespoonful of limewater, or half a teaspoonful of baking soda mixed with a glassful of water.

#### CARE OF THE BREASTS

It should be the hope, as it is the first duty, of every mother to nurse her baby. Breast milk is the natural food for the baby. It is



easily assimilated, cheap, clean, and convenient. Breast feeding gives a baby a much better chance for life and for steady, normal growth.

In preparation for this function, all the healthful measures already set forth will play an important part. The mother can help further in this preparation by seeing to it that the breasts themselves are in the best possible condition. By wearing loose clothing she allows them plenty of room to develop; a tight brassière may do harm by preventing free circulation. The breasts and nipples may require special attention. The doctor will examine them to see if special treatment is necessary. If a little dried scale appears on the nipples, do not pick it off. Rub a little cold-cream ointment over them carefully at night to soften the crust, which will probably be washed away by the bath. If the cold cream does not soften the scale, ask the doctor what to do.

#### INTERCOURSE DURING PREGNANCY

Intercourse during the early months of pregnancy is a frequent cause of miscarriage. The danger is increased if the intercourse takes place at what would be a monthly period were the woman not pregnant. During the last three months intercourse should be forbidden, because it may bring on labor ahead of time. If intercourse takes place shortly before labor begins, blood poisoning (septicemia) may follow with very serious results. It is, therefore, advisable to limit the frequency of intercourse during the first six months of pregnancy and to stop it entirely during the last three. Intercourse should also be avoided for the first six weeks after delivery.

#### MENTAL HYGIENE

How the expectant mother can keep her body in proper condition to produce a healthy baby has been pointed out in the foregoing sections. She needs also to keep her mind healthy. Confidence, contentment, a happy anticipation of the new life that will be hers to guide, and a cheerful acceptance of this responsibility—these are the signs of mental poise.

The mother will keep this poise much more easily if she and her husband are working together to make their home world a happy place for the baby to be born into. The prospective father can help by showing that he wants to help. Then he can speak gently and not claim the privilege of being cross because he has come in tired from his day's work. Pregnancy is not a disease, but it is "nature under a strain"; and the strain may show itself in overwrought nerves if there is jangling instead of peace in the family. There will be many things for the father and mother to talk over in the

evenings and decide: That their baby will be breast fed because that will give him a better chance for life and health than the artificially-fed baby has; that their baby will be trained in the right habits from birth; that they will work together, as they must, to give him the right habits and a happy and harmonious home.

How can the mother spend her day so that she will be ready for such a quiet, happy evening? Her two hours or more in the open air and sunshine will help her mentally as well as physically. They will help her all the more if she can arrange to get them without hurrying her household or other tasks and getting nervous over finishing them in time. Perhaps the need of these hours of freedom will make her think out some way to do her work that will take fewer steps and less time, and thus will allow for her hour's nap or rest lying down as well as her time out of doors. Recreation, so long as it does not tire her, is necessary for her well-being.

The greatest enemies of mental health (and you can not have physical health unless you have mental health) are worry, nervousness, fears. The mother should not worry if she has pain she can not account for; she should tell the doctor, and he will explain how to relieve it or remove the cause. She should not think of herself as an invalid just because she is pregnant, nor should her friends. She is to be envied, not sympathized with. Above all, she should not be afraid for herself or for the baby.

Some women are afraid that their babies will have "birthmarks" or "maternal impressions." By a "maternal impression" is meant an injury to the child through the influence of some harmful state of mind in the mother. In other words, there is a widespread feeling that if a mother is injured or sees some one injured or sees something especially repulsive to her, her baby will be "marked." But there is no connection between the nervous system of the mother and of the unborn baby, and such "maternal impressions," as these alleged injuries to the baby are called, are absolutely impossible.

A mother may harm the baby, however, by failing to plan her own life, physical and mental, in the way that will result in the highest degree of health and happiness for herself and, therefore, for the child. Nervousness and fears may affect her ability to nurse her baby. Steady nerves and mental poise and the earnest desire to give her baby this advantage will help her to do so. It can not be emphasized too much that pregnancy is not a disease but is frequently a pathway to better health.

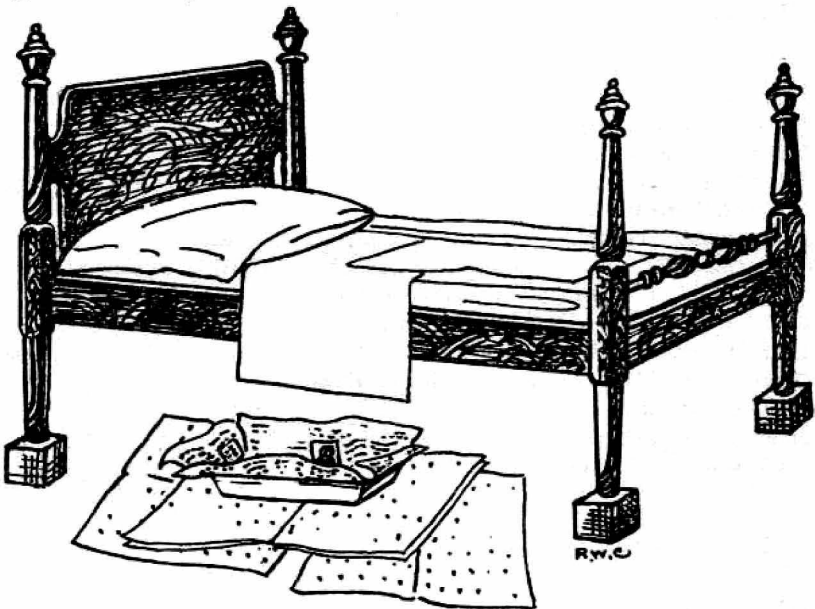
## HOME OR HOSPITAL FOR THE DELIVERY

It is becoming more and more common for women to go to hospitals to be delivered. If a hospital is chosen, it should be one that is well equipped to handle obstetrical work and that provides for the separation of maternity cases from all other patients in the hospital. Otherwise it has no advantage over a woman's own home. A well-equipped and well-conducted hospital has many advantages over a private home. It may be cheaper, it is far more convenient, and, if any emergency arises, it is much safer for both mother and baby. In many parts of the country no hospitals of any sort are near enough to be used, and the majority of women must necessarily be delivered at home. By careful examination the doctor can usually tell by the eighth month whether or not a normal delivery is to be expected. If he expects an abnormal delivery or if by this time he is still in doubt, he will probably arrange to send the woman to the nearest and best hospital available. The delivery may turn out to be easier than he had expected, but it is much better to go unnecessarily to a hospital than to be delivered at home with unfortunate results.

Hospital charges in the various parts of the country vary greatly. The private physician's fees are in addition to the hospital charges, and not infrequently the baby's laundry must be provided for outside. In most cases the routine care given by the floor nurses will be sufficient; if a special nurse is employed, the cost is much increased, for her salary is never included in the hospital rate. It would be well to have a definite understanding beforehand as to the cost of the physician, the hospital, and the nurse.

## SUPPLIES AND EQUIPMENT

Hospitals vary in their rules about baby clothes; some prefer to furnish the clothes while the baby is in the hospital, but others require the mother to furnish them. When the mother furnishes the clothes, the washing of the clothes is usually done outside the hospital. Diapers are usually furnished by the hospital. Because hospitals differ in their requirements, the expectant mother should always find out what the hospital she is going to expects her to bring for the baby.



Bed prepared for delivery

Hospitals furnish nightgowns for the mother if desired; if she prefers to use her own, arrangements must be made to have them laundered outside the hospital. Public hospitals usually furnish kimonos and slippers, but private hospitals do not. The mother must provide her own brush, comb, toothbrush, and other toilet articles.

### THE DELIVERY ROOM AND ITS EQUIPMENT

The room for the home delivery, if there is a choice, should be the quietest in the house. If sun enters, so much the better. Nearness to the bathroom is to be desired. A single bed so placed that both sides can readily be approached is best. If the bed is low, it should be raised up on blocks so that the mattress is 30 inches from the floor. This is a great help to the doctor during the actual delivery, and

afterwards it makes the nursing care much easier. Placing a board across the bed under the springs prevents the bed from sagging and is of much help at the time of delivery. The bed should be in a good light by day and well lighted at night. Two small tables are useful; but if they can not be had, chairs may be used in their place. It is not necessary to take draperies down; but it is well to take out unnecessary furniture and to protect the floor and the floor covering.

### SUPPLIES FOR THE MOTHER

The supplies considered necessary for a delivery at home vary greatly according to the mother's finances. The following list contains the supplies that it is advisable to have, but even this list can be cut if necessary:

1½ yards of rubber sheeting at least 36 inches wide, or 1½ yards of white table oilcloth to protect the mattress.

4 clean sheets and 4 pillowcases.

Receiving blanket for the baby (a piece of old clean blanket about a yard square or a soft bath towel).

4 delivery pads. To make one, take 12 opened-out sheets of newspaper and cover them with white cheesecloth with edges turned in and basted. They are better if they are padded with a 2-inch layer of absorbent cotton on top; but the cotton need not be used if this makes them too expensive. Iron the pads with a hot iron until they are scorched slightly, fold them top side in, and put them away in a clean pillowcase.

Supply of newspapers.

2 pounds of absorbent cotton.

2 enamel basins 10 inches in diameter.

2 pails with covers. (These can be used after the delivery for diapers.)

Bed pan.

1 stewpan with handle (2-quart size).

1 pair of scissors.

1 skein of bobbin (narrow cotton tape) or strong cotton string to tie the cord.

4 yards of unbleached muslin for abdominal binders.

4 ounces of tincture of green soap.

4 ounces of boric-acid crystals.

Castile soap.

Tube of plain white petroleum jelly.

2-quart fountain syringe or enema can (with rectal tip).

Hot-water bottle.

2 glass drinking tubes.

2 dozen safety pins, size 0.

2 dozen safety pins, size 4.

2 nail brushes, stiff and cheap.

2 wash cloths.

1 dozen hand towels.

3 nightgowns (either low enough in the neck to allow for nursing or opening down the front).

1 pair white stockings.

10 yards of gauze for making sanitary pads, "sponges," and dressings.

The towels and the following articles are to be sterilized and put away until the time of delivery:

- 2 dozen sanitary pads. These may be bought ready made or may be made at home of absorbent cotton wrapped in gauze or in old soft cloths that have been washed and boiled. Cut the cotton into pads 10 inches long, 4 inches wide, and 1 inch thick. Cut the gauze into pieces of the right size to fold around the cotton, and allow it, when folded, to extend 2 or 3 inches beyond the cotton at each end.
- 1 dozen gauze "sponges." Take a piece of gauze 16 by 16 inches; fold edges to center; fold again; bring raw ends to center; fold again, making a finished sponge about 4 inches square.
- 5 dozen cotton pledgets. Take a piece of absorbent cotton the size of an egg; make it into a ball; twist the loose end. Put them into five muslin bags.
- 1 dozen gauze squares (4-inch size) for cord dressings. Make like the "sponges," then cut a hole the size of a quarter in the center of six of them.
- 1 yard of bobbin (very narrow tape) or strong white cotton string. Cut this into four pieces, each 9 inches long, to use in tying the cord. Put these and four of the gauze squares, two with and two without holes, into a muslin bag.

In many parts of the country the visiting-nurse associations have sterilized delivery pads at their central offices, which they sell to the mother at cost. Surgical-supply houses in the large cities also put up these sterile supplies. Some of the State departments of health sterilize obstetrical packages that are sent to them for this purpose. The mother should buy these supplies only from sources that she knows to be reliable, preferably on the recommendation of her doctor, for it is of the utmost importance that these supplies should be thoroughly and recently sterilized and well packed.

**HOW TO STERILIZE THESE ARTICLES**

Wrap the sanitary pads, towels, and the sponges in packages of six each, and the remainder of the gauze squares in muslin and fasten with common pins. Put these packages and the muslin bags (five containing the cotton pledgets, the other the four cord ties and four gauze squares) into a pillowcase. Use a large wash boiler with a cover. Put water into it to a depth of 6 inches. Suspend the pillowcase containing the dressings in a hammock made from a towel or a piece of muslin (the hammock must not touch the water). Attach the ends of the hammock to the handles of the boiler. Wrap a cloth around the cover so that the cover will fit tightly. Steam an hour. Dry in the oven or in the sun by pinning the bag to a clothes-line. Repeat the process the following day. Dry thoroughly. Put the pillowcase away, unopened, until the articles are needed. If these articles have



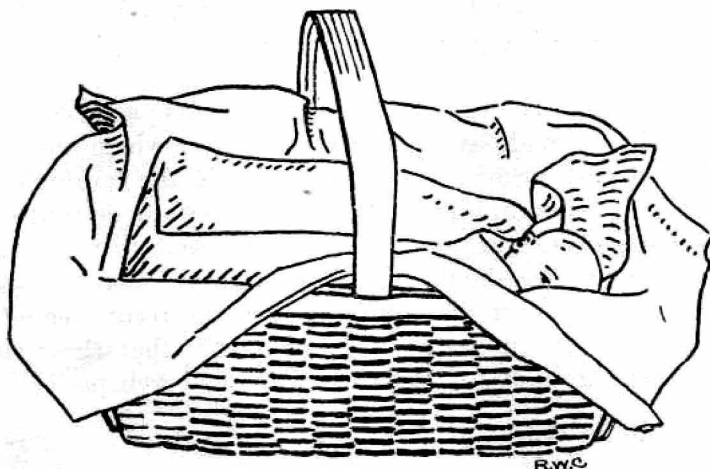
Sterilizing delivery supplies

been sterilized more than a month, they must be sterilized again. The mother's nurse or the public-health nurse will explain to her the details of preparing and sterilizing these supplies.

### SUPPLIES FOR THE BABY

The following list contains the articles it is well to have for the baby. A few of these could be omitted if all can not be had:

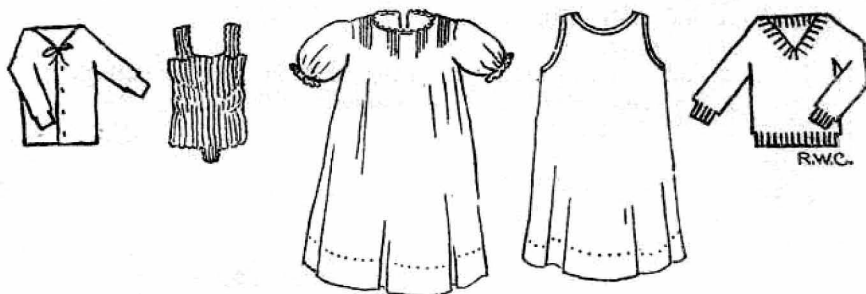
- 1 bassinette, basket, or box for bed. A clothes basket makes a good bed. A basket or box that can be moved about readily is a great convenience.
- 1 blanket, felt pad, or pillow for mattress. Table or bed padding, folded a few times, makes a very soft, smooth mattress and has the advantage over the ordinary mattress that it may be washed and boiled and dried in the sun.
- 2 small warm blankets.
- 3 small sheets or pillowcases.



Small baby's wrap and basket bed

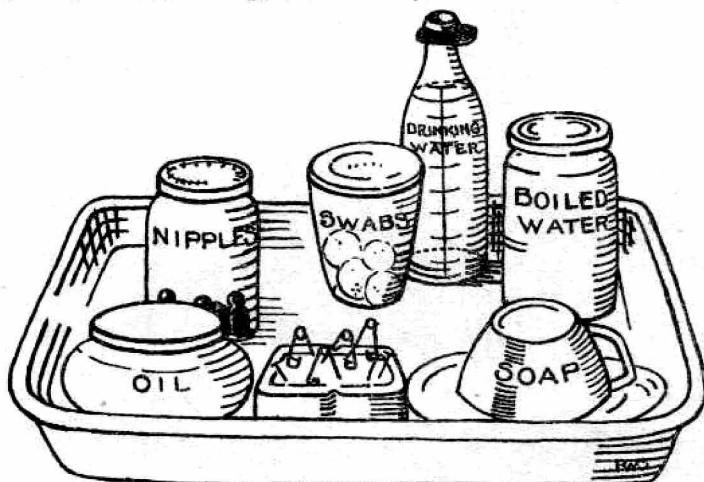
- 2 soft towels.
- 2 soft wash cloths.
- 1 piece Castile soap.
- 6 ounces of olive oil or liquid petrolatum.
- 3 binders (canton flannel) 6 by 27 inches, with edges pinked, not hemmed; used to keep the cord dressing in place. After the cord comes off and the navel is healed, a band with shoulder straps is the only garment worn under the shirt. Binders are usually supplied by the hospital if the baby is born there.
- 3 knitted bands, size 2. These are made with a bodice top (a straight top with shoulder straps) and slip on over the feet. The bottom edge is reinforced all the way around, so that the diaper may be pinned in any position. If size 2 is too big at first, a tuck can be taken in the top of each shoulder strap.
- 48 diapers 24 by 24 inches.
- 3 shirts, size 2—for summer, made of light-weight cotton; for winter, of cotton and wool or silk and wool.

- 3 petticoats, or gertrudes, 20 inches long finished, made of muslin (not needed except for the sake of appearance with thin dresses). These may open on the shoulders so that they can be slipped off if soiled without removing the dress, or they may open down the back, like the dress.
- 3 dresses, 31 inches long finished. These may be made from a nainsook or a fine quality of crinkle crêpe which does not need to be ironed. They should open all the way down the back so that they can be pulled off from under the baby.



Baby's clothes

- 3 flannel or knitted squares 36 by 36 inches, which can be used instead of coat and bonnet for the very young baby. (See illustration p. 26.)
- 1 coat and bonnet, simple and washable.
- 3 nightgowns, 27 inches long finished, made of muslin or flannel according to the season. These open down the back. Tape should be run through the bottom hem to draw it together.



Baby's toilet tray

The baby's toilet tray varies with the mother's individual wishes even more than the list just given. It should contain three covered jars (jelly glasses or mayonnaise jars will do), one for boiled water, one for rubber nipples, and one for cotton swabs; two flat dishes, one for the soap and one for the oil; a pincushion; and a nursing bottle for drinking water.



## ADDITIONAL CONVENIENCES

Below is a list of additional articles that will be found convenient in the care of the baby, though not so essential as those previously listed:

Bathtub—tin, enameled ware, or rubber.

Drying frames for shirts and stockings.

Bath apron of Turkish toweling or outing flannel.

A low chair without arms.

Baby scales.

A low screen to protect the baby while he is being bathed.

A low table on which to bathe and dress the baby.

## COMMON DISORDERS OF PREGNANCY

### NAUSEA AND VOMITING

Nausea with or without vomiting is one of the common ailments of early pregnancy (from about the fourth to the twelfth week). It is very apt to come in the morning, and for that reason is often called "morning sickness," although not infrequently it comes only in the late afternoon or early evening. Many women do not have it at all. If there is more than slight occasional vomiting, the doctor should be consulted. Eating six small meals a day instead of three larger ones helps to relieve this nausea. Taking something to eat before getting up, such as toast or crackers, will often help. No one method of treatment works satisfactorily with all women. Therefore the physician must decide what is best for each individual.

### HEARTBURN

Not infrequently during pregnancy the expectant mother complains of burning in the throat caused by bitter eructations (belching) from the stomach. This condition is commonly called "heartburn." If it continues, the doctor should be notified. Frequently heartburn is evidence that the diet contains too much sugar and starches; the doctor will get further evidence on this point if he finds sugar present when he analyzes the urine.

### VARICOSE VEINS AND PILES

As the weeks go by, the enlarging uterus presses more and more on the blood vessels in the lower abdomen, and in many instances the veins of the leg appear as bluish lines. These are called "varicose veins." Later as they enlarge they may cause slight burning or tingling sensations in the legs. If the symptoms remain slight, no treatment is necessary. If they become more marked, lying down for an hour morning and night with the legs elevated or at right angles to the body may give relief. The doctor's attention should be called to these varicose veins, and he will direct any necessary treatment.

When the varicose veins appear in the rectum, they are called "hemorrhoids," or "piles." These again are due to pressure; and if any discomfort is felt at the anus the doctor must be told at once so that he may direct appropriate treatment.

**CRAMPS IN THE LEGS**

Cramps in the legs, usually after the mother has gone to bed, may occur in any part of the pregnancy, but they are more apt to come in the latter half. Relief may be given by gentle massage of the legs or by bending the foot up on the ankle.

**RELAXATION OF THE PELVIC JOINTS**

As pregnancy advances, the three joints which go to make up the pelvic girdle, two behind and one in front, oftentimes relax to such an extent that severe pains are felt in the legs. An abdominal support, such as has been recommended (see p. 15), will do much to relieve this condition.

**LEUCORRHEA**

Leucorrhœa (whites) is a whitish discharge from the vagina. This discharge comes from the glands in the neck of the uterus and the entrance to the birth canal, which are more active than usual because of pressure of the enlarging uterus on the blood vessels. Leucorrhœa is often annoying but not usually serious. The physician should be told of it, and he will prescribe the necessary treatment. Douches of any sort should not be taken except under his advice.

## COMPLICATIONS OF PREGNANCY

### TOXEMIA

As the baby grows in the uterus there is being sent back into the mother's blood an increasing amount of waste matter. If the mother's elimination is imperfect, so that she has difficulty in getting rid of her own as well as the baby's waste products, a toxic, or poisoned, condition may result which will be more or less serious for both the mother and the child. Some of the common symptoms are:

- (1) Serious or persistent vomiting.
- (2) Repeated headaches.
- (3) Dizziness.
- (4) Puffiness about the face, hands, and legs.
- (5) Blurring of the vision, or spots before the eyes.
- (6) Neuralgic pains, especially about the pit of the stomach.

Having one or even more of these symptoms does not necessarily mean that toxemia is present, for in many cases the cause of the trouble may be removed very easily without serious results. But when such symptoms appear, they should always be brought at once to the attention of the doctor, and it will be well also to send a specimen of the urine to him immediately. Prevention of serious results from toxemia by observing and reporting to the doctor the symptoms which precede it is of great importance to all pregnant women.

There is an unfortunate tendency among women to regard some of these disturbances as a necessary part of pregnancy. No pain or distress that can be prevented by proper means should be endured during pregnancy or at any other time. There is no truth in the old saying that a "sick pregnancy is a safe one." If a pregnant woman will follow certain simple rules for health, she will not have cause to fear toxemia and will be in better condition to meet the strains of pregnancy and childbirth. She should—

- (1) Place herself under the care of a competent physician.
- (2) Consult him regularly, at least once a month during the first six months, then every two weeks or oftener, preferably every week in the last four weeks of the pregnancy.
- (3) Have her blood pressure taken regularly.
- (4) Have her urine examined at the visits to the doctor.
- (5) Guard carefully against constipation.

- (6) Avoid a large amount of meat and any other form of over-eating and all extra salt.
- (7) Drink eight glasses of water a day.
- (8) Exercise daily out of doors but not to the point of fatigue.
- (9) Keep all the rooms of the house well ventilated day and night.
- (10) Bathe every day.
- (11) Wear lightweight but warm and comfortable clothing.
- (12) Sleep at least 8 hours out of the 24, rest during the day, and not get overtired.
- (13) Report to the doctor all acute illnesses, especially colds, sore throat, or persistent cough.
- (14) Go to the dentist early in pregnancy.
- (15) Report any unfavorable symptom, remembering that she must at all times be well.

### MISCARRIAGE

"Miscarriage" is commonly used to mean the birth of the child before it is sufficiently developed to be able to live outside its mother's body—that is, before the end of the sixth month of pregnancy. There are many possible causes of this mishap. Among them are heavy work (such as washing, sweeping, lifting, or moving heavy furniture), running a sewing machine or other form of taxing labor, strenuous indulgence in amusements that jar the body (such as dancing, skating, tennis, golf, horseback riding, or climbing), or jolting over rough roads in an automobile, or long journeys by train or boat. Some constitutional disease of the mother, a fault in the position of the uterus or some abnormality of its lining, or intercourse during pregnancy (see p. 20) may cause miscarriage. Microscopic examination of tissues thrown off from early miscarriages has shown that many are due to faulty development of the fetus (unborn baby); such miscarriages are nature's way of getting rid of a pregnancy that could not go on to final success. In many cases the cause is impossible to discover, and a woman may have repeated miscarriages. The prevention of many miscarriages lies in guarding against overexertion in the early weeks of pregnancy. If a woman has had a miscarriage before, a long stay in bed may carry her past the danger when nothing else will do it.

Syphilis is often the cause of miscarriages, but as yet it has not been proved that it causes miscarriage in the first two months of pregnancy.

Any woman who has had repeated miscarriages or premature labors with dead babies should have a blood test (Wassermann) to find out whether she has syphilis. This test should be part of the doctor's complete examination of every expectant mother; it is of special importance for the mother who has had a previous miscarriage of

which she does not know the cause. The blood for this test is easily withdrawn from the arm. If it shows that the mother has syphilis, treatment should be started at once and kept up systematically throughout pregnancy. If she receives proper treatment, a syphilitic mother will give birth to a healthy baby.

At the first appearance of bleeding or abdominal pain the mother should go to bed at once. It is always advisable to send for the doctor; it is urgent to do so if the pregnancy has advanced beyond the sixth week. If the mother can not get the doctor, she must remain perfectly quiet in bed for at least 48 hours after bleeding or pain has stopped. A miscarriage occurring before the sixth week may appear as nothing more than an unusually severe menstrual period.

What happens is that the placenta and membranes which surround the fetus have become loosened from the uterus. If the loosening is slight, complete rest in bed may prevent it from going further. If a large part of these membranes, however, has become separated from the uterus, the separation will become complete and the fetus will be expelled. It is not until the twelfth to the fourteenth week of pregnancy that the union between these membranes and the uterus becomes firm; consequently it is during these early weeks that miscarriage is most likely to occur.

When a miscarriage has occurred, there is danger that portions of the membrane may stick to the uterus and not be expelled. In order to find out whether this is the case, it is important that a doctor should be in attendance and that whatever has been expelled be saved for him to see.

A neglected miscarriage may mean the total loss of health; a spontaneous miscarriage properly attended is not likely to have bad results. On the other hand, a self-induced miscarriage may result in blood poisoning and death. It is unreasonable to regard a miscarriage as something to be concealed, and dangerous to deprive oneself on this account of proper care and treatment. This unhappy way of regarding a miscarriage is perhaps partly due to the association in many persons' minds of a miscarriage with a criminal abortion, the results of which are often serious and many times fatal. Such an attitude of mind is unjustified, for there are many causes of miscarriage, and often, humanly speaking, it is unavoidable. It should be treated like any other illness, and such measures should be taken as will best conserve the future health of the disappointed mother.

**BLEEDING IN PREGNANCY**

Bleeding, or the show of blood from the vagina in a pregnant woman, demands investigation, for it never occurs in normal cases. It may be a very serious sign, especially if it occurs in the latter part of pregnancy. It always must be regarded as serious until the doctor by careful examination determines that it is not. At the first sign of blood from the vagina a pregnant woman should go to bed and should notify the doctor at once. Under no circumstances should a woman who has had vaginal bleeding be up and about her house attending to her household. It can not be overemphasized that bleeding from the vagina in pregnancy is abnormal and may be a very serious complication. The responsibility for good results when bleeding has occurred is twofold: (1) Upon the patient—she must report it to her physician at once; (2) upon the doctor—he must respond without delay, determine the cause of the bleeding, and give the proper treatment.

## BIRTH OF THE BABY

At the end of the nine months' development in the uterus the baby is born, and the act of birth is called "labor." This act is a natural one and, though it is painful and tiring, it should end normally with a healthy mother and a healthy baby. It probably will have this happy ending if the mother has had proper care during her pregnancy and is in the hands of a competent attendant who understands the need for perfect cleanliness and uses every means to secure it.

### PRECAUTIONS THAT MUST BE TAKEN

The prevention of the infection that causes puerperal septicemia, or "childbed fever," lies in the scrupulous care taken by everyone who is concerned in any way with the attendance upon a woman in childbirth to allow nothing not absolutely clean to touch her. Puerperal septicemia is a largely preventable disease, since its cause and the measures necessary to prevent it are well known, and all women in childbirth and their families have a right to insist upon this protection. No physician who values his professional reputation will be satisfied to neglect any of the precautions against this most dreadful disease. The patient can help by having ready clean bedding, towels, and sterile supplies. The woman, the family, and the nurse must be ready in every way to aid the physician in this effort.

The well-trained doctor *insists* that the external parts be shaved when the patient goes into labor. This shaving is for the patient's protection and does much toward the prevention of blood poisoning. The doctor can obtain much information as to how soon the baby will be born by rectal examinations, and the patient should never refuse to permit them. Vaginal examinations during labor, no matter how carefully done, always carry a certain amount of risk. When the physician exposes the patient during the actual delivery of the baby, the patient must realize that he is working in her interest and for her protection.

### LABOR

The progress of labor is divided into three stages. The first is occupied with the dilatation, or enlargement, of the mouth of the uterus, the second with the actual birth of the child, and the third with the separation and throwing out of the afterbirth and membranes.



The first stage is the longest and most trying part to the expectant mother. During this time the mouth of the uterus, which is less than one-quarter of an inch in diameter at first, must increase to  $3\frac{1}{2}$  to 4 inches before it is large enough to permit the child's body to pass out. This stage usually takes a number of hours and is very tedious to the woman, because she is unable to feel for herself that she is making progress. Labor pains may begin in the abdomen or in the back. They may come at first half an hour or an hour apart, or perhaps only a few minutes. They will come at shorter and shorter intervals and with greater and greater strength as the mouth of the uterus gets larger. Sometimes the bag of waters (amniotic sac) that surrounds the baby breaks before labor begins. At the time labor begins or shortly after there may be a slight blood-tinged discharge. This is commonly called the "show" and is more likely to appear in first labors than in later ones. The progress of labor can not be judged by the show alone. The regularity, the frequency, and the strength of the pains are the chief guides.

To pass the time between the pains, the woman may occupy herself in any way she likes; she may sit down, lie down, walk about, or even sleep, if she can. She should notify the nurse and the doctor as soon as she becomes convinced of the regularity of labor pains, or in case water in any quantity comes away before the pains begin, or in case of any bloody discharge. Since the doctor can not hasten the progress of this stage, it is not usually necessary for him to remain with her all the time. But he should keep close watch of the case and be always within easy call. No enema should be taken on the onset of labor except on the advice of the physician. If the woman is hungry, she may have some light food. As soon as the doctor comes, he will give advice on all necessary details.

The bed should be made ready, the mattress being protected by a rubber sheet or oilcloth or several layers of newspapers. An extra sheet, folded in the middle, is pinned across the bed under the mother's hips; this sheet may be drawn out after the labor, leaving the bed clean and dry.

If the confinement is to take place at a hospital, the woman should be ready to go when regular pains have started. The ride to the hospital will help to pass the time and may also serve to hasten the delivery to some extent. She will take with her a bag that should have been packed some time before, containing nightgowns, toilet articles, slippers, kimono, and the like, with the baby's first outfit.

The second stage of labor, in which the actual birth occurs, is much shorter than the first, usually from two to two and one-half hours. It is frequently less trying to the patient than the first stage, because as each pain occurs the muscles are pushing the baby

along the birth canal, and she feels that she can help by straining, or "bearing down." The amniotic sac is usually ruptured as the pains of this stage begin, and after this occurs it will usually not be long before the child is born. In case the bag of waters has broken earlier, as sometimes happens, the birth is said to be "dry" and may proceed somewhat more slowly. Whether the pain of the actual birth should be lessened or deadened by the use of an anesthetic will be decided by the physician.

After the baby is born the third stage of labor takes place—namely, the separation and throwing out of the afterbirth (placenta) and the other tissues that connected the baby's body with the mother during pregnancy. This occupies about half an hour. "Afterpains" are the pains that immediately follow the emptying of the uterus and are due to the natural contractions of its muscle fibers. These pains are less likely to be felt in a first confinement than in later ones.

## EMERGENCIES

It sometimes happens that the baby is born before the arrival of the doctor or nurse, when labor comes on earlier than was expected, or the doctor is at some distance. In an emergency like this it is necessary for the expectant mother and her family to know what to do.

The delivery room must be set in order and the bed freshly made. The mattress should first be protected with the rubber sheet or oil-cloth, or newspapers, and the extra folded sheet as described on page 36. The mother's external parts should be well washed and shaved. The sterilized dressings, still in their packages, should be put close at hand. A large kettle of water should be boiled and cooled without being uncovered. At this same time the scissors for cutting the cord should be boiled for 10 minutes and left untouched.

Meanwhile, if matters have gone so far that the pains are returning every 5 minutes, or if the "waters" have broken, the woman should go to bed; she will lie on her back, with her knees drawn up and spread apart. (If the doctor is in charge, he may prefer another position.) When the pain comes, the patient will bear down but will not attempt to strain except when she feels she must. Whoever is at hand to help will then put one of the delivery pads underneath the mother's hips and should thoroughly disinfect the hands by scrubbing them for 10 minutes in warm water, using a brush and plenty of soap. The attendant will sit by the mother until the baby is born, but should not touch her. After the head is born, if the face of the baby turns blue, the mother should be told to strain vigorously, and at the same time she may press with both hands upon her abdomen, while the attendant grasps the baby's head and pulls it steadily but gently downward. This will shortly bring out the baby.

As soon as the child is born he should take a breath and cry. If he does not do this, the attendant should slap him smartly upon the buttocks, meanwhile holding him up by the feet for a moment. When he cries, he should be laid down close enough to the mother so that the navel cord will not be stretched, care being taken not to smother him nor allow any of the discharges to touch his face. Then the attendant will tie the cord twice, once 2 inches from the child's navel, once 2 inches nearer the mother, using pieces of sterilized bobbin or other string that has been boiled. The cord is then cut with the scissors between the two ties (ligatures). There will be a

single spurt of blood, but bleeding will cease immediately if the cord is tied tight. If bleeding from the baby's navel should not stop altogether, the cord should be tied again nearer the baby without disturbing the first tie. The cord dressing should be put in place at once. The baby should then be covered with a light, warm, and soft blanket, removed to a place of safety while the mother is being taken care of, and kept warm.

The separation of the afterbirth usually takes place within 10 to 30 minutes. Sometimes it takes as much as two hours, but the process must not be hurried, unless under the doctor's directions. Sometimes the mother can help by straining as she did to bring the child; but unless the doctor or nurse has arrived it is better to be patient and wait for the contents of the uterus to be expelled naturally. All the soiled pads and dressings and everything that has been expelled should be saved for the doctor's inspection.

After the soiled pads have been removed, the region around the vagina is carefully washed with sterile warm water, pieces of sterile gauze or cotton pledgets being used for this purpose. An abdominal binder and one of the sanitary pads are then put on. All the soiled dressings are removed and the pad beneath the mother renewed. If, after all is over, the mother suffers from a nervous chill, as often happens, she need not be alarmed. A hot-water bag at her feet, a glass of hot milk, and a blanket will soon warm her, and she will usually be ready to fall asleep to rest after the fatigue of the labor.

There is always a considerable discharge of blood just after the birth. The attendant can help to stop this bleeding. Sitting on the bed, facing the foot of the bed with the hands on the mother's abdomen, she will feel for the uterus, which will be a rather large, soft mass just under the navel, and will massage it gently, passing the thumb over the front of the organ, while the fingers surround it. This will cause the muscles of the uterus to contract and will help to stop the bleeding. The massage should be begun gently, as soon as the child is born. Then the uterus will stay very tightly contracted and firmer to the touch, and in the long run a great amount of blood will be saved. While the attendant is caring for the baby, either the mother herself can be rubbing the lower abdomen or someone else in the family can help temporarily. Cracked ice, wrapped in gauze, may be laid over the uterus to help in the contractions, and sometimes putting the baby to breast will serve the same purpose. These measures are especially necessary if the amount of bleeding seems excessive and the doctor has not arrived.

When the doctor comes, he will repair any lacerations (tears) that may have occurred during the baby's birth.

## FIRST CARE OF THE NEWBORN

Immediately after the baby is born his eyes should be carefully wiped free from mucus or blood with the pledgets of sterile clean absorbent cotton which were prepared beforehand. (See mother's supplies, p. 24.) A separate piece of cotton should be used for each eye and should be discarded as soon as it has been used once. Wipe from the nose outward without opening the lid. At this time also the lips and nose should be wiped clean and the nurse's or doctor's little finger, wrapped with a piece of moist cotton, should be passed into the child's mouth and any accumulated mucus removed by an outward sweep of the finger.

### NITRATE OF SILVER FOR THE BABY'S EYES

As soon after birth as possible the eyelids should again be wiped clean of mucus, and two drops of a silver preparation which the doctor or nurse will provide should be put into each of the baby's eyes, the lids being gently opened so that the medicine will get inside the eye. (Nitrate of silver in 1 per cent solution is put up in ampules for this purpose.) This care is necessary in all cases because a baby's eyes may become infected during the passage through the birth canal, and this infection sometimes leads to an eye disease of the newborn, called ophthalmia neonatorum, which may cause blindness. The treatment is simple and perfectly harmless and is certain to prevent the infection from developing. If, however, the treatment is not given and symptoms of the disease appear (namely, redness, swelling of the lids, and a discharge from beneath them), the mother should not lose an hour in placing the baby in the hands of the best doctor she can find. The eyes may be saved by a few hours' care, but treatment to be efficient must be begun at once; neglect may doom the baby to lifelong blindness or at best to imperfect vision. It is the law in all the States except one that this condition must be reported to the health authorities.

In bathing the eyes always use a different piece of cotton or gauze for each eye, and in case of any infection use the greatest care not to infect one eye from the other. The germs may be carried by the fingers, the towels, the cotton, or any other article that has touched the infected eye.

### BATHING THE BABY

The newborn baby's skin is covered with a cheeselike substance, which is the more easily removed if it is first oiled with olive oil, liquid petrolatum, or petroleum jelly. The baby may then be wrapped warmly and put in a safe place until the mother has been attended to, after which the baby may be bathed. The water should be of a temperature that feels comfortable to the bare elbow of the nurse. After the skin is thoroughly but very gently washed with Castile soap (care should be taken not to get soap into the eyes) it should be patted dry with warm and very soft old towels. A square of sterile gauze, with a hole for the cord, is placed over the navel. This square is folded back to cover the cut end of the cord, or a second pad is placed over the cut end. The dressing is held in place with the flannel binder already prepared. Unless this dressing becomes wet or soiled it is not necessary to change it for a few days. The stump of the cord will usually shrivel and fall off within a week. After this happens the navel will be dressed in the same manner until it is entirely healed.

### THE BABY'S STOOLS

The first discharges from a newborn baby's bowels are known as meconium. They are very dark green, thick and sticky, with little or no odor. These soon change to the normal yellow stools of the healthy baby after he begins to be fed. If any blood is seen in the stool of a newborn baby, the fact should be reported to the doctor immediately.

## LYING-IN PERIOD

The time just after childbirth, when maternal nursing begins and the organs connected with childbirth return to the condition they were in before pregnancy, is called the lying-in period. The change in the uterus, called the involution, is the most important. The uterus dwindles in weight from about 2 pounds to about 2 ounces and sinks down to its original position in the pelvic cavity. The length of time required for these changes to take place is shorter with nursing than with nonnursing mothers, but complete involution commonly takes five or six weeks. If lacerations (tears) or other accidents have occurred during childbirth, involution may take longer.

It is plain, then, that the mother, no matter how well she may feel, needs a certain time of rest before she is fully able to take up her ordinary occupations and pleasures, which, if she goes back to them too early, may slow up or stop the natural restorative processes. Most women are allowed to sit up in a chair for an hour on the tenth day. Usually they may walk about the room after two weeks, and by the end of the month they will be allowed to go up and down stairs; but in all cases it is well for the mother to refrain from full activity for six weeks. After six weeks the doctor should make a final internal (vaginal) examination to be sure that all is as it should be and will direct the proper treatment in case anything is wrong.

For some time after the baby's birth there is a discharge from the vagina. This discharge, which is called the lochia, at first is pure blood, but later becomes quite brown in color. It is likely to increase somewhat as the mother gets about, and this is an additional reason for lengthening the period of rest and quiet after childbirth.

In a small percentage of cases the monthly periods may return at once, but in the vast majority of cases menstruation is not established until a month or two after nursing has stopped. Nursing the baby does not prevent conception, even though menstruation has not begun again.

## NURSING THE BABY

It is the first duty of every mother to nurse her baby. Every doctor, nurse, or other attendant should insist that the mother nurse her baby and should do everything possible to start the secretion of milk, to promote it, or even to bring it back if for any reason it has stopped. It is true that not all mothers are able to nurse their babies, even when they would gladly do so, but the cases in which maternal nursing is impossible, at least for a few weeks, are very uncommon. There are only a few good reasons for not nursing an infant under 6 months old. Chief among them are tuberculosis in the mother and the beginning of another pregnancy.

### ADVANTAGES OF BREAST FEEDING OVER ARTIFICIAL FEEDING

Mother's milk gives the baby the greatest help in the complicated and difficult task of growing, and it also makes the baby more resistant to the various sicknesses to which he may be exposed. Satisfactory nursing greatly increases his chances for growing up. Besides, it is easier to nurse the baby than to feed him otherwise. To make bottle feeding safe requires scrupulous and constant care. To secure a supply of pure milk, to keep it at the proper temperature, to have it properly prepared for the baby's use, to change the composition of the milk in accordance with the baby's changing needs, to keep all the utensils used in the care and preparation of the baby's feedings absolutely clean, to have the bottles and nipples scrubbed and sterilized, call for constant care and attention even when the baby is thriving. But when, as is often the case, the baby does not thrive, the difficulties of artificial feeding are greatly multiplied. Too often artificially-fed babies pass their first 6 or 12 months in a series of unfortunate feeding experiments, with the result that the growth of the organs, the functions, and the general development are retarded.

### COLOSTRUM

At the birth of the baby there is, in by far the majority of cases, no milk in the mother's breasts. The secretion that is in the breasts at that time is called colostrum. The mother's milk does not usually come for two or three days, sometimes longer, after the baby is born. The colostrum has a laxative effect on the baby and for that reason is valuable during the first days of his life. After the mother has



had a good rest for 6 to 12 hours after the delivery, the baby should be put to the breast for 2 or 3 minutes. By this early nursing the breasts are stimulated to secrete milk, and the baby is trained early to nurse. If before the first nursing the baby becomes restless and cries a great deal, he may be given a few teaspoonfuls of warm boiled water from a bottle. It is not necessary that the water be sweetened or contain any medicine, although many physicians use a 5 per cent solution of milk sugar until the milk comes in.

#### POSITION FOR NURSING

The position that the mother assumes for nursing her baby varies more or less with the advice of the physician and nurse. A satisfactory position is for the mother to turn well onto the side on which she is to nurse, with the arm on that side raised up above her head. The baby, lying on the bed at her side, is able to get hold of the nipple satisfactorily and the mother is not in a cramped position.

#### FEEDING SCHEDULE

The time for nursing varies considerably in different parts of the country, but the majority of physicians now have the mothers nurse not oftener than once in three hours, and many put the baby at once on 4-hour feedings. The routine in the establishment of nursing varies considerably, depending many times upon how much milk there is in the breasts. As has already been said, the first nursing takes place after the mother has had a good rest. Some doctors increase the daily number of feedings gradually, so that the regular routine is established by the third or the fourth day of life. Others put the baby on the 4-hour or the 3-hour schedule immediately after the first nursing. It is important that the nursings be by the clock as soon as the regular routine can be established in order to start the baby with good habits.

#### CARE OF THE BREASTS

Before the baby nurses the first time the breasts should be thoroughly but gently washed. If the nipples have been carefully attended to in the last two months of the pregnancy, there will be no dried secretion on them. If by chance the nipples have not been properly attended to and there is dried secretion on them, care must be taken in removing it. The nipples first should be covered with a simple cold-cream ointment in order to soften this secretion. Under no circumstances should it be picked off, for, if it is, damage may be done to the nipples, and this may allow infection of the breasts to occur.

After the milk comes in, there may be an excessive supply for a few days. In the majority of cases there is no need of doing anything to the breasts with the first engorgement (fullness). Occasionally the physician in charge may suggest the use of a breast pump or of massage or the use of warm oil to relieve the tension in the breasts, but none of these should be used unless the physician advises it. If the engorgement is very painful, the comfort of the patient may be increased materially if ice bags are put to the breasts. A supporting bandage may greatly help large pendulous breasts, but it must be put on properly and must in no way constrict them. Massage must not be used on the breasts unless it is specifically ordered by the physician in charge. Manipulation of the breasts at the first engorgement does more harm than the good that may come in a few cases. A breast pump must not be used unless it is ordered by a physician; and if it is used, it must first be boiled and then cooled.

In the early weeks of nursing the breasts are extremely liable to injury, and the nipples especially are very apt to become cracked. If this occurs, infection may follow. The three requirements for the protection of the breasts are (1) absolute cleanliness, including washing with boiled water before and after each nursing; (2) avoidance of the slightest injury; and (3) protection of the nipples and, in the beginning, of the breasts themselves with clean linen between nursings. If the nipples crack, the baby may have to be taken off the breast entirely for a few nursings, or a nipple shield may have to be used. If the nipple shield is used, it should be boiled before each nursing. Advice on the use of the shield should be sought from the doctor.

#### THE BABY'S PROGRESS

Whether the baby is doing satisfactorily may be found by weighing him every two or three days. A nursing baby should gain at least 4 or 5 ounces a week. An ounce a day is a very satisfactory gain, and many babies gain much more. After the nursing is well established there should be a steady gain in the baby's weight.

If the baby cries before the feeding is due or immediately after the feeding, it may be because he is not getting enough milk, and that can readily be determined by weighing him with all his clothes on before and after nursing and noting the gain. It is not sufficient to do this once in the day. In order to find out whether there is a sufficient amount of milk, he should be weighed before and after every feeding in one 24-hour period and the amount of milk obtained noted. Even if the baby is getting only 1 ounce at a feeding—obviously not enough—this is not usually a sufficient reason for

weaning him. The breast milk must be supplemented with modified cow's milk. The thing to do is to obtain the advice of some good doctor who understands infant feeding. Four or five ounces of mother's milk is distinctly worth while for the baby, especially if this can be kept up for the first three months of his life. The attempt to nurse the baby will stimulate the flow of milk, and then, if the breasts are completely emptied at each nursing<sup>1</sup>, the milk oftentimes will increase, especially if the mother's diet and her rest periods and general health are carefully looked after.

---

Another bulletin of the Children's Bureau, Infant Care, gives directions for the care of the baby to the end of the first year.

---

<sup>1</sup> If the baby does not empty the breasts, the milk should be expressed by hand or by means of a breast pump. See footnote 1, p. 55.

## HYGIENE OF THE NURSING MOTHER

The diet for a nursing mother under ordinary circumstances will be the same as that prescribed during pregnancy—that is, it must be nutritious, laxative, and appetizing. The old idea that acid fruits and vegetables give the baby colic is not true, since these acids are changed in the process of the mother's digestion. However, if they or any other food or drink disturbs the mother's digestion, this may have an unfavorable effect upon the milk. If a woman eats slowly, chews her food thoroughly, and, above all, has sufficient rest and refrains from worry, there will be no reason to suppose that the maternal milk will not agree with the baby. Constipation should be guarded against as carefully during the period of lactation as during pregnancy.

### A DAY'S FOOD PLAN FOR THE NURSING MOTHER

A quart of milk, a leafy vegetable, a citrous fruit (orange or half grapefruit), and an egg are essential in the nursing mother's daily diet. The following plan for the whole day's food may be helpful:

#### *Breakfast*

- Fruit:** Half grapefruit, whole orange, or whole banana.
- Cereal (well cooked):** Oatmeal, farina, or corn meal with whole milk and sugar.
- Bread and butter:** Two slices of bread, with two pats of butter.
- Milk:** One cup, or one cup of cocoa made with whole milk.

An egg, or bacon and egg, may be added to this meal. (The egg should be boiled, coddled, or poached.) One cup of coffee may be taken if desired.

#### *10 a. m. luncheon*

- Milk:** One glass of whole milk (if this does not interfere with the appetite for dinner).

#### *Dinner*

- Meat, fish, or egg.**
- Salad:** Lettuce, romaine, endive, cress, raw cabbage, tomato, celery and nut, fruit, with mayonnaise or French dressing.
- Vegetables:** Baked potato with butter, tomatoes, carrots, peas, or string beans; properly cooked cabbage, spinach, or other greens, creamed.

**Bread and butter:** Two slices of bread with one pat of butter.

**Dessert:** Custard, gelatin, canned or raw fruit, milk pudding.

**Milk:** One glass of whole milk.

*Supper*

**Soup or other hot dish (made with whole milk):**  
Creamed pea, tomato, or other vegetable soup, or a scalloped vegetable, or macaroni and tomatoes, or rice and cheese.

**Bread and butter:** Bran or graham muffins or toasted raisin bread with two pats of butter.

**Dessert:** Stewed fruit and cake or baked apple with top milk or cream.

**Milk:** One glass of whole milk.

One cup of tea may be taken in addition to the milk.

A glass of milk may be taken at 10 p. m.

Every effort should be made to get fresh vegetables, as no other food can adequately replace them in the diet of the nursing mother. Canned tomatoes may be used frequently, and canned spinach occasionally. When fresh fruit is too expensive or out of season, dried or canned fruit may be used. If it is impossible to obtain fresh cow's milk, dried or evaporated milk should be used.

Cod-liver oil is excellent to take under the doctor's direction during the period of lactation, as it is during pregnancy. (See p. 11.)

#### HEALTHFUL LIVING ESPECIALLY IMPORTANT FOR NURSING MOTHERS

It is necessary to emphasize the importance of a quiet state of mind for all nursing mothers. There is no one thing which more certainly and completely interferes with the secretion of the milk than an overwrought, nervous condition. Moreover, an overworked mother can not be expected to supply breast milk satisfactory in either quality or quantity. The mother should have pleasant exercise, out-of-door life, pleasure, cheerful society, and should be surrounded as far as possible with things that interest her. She should have at least eight hours of sleep at night and an hour's rest during the day. The busy mother may add to her rest period by lying down while she nurses the baby. Plenty of fresh air and sunshine are always desirable. The amount and kind of exercise the mother should take depend upon her habits. Many mothers find a walk beneficial. A good rule is to exercise only to the point of a sense of pleasant stimulation. The busy housewife may get sufficient exercise in her daily activities. She should take some time out of doors, however, in the sun, preferably in the middle of the day in winter and before 12 and after 3 o'clock in hot weather.

**TEMPORARY DECREASE IN MILK SUPPLY NO REASON FOR WEANING**

There is usually a period after the nurse has gone and the mother is left to herself when the weariness resulting from the fact that her strength has not fully returned, broken sleep, and the worry consequent upon taking care of the baby alone causes the milk to diminish in quantity. This usually means that the mother is overdoing; she has not gained the strength to take care of her household and at the same time produce milk for the baby. It is at this time that many a mother concludes that the baby is starving and is very apt to become discouraged and give up nursing as hopeless. This is a great mistake. It is usually true that the strain of this period is relieved, day by day, as mother and baby gradually become adjusted; her strength returns; slowly but certainly things will grow more comfortable, and with this will come more milk. So that if the mother will only strive to carry herself and the baby past this time she will in all likelihood be able to nurse the baby quite successfully. At least every possible means to this end should be tried before weaning is resorted to.

The return of the menstrual periods is not a sufficient reason for weaning; but a pregnancy demands it, as the mother's strength will hardly be sufficient for this additional strain.

## PREMATURE DELIVERY AND THE CARE OF THE PREMATURE BABY

The last two months of prenatal life are very important in the growth of the baby, and every effort should be made to prevent premature birth. Delivery before the proper time may be the result of some of the factors that lead to miscarriage. (See p. 32.) If the physician thinks that labor is about to take place before the proper time, he will probably send the mother to a hospital.

In spite of every effort and for some causes that are unavoidable, a certain number of deliveries occur prematurely. A premature baby is not so well developed at birth as a baby born at full term. The earlier the baby is born, the more difficult it is to keep him alive. A baby born only two or three weeks before the expected date may be quite strong and little different from a full-term baby. A baby born seven or eight or more weeks early may be very small and difficult to save, and occasionally a baby born at full term is exceptionally small and feeble. All babies weighing less than 5 pounds at birth should be treated as if premature. Instructions for care of the premature baby are included here in case the mother has not yet obtained a book on infant care. (These instructions are quoted from the Children's Bureau publication, *Infant Care*, which may be obtained free on application to the bureau at Washington, D. C.)

Many babies weighing only 2 or 3 pounds at birth can be saved if the proper care is given them. Premature babies born at home are often best cared for in their home surroundings unless a hospital suitably equipped for the care of these small infants is available. Such a hospital will have special rooms for these babies and will have doctors and nurses on the staff who are trained to care for them and who will be able to feed them properly. Great care should be taken to keep the baby warm while he is being carried to the hospital, as chilling at this time decreases the chances of saving his life. He should be wrapped immediately after birth in wool flannel or cotton batting and in several soft wool blankets, and if the hospital is more than a short distance away warm-water bottles should be used to keep him warm during the trip.

Most premature babies are born unexpectedly, and it is wise for every expectant mother to have her equipment for the birth ready two months before the baby is due.

If, as is the case in many communities, a properly equipped hospital is not available, the premature baby must be cared for at home. The advice of a physician specially trained in the care of babies should be obtained at once and followed closely. If a nurse who has been trained in the care of premature babies can be engaged her experience will be a great help to the mother.

In caring for a premature baby there are three main problems which must be kept in mind constantly:

1. How can his body be kept at normal temperature?
2. How can he be protected from infections?
3. How can he best be fed?

#### KEEPING THE BABY AT NORMAL TEMPERATURE

The premature baby's heat-regulating power is very slight. His body temperature must be maintained for him by having the room in which he is to be born kept warm (80° F.), by preventing exposure, by using proper clothing to prevent loss of heat, and by applying external heat. All this is most important in the first hours and days of life.

#### CARE IMMEDIATELY AFTER BIRTH

A premature baby may die from exposure unless proper care is given him at once after birth. As soon as he is born he should be wrapped in wool flannel or cotton batting, covering his entire body except his face. This is necessary in order to keep him from losing any of his body heat. (The cord must be protected with a sterile dressing.) He should be put at once into a warm bed which has been prepared for him (see p. 53 for homemade heated bed) in a warm room. His temperature should be taken by rectum soon after birth, and his skin should not be oiled until his temperature is normal (98.6°–99.6° F.), and then only if his general condition is good and the room temperature is not lower than 80° F. He may then be cleaned with warm oil, one part of his body at a time being uncovered. It is much more important to keep him warm than to give him a bath. The complete oil bath need not be given for several hours or even a day or two after birth.

#### GENERAL CARE

A premature baby should be exposed and handled as little as possible—only when it is necessary to oil him, feed him, give him drinking water, or change his diaper. He may be turned over as often as every hour or two, but should not be picked up and handled unnecessarily.



The room in which the premature baby is kept should be ventilated by means of a narrow cloth screen (2 inches or more, according to the climate) at the top of one window, and a temperature of 75° to 80° F. should be maintained steadily, day and night. When the temperature in a room is as high as this, it is apt to be very dry. If a window is kept open, even a small amount of outdoor air coming in will bring with it some moisture. More moisture can be obtained by hanging wet sheets in the room or by keeping a kettle of water boiling on a small stove at a safe distance from the baby. The temperature inside the crib should be between 80° and 90° F. A thermometer should be kept in the crib with the baby so that the temperature in the bed can be known at any time. The baby's body temperature should be taken by rectum every four hours and recorded on a chart. It should be kept between 98.6° and 99.6° F.

#### CLOTHING

The first clothing that a premature baby wears is usually the wool flannel or cotton batting in which he is wrapped at birth and soft wool blankets. The clothes that have been prepared for him are as a rule much too large, and the mother or nurse must prepare substitutes at once which can be put on and taken off with the least possible handling of the baby. The clothes must fit the baby snugly to provide the necessary warmth but must not be tight. For a week or two after the baby's birth it may be best to continue the use of the cotton batting or wool flannel wrapped closely about the baby's body and to use small squares of cotton batting as diapers. Soon after that, however, small shirts and bands of wool flannel or knitted wool material and small diapers may be used. A few of the regular-sized diapers can be cut down to fit the tiny baby. If the diapers can not be changed without considerable handling of the baby, it is better to continue to use the cotton-batting squares, which can be removed easily.

A sleeveless padded jacket may be used as a wrap. The jacket may be made of two squares of cheesecloth or of some very thin cotton material (18 inches square), with a thick layer of cotton batting stitched between, having a piece of the padded material arranged as a hood, and should be long enough to cover the feet well and wide enough to lap over and be pinned in front. It may be opened at the bottom for changing the baby's diaper. When soiled, such a jacket may be burned and a new one substituted. A small square of wool flannel or soft old blanketing may be used as a wrap instead of the cotton-padded jacket; but, though it is warmer, it is less convenient for changing the diaper without disturbing the baby.

## FEEDING THE BABY

## HUMAN MILK

The feeding of a premature baby is a most serious problem. Mother's milk is the best food for him. Until the mother's milk is established, every effort should be made to get at least a few ounces of milk daily from some other mother nursing her own child or from a breast-milk agency, or to obtain a regular wet nurse. Any milk except that of the premature baby's own mother should be boiled for one minute.

The premature baby may be too weak to nurse or to draw milk from a bottle, and in that case the mother's milk should be expressed by hand or by a breast pump<sup>1</sup> and fed to the baby slowly by means of a medicine dropper or stomach tube. Feeding with a stomach tube (so-called "catheter feeding") should be undertaken only by a trained person. If a medicine dropper is used, it is well to slip a short piece of soft-rubber tubing over the end to prevent injury to the baby's mouth. Occasionally a strong premature baby may be able to nurse or to take breast milk from a bottle.

As it may be some weeks before the baby is able to draw even small amounts of milk from the breast, it will be necessary for the mother to empty her breasts at regular intervals, not only to obtain milk for the baby during the early weeks of life, but to keep up the milk flow until the baby is strong enough to nurse.

If breast milk can not be obtained, artificial feeding will become necessary. The doctor will order the formula.

Care should be taken that the baby is not overtired during feeding.

## NUMBER AND AMOUNT OF FEEDINGS

It is best to withhold food for 12 hours the first day of the baby's life. During the second 12 hours the baby may receive three feedings. Expression of milk from the mother's breasts should be begun at the

<sup>1</sup>The breasts may be emptied by hand, by an electric breast pump, or by a hydraulic breast pump. Breast pumps may be rented or purchased through the physician. The ordinary suction breast pump is of little value. Emptying the breast by hand should be done as follows: Scrub hands and nails with soap and warm water for one full minute, using a brush. Dry the hands on a clean towel. Wash the nipple with cotton dipped in boiled water. Have a sterilized glass and bottle ready to receive the milk. If the glass you are using has no lip, you should also have a sterilized funnel ready. Place the balls of the thumb and forefinger on opposite sides of the breast  $1\frac{1}{2}$  inches from the nipple. This is usually at the edge of the pigmented area. Press deeply and firmly into the breast until the resistance of the ribs is felt. Then bring the thumb and fingers tightly together well behind the base of the nipple. When the fingers and thumb are pressed deeply into the breast, keep them there and repeat the "together" motion 60 to 100 times per minute. Speed is important and is attained after some practice. The fingers should not slip forward on the breast lest the skin be irritated. It is not necessary to touch the nipple. If the stripping of the breasts is done in this way, it will cause no discomfort. If the milk expressed is not to be used at once, it should be kept on ice in a sterilized stoppered bottle.

A better bed can be arranged by using a small clothes basket or, still better, a box well padded inside and outside by quilting, into which is fitted a removable platform about 4 inches above the padded floor of the basket. A thin, flat hair pillow or several layers of wool blanketing should be used as a mattress to cover the platform. Beneath the platform, on the floor of the basket, three warm-water bottles are placed, which must be refilled whenever necessary to keep the temperature in the bed between 80° and 90° F. It is best to refill one bottle at a time, so as not to cool the bed too much. An opening should be cut in the side of the basket below the platform so that the warm-water bottles can be removed for refilling without disturbing the baby. (See illustration, p. 53.) The bottles beneath the platform should be at 115° to 125° F. If warm-water bottles are placed beside the baby in the bed, they should never be warmer than 115° F.

If the baby's bed is too hot, his temperature will rise above normal.

#### BATHING

With very small and weak babies it is frequently advisable not to give a bath for two or three days. It may, however, be necessary for the doctor or nurse to use the warm bath to stimulate the baby when he does not breathe well. If the complete daily bath can not be undertaken without danger of chilling the baby, it should be dispensed with or a partial bath may be given daily—washing the face, buttocks, and genitals only—without removing the baby from the heated bed and without exposing the rest of the body.

The baths should consist of a rapid sponging with oil or with water at 105° F. in a room 75° to 80° F., one part of the body only being exposed at a time to prevent chilling.

#### PROTECTING THE BABY FROM INFECTIONS

Premature babies have very little resistance to disease. They are particularly subject to infections, especially colds. A cold is serious in a premature baby because it is very likely to develop into pneumonia, which may prove fatal. Every person who cares for a premature baby or comes in contact with him in any way must be careful to wash the hands before touching the baby lest some infection be carried to him. No one who has even a slight cold or other infectious illness should be allowed to care for a premature baby. No visitor should ever be permitted in the room where a premature baby is kept. These rules can not be kept too strictly. Colds, pneumonia, and ear infections are common causes of death in premature babies.

end of 12 hours, and the colostrum—and the milk when it comes—should be given to the baby. From then on he should be fed regularly day and night. Small babies fed with a medicine dropper should receive their food at 2-hour intervals during the day and 3-hour intervals during the night (10 feedings in 24 hours). Larger babies, whether fed with a dropper or from a bottle, may be fed from the start at 3-hour or even 4-hour intervals.

The baby needs daily a total amount of fluid (milk and water) equal to about one-fifth to one-sixth of his body weight in pounds. For instance, if the baby weighs 3 pounds, he will need daily one-fifth of 3 pounds, or three-fifths of a pound of fluid. As 1 pound is equal to 16 ounces, three-fifths of a pound will be equal to about  $9\frac{1}{2}$  ounces. The 3-pound baby's full requirement of fluid therefore during 24 hours will be  $9\frac{1}{2}$  ounces.

Such quantities, although needed, can not be given to the premature baby during the first days of life. The amount given daily will at first be small and the increases gradual. In fact, it is fortunate if the baby can take one-eighth of his body weight in total fluid (2 ounces for each pound of body weight) by the fourth day.

The quantity of milk given in 24 hours at first will be half an ounce to an ounce of milk for each pound of body weight. This will be divided into 10 feedings; each feeding will therefore be very small—1 to 3 teaspoonfuls of breast milk. The total amount of milk given in 24 hours may be increased daily by one-eighth to one-fourth ounce for each pound of body weight, until usually by the tenth day the total amount of milk taken in 24 hours will be 2 to 3 ounces per pound of body weight. The rapidity with which the amounts can be increased will vary with the size and development of the individual baby.

#### DRINKING WATER

During the period when the baby is receiving very small feedings of breast milk, special care must be taken to give him small quantities (2 to 4 teaspoonfuls) of boiled water between feedings. He will need this to bring his total intake of fluid up to even the lowest requirement—2 ounces for each pound of body weight. As he takes more milk he will require less water, but it is well to offer water to him between feedings even when he is strong enough to take an adequate amount of fluid at his feedings.

#### THE BABY'S WEIGHT

Although occasionally premature babies will hold their birth weight, most of them will lose weight and should not be expected to regain their birth weight until the second or, what is more likely,

the end of the third week. In very small premature babies an average daily gain of one-third to one-half ounce, with a doubling of birth weight in 75 to 100 days, may be considered satisfactory.

#### ADDITIONAL FOODS

Premature babies are likely to develop rickets, and therefore it is important that treatment in the form of pure cod-liver oil, tested for the antirachitic vitamin D, should be begun at the end of the first week of life. Begin with one-fourth teaspoonful of cod-liver oil twice a day and after two or three weeks increase this amount to one-half teaspoonful twice a day. At the end of six weeks this amount may be again increased to 1 teaspoonful twice a day, and in the third month to 1½ teaspoonfuls twice a day.

Orange juice—one-half teaspoonful in water once a day—should be begun when the baby is 2 weeks old and the amount increased gradually so that at 2 months the baby receives one-half table-spoonful twice a day and at 3 months 1 tablespoonful.

Other foods should be added to the baby's diet as he grows older, as they are to the diet of the normal baby.

#### SUN BATHS

Sun baths can not be given to small premature babies until they are strong enough to have part of their clothing removed and lie in the sun without chilling. In summer, when the sun is very warm, premature babies may be given sun baths at an earlier age than in winter. Because sun baths can not be given to premature babies when they are very young, special effort must be made to see that the full amount of cod-liver oil, tested for vitamin D, is given with great regularity. In hospitals artificial sun baths of ultra-violet light may be advised by the doctor.

#### THE BABY'S LATER DEVELOPMENT

As he grows older a premature baby should become more and more like a small edition of a healthy full-term baby. Though small, he should have good color in his cheeks, his muscles should be firm, and he should gradually become more and more active and alert. He may be slower in learning to do some things, like holding up his head or sitting up; but if he gets the right kind of food and plenty of sunlight, he will usually catch up to the full-term baby of the same age by the time he is 2 or 3 years old.

## SELECTED BOOKS OF INTEREST TO MOTHERS <sup>1</sup>

- Baby's Daily Time Cards. U. S. Children's Bureau Chart No. 14. (Revised February, 1930.)
- The Baby in the House of Health. American Child Health Association, New York, 1926. 48 pp. 10 cents.
- Breast Feeding. U. S. Children's Bureau Folder No. 8.
- Child Management, by D. A. Thom, M. D. U. S. Children's Bureau Publication No. 143. Washington, 1928. 47 pp. (New edition in preparation.)
- A Doctor's Letters to Expectant Parents, by Frank Howard Richardson, M. D. Children, the Parents' Magazine, and W. W. Norton & Co., New York, 1929. 118 pp. \$1.75.
- The Expectant Mother; care of her health, by Robert L. De Normandie, M. D. (Edited by the National Health Council.) Funk & Wagnalls Co., New York, 1924. 57 pp. 30 cents.
- The Expectant Mother in the House of Health. American Child Health Association, New York, 1926. 23 pp. 10 cents.
- Everyday Problems of the Everyday Child, by D. A. Thom, M. D. D. Appleton & Co., New York, 1927. 349 pp. \$2.50.
- Feeding the Family, by Mary Swartz Rose. Macmillan Co., New York, 1929. 459 pp. \$2.40.
- Getting Ready to Be a Mother, by Carolyn Conant Van Blarcom, R. N. Macmillan Co., New York, 1922. 237 pp. \$1.50.
- Infant Care. U. S. Children's Bureau Publication No. 8. Washington, 1929. 127 pp.
- The Infant and Young Child; its care and feeding from birth until school age, by John Lovett Morse, A. M., M. D., E. T. Wyman, M. D., and L. W. Hill, M. D. (Revised.) W. B. Saunders Co., Philadelphia, 1929. 299 pp. \$2.
- Keeping the Well Baby Well. U. S. Children's Bureau Folder No. 9. (Revised 1930.)
- A Practical Psychology of Babyhood, by Jessie Chase Fenton. Houghton Mifflin Co., Boston, 1925. 348 pp. \$3.50.
- The Prospective Mother, by J. Morris Slemons. (Revised.) D. Appleton & Co., New York, 1921. 343 pp. \$2.
- Simplifying Motherhood, by Frank Howard Richardson, M. D. G. P. Putnam's Sons, New York, 1925. 263 pp. \$1.75.
- Sunlight for Babies. U. S. Children's Bureau Folder No. 5.
- What Builds Babies. U. S. Children's Bureau Folder No. 4.
- Why Drink Milk? U. S. Children's Bureau Folder No. 3.
- Why Sleep? U. S. Children's Bureau Folder No. 11.
- Your Child's Teeth. U. S. Children's Bureau Folder No. 12.

---

<sup>1</sup> Single copies of Children's Bureau publications may be obtained free by writing to the bureau at Washington, D. C.

## GLOSSARY

---

- Abdomen.**—The belly; the part of the body between the chest and the pelvis, containing the stomach, bowels, etc.
- Abnormal.**—Irregular; not according to the usual standard or condition.
- Abortion.**—A miscarriage.
- Afterbirth.**—The mass of tissue (placenta and membranes) expelled from the uterus after the baby's birth.
- Antirachitic.**—Preventing rickets from developing, or curing the disease if it is present.
- Anus.**—The outlet of the bowels.
- Assimilation.**—The process by which the body absorbs or makes use of nourishment.
- Birth canal.**—The passage through which the child is born.
- Blood pressure.**—The pressure of the blood on the walls of the blood vessels. It is of special importance that the doctor take at each visit the blood pressure of the expectant mother because a rising blood pressure is one of the symptoms of toxemia of pregnancy.
- Calcium.**—Lime; a mineral required by the body, particularly for the teeth and bones.
- Childbed fever.**—Fever of the mother resulting from blood poisoning at or near the time of childbirth; puerperal septicemia.
- Circulation.**—Movement in a regular course, as the circulation of the blood in the vessels of the body.
- Colostrum.**—The first fluid from the breasts of the mother after delivery of the child but before the milk comes.
- Conception.**—The fertilization by the father of the egg in the mother which starts the growth of the fetus in the mother's body.
- Confinement.**—The time that it is necessary for a mother to remain in bed during and after the birth of her baby.
- Constipation.**—The passing of very hard material from the bowels, or the passing of a very small amount, or failure to empty the bowels daily.
- Constitutional disease.**—A disease in which the whole body or a large part of it is affected.
- Criminal abortion.**—An abortion or miscarriage that is artificially brought about and is not necessary to save the life or protect the health of the mother.
- Delivery.**—The birth of the baby.
- Dental arch.**—The arch of the jaw that contains the teeth and is covered by the gums.
- Digestive organs.**—The principal digestive organs are the mouth, stomach, and bowels.
- Douche.**—A stream of water directed upon or into a part of the body.
- Enema.**—The insertion of a medicine or liquid into the rectum.

- Fetus.**—The unborn child in the uterus.
- Goiter.**—Enlargement of the thyroid gland, causing a swelling in the front part of the neck.
- Hygiene.**—A system of health rules or principles that will prevent disease and keep the body in good condition.
- Infection.**—The entrance into the body of germs that cause disease.
- Intestines.**—The long tube extending from the stomach to the anus; the bowels.
- Involution.**—The return of the uterus to its natural size after the baby is born.
- Kidneys.**—The two organs in the abdominal cavity that secrete the urine.
- Lactation.**—The formation of milk in the mother's breasts after the birth of the baby; the nursing period.
- Laxative.**—A food that keeps the bowels open; a medicine that causes the bowels to move.
- Massage.**—Treating the body by systematic stroking, rubbing, or kneading.
- Menstrual period (menstruation).**—The monthly flow in women.
- Miscarriage.**—Expulsion of the fetus before it can live outside the mother's body—that is, before the seventh month of pregnancy; abortion. *See* Self-induced miscarriage; Criminal abortion.
- Nausea.**—Sickness at the stomach.
- Navel.**—The place in the abdomen where at birth the cord was attached that connected the baby with the mother.
- Obstetrical.**—Having to do with the care and treatment of women during pregnancy and childbirth.
- Pelvis.**—The bony cavity formed chiefly by the hip bones and containing the uterus, vagina, bladder, and rectum.
- Placenta.**—The organ within the uterus of the pregnant woman through which nourishment passes from her to the fetus. It is attached on one side to the uterus of the mother; a cord on the other side connects it with the fetus.
- Premature.**—Happening before the usual time, which in reference to the length of pregnancy is nine months; as, premature birth, premature labor.
- Prenatal.**—Before birth; refers to the period of pregnancy.
- Prenatal center or clinic.**—A place to which expectant mothers can go for advice free or for a small sum; usually connected with health departments or hospitals.
- Puerperal septicemia.**—A disease caused by blood poisoning at or near the time of childbirth; sometimes called childbed fever.
- Rectum.**—End of the lower intestine leading to the opening or anus.
- Rickets.**—A disease of children in which the bones become soft because of lack of calcium. It can be prevented and cured by sunlight and cod-liver oil.
- Roughage.**—Any part of food that passes through the bowels without being digested; it thus helps to make the bowels move and to prevent constipation.
- Self-induced miscarriage.**—A miscarriage or abortion that is brought about by the mother.
- Spontaneous miscarriage.**—A miscarriage or abortion that occurs naturally, without artificial interference.
- Sterilize.**—To make free from all germs.
- Stool.**—The discharge from the bowels.
- Syphilis.**—A certain constitutional disease that is communicable through contact—by sexual intercourse or otherwise—with a person who has the disease or with his towels, drinking glass, or other personal belongings. The baby in the uterus will become infected with the disease from a mother who has it if the mother does not receive adequate treatment during pregnancy. For this reason a blood test (Wassermann) is necessary for all pregnant women.



- Thyroid.**—A large gland in the neck that is of great importance to the proper working of the body machinery. *See* Goiter.
- Tissue.**—A collection of cells forming parts of the body, as bone tissue, brain tissue, muscle tissue.
- Tonsils.**—Small, soft masses lying on each side of the throat.
- Ultra-violet light.**—Rays of the sun or of certain kinds of artificial light that do not give heat and can not be seen but have a powerful effect on living matter; they prevent and cure rickets.
- Uterus.**—The organ in which the unborn baby lies; womb.
- Vagina.**—The passage through which the baby leaves his mother's body at birth; the lower part of the birth canal.
- Vitamins.**—Certain food elements that are necessary for proper nourishment and growth. Lack of vitamins in the diet produces certain diseases such as rickets.
- Vioosterol.**—A medicine made by treating a substance called ergosterol with ultra-violet light.
- Wassermann test.**—A test of the blood to find out if syphilis is present.
- Womb.**—Uterus.