

# prenatal care



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FEDERAL SECURITY AGENCY

Social Security Administration

1906.

● Children's Bureau

Doctors have known for a long time that mothers who are well prepared for their expected babies stand the best chance of having healthy, happy ones.

Now, more than ever before, doctors say that being well prepared is not only a matter of the mother's keeping physically well throughout pregnancy. It means, also, that both father and mother are emotionally ready and eager to welcome the arrival of their new baby.

Here is a bulletin—the first edition of which pioneered more than a third of a century ago—that helps both mothers and fathers prepare for parenthood. It does not take the place of a doctor, but supports the advice and guidance he gives.

I know of no other single element in our many-sided effort to build ~~abounding good health in all our people~~ that is more important than the best possible start in life.

*Wm. P. Ewing*  
*National Security Administrator.*

# prenatal care

FEDERAL SECURITY AGENCY

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## *Foreword*

The term "prenatal care" as used in previous editions of this pamphlet refers to the care an expectant mother receives during the period before the birth of her baby. Although this bulletin is titled "Prenatal Care," its contents cover a wider range.

When "Prenatal Care" was first published by the Children's Bureau in 1913, its chief aim was to point out and stress the need of medical care during pregnancy. Early and continuing medical care is just as important during pregnancy as it has always been. But today the concept of good care for the mother and baby has broadened. We think more in terms of "maternity care," which includes medical supervision from early pregnancy through the birth of the baby and for several weeks after. Healthy mothers and babies, comfortable pregnancies, and easy labor are the goals of good maternity care.

Good maternity care, moreover, aims for more than the promotion of physical health alone. The thoughts of both mother and father about pregnancy, and their reactions to it, must also be considered. The thinking and planning which the mother and father share for their coming child, and their cooperation with the doctor in preserving and promoting good physical and mental health, help to lay the foundation for good parenthood.

This bulletin was written by Dr. Ann DeHuff Peters, under the direction of Dr. Katherine Bain, Director of the Division of Research in Child Development. Use was also made of many helpful suggestions from other members of the Children's Bureau Staff. Sincere thanks are due to the members of our Obstetric Advisory Committee, and to the professional persons and parents who also reviewed the manuscript.

*Katherine F. Luroff*  
Chief, Children's Bureau

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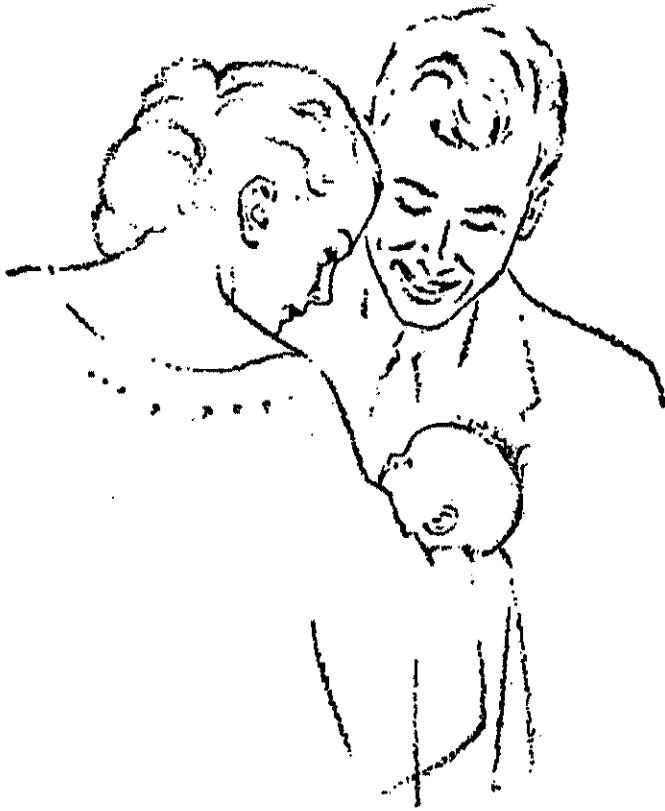
## *To make the best use of this pamphlet*

This pamphlet covers many points of pregnancy, childbirth, and care of the newborn baby. It does not take the place of good medical care. But it will help you see why such care is so important. Some expectant parents will want to read the entire pamphlet. Others may find only certain chapters helpful or of interest.

All pregnant women experience and think about certain things. They are interested in the changes in their bodies, how the baby grows, and what to do to get ready for the baby. All need to understand how to take care of themselves in general, what food they need, how much recreation and exercise is important, what personal hygiene is necessary, and what kind of clothing is most comfortable.

In writing this pamphlet, we have tried to outline the sequence of normal pregnancy and childbirth, and the first few weeks after a baby's birth. Many women go through pregnancy and childbirth with few discomforts and no complications. Complications of pregnancy are rare. But some of the women who experience them want to know the hows and whys of their difficulties. They will find some of the details in the chapter of this handbook dealing with these questions.

Many medical and technical terms are used in this book. These are the words your doctor will use. At the back of the pamphlet a glossary gives the meaning of most of these terms. Look up the words you aren't familiar with. They can help you to talk with and to understand your doctor.



## *Planning your care*

### **The early signs of pregnancy**

It is not always easy for a woman to tell whether or not she is pregnant until 2 or 3 months have passed. Even a woman who has been pregnant before can be mistaken. Some of the so-called "signs" may occur even when she is not pregnant. And if she is pregnant, the usual signs sometimes do not appear during the early months. This uncertainty is the reason why you can't always depend on the tales you hear from some of your family and your neighbors. Every woman reacts in a different way. Every pregnancy is different. That makes it important for you to get expert medical care and advice as soon as you think that you might be pregnant. In this way you will have the best and most comfortable

experience possible during the months while your baby is developing in your uterus (womb). And he will have the best chances for health.

The first thing most women notice when they think they might be pregnant is that the regular menstrual period does not appear. This is not always a sure sign, for most women do not menstruate exactly on time every month. But if you skip a second period, the chances are much greater that a baby is really on the way. A few women do have brief menstrual periods during the first 2 or 3 months of pregnancy. These periods are not so long nor the flow so much as usual. Some women notice vague cramps when their first and second periods are due, but without any show of

blood. These are the reasons the doctor will ask you when your last "normal" period began.

If you really are pregnant, you may begin to notice some other things after the first missed period. You may be more sleepy than usual. Your breasts will probably begin to grow larger and feel tender. You may need to pass your urine more often. Sometimes you may feel nervous and easily upset. You may or may not have "morning sickness," a feeling of nausea that may come in the morning or at times when you are very tired or hungry.

Few women go through the first 3 months of pregnancy without having some of these feelings. You and your husband need not be disturbed by them. They are simply reactions of your body as it adjusts to the developing baby's needs. The enlarging breasts mean they are getting ready for their later job of producing milk. The need to pass urine so often results from changes in the position of the uterus and the bladder as the uterus begins to grow larger.

Some women notice only 1 or 2 of these changes. Many women never have morning sickness. It used to be considered a necessary part of pregnancy for all women. Even now some of your friends may not believe you *are* pregnant if you don't become nauseated. However, with the right food and a cheerful outlook on life, many women are not troubled with vomiting. If you do get a sickish feeling, ask your doctor what to do. Many little things help. We will talk about some of these later on.

### Going to see the doctor

What about going to see the doctor? First of all, don't put it off. It is easy to let this slide. But it is not wise; some

problem may come up that might have been avoided.

It is important that your doctor should have had good training and experience in caring for pregnant women. You may already have a family doctor who knows a lot about pregnancy. Or you may want to go to an obstetrician (a doctor who has had several extra years of special training in the care of pregnant women). Or you may have a good hospital clinic or public health clinic nearby.

Perhaps you are worried about the expense. Many doctors and clinics now charge a lump sum which covers all your care during pregnancy, at delivery, and for a period after the baby's birth. Discuss the cost frankly when you first see your doctor. It is best to have a clear understanding from the beginning. Most doctors consider your pocketbook in deciding how much to charge, so don't put off going because you think it might cost too much. Delay may cost you much more. So choose early and go to see the doctor as soon as you can. There are several reasons for this—all important. First of all, he can find out if you really are pregnant. Then he will give you a complete physical examination—perhaps the most complete you've ever had. And he will give you care and guidance throughout your pregnancy, labor, and the period following your baby's birth.

### Helps in planning your care

Many communities have various kinds of resources for expectant parents who want help in working out plans for care or in answering some of their questions. Large cities have most of them; small towns or rural communities may have only a few. Some of them are listed in telephone directories, or your doctor may know about them.



What are these resources? They are hospital clinics, public health departments, social agencies, visiting nurse associations, and other organizations that are interested in the care of mothers and babies.

Do you want help in finding a good doctor? Several places can give you a list of doctors who specialize in the care of mothers and babies. Ask at the local or State public health agency, the local or State medical society, or at the medical school if there is one in your community.

Is expense a problem? Many large hospitals have free or special rate clinics, and some health departments have free clinics which provide care for you before your baby's birth, and, sometimes, delivery of your baby and care for a period of time after birth. Many of these clinics have medical social workers who can help you work out problems of budgeting and financial arrangements.

Are you wondering who will care for the rest of the family when the baby comes? The medical social worker at the clinic or hospital can often help you work out a practical plan.

Do you know about public health nurses? Many clinics have visiting nurses or public health nurses. They not only help the doctor but also conduct classes in maternity and baby care, make home visits before and after the baby comes, and help the mother with plans for her own care and care of the baby. The services of a public health nurse are available to anybody in the community.

Are there other problems or questions which bother you? Many public health and hospital clinics, as well as social agencies, have trained social workers who understand a lot about economic and emotional problems and can help to work them out. Your doctor or the public

health nurse can help you find out about them.

### What the doctor looks for

Many women dread going to the doctor, most of them because they have never had a complete examination and don't know what it includes. If you've been examined before you became pregnant, you may know more what to expect. Anyway, everything your doctor does in examining you has real plan and purpose to it. He or she will make every effort to see that the examination is as free from embarrassment as possible.

Every doctor has a different way of making his first examination, but many of them follow a plan something like this:

First of all, your doctor or the nurse will talk with you. They want to know about your past health, your parents' and grandparents' health, your husband's health, what sort of work you do, how you and your husband get along, whether you have had any miscarriages, what happened in other pregnancies you may have had—and all sorts of things you may have almost forgotten. You will be asked about your menstruation, your age when it began, how regular it is, when you had your last normal period. All of this information is put down on your record, which your doctor will keep and add to during your entire pregnancy. Try to remember all the kinds of sickness you have had. Even such apparently minor illnesses as measles or "flu" may give the doctor information he needs to give you good care.

After this history-taking, you undress completely. The nurse will give you a sheet or robe to wrap yourself in. You will probably be told to pass your urine

into a special pan, from which a small amount will be taken for examination. The doctor will examine it for albumin and sugar, and look at it under the microscope. Most people think of urine as a "waste." To doctors, however, it tells many things about how our bodies are acting. If the kidneys are not working well, or if we have some other kind of illness, something may appear in the urine which does not normally belong there. Your doctor will want to examine a sample of your urine at every visit.

Your weight will be taken sometime during the examination.

During the physical examination your doctor will do a number of things. He will take your blood pressure. He will check your eyes, ears, nose, and throat for any sign of infection. He will examine your breasts. Is there any secretion? Are they tender? Most women begin to have a thin watery secretion from their breasts about the third or fourth month of pregnancy. This secretion is perfectly normal but may sometimes cause a little irritation of the nipples. He will thump your chest and listen to your heart and lungs with a stethoscope. Then he will examine your "stomach," or what is medically known as the abdomen.

Your doctor will also do an internal or pelvic examination. If you relax completely and breathe through your mouth (which helps you relax), it need not be uncomfortable. He may first place a small, tube-like instrument in the vagina, the passageway to the uterus. This opens the vagina a little, and with a light, the doctor can see the lower end of the uterus. Next, he puts two gloved fingers inside the vagina and the other hand on top of the abdomen. In this way he can feel the uterus and can tell from its size

and shape about how far along the pregnancy is. The uterus ordinarily cannot be felt from outside the abdomen until you are over 3 months pregnant.

At the same time he does the internal examination, your doctor may take certain measurements, which tell him whether the birth-canal is large enough for a normal birth. Most women have a normal birth-canal, but the doctor always measures to be sure. Some doctors prefer to wait until a later visit to take these measurements, but they will be done sometime during your pregnancy.

During your first visit, the doctor will take a small amount of blood (about 1 to 2 teaspoonfuls) from one of your arm veins with a small needle. This is no more painful than an ordinary pin prick. He will use the blood for several tests. One test will tell him if you are anemic. Also he will do a blood test for syphilis, find out what type your blood is, determine the Rh factor, and do any other tests that are necessary.

When the examination is over, the doctor or nurse will talk with you again. They will tell you about what to eat, how much sleep and exercise to get, what sort of clothing you will need, and when to make your next visit to the doctor.

Ordinarily a pregnant woman should see her doctor once a month for the first 6 months, then at more frequent intervals. On later visits he may not need to examine you so completely. He may ask you a few questions, take your weight and blood pressure, examine your abdomen to see how much the baby has grown, test the urine, and occasionally prick your finger for a drop of blood to be sure you do not become anemic. Some doctors will want a chest X-ray taken.

You may want to keep notes on questions that come up in between your visits to help you remember what you wanted to ask on the next visit to the doctor.

## **Pregnancy tests**

Pregnancy tests are special laboratory tests used at times to help the doctor know whether or not a woman is pregnant. Such a test may be advisable for some women because of health problems. Unless such problems exist, however, all that is needed is a little patience, for time will soon tell whether a baby is on the way. Your doctor may not think it is necessary to do a pregnancy test on you—and if he doesn't, don't urge him. They are expensive and usually have to be done in a special laboratory.

Most pregnancy tests are based on the fact that a pregnant woman passes certain chemical substances out in her urine. If a little of the pregnant woman's urine is injected into certain female animals, such as a mouse, rabbit, or frog, these substances cause changes in the animal's reproductive organs.

These pregnancy tests can only be used during a certain period of time. If too early, they may be called "negative" when the woman really is pregnant, and after 3 months they are seldom needed. Most doctors use them only in addition to their own observations.

## **When is the baby due?**

If someone could discover how to tell just when a baby is due, he would earn the gratitude of the doctor and mother alike. But this is one of the secrets nature still holds. All we can do is figure roughly.

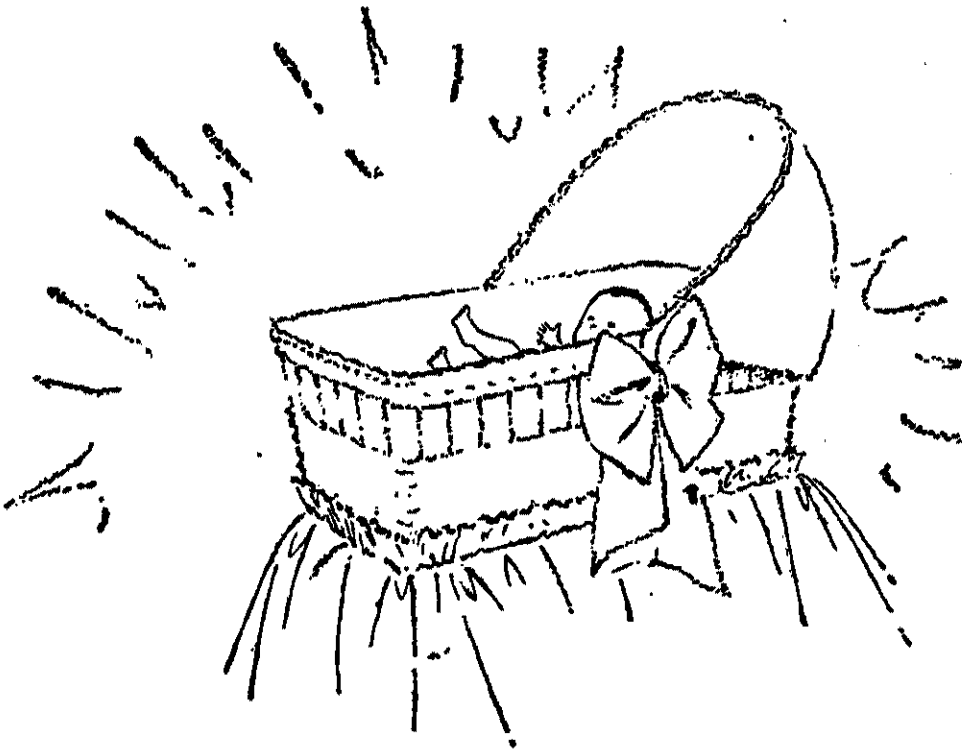
In the human being the average time from conception to birth is about 266 days. Since it is difficult to tell the exact

day on which conception occurred, doctors have hit on a convenient scheme, which is fairly reliable, to estimate when the baby is due. The scheme is based on the observation that many babies are born about 280 days after the last normal menstrual period occurred. To figure about when the baby is due, count back 3 months from the first day of your last normal menstrual period and add 7 days. For example, if your last period began June 10, count back to March 10, add 7 days, and the baby will be due about March 17.

You notice we say "about" then. Very few mothers will have their babies on the exact day. It is better to prepare yourself to expect the important arrival anywhere from 1 to 4 weeks before or after the chosen date. It may be a help to know, however, that most babies arrive within a week of the expected time.

## **Does the mother's age make any difference?**

The talk about the advantages of having children early has made some women afraid of having babies after they reach the age of 35 or so. Many doctors do feel that a woman in her early twenties is a little more likely to have an easy pregnancy and labor than if she has her first child at 40. But a number of women over 40 have had their first babies without any difficulty, and go on to have more. No woman needs to be afraid of pregnancy just because she is over 35. With good medical care and guidance, she probably will have very little more discomfort than her younger and more "elastic" sister. Some older women who have kept themselves youthful with proper food, good exercise, and a happy outlook on life may find their pregnancy and labor actually very easy.



## *How the baby grows*

### **Menstrual cycle**

Certain organs inside the lower part of a woman's abdomen are concerned with menstruation and child-bearing: the uterus (womb), the two ovaries and tubes, and the vagina (birth-canal). These organs lie deep down in the lower abdomen and are protected by the bony walls of the pelvis.

The uterus is a pear-shaped organ about 3 inches long, which is located just above the vagina and leads into it through a small opening. The lower end of the uterus is called the cervix. The walls of the uterus are made of thick muscle. Branching out from the upper corners of the uterus are the two Fallopian tubes. These are tiny tubes about 3 inches long and one-fourth to one-eighth of an inch

in diameter. The outer end of each tube lies near an ovary. The ovaries are about the size and shape of an unshelled almond, and are located on either side of the uterus. The vagina opens into the uterus, and the uterus into the Fallopian tubes.

The ovaries contain many, many tiny cells which are capable of developing into mature female sex cells. These cells are so small that, if they could be seen, they would look like tiny white specks. About every 28 days, midway between two menstrual periods, one of these female cells is released by the ovary. This female cell then finds its way into the Fallopian tube.

The process of menstruation, or the monthly flow of blood, is related to this

activity of the ovaries. The female cell is released from the ovary at a fairly regular time each month. In most women this is about 14 days before a menstrual period is due. However, this is not a hard and fast rule. The time varies in different women.

As the ovary prepares itself to release the cell, changes are taking place in the lining of the uterus to get it ready for a possible pregnancy. As soon as a menstrual period is finished, the lining of the uterus begins to grow. Tiny glands form in the outer layer of the lining. Many little blood vessels grow up into this layer, and the whole lining becomes soft and velvety.

If the female cell is fertilized by a male cell and pregnancy begins, as we explain in the section **How does a baby grow before birth?** the lining of the uterus will be ready for the newly forming baby. If pregnancy does not occur, the female cell dies in about 3 days, and the growth of the lining of the uterus slows up.

The monthly flow occurs when the top layer of the lining stops growing and begins to come loose. The top layer contains the newly formed glands and many of the little blood vessels. As it loosens, a flow of blood results, which carries out most of the lining with it. The flow is heavy at first, but slows up as the lining becomes thinner and the little blood vessels disappear. At the end of the menstrual period, the lining is almost completely gone. Now it begins to grow again, as we have described, and the whole process is repeated. About 28 days from the beginning of the last menstrual period, a new menstrual period begins.

If pregnancy does occur, menstruation will stop. The lining grows thicker, and it will not be shed, for it is now in use. No more female cells will be released by

the ovary during pregnancy, and menstruation will not begin again until several weeks or months after the baby is born.

## **How does a baby grow before birth?**

### *Conception*

A baby grows from the union of a male cell and a female cell. Male cells (called spermatozoa) form in the testes (sex glands) of a man. Female cells, or ova, form in the ovaries of a woman. The union of a spermatozoon with an ovum is called conception, or fertilization, and is the beginning of pregnancy.

The female cell is very tiny. It has only been seen under a microscope. It is about one two-hundredths of an inch in diameter. In shape, it is round. It is surrounded by a protective outer covering. Inside this is a layer of food material, and deep in the middle is a small inner circle called a nucleus.

The male cell is many times smaller. It moves by lashing its long, slender tail. The female cell however cannot move by its own power. The male cell must find its way to the female cell in order for conception to take place.

Millions of male cells, or spermatozoa, are passed into the vagina at each intercourse. Some of these cells pass up through the uterus and into the tube. They can move fast enough to reach the end of the tube within an hour after intercourse. If one of them finds a living ovum there, conception can take place. If not, the male cell will die within a few days. Those remaining in or near the vagina probably die within 24 hours.

When a male cell reaches a female cell, it pierces the protective outer covering and its tail drops off. It passes through

the layer of food material and unites with the nucleus of the female cell. This is fertilization. A new life has started.

You will not know when conception takes place. In fact, the baby will develop for 2 weeks or longer before you even suspect you are pregnant.

### *The first week of life*

Neither the male nor female cell is complete in itself, but upon their union they form a cell that is complete, that can begin to grow. This newly formed cell contains all the material from which the baby gets his inheritance: what he will look like, and what his basic capacities will be.

This cell soon divides into two cells, and the two into four, and so on. This process of cell division will continue on throughout life. During these early days, however, cell division is more rapid than it will ever be again.

The increasing cluster of cells is called an embryo.

During the first few days after conception, the embryo gets its food from the material in the middle layer of the original female cell. This food is gradually exhausted as the embryo moves down the tube into the uterus. It probably takes about 3 to 5 days to make this journey.

At the end of 6 days, the embryo has become a mass of many tiny cells. It sinks into the thick soft lining of the uterus. The lining contains many glands and tiny blood vessels. As the embryo settles into this lining, it finds a bed and food for itself.

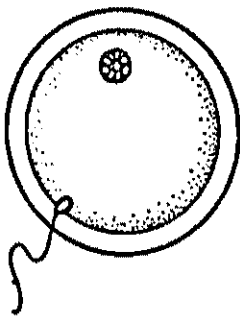
### *Second week after conception*

About the ninth or tenth day, the protective outer layer has disappeared, and a shaggy growth with many little finger-like structures takes its place. These little finger-like structures fasten the embryo to the inner lining of the uterus, and are the beginnings of the placenta.

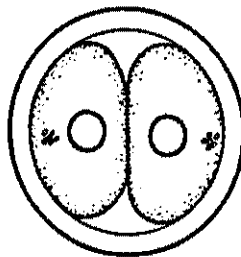
During the second week after conception the original cluster is beginning to

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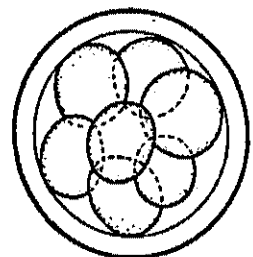
## Greatly enlarged drawing of fertilization and the early cell division of the embryo



the male cell pierces the outer covering of the female cell

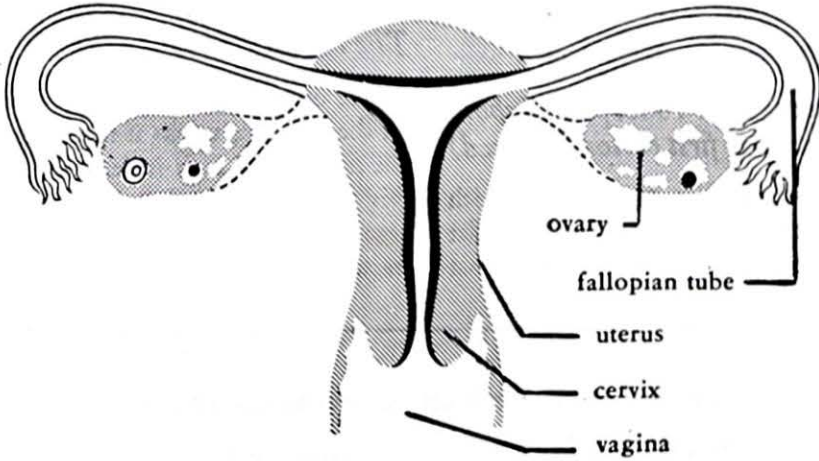


the fertilized cell divides into 2 cells

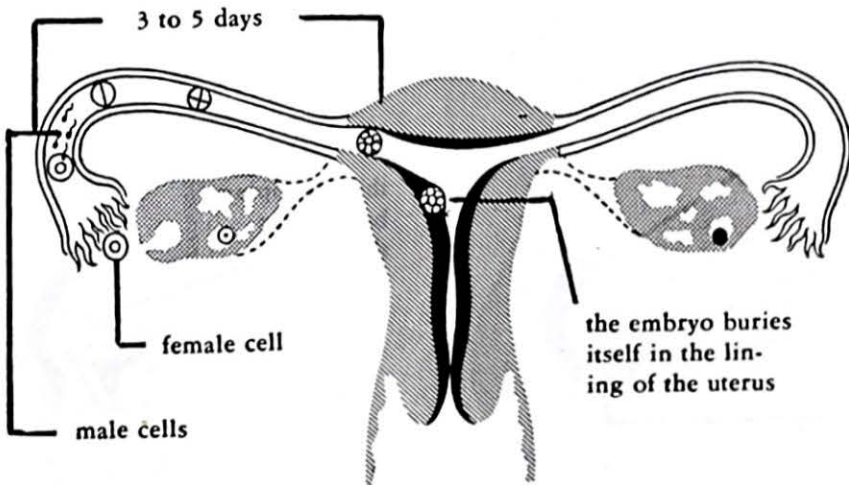


the embryo has become a cluster of many cells

Inside view of the  
child-bearing organs



The process of fertilization and movement of the  
fertilized embryo through the tube and into the uterus



The five ova shown in the tube and uterus represent different positions of the same ovum  
as it moves down the tube into the uterus

change into three different groups of cells. Some of these cells will develop into the baby himself. Some will form the attachment to the uterus—the placenta—which will be joined to the baby by the umbilical cord. Some will develop into the membranes that will surround and protect the baby.

*Third week after conception (about the time your first period is missed)*

In this week the group of cells which develop into the baby looks like a flat grooved, or ridged, oblong. It is just

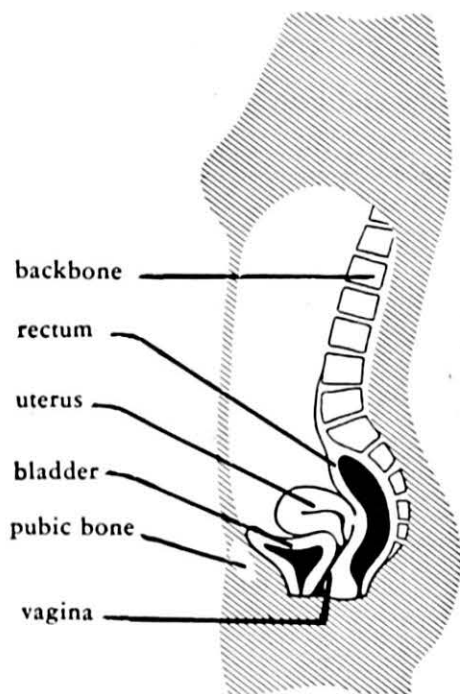
barely large enough to be seen by the naked eye. Many beginnings of organs are present. The area which will develop into the head and brain is growing very, very fast. There are shallow depressions where the eyes will form.

*The baby's 4th week of life*

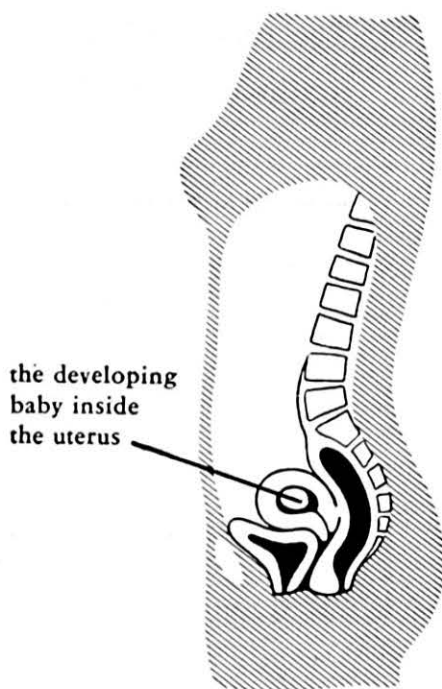
The embryo is growing very rapidly. At the end of 4 weeks it measures about one-sixth of an inch in length. During this important week, all the internal organs (such as the heart, liver, digestive tract, brain, and lungs) are really begin-

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Side view of a woman's body, showing the relationship of the bladder, uterus, vagina, rectum, and pelvic bones



not pregnant



about 3 months pregnant



ning to take form. The heart begins to beat, although it cannot be heard for many more weeks yet. You are probably beginning to think now that you might be pregnant.

### *The baby's 5th week of life*

The embryo is bent in an arch, and looks like a little fat semi-circle. The backbone begins to form. The head is developing much faster than the rest of the body, as it will continue to do until after

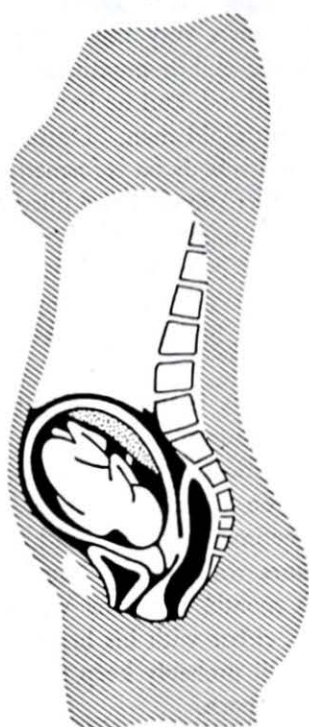
the baby is born. Tiny limb-buds, the beginnings of the arms and legs, have appeared.

### *The baby's 6th week of life*

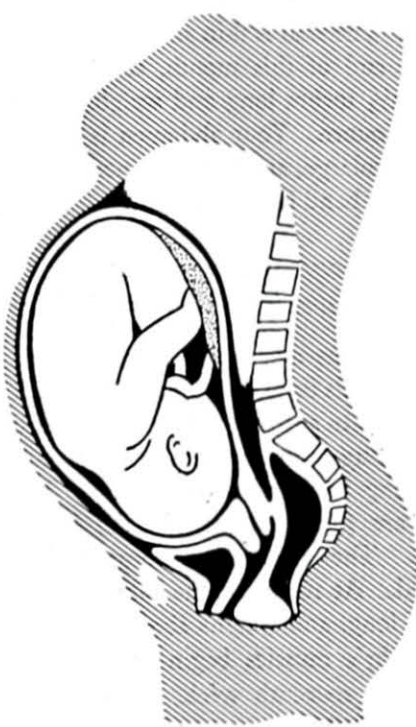
The embryo is now almost one-half an inch long. The four limb-buds have grown into arms and legs with tiny webbed fingers and toes. The embryo has a well-developed tail and a pot belly, because the internal organs are growing so fast.

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## Side view of a woman's body, showing the relationship of the bladder, uterus, vagina, rectum, and pelvic bones



about 5 months pregnant



full-term pregnancy

*The baby's 7th week of life (about the time your second period is missed)*

During these days the face of the embryo takes on a more definite shape. The ears and eyelids are forming. The internal organs begin to take their permanent place in relation to each other.

*Third month of pregnancy (8th to 12th week of the baby's life)*

At the end of the eighth week, the placenta and membranes have completely formed. The membranes make a sac that contains fluid in which the baby floats. From now until birth, the baby is known as a fetus. During this month, the fingers and toes lose their webs. The tail has disappeared, as the body grows longer. The skin is thin and transparent. At the end of this month, the baby is about 2½ inches long and weighs about half an ounce. Your abdomen is beginning to enlarge, and you may notice that your skirt band is getting tight.

*Fourth month of pregnancy (12th to 16th week of the baby's life)*

The fingers and toes are well-formed and tiny nails begin to appear. The back is still bent in an arch, but the baby's head is becoming more erect. A little hair is beginning to grow on the scalp. The teeth are forming, deep in the baby's gums. The external sex organs have formed. At 16 weeks, the baby is 4 to 5 inches long, and weighs about 4 ounces. The baby's muscles begin to be active about the sixteenth week. Toward the end of this month, a few women notice the baby moving but most do not feel these movements yet.

*Fifth month of pregnancy (17th to 21st week of the baby's life)*

Sometime between the eighteenth and twentieth week of the baby's life, the doctor begins to hear the baby's heart beat when he listens through his stethoscope. About this same time, you may begin to feel the faint fluttering movements as the baby stretches his arms and legs. At 20 weeks, the baby is about 8 inches long, and weighs about 10½ ounces. Your abdomen is getting large enough to begin to be noticeable.

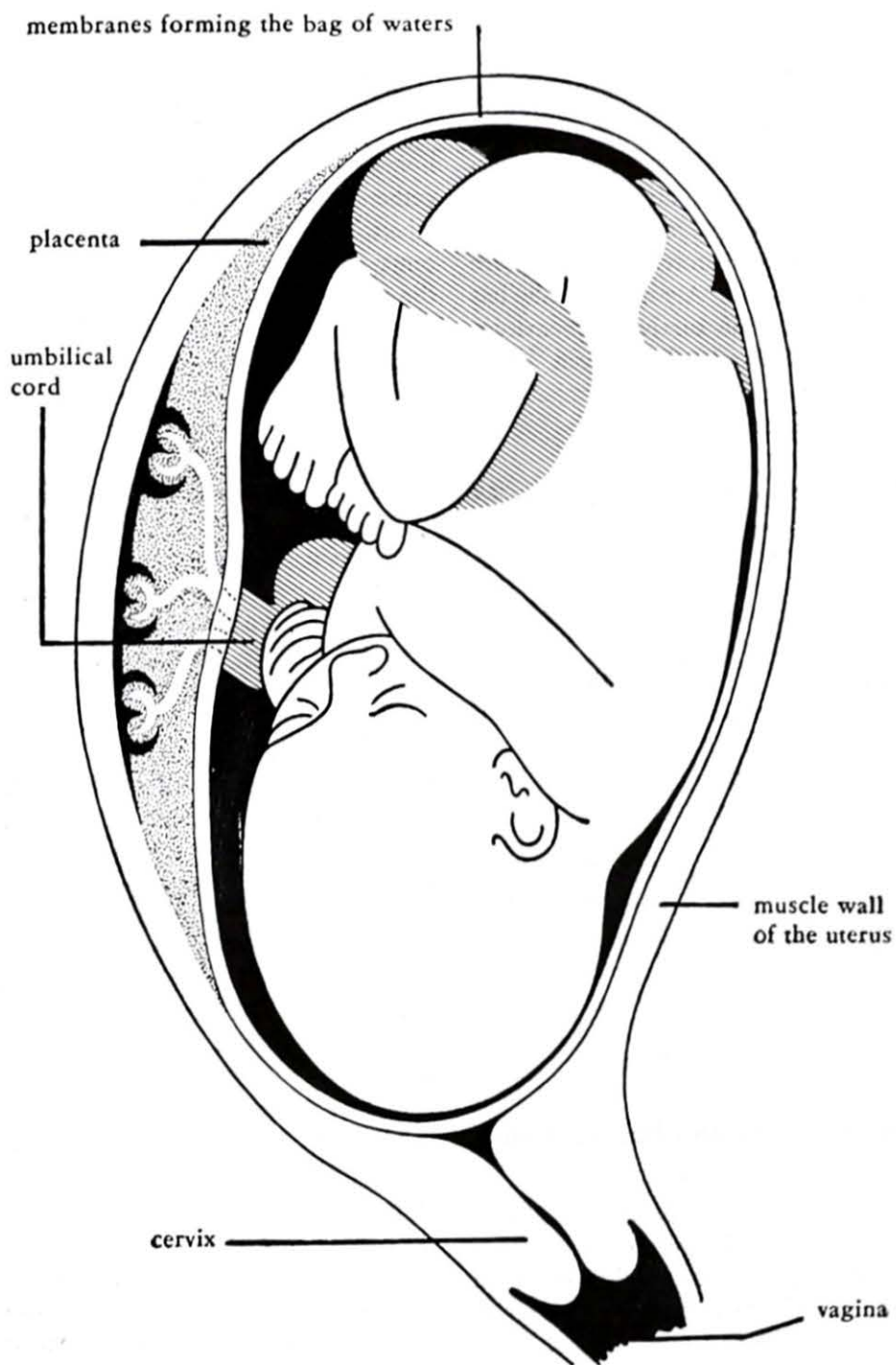
*Sixth to ninth months of pregnancy (22d to 38th week of the baby's life)*

From now on, you will notice your abdomen enlarging more rapidly. The baby's body grows very fast in length. Until about the eighth month, his skin is wrinkled and red, and he looks somewhat like a little old man. During the last 2 months, his body fat is formed, and he becomes more rounded and filled out. From the sixth month until shortly before birth, his skin is covered with soft downy fuzz. A soft white creamy secretion called vernix begins to collect on his body.

His movements become real thumps by the sixth month. The baby may change his position many times. Sometimes he lies on one side, sometimes on another, sometimes with his head down and sometimes with it up. Usually by the seventh month, the baby will take one position, either with his head up or down, and will probably keep this position until he is born.

There may be times when you do not feel any movements. Some doctors think the baby has periods of waking and

### Full-term baby in the uterus



sleeping, just as he will later on after birth.

A few babies born before their twenty-eighth week of development have lived, but this is very rare. Before this time, the baby's internal organs have not developed enough for him to be able to live in the outside world. After the twenty-eighth week, or roughly about 6½ calendar months of pregnancy, his chances of living, if prematurely born, increase with each month. A 7-months baby has a fair chance of surviving premature birth; an 8-months baby even better chances, if he is given the special care that all premature babies need.

### *When the baby is ready for birth (full-term)*

At the ninth month, the tiny fuzz covering the skin has largely disappeared. The baby's skin has more natural color and is thickly covered with the soft, creamy vernix secretion. His head is covered with fine hair, and his eyes are a dark slate color. As soon as he is born, he will cry vigorously and move his arms and legs energetically.

The average weight of a full-term baby is about 7½ pounds, and the average length about 20 inches. But normal full-term babies vary all the way from 5½ to 10 or 11 pounds, and from 19 to 22 inches. Boy babies usually weigh a few ounces more than girl babies.

### **The placenta and bag of waters**

Most mothers want to know how the baby is "fastened" to them; just what is the connection between their bodies? Actually there is no connection except through the placenta. This important structure provides a way for the baby to

get nourishment. It is often called the afterbirth, because it passes out of the uterus after the baby is born.

As the embryo settles into the lining of the uterus, in the second week after conception, its outer covering spreads many little finger-like structures out into the lining. These finger-like structures, together with the region of the lining where they are fastened, form the placenta. As the uterus and the baby grow, the placenta grows, too. The little fingers going down into the lining of the uterus lie near many of the blood vessels in the wall of the uterus. Blood vessels from the baby's body run through the umbilical cord out into the placenta, where they can pass close to the mother's blood vessels.

Although these blood vessels lie close together, there is no direct connection between the mother's and baby's blood streams. Food materials from the mother and waste products from the baby must pass to and fro through the blood vessel walls in the placenta. The food material is carried to the baby by the blood vessels in the umbilical cord. In addition to supplying food to the baby, the mother's blood stream carries away all the waste from the baby's body.

The "bag of waters" is a sac formed from thin membranes which grow from the edges of the placenta and completely surround the baby. This sac is filled with a thin watery fluid.

One might ask, "But why doesn't the baby drown if he is floating in fluid?" There is no danger of that, because the baby does not use his lungs to get oxygen as he will after birth. He gets all the oxygen he needs from your blood. His lungs will not fill with air until after he is born. There are good reasons for the

fluid. It keeps him at an even temperature. It also acts as a cushion or shock-absorber to protect him from the jolts and bumps he might get from your ordinary activity.

## The baby's sex

How does it come about that the baby will be a boy or a girl? It is apparently a matter of chance. Scientific studies seem to show that the male cells determine whether the baby will be a boy or a girl. There are two kinds of male cells, one which will cause a girl baby, the other a boy baby. The two kinds of male cells are probably produced in about equal numbers. As far as we know now, it is chance that decides which kind of male cell fertilizes the female cell.

There is no way known at present of telling definitely before birth whether the baby is a boy or girl. X-ray will not help, as it merely shows the baby's bony structure.

## Abnormalities

Many a mother wonders at times whether her baby is developing normally. It is comforting to know that only a very few babies are born with any sort of defect. The reason for this is that defects are often the result of a flaw in the cell material of either the male or female sex cell from which the baby was formed. When the defect is there from the beginning, the baby cannot develop normally and is often miscarried very early.

Many people used to think that "marking" the baby came about because of something the mother thought, or saw, during pregnancy. This superstition, however, is not true. There is no direct connection between your nerves or your

blood stream and the baby's at all. Your thoughts and the thing you see cannot have any direct effect on the way the baby's body is formed. If a baby is born with a deformity, it is not the result of any action or fright or thoughts the mother may have experienced.

Doctors know some of the causes for deformities, but not all. Some defects may result when the mother has certain illnesses, such as German measles, early in pregnancy. Some rare conditions—certain types of eye deformity or extra fingers and toes—are inherited. Some deformities may result from an extreme lack of certain essential foods in the mother's diet. Others, as we have mentioned, are the result of defects in the original cells from which the baby grew.

Birthmarks usually come about because of some small flaws in the early development of the baby. These marks often fade away as the baby grows older. Often newborn babies have small purple discolorations on their foreheads or the back of their necks. These are not true birthmarks and usually begin to fade in a few days or weeks. Their cause is not known.

## Twins

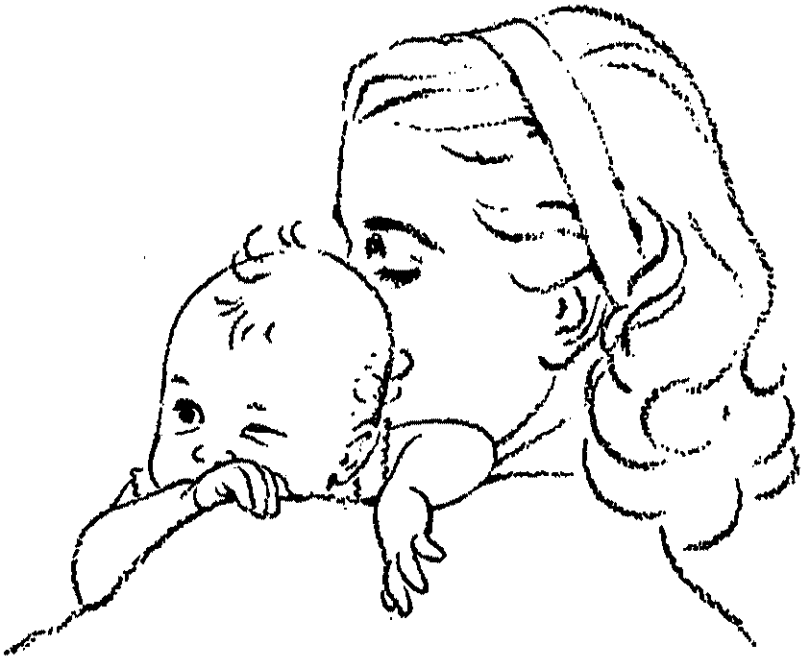
Twins are born about once in 86 pregnancies on the average. About 25 percent of all twins are identical. Triplets and quadruplets are born so seldom that they usually rate a story in the newspapers.

Nowadays, twins usually do not come as a surprise. The doctor can often tell by hearing two separate heart beats or feeling two separate babies as he examines your abdomen. If he has any question, an X-ray after the fourth month will show whether there is one baby or more.

There are two types of twins, those called "fraternal" and those called "identical." Fraternal twins are entirely separate babies from the very first. They come from two separate female cells, each of which was fertilized by a separate male cell. Each baby has its own placenta and bag of waters. This type of twin probably develops because both ovaries release a female cell at the same time, or because one ovary happens to release two cells at once. These babies are no more alike in looks and disposition than any other brothers and sisters. Boy-and-girl twins are always of this type, although fraternal twins may also be two boys or two girls.

Identical twins form in a different way. They come from the union of one female cell and one male cell. When this new life first begins to grow, something apparently causes it to separate entirely into two parts, which develop independently. No one knows why this happens. These babies usually have separate umbilical cords and bags of waters, but are attached to one placenta. They are always of the same sex, and look so alike that even their mothers have trouble at times in telling them apart.

Triplets and quadruplets can be either identical, fraternal, or both.



## *Thoughts and feelings*

During pregnancy most women experience many kinds of emotion. Some women keep an even disposition, but most find they have some changes in feeling. You may be happy, irritable, weepy, excited, worried, happy-go-lucky, blue, fearful, or gay—not all at once, of course, but your reactions may surprise you at times. This does not mean that you are entitled to throw all restraints to the winds and change your feelings as fast as you move from one room to another. After all, adults are expected to have a little self-control. But the physical adjustments your body has to make may influence your state of mind, and there are many “emotional adjustments” to make, too.

Having a baby means a lot more than just the physical changes in your body. It means added responsibility, changes in your way of life, giving up some of your freedom, more financial adjustments, perhaps planning another place to live—many things that go with having a family. It is no wonder that you will have moments of doubt and uncertainty mixed in with excitement and pleasure and anticipation. These ups and downs are more common with a first baby, but they can come with a second and third and fourth baby, too.

Certain fears may pop into your mind at the most unexpected moments: Am I going to get along all right? Will the baby be normal? Will my labor be pain-

ful? How can I manage to do everything? And nearly every pregnant woman at one time or another feels that she looks "funny": her clothes aren't right, her balance is awkward, she can't stoop over to tie her shoes, she's tired of the "same old dress."

Your feelings can depend a lot on whether you really want the baby and are ready for the responsibilities of being a parent. Babies don't always come at just the right moment. Many people find they have to grow up a lot themselves when they have children. If you have always had your own way, or if your husband is used to having all your attention, or if you find it hard to make ends meet even before the baby comes, you may have to make a lot of changes in your way of life. Babies are demanding, too, and it may be necessary for you and your husband to learn how to share each other with the baby.

Even if you want the baby very much and have been hoping and planning for one, you may have doubts at times about whether you can carry out all the demands a family puts upon you. This is a perfectly natural feeling. It is natural, too, to hide away many of such doubts and feelings. Most women have been brought up to think that of course all mothers want and love their babies and are ready and able to take good care of them. They feel ashamed and guilty if they wonder at times whether they really want a baby and can make a go of it. But it is no reflection on you to have such doubts. There is no need to feel ashamed. Most mothers have these questions, both before and after the baby comes. They may be more common during pregnancy when you have more time to worry and cannot see the baby.

When these doubts and fears are hidden away, they may pop out in different form; for example, a sudden annoyance at the way you look or at something your husband said. Or you may want to cry, without knowing just why. It is important to face these doubts and fears frankly. Get them out in the open and talk them over with an understanding person. Perhaps your husband or your mother, or some close friend can help you to talk them out. Some women find it easier to talk to someone outside the family, such as the doctor, the nurse, or the social worker. If you can look at these worries clearly, you may find they are not so alarming, after all.

### Keep up your interest

One of the best ways to help yourself feel happy and confident is to keep up an active interest in all sorts of things. Visits to relatives and friends, movies, bridge games, walks, and other social activities, reading, and keeping up with the news—all these will help to keep you feeling your best.

It is a mistake to take advantage of your "condition" by slopping around the house in old slippers and a messy housecoat, with your hair uncombed. If you can keep yourself neat and well groomed, you may be surprised to find how much the bluest feelings improve. Some women find they feel their best both physically and mentally when they are pregnant and many of them are prettier than ever, too.

Knitting or sewing for the baby can be lots of fun. Many young mothers-to-be have found it very helpful to spend some time with friends who have small children—helping to bathe and feed the baby, or taking him for a walk, and finding out



some of the practical "ins-and-outs" of being a mother.

You might like to read something about babies. A good book or pamphlet can often help you to understand the care of a baby, how babies grow and develop, and some of the joys and problems of good parenthood. You will find some suggestions on the back cover of this booklet.

Some communities have mothers' classes where expectant mothers can learn about and discuss their own care and the care of the baby. These classes are usually sponsored by public or private health centers, hospitals, visiting nurse associations, or other community groups. You might want to find out about such classes in your own community.

At times you will want to sit and dream about how nice it will be to have the baby. What will he look like? Will the baby be a "he" or a "she"? It is better not to make up your mind too firmly on that score. Most people have a preference—sometimes secret. But boys and girls don't always come in the order you might prefer. If you and your husband decide too firmly about this, you may be in for some real disappointment. You might guess right, but the chances are just as good that you won't.

If you or your husband think you really want a girl or a boy more, try to figure out why. Do you want a little girl to dress up in pretty clothes? Does he want a son to go in business with him? Do you want a boy because you have never gotten along very well with girls? Or do you have two boys now and think a little girl would round out the family? Then try to think of all the reasons why it would be nice to have the opposite. You may come out with the feeling that it is pretty nice to have either a boy or a girl.

A great deal of family upset and disappointment can be avoided if you and your husband make up your minds early to accept a boy or a girl with equal love and pleasure. Even little children can sense disappointment and disapproval very early, no matter how hard you try to hide it. And it can put real stumbling blocks in the way of a child's normal growth and development, when he does not have the feeling of love and security that is so important in the development of his own self-confidence.

Doubts and questions may come up again after the baby is born. With so much excitement right at first, and so many things to do and learn, you and your husband will be carried along for a while with the wonders of the new baby. But often, when the baby is a week or two old, is gaining weight well, and his feeding has been going along fine, you may suddenly feel pretty tired and blue. Some mothers have spells of weeping and just don't know what is wrong. Others feel all worn out. Some doctors call this reaction the "baby blues." It isn't anything to worry about. It seems to be a way your body takes to relieve the tension and anxiety that all mothers feel at times. This blueness really isn't a problem unless you just can't seem to climb out of the dumps. In that case, your doctor ought to know about it and may be able to help clear things up. It is normal to feel tired at this time, and you may feel better if you can talk it over with someone who understands.

### **You may feel lonesome**

Another feeling may come up at times with a woman who has been actively and happily working outside the home. After the busy office days and friendly

contact with co-workers, these young mothers sometimes find the day-to-day routine of the home and the care of the baby a lonely experience. Babies can't talk or discuss interesting happenings of the day, and even though a mother loves her baby dearly and is interested in his development and care, she may find herself lonesome and bored at times. You do not need to feel guilty about such feelings. Talk it over with your husband. See if you two can work out a plan to give you a chance to get away occasion-

ally from the day-to-day routine. You won't be neglecting the baby if you go out once in a while. In fact he will get along better if you are relaxed and happy.

Most young fathers and mothers need to realize too that their personalities will not change completely when they become parents. They need to go out together at times, to have friends in, and to continue some of their previously shared outside interests. You will be happier, and the baby will get along better too if he is a part of a normal family group.



### *This is a family affair*

Most of the things we talk about in this bulletin largely concern the mother. But this does not mean that the father should feel left out. Many men have just as much curiosity as their wives about what is going on, how the baby grows, what labor and childbirth are like, and what their wives should be doing to preserve good health. It is just as important for a father-to-be to read all of this bulletin as it is for his wife, but since he may have some special questions this chapter is written for him.

Having a baby—whether it is the first or the tenth—really is a family affair. Your wife will have the physical responsibility of pregnancy and labor, but you will have just as many changes in your way of life to face as she has. Chil-

dren mean added responsibility, in time and money and the planning and thought that go into good parenthood. But they bring much enjoyment and pleasure, and most parents admit that the investment is well worth it.

The support and encouragement you give your wife from the very beginning is most important to her. Plan to see her doctor sometimes during the early months of her pregnancy. He can help you understand a lot of the things you and your wife need to know about parenthood. At times your wife will need a special word of encouragement—perhaps about her diet, or how she looks, or whether she is getting enough rest. No one can give her quite the same feeling of confidence that you can. It is very

common for even the most even-tempered woman to feel depressed at times during pregnancy. If you can understand this and give her that needed "boost" at just the right moment, both of you will grow in your understanding and love for each other.

### Attend a fathers' class

Some communities have "fathers' classes," where expectant fathers can go to learn how to take care of a baby, and have a chance to talk over with a doctor or a nurse some of the things that have puzzled them. Most men who have been to these classes think them very helpful. Some of these classes are sponsored by health departments, some by the YMCA, or other community agencies. Many of the puzzling things about pregnancy and babies are cleared up when young fathers get together with someone who can answer their questions.

If you are handy with tools and like to make things, you might want to make a crib, play pen, or cabinets for the baby. Plans for baby furniture are sometimes published in magazines, or can be found in books on furniture-making or wood-working. Ask your public library to help you find some good plans, if you want to try your hand at this. Or you may be lucky enough to get some hand-me-down furniture, or some second-hand pieces that need only a little refinishing to make them as good as new.

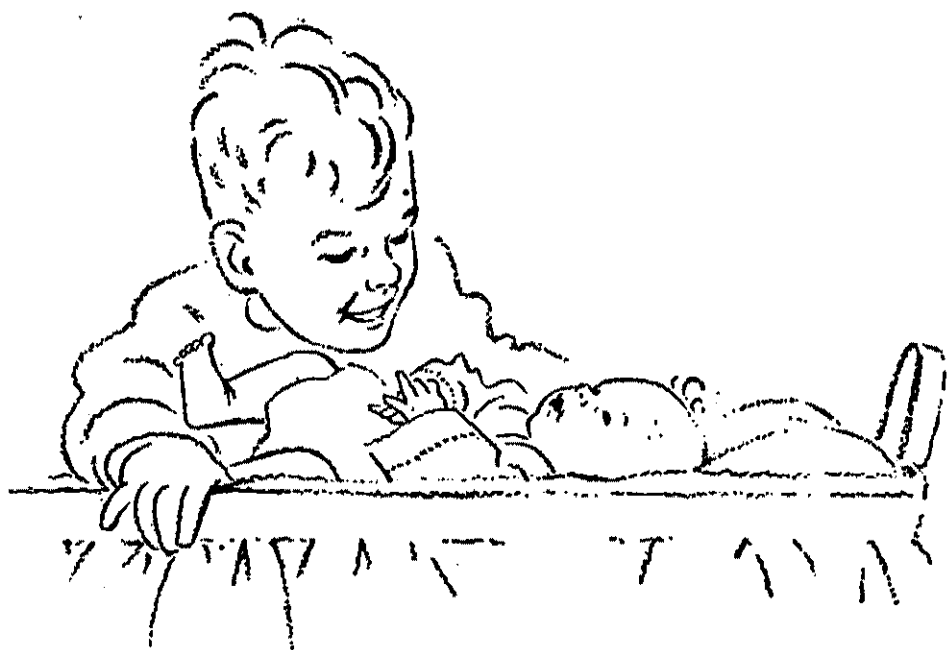
Many husbands help with housework, whether their wives are pregnant or not. Some men, however, are used to being waited on. They forget that certain tasks are hard for their wives to do during pregnancy. Plan together to arrange the housework so your wife will not get too tired. If you can get used to changes in

the household routine before the baby comes, it is going to be easier to adjust to the other changes after the baby is here.

If this is your first baby, you may have doubts, too, about whether you are going to be a good father, and whether you can carry all the responsibilities as well as you'd like. Many young parents have these questions. Talk them over with your wife, or with her doctor, or with some of your friends who are young fathers. The hurdles aren't really so big, and the enjoyment and pride you will feel in your child will more than offset them.

If you catch yourself feeling neglected because the household routine is changed, or because things seem different now that your wife is pregnant, stop a minute and figure it out. You won't have such feelings long if you remember that you are just as important to your wife as ever, and that you will be a very important person to the baby. The good comradeship that you and your wife shared in other things can be carried over into your thinking and planning for the baby. The necessary adjustments that come with parenthood won't seem very hard to make if you and your wife understand each other, and can share in both the fun and work.

After the baby comes, there will be many new demands on your wife. The whole process of parenthood will be new and strange to you both. Don't think you can't change a diaper. You can, and your wife will certainly appreciate it. She was probably just as awkward the first time or two she tried. You needn't be afraid to pick up the baby. You will find it is lots of fun to get acquainted. He needs your love as much as he needs his mother's. Pitch in and help her get things done. You will all feel rewarded in the long run.



### *If this is not your first child*

When should you tell the other children about the new baby? You don't need to tell them as soon as you know you are pregnant. Seven or 8 months is a long time to a child. If they ask about it, tell them when they ask. If they haven't asked, tell them 2 or 3 months before the baby is due. Most children notice changes in the mother's figure in the later months, and may overhear scraps of conversation. Or they may see the mother getting together the baby clothes and furniture. They will probably wonder and worry if they are not told about the baby. It is a mistake to wait until the baby has arrived, or until the mother leaves home for the hospital, and then expect the new baby to be a happy experience for the other chil-

dren. They need to know ahead of time that a baby is on the way, and that their mother may be away for a while. If they do, the natural jealousy that any child feels at times toward a new brother or sister is less likely to become a problem.

Many times, children can be drawn into the plans for the new baby—where he will sleep, helping mother to get the baby's clothes ready, and perhaps going with mother to see a friend's new baby. Many children are quite enthusiastic in helping to plan for the baby. Don't be surprised, though, if your child thinks new babies look funny, or if he announces he doesn't want a new baby brother or sister. Some children need time to get used to the idea. Parents need to under-

stand that even the best adjusted child will have many moments after the baby comes, too, of wishing the baby was not there. He will need continuing reassurance both before and after the baby comes that you still love him too.

Some parents have found it helps a lot to ease the mother's absence if the child could see the hospital building before mother goes there, and know that is where mother will be. To many children, a big, unknown hospital is a frightening place, especially if it keeps mother away from home. They may not feel so upset, however, if they have a chance to see the building and are told about the nurses and doctors who help mother get ready to come home quickly.

If you plan to have a relative or friend, or someone else, come in to take care of the children while you are in the hospital, try to have her come while you are still at home. In that way, the children can get used to her while you are still there, and the separation and strangeness will not be so upsetting to them.

Other parents, particularly those with toddlers, have found it a good plan to have the friend or relative or nurse take over responsibility for the new baby when the mother and baby first get home. The mother can then spend much of her time with the older child, since the new baby sleeps a lot and does not need her personal attention as much as he will later.

A new baby often is the center of much attention and interest, and an older child may feel completely left out in all the stir and bustle. If his father can give him some extra attention too, during these early weeks, it will help to keep the older child from feeling displaced.

Most parents have to think out for themselves how best to handle these early weeks of adjustment. Discussions of this in various books on child care give helpful points. The most important thing to remember is to be as natural and loving with the older child or children as you have always been—never to be afraid or apologetic.



## *How to keep well*

### **Diet**

When we realize that the baby is getting his food through the mother's body, we know that what the mother eats is very important. We should make it clear, however, that the importance lies more in eating enough of the kinds of food she needs than in eating a lot of just any food. Don't let anyone tell you that you must eat a lot more because you are "eating for two." The amount of food a pregnant woman needs is only slightly more than the food a normal, nonpregnant woman requires.

Some women need a larger amount of food during pregnancy than others. A lot depends on what your weight was before you became pregnant. If you have

always weighed close to the normal for your height and build, you should not put on more than 20 to 25 pounds during your entire pregnancy. If you have always been underweight, it may not hurt to gain a little more. But if you have always been overweight, don't gain that much. Follow your doctor's advice carefully about this. If you eat a well-balanced diet, you can supply your baby with the things he needs without harming your own health and figure.

The food you eat is absorbed into your blood stream, where it can be used by your own body tissues or by the baby. When the proper building materials are in the mother's blood stream, the baby can get exactly what he needs for proper growth. If the mother's food does not

contain all these necessary substances, her blood will try to supply them to the baby from her own body tissues. This can only be done when the mother's body contains these needed substances. You can see for yourself what might happen if the mother does not eat the right foods. Her body and her bloodstream might not contain enough of what her baby needs. And the draining of the important materials from her own body may make her ill. A woman who does not eat the essential foods can do real harm to herself and the baby. Recent studies have shown that mothers with adequate diets during pregnancy tend to have better labor and are less likely to have premature or sickly babies.

The most important foods that a mother's diet must contain are those rich in protein, calcium, iron, and all the vitamins. In some regions, extra iodine must be supplied. Calcium and protein are the bone and body-building substances, and iron is needed for good rich blood. Vitamins are needed for normal activities of all the body cells. There are other materials in everyday foods, such as sugars, starches, and fats, which everyone needs to provide enough calories (another name for energy). But these materials are not so necessary for the baby's growth as those mentioned above, and this type of food can be cut down to a minimum if a mother is gaining too much weight.

An expectant mother needs the following foods every day:

**Milk.**—One quart of whole or skim milk a day. Part of this can be used as cream soups, custards, puddings, or creamed foods. Cheese may be used at times. Yellow cheese supplies most of the important materials found in milk. One-eighth of a pound is about equal to 1 pint of milk. Skim milk

can be used if you are overweight, if you are getting vitamin A from other foods. Milk is an important source of protein, and supplies nearly all the calcium that is so necessary to insure good teeth and bones in your baby. In fact, there is no food that can take the place of milk in providing this important mineral. Milk is also the richest source of the vitamin riboflavin.

Some women who do not like milk think that they can take calcium tablets instead. Calcium tablets are not a complete substitute for milk because they do not supply protein or riboflavin.

**Fruits and vegetables.**—You will need five to seven servings of fruits and vegetables a day, and at least one serving of each should be raw. Include a serving of oranges, grapefruit, or other citrus fruits, or tomatoes, berries, or melon, and 1 or more leafy green vegetables. Choose other fruits and vegetables as you wish. Eating plenty of these fruits and vegetables will give you vitamins and iron, and also some of the calcium and energy you need.

**Lean meat, poultry, fish.**—At least one quarter of a pound a day of meat or fish, in one or two servings, is desirable. All meats are good foods, but the lean parts supply the building materials for muscles and blood. Liver, kidney, and sweetbreads are especially good; tripe, brains, and heart may also be used. All kinds of seafood may be used in place of meat.

**Eggs.**—At least one egg a day. Eggs are a good source of iron, which helps to build good blood for both you and the baby.

**Cereals and bread.**—Three servings a day of cereals and bread are needed to supply certain vitamins. These are good energy foods, too. Use only the



whole-grain, restored, or enriched cereals, breads, and flour. In the white or refined products, much of the important minerals and vitamins have been lost or removed. When these foods are labeled "restored" or "enriched," vitamins and minerals have been added to replace some of those that were lost.

**Butter and fortified margarine.**—

These contain vitamin A, but they are fatty foods and should be used sparingly, if you are watching your weight. You can get vitamin A from other foods that are less likely to be fattening, such as liver, carrots, yellow squash, and leafy green vegetables.

**Fluids.**—

Plenty of water and other fluids are needed to keep your kidneys working well. Soups, milk, and fruit juices are good sources of fluid, but most expectant mothers need to drink several glasses of water a day in addition. However, you need not carry this to an extreme—four to six glasses of water are enough unless your doctor tells you to drink an extra amount. Tea and coffee in moderation do no harm, but ask your doctor about these.

**Vitamin D.**—

Most pregnant women need some source of vitamin D, especially in winter when they do not get outdoors in the sun as much. You can take this in the form of fish-liver oil or some type of concentrate. Ask your doctor about this and do not try to dose yourself.

Liberal amounts of the important foods that have been listed should satisfy your appetite. If you are still hungry, and the doctor does not think you are gaining too much weight, you may eat other foods as you wish, but beware of stuffing yourself with cakes, candy, jelly, pastries, "soft drinks," and other "goodies."

These will send your weight sky high, take away your appetite for the necessary foods, and play havoc with your health if you are not careful.

Some doctors think pregnant women should not eat much salt. If your doctor has told you to cut out salt, do not add it in cooking, but let the rest of the family season their food later. A little pepper or a very small amount of sugar will help make the food appetizing, and you will not miss the salt after a few days. Remember, too, if your doctor has told you to stop eating salt, omit any foods which contain extra salt. These are such foods as bacon, ham, chipped beef, corned beef, salted and smoked fish, salted nuts, pretzels, salted crackers, popcorn, or potato chips.

You will find that your doctor watches carefully how much weight you gain during pregnancy and how fast you gain it. Most doctors find that women who weighed about the right amount before they became pregnant do best when they gain only 20 to 25 pounds. They tend to feel much better, may have easier labor, and regain their figures more quickly after the baby comes. Consider what makes up the added weight. The average full-term baby weighs about  $7\frac{1}{2}$  pounds. The placenta and membranes are about  $1\frac{1}{4}$  pounds, the enlarged uterus about 2 pounds, and the fluid inside the bag of waters about 2 pounds. This adds up to nearly 13 pounds. The increased size of your breasts adds a little more. Your body tissues absorb and keep more water during pregnancy and this adds a little to your weight, too. If you gain a lot more, you only add to your body fat, and may have a hard time getting rid of the extra weight after the baby comes.

The amount of food you eat will not have much effect on the size of the baby.

So it won't help much, and may actually harm the baby, if you try to starve yourself in order to have a small baby.

## Clothing

Wear clothing that is attractive, comfortable, and loose. Today, it is fairly easy to find clothes, including underwear, that are especially made for the pregnant woman. You can find many attractive patterns, too, if you make your clothes. Most important is to avoid anything tight or binding about the waist. If dresses, skirts, and slips hang from the shoulders and have adjustable waistlines they will not put pressure on the abdomen. Panties are more comfortable if they are loose enough to be adjusted easily as your waistline expands.

You probably will not need maternity dresses until the fourth or fifth month. Most women cannot afford to buy several maternity dresses and you may get very tired of them if you start to wear them too early.

Select a brassiere that gives good support to the breasts, but is not too tight. The best type has a full cup, wide shoulder straps, and pulls each breast up and in toward the opposite shoulder. By the fifth month, your breasts will probably be as large as they are going to become during pregnancy. You may not need to buy any larger brassieres after that until you get your nursing brassieres. Some women wear nursing brassieres during pregnancy with tucks that can be let out after the baby comes.

One of the definite "don'ts" refers to round garters. Discard these during pregnancy, and don't roll your stockings into a tight band at the top. Any tight band may slow up the normal blood flow in the legs, and might add to the discomfort of muscle cramps or varicose veins.

Many pregnant women find it easier to wear socks or to go without stockings altogether. If you wear stockings, but not a girdle, you can buy or make an adjustable garter belt with straps over the shoulders to support it. These "suspenders" sound bulky, but are really comfortable.

The question of whether or not to wear a corset is one your doctor can help you decide. If you have always worn a girdle or corset, you will probably need one during pregnancy. During the first 2 or 3 months, it is all right to wear an ordinary elastic girdle without bones, but after that, you will need a special maternity corset, with adjustable sides and back fitted to your measure. Your doctor or clinic can probably tell you where to get this. A maternity corset is put on in a different way. You will find it more comfortable to lie on your back, with a pillow under your hips if needed. Then pull the corset up over your legs into position and start fastening with the bottom hooks. Or put it on in the usual way without hooking it. Then lie down on your back to fasten it. The first time you try this may be awkward, but you will find it supports the uterus better. And later in pregnancy it is easier than struggling into the corset while standing up.

If you have never worn a girdle or corset, you may not need one during pregnancy. Ask your doctor about this if you have any question.

An abdominal support can be made at home with a wide band of soft muslin or similar material. Pin this firmly around the abdomen, as you lie on your back, starting at the bottom. This will pull the abdomen up into normal position. You may find it hard to put on this type of support properly without help, and it is not as satisfactory as a maternity corset.

However, it can be used if you cannot get a corset.

Flat-heeled or low-heeled shoes which fit you comfortably will help your posture as well as your disposition by keeping you from getting too tired. It is important that shoes give you good support, for a flat, shapeless moccasin may tire you just as much as high heels. The increased weight in your abdomen changes your usual posture, and badly fitting or high-heeled shoes will throw you even farther off balance. There is more danger of falling, too, if you wear high heels. You may find a pair of medium-heeled shoes a good transition from high heels to low, if you have always worn high-heeled shoes.

### Exercise

A moderate amount of exercise is good for anyone, and this is particularly true for a pregnant woman. Unless you have been ill or unless there is some other complication, you can continue your housework, gardening, daily walks, and even swim occasionally. Your doctor will probably tell you to keep on with most of the things you have been doing, but to avoid very heavy housework and heavy lifting. He may also tell you to stop strenuous exercise like horseback riding, basket ball, or diving. He will probably tell you to work more slowly and to rest a few minutes several times a day. Most women can keep up much of their normal activity until the baby is due, although the awkwardness late in pregnancy makes it harder to be active then:

Plan to spend some time out of doors every day. If you have a garden, it will give you a good excuse to get some fresh air as you work. If not, you may enjoy taking a walk every day. Try to walk to the store or to your friend's house in-

stead of riding—but do not get too tired. And on the day you have a heavy bag of groceries, you had better ride.

If your indoor work involves much exercise, it may be better to make the outdoor time a rest period, especially in nice weather when it is pleasant to sit outdoors.

To sum it up, don't consider yourself an invalid. The old idea of being "in a delicate condition" is not popular any more. Many women find they feel better during pregnancy than at any other time.

### Rest and sleep

Every pregnant woman needs at least 8 hours of sleep at night, and a rest period at least once during the day. This daytime rest may be nothing more than taking off your dress and lying down for 10 or 15 minutes. Even if you do not go to sleep, the relaxation will do you a great deal of good. Doctors are stressing more and more the importance of learning to relax, especially if you are inclined to be tense.

If you are employed, try to rest with your feet up, for a few minutes after lunch or when you get home from work. Some businesses or industries provide extra rest periods for pregnant women.

Frequent stops during the day when you are doing your housework will help to refresh you. Sit down several times a day for a few minutes with your feet up—you will be surprised how much better you feel at the end of the day. The slang phrase "take the load off your feet" expresses it pretty well.

### Smoking and drinking

Doctors differ in their opinions regarding smoking and drinking during pregnancy. Ask your doctor about these questions.

## **Marital relations**

Most doctors advise that you avoid intercourse during the time your second and third menstrual periods would have taken place. At these times miscarriage is thought to be a little more likely. Doctors also advise that you discontinue intercourse entirely during the last few weeks of pregnancy. It should not be resumed until several weeks after the baby's birth.

The germs which are always present on the skin and in the vagina may be carried up near the uterus during intercourse. These germs usually do no harm, but they may during labor, if intercourse has taken place shortly before labor begins. Since it is not possible to know just when labor is likely to begin, doctors advise that you discontinue intercourse for the last few weeks before the baby is due. The danger of infection is present for several weeks after the baby's birth, for the uterus and vagina take about 6 weeks to return to normal after the baby arrives.

## **Bathing**

You may perspire more during pregnancy than you did before. Perspiration is one way of throwing off waste products. Since the baby's waste must be cast out, too, the amount of perspiration may increase. A daily bath during pregnancy will help keep you fresh and is the best care you can give your skin. During most of your pregnancy, it may be a tub bath, a shower, or a sponge bath, as you choose.

Late in pregnancy, most women prefer a shower or sponge bath, because of the awkwardness in getting in and out of the tub.

## **Care of the breasts**

The best thing you can do to care for

your breasts is to wear a good brassiere that supports but does not bind.

Keep the breasts and nipples clean. The colorless secretion that begins to ooze from the nipples about the fourth month may be a little irritating. If so, wash them with mild soap and water and rub on a little cold cream, lanolin, or cocoa butter. Some doctors used to recommend rubbing the nipples with alcohol to "toughen" them. This idea has been discarded, for it may actually make the nipples sore. You will probably not need anything on them except a little cold cream.

If your nipples are inverted, ask your doctor if he thinks any treatment is necessary.

If your breast or nipple becomes sore or inflamed, or if you notice any lumps in your breast, let the doctor know at once.

## **Traveling**

If you are likely to get "car-sick" easily during the first 2 or 3 months of pregnancy, it is a good idea to limit any traveling to short trips around town or the nearby countryside. If you are not easily upset, a trip of 100 or 150 miles in a car will probably not cause you discomfort. Many women continue to drive a car during pregnancy, although most doctors advise against driving alone during the last month.

The disadvantage of long trips by car or train is that they may be very tiring. This is particularly true in traveling by automobile. Trips are less tiring if you can plan to have stretching periods, when you can stand up and walk around a while.

There is not much evidence that traveling during early pregnancy causes miscarriage. Late in pregnancy, however, the jolting and jarring of a long trip by

auto might start you into labor at a most inconvenient time. If you must make a long trip after the sixth month, it is better to go by train or plane. Talk to your doctor about it and get his advice before you set out.

The question often comes up about moving. If you are planning to move into a bigger house before the baby comes, try to arrange, if possible, to move before the seventh month of pregnancy. Or, let your husband, family, or friends move the household while you are in the hospital. Even if you do not do any lifting, moving requires an endless amount of packing, sorting, and stooping, and is a very tiring procedure.

### **Care of the teeth**

Good dental care is important during pregnancy, just as it is at all times. Go to your dentist early and see him regularly. He will tell you how often. If you have cavities, he will see that they are filled. This prevents further decay which might mean the loss of a tooth. Infection of the gums needs prompt treatment. A tooth that has become badly infected or is dead can be pulled during pregnancy. Some dentists used to put off pulling teeth until after the baby came, but at times it is better to have the tooth out and the infection cured as quickly as possible. Pulling teeth will not cause a miscarriage or harm the baby.

On the other hand, it is better not to plan on a lot of complicated dental work during pregnancy. You need to be able to eat regularly, so most dentists prefer to leave very complicated repairs until later.

### **Employment**

Fashion no longer demands that pregnant women remain shut up at home,

seeing only their husbands and a few intimate friends. Many women are employed outside the home nowadays and keep on working during part of their pregnancies.

It should no longer be necessary for a woman to leave her job or be fired just because she is pregnant. Some States have laws concerning working conditions for pregnant women, and many businesses and industries have recognized the need for special codes to protect expectant mothers in their employ.

The United States Children's Bureau and the Woman's Bureau of the Department of Labor have worked out standards for the employment of pregnant women which are available to any employer who wishes them.

If you are employed, you may wonder how long it is safe to continue. It depends a lot on how you feel and what kind of work you do. A job that requires a great deal of standing or continuous motion of the feet is likely to be too tiring. Desk work, on the other hand, may not tire you at all. Occasionally employers are willing to arrange work during pregnancy that allows you to sit down most of the time. Some women keep their employment until the eighth month, while others find it necessary to stop earlier.

If you have tiring work that requires long standing, or much bending or lifting, and your employer cannot change it, you should plan to stop after the fourth or fifth month. But if you can get enough sleep and rest, are eating the right kinds of food, and do not have a tiring job, there is no reason why you should not work up to about 6 weeks before the baby is due. Take your doctor's advice about this.



## *Some discomforts*

Along with the pleasant feelings which pregnancy brings to many women, discomforts may come up at times. These discomforts are not serious, but one or another may bother you. If you understand them, it is easier to find ways to keep comfortable.

### **Sleepiness**

Sleepiness is quite usual during the early part of pregnancy. By the time you are 3 or 4 months pregnant, however, you may not notice it. Sleep and rest are nature's way of helping us feel refreshed. During early pregnancy your body is getting accustomed to the changes of pregnancy, and you probably do need extra sleep. As pregnancy goes along, how-

ever, your body adjusts more easily, and the sleepiness should disappear. You can help by getting regular hours of sleep at night and taking a rest period during the day.

### **Frequency of urination**

You will notice that you have to empty your bladder more often during early pregnancy. Most women first notice this when they find they have to get up at night to urinate. During the middle months of pregnancy this frequency often disappears; then toward the ends of pregnancy you will notice it again.

The bladder is normally located just in front of the uterus. In the early months of pregnancy, when the uterus

begins to grow, it pulls on the lower end of the bladder, and you feel the need to urinate more often. This position changes after about the fourth month.

In the last month of pregnancy, the baby moves down, getting in position to be born. This brings him down against the bladder, and the resulting pressure will make you need to pass urine often. Some women notice leaking of urine when they cough or laugh heartily, or if they happen to step down hard.

### Food fads and cravings

Some of the older generation of women like to tell of the things they just *had* to eat during pregnancy. These tales range all the way from dill pickles to ice cream, and some of them sound very odd. We know now that such cravings are not a necessary part of pregnancy at all. They may be the result of poor food habits. Or they may happen if a woman becomes so excited or upset by becoming pregnant that she wants special attention. On the other hand, every woman, pregnant or not, has times when she particularly wants a certain food.

At times, craving a certain kind of food (for example, oranges or lemons) means that the food really is needed. But if you are used to eating irregularly and have not paid attention to a good diet, you may crave things you do not need. If you find yourself wanting to eat certain things more than usual, talk to your doctor about it. If these foods are necessary parts of your diet and will not upset your weight gain, he may tell you to go ahead. On the other hand, if they will do you harm, it is better for you to use a little self-control. Most women who have had an adequate diet before they become pregnant, and who can arrange to eat the

proper foods during pregnancy, find they do not have any cravings.

### Mouth watering

A few women find their mouths watering a great deal during pregnancy. We do not know why this happens, and it will usually stop by itself after a while. It is an unpleasant feeling because it may cause vomiting at times. Eating several small meals rather than three big ones has sometimes helped. Some women find that chewing gum helps. If you are troubled with mouth watering, talk it over with your doctor.

### Morning sickness

If you are one of the many women who is not bothered with this sickish feeling and occasional vomiting, you can skip this section. Don't worry, however, if you do have these feelings. Some women seem to have more sensitive digestive systems than others. This seems to be more common in women who find it hard to relax. As your body gets used to the changes of pregnancy, morning sickness should disappear. It seldom lasts longer than the third month.

You can do several things to help overcome it. Rest is important. If you are feeling a little nauseated, don't try to jump out of bed in the morning and do all your work at once. Take it easy. Move more slowly. Wait to brush your teeth until after breakfast, and do it gently. Let your husband get the breakfast, and leave the dishes and bed-making until a little later. But don't make the mistake of lying in bed all day. And don't feel sorry for yourself. You will find, as the day goes along, that you feel better and better.

The best thing to do, strangely enough, is to eat something before you get out of

bed in the morning. Try leaving a few crackers on the bedside table, and eat them when you first wake up. Then relax about 15 minutes before getting up. Or have your husband bring you some toast or cereal before you get up. It may not be wise to drink much liquid with this early snack. Liquids often make matters worse. Very sweet foods like cookies are not good either. The best foods are dry crackers, toast, or a soft food like cereal with a little milk and very little sugar, if any.

After you have been up a while, you may be able to eat your usual breakfast with no difficulty. If you feel like vomiting during the day, lie down and rest a while. Don't starve yourself, though. You will find that morning sickness is not like the usual kind of stomach upset, for eating helps. You might try eating six small meals instead of three big ones. Or take crackers or soft foods of some sort every 2 hours between meals until the period of nausea is over. Do something interesting, or read a good book to take your attention away from your stomach.

### **Heartburn**

Heartburn is a kind of indigestion. It has nothing to do with the heart, but gets its name because the pain seems to be up in the chest near the heart. Heartburn is noticed more during the last 3 months of pregnancy. At this time, the growing baby presses upward against the stomach and may interfere with the normal movements of the stomach during digestion. There are medicines which help, so ask your doctor which he would suggest. Baking soda should never be taken unless your doctor prescribes it.

### **Constipation**

Constipation is fairly common in pregnancy, even with women who have had

normal bowel habits before. You can help to prevent it by eating plenty of fruits and vegetables and drinking plenty of water. Try to have a regular time each day to move your bowels. After breakfast is usually a good habit. Some people normally have bowel movements only every 2 or 3 days. If this is your usual habit, you should not expect them to move every day. Taking large amounts of laxatives all the time is harmful rather than helpful. It keeps the bowel lining irritated and may keep you from forming good habits. Prune juice, or raw or stewed prunes eaten once a day, may help to keep your bowels moving regularly. Some doctors recommend drinking two glasses of water before breakfast. Your doctor may have some other suggestion.

If you do become constipated, avoid harsh laxatives such as castor oil. You are likely to upset your stomach with strong laxatives during pregnancy. And they usually cause severe cramps in your lower abdomen. Strong laxatives seldom cause miscarriage, but will cause trouble by irritating the bowel. If you feel you need a laxative, talk this over with your doctor. He may tell you to take a tablespoonful of mineral oil or milk of magnesia before going to bed if you continue to have trouble.

### **Hemorrhoids**

Hemorrhoids are groups of enlarged blood vessels located at the lower end of the bowel, just inside the small muscle which controls the emptying of the bowel. They are often called "piles." Many people who are not pregnant have hemorrhoids, but these enlarged veins are more common during pregnancy. Hemorrhoids are nearly always the result of constipation, because of straining in trying to



pass the stool. When there is pressure in the lower abdomen, as in pregnancy, hemorrhoids develop more frequently. A little petroleum jelly placed just inside the rectum before a bowel movement may make it unnecessary to strain.

Hemorrhoids may become very painful, especially if straining has squeezed them outside. If this happens, your doctor can show you how to wrap a piece of cotton around your finger and push them back. Lie down on your side, with your hips on a pillow, and use mineral oil or petroleum jelly to lubricate your finger. Sometimes a compress made of a few folds of clean gauze soaked in ice-cold witch hazel or a solution of Epsom salts will relieve the discomfort. Hemorrhoids may also bleed. If this happens, let your doctor know.

### **Muscle cramps**

Muscle cramps are noticed by some women during the latter part of pregnancy. They may be leg cramps, or cramps in the muscles of the abdominal wall. Leg cramps are due to slowing up of the circulation of the blood in the legs, because of the pressure of the baby and uterus on the large blood vessels in the lower part of the abdomen. Most women seem to notice these cramps more at night after they go to bed. You can relieve the cramps by rubbing the legs gently, by bending your foot forward with your hands, or by putting a hot-water bottle against the cramped muscles.

Cramps in the muscles of the abdominal wall are not very frequent. They are due to stretching of the abdominal muscles as the baby grows. This type of cramp may pass away without any treatment. It can often be helped by resting.

If you have these cramps often, you may need an abdominal support or corset.

### **Backache**

As your abdomen grows bigger your general posture changes. The muscles of your back are pulled into different positions. Some women notice backache during the latter part of pregnancy, usually at the end of the day. You can avoid backache to some extent by wearing low-heeled shoes, which give you better balance. An abdominal support or corset may also help. If you notice backache often, rest as much as possible.

### **Varicose veins**

Varicose veins are enlargements of the leg veins which lie just beneath the skin. Some people develop varicose veins more easily than others, and they seem to be a family tendency. The leg veins empty into the large blood vessels in the lower part of the abdomen. If something slows up the circulation of blood in the legs, such as the pressure of the baby in the lower abdomen during pregnancy, varicose veins may develop, or may get worse if you already have them. Varicose veins can become quite painful, or may break open, so it is important to take proper care of your legs.

Varicose veins cannot be prevented entirely, but your doctor may suggest ways to make you more comfortable. Resting with your feet up as much as possible helps. You may need to wear an elastic bandage or stocking during the day, which should be removed at night. Attractive elastic stockings are now available that hardly show under fairly thin stockings. Your doctor or the nurse in the clinic can show you how to wear them properly. Put on the bandage or stocking before you get up in the morn-

ing, before the veins have a chance to fill. In putting on the elastic bandage, be sure you wrap a turn or two around the instep of the foot. This will anchor the bandage and keep your foot from swelling. The elastic bandage can be washed often, and some doctors prefer it to a stocking.

If the varicose veins are very troublesome, your doctor may suggest that you have them treated. Some doctors feel, however, that it is better not to treat them during pregnancy, since the condition may improve after the baby is born.

Some women notice enlargement of the veins around the vaginal entrance. Enlargement of these veins is more common after you have had several babies. This enlargement also is due to the pressure of the baby in the lower abdomen. It will probably disappear after the baby is born. No treatment is necessary, but it is wise to avoid having anything rub against this region.

### **Vaginal discharge**

During pregnancy, the tissues of the vagina are changing and getting ready for the baby's birth. The lining of the vagina becomes softer and thicker and more elastic, so the vagina can stretch easily during birth. The glands in the cervix form a sticky solution called mucus all the time, even when you are not pregnant. Normally, the amount of secretion is so small that it is not noticed. In pregnancy, however, much more mucus is formed. Most pregnant women notice a slight whitish, sticky discharge, which merely means that the vaginal passage is becoming lubricated.

This softening process, however, also makes the vagina and cervix more likely to become infected during pregnancy. Germs which are always present on the skin or in the vagina and usually do no harm may begin to grow in the softening mucous membrane. If you notice that you are having more vaginal discharge than usual, or if the discharge becomes yellow, greenish, or frothy, let your doctor know. These infections can usually be cleared up if treated early. If you wait too long, they may cause enough irritation to be painful and are harder to cure. You should never take a vaginal douche during pregnancy unless your doctor orders it.

### **Changes in the skin**

Some women worry about the little red streaks that may appear on the skin of the abdomen or breasts. These little streaks are due to stretching of the skin, and are not serious. They will fade into thin white lines after the baby is born, but will probably not disappear entirely. Some doctors believe that proper support of the abdomen and breasts during pregnancy will keep these streaks from forming.

### **Shortness of breath**

In the last month or two of pregnancy, some women find they are a little short of breath when they climb stairs, or are very active. When the baby has grown so large, he is taking up a lot of space in your abdomen and you cannot breathe as deeply as you ordinarily would. If you notice this often, mention it to your doctor.



## *Some problems*

### **Warning signals**

Certain signals may appear during pregnancy which are associated with conditions called complications of pregnancy. If you have had good care all during pregnancy, you are not so likely to develop one of these disorders. Complications of pregnancy are relatively rare. And it may comfort you to know that no serious problem develops during pregnancy without at least one of these warning signals. You should know what these signs are, so you can notify your doctor at once if any of them appear. In this way, early treatment is possible and many difficulties may be avoided.

The most important signs of trouble are:

**Bleeding from the vagina.**

**Severe or continuing nausea and vomiting.**

**Continuing or severe headache.**

**Swelling or puffiness of the face or hands, or marked swelling of the feet or ankles.**

**Blurring of vision or spots before the eyes.**

**A marked decrease in the amount of urine passed.**

**Pain or burning on passing urine.**

**Chills and fever.**

**Sharp or continuous abdominal pain.**

**Sudden gush of water from the vagina before the baby is due.**

If you notice one or more of these signs, let your doctor know at once.

## Miscarriage

Miscarriage refers to the birth of the baby at a time before it has developed enough to live in the outside world. This usually means before the sixth month. After the sixth month, birth of the baby before it is due is called premature labor. About two-thirds of all miscarriages occur in the first 3 months of pregnancy, and these early miscarriages are fairly common.

The earliest signs of a threatened miscarriage are bleeding from the vagina and pain in the lower abdomen. The bleeding may be only a slight spotting or it may be a gush of blood with clots.

*It is important to remember that bleeding from the vagina at any time during pregnancy is abnormal.*

Slight spotting may mean that a miscarriage is only threatening; more severe bleeding usually means that a miscarriage is actually happening. If a miscarriage is only threatening, proper rest in bed may be enough to prevent it. Try to save any blood clots or tissue in the bedpan or in a small pan for the doctor to examine.

If you notice bleeding at any time during pregnancy, go to bed at once and plan to stay there until your doctor tells you it is safe to get up. Have your meals in bed and use a bedpan for urine and bowel movements unless your doctor tells you otherwise. Have your husband or someone else notify the doctor. The doctor will want to know when the bleeding began, how much bleeding there is, whether you have passed any clots, and

whether you have had any pain or cramps in your lower abdomen.

The cause of a miscarriage is often hard to discover. Miscarriage used to be blamed on a fall, a blow on the abdomen, overwork, severe mental shock, or some similar "strain." Doctors know now that such things seldom cause miscarriage. A normal baby that has become properly settled in the uterus at the time of conception cannot be dislodged so easily. Some pregnant women have even had serious injuries, such as broken pelvic bones or severely bruised abdomens, and still carried their babies to normal, full-term delivery. A few women miscarry with no apparent reason, but careful medical study may find a cause. Many miscarriages happen because the baby is not developing normally, because the mother may have had a prolonged or serious illness during pregnancy, or because there is some lack in the normal activities of the many glands in the mother's body.

In many instances, early miscarriage seems to be nature's way of stopping pregnancy when an abnormal baby is developing. This type of miscarriage usually happens early in pregnancy, and nothing you or the doctor can do will stop it.

The miscarriages due to glandular problems in the mother can sometimes be avoided by good prenatal care, but these conditions are often hard to discover. This problem needs a great deal of study. Any woman who has had more than two miscarriages, and cannot seem to carry a baby to full term, should have a complete medical examination before she becomes pregnant again to see if any health problems or glandular lacks exist.

A miscarriage which comes about naturally is usually not dangerous to the mother's health, and recovery may be very

rapid. The only dangers to your health occur if you keep on bleeding for a period of several weeks or if infection sets in. Neither is likely to happen if you are under the care of a doctor. At times he may need to remove bits of tissue which did not come out, since they might cause continued bleeding.

Doctors often refer to early miscarriage as "abortion." However, to most people the word abortion means deliberate miscarriage, brought about by illegal means. Occasionally there are times when it may seem necessary for medical reasons to stop a pregnancy. If this decision is made, the operation must be done by a qualified doctor with the advice and consultation of several other doctors. Any other type of deliberate miscarriage is forbidden by law. An abortion that is deliberately caused by entrance of unsterile instruments or other unclean objects into the uterus, or that is done by an unqualified person can have very serious results. Infection, severe bleeding, or other injury to the mother happens so often as a result of an illegal abortion that many of these women have lost their lives, or have lost the ability to bear children.

### **Prolonged vomiting**

Prolonged vomiting is an unusual complication. It comes on after the third month of pregnancy and is more severe than morning sickness. This type of vomiting may not be helped by eating, but often gets worse. It seems to develop more often in women who are highly nervous, who are subject to glandular disorders, or who have had a very poor diet. Serious family problems or other overwhelming worries may also be connected with this illness.

Few women have this difficulty. Talk to your doctor if anything is worrying you extremely. He may be able to help straighten things out, or arrange for you to talk to someone who can give you the kind of help you need.

### **Toxemia of pregnancy**

Toxemia is a complex disorder which used to be more common than it is nowadays. Good care during pregnancy is the best insurance against this difficulty. A woman who has toxemia with one pregnancy is more likely than not to develop it again during another pregnancy. This is one of the reasons why good prenatal care is important with every pregnancy.

Not much is known about the cause of toxemia. It is a condition in pregnancy in which there is some interference with the normal activity or condition of the mother's kidneys, heart, or circulation of the blood. It usually develops gradually, during the second half of pregnancy. One of the first signs the doctor may notice is a rise in blood pressure above normal limits. This rise may happen before you realize that anything is wrong, and is the reason why the doctor checks your blood pressure on each visit. The doctor may find you have gained a lot of weight in a short time. Such rapid gain is usually due to an over-accumulation of water in your body tissues. The signs you may notice yourself are marked swelling or puffiness of the face, hands, or feet, blurring of vision, or sometimes severe headache. Another serious sign is a sharp decrease in the amount of urine passed.

Two dangers in toxemia are: death of the baby before birth, and the possibility of the mother's developing convulsions or "eclampsia."

Eclampsia usually develops from untreated toxemia and is a very serious illness. It is becoming much less common as more women receive good prenatal care. Eclampsia can be prevented by intelligent cooperation between the pregnant woman and her doctor, and no woman need fear this complication if she takes proper care of herself and follows her doctor's advice.

Treatment of mild or early toxemia consists primarily of rest in bed and cutting out all salt in the diet. The doctor may prescribe certain medicines. Usually, rest in bed and strict attention to the doctor's orders will be enough to stop the trouble from developing any farther. Sometimes, however, rest and treatment in the hospital are necessary.

After the birth of the baby, the mother's circulation and kidney activity usually return to normal.

### **Kidney infection**

A pregnant woman is a little more likely to develop a kidney infection (pyelitis) than a woman who is not pregnant. Certain changes in the capacity of the bladder and the tubes leading from it to the kidneys apparently make it easier for the kidneys to become infected. Kidney infection is especially serious in a pregnant woman, since her kidneys have to work for both her and the baby.

Pyelitis usually begins with a sharp chill, fever, and pain in the back near the waistline. These symptoms are often accompanied by pain or burning during urination. If you notice such symptoms at any time, call the doctor, go to bed, and drink plenty of water. Certain medicines help to clear up kidney infection, but they must be prescribed by your doctor.

### **Anemia**

Anemia is a condition of the blood resulting from a reduction either in the number of red blood cells or in the amount of hemoglobin. Hemoglobin is the colored substance in the red blood cells which carries oxygen to the body tissues. If the amount of hemoglobin is below normal, or if there are too few red blood cells, not enough oxygen will get to the tissues. In pregnancy, it is particularly important to prevent anemia since both the mother's body and the baby need a good supply of oxygen.

Anemia may develop from loss of blood or from a lack of sufficient iron in the diet. Iron and protein are important materials for forming hemoglobin. Lean meats, especially liver, and eggs, are good sources of iron and protein. A pregnant woman may more easily become anemic because it is often difficult for her to get enough iron from food alone to take care of her needs and the needs of the baby. The baby must store iron during the months before birth so that he will have enough to carry him through the early months after birth before he can take solid foods. Often some kind of iron compound, in the form of pills or capsules, will help to supply the extra needs during pregnancy. Your doctor can decide about this by checking the amount of hemoglobin in your blood from time to time.

Some types of anemia in pregnancy are due to more complicated causes and may be harder to treat.

### **Premature birth**

A sudden gush of water from the vagina several weeks before the baby is due usually means that premature birth of the baby is likely. The gush of water

results from breaking of the bag of waters and is often the first sign of premature labor. If the bag of waters breaks, let your doctor know at once. Premature labor may be very short, because a premature baby is smaller than a full-term baby and can pass through the birth-canal more quickly. Also a premature baby is not as strong as a full-term baby, and must be given special care immediately after birth in order to live.

Some of the causes of premature labor are toxemia, syphilis, or a very inadequate diet. However, most cases cannot be explained. Women who have had good care during pregnancy are less likely to have premature babies than those who do not get good prenatal care.

### **The Rh factor**

The Rh factor is a substance which is present in the red blood cells of a large proportion of people. If you have the Rh factor in your red blood cells, you are called Rh positive; if you do not, you are Rh negative. "Rh positive" and "Rh negative" are just convenient terms to describe the presence or absence of this substance. Both conditions are natural and normal and cannot be changed. Inheritance determines whether you are Rh positive or Rh negative. A special blood test can show whether or not your blood contains the Rh factor.

The Rh factor has only recently been discovered. Many scientific studies are being carried on and a great deal of information is being accumulated. Early in these studies, a relationship between the Rh factor and a rare type of severe anemia in the newborn called erythroblastosis fetalis, was found. A great deal of publicity resulted about the "problems" of being Rh negative.

Actually, being Rh negative is only a problem under certain circumstances. A woman who is Rh negative and whose husband is Rh positive may sometimes develop certain conditions during pregnancy which affect the baby who has inherited Rh positive blood. These conditions usually happen only if she has had previous transfusions with Rh positive blood, or if she has had more than one pregnancy with Rh positive babies. Under such circumstances a few Rh negative women may form substances called antibodies in their blood which can get through the placenta into the baby's blood stream. These antibodies are not a danger to the mother herself (unless she happens to be transfused with Rh positive blood) but they may produce erythroblastosis in an Rh positive baby. In this disease, the baby's Rh positive red blood cells are destroyed by the antibody, and severe anemia results.

Fortunately, this reaction to the Rh factor is a rare complication. Only a few Rh negative women form antibodies, and most Rh negative women have normal babies. And a baby who has inherited Rh negative blood would not have this complication.

Your doctor will probably want to test your blood to see whether you are Rh positive or Rh negative. If you are Rh negative, he will also want to test your husband's blood. This knowledge may help to avoid trouble. Most doctors follow the progress during pregnancy of Rh negative women whose husbands are Rh positive by doing repeated blood tests. These tests show whether the antibodies are forming that might give rise to complications. If antibodies have not appeared by the end of the seventh month, the baby will not have erythroblastosis.

Recent studies of erythroblastosis have taught doctors a great deal, both about the cause and the treatment of this condition in the baby. Immediate treatment after birth has saved a number of babies who would have died without this care. With frequent blood tests on an Rh negative woman during her pregnancy, the doctor can be prepared to give both the mother and the baby the benefit of all that has been and is being learned about the Rh factor.

You need not be alarmed if you are Rh negative. Most such women have had several babies with no difficulty whatever from the Rh factor.

### **Chronic diseases**

If you have had certain chronic illnesses or disorders before you became pregnant, you may have some difficulty during pregnancy because of them. Such illnesses as diabetes, rheumatic heart disease, chronic kidney disease, tuberculosis, and syphilis may cause special problems.

For a woman with any of these diseases, good care and continuing medical supervision are absolutely necessary during pregnancy. If you have ever had one of these illnesses, you must pay particularly close attention to your doctor's advice and recommendations.

Diabetes, heart disease, and chronic kidney disease may interfere with normal

functioning of the mother's internal organs.

Tuberculosis is not inherited by the baby, but after birth a baby may catch this disease from contact with his mother. It is necessary to keep the baby of a mother with active tuberculosis away from her until she is well.

The germ of syphilis can get through the placenta and infect the baby before birth.

Many States now have laws that require a test for syphilis on every pregnant woman. Such tests are important because it is possible for a woman to become infected with syphilis without knowing it. Her unborn child may become badly infected if the mother does not receive proper treatment. With early and adequate treatment the chances of having a normal baby are almost 100 percent, but untreated syphilis can cause the death of a baby either before or after birth. If an infected baby lives it may be physically and sometimes mentally damaged.

Even if the mother has been previously treated for syphilis, the baby can sometimes become infected before birth. Syphilis is a complex disease, and relapse can happen. A woman who has, or has had syphilis, must follow a careful treatment plan with frequent blood tests during her pregnancy. This treatment should begin as early as possible for the baby to have the best chances.





## *Getting ready for the baby*

### **Clothing**

A newborn baby needs a very simple layette. It is better not to buy too much at first. You will want to add things later on when you see how fast he grows and when you learn what he will need as he gets older. You may receive gifts of clothing, too.

Clothes should be comfortable, easy to wash, and easy to put on. Garments that tie on are easier to handle than those with buttons. Babies do not like to be all bundled up. They are likely to be fussy if they are dressed and undressed many times a day. Babies need enough clothing to keep them warm and dry, but you will not find much use for fancy dresses or elaborate bonnets and coats. And you will appreciate having less washing and ironing to do.

This list includes the things you will need for about the first 6 months:

Diapers (dozen).....	3-4
Shirts (long or short sleeves, or sleeveless, according to the climate) .....	5-6
Nightgowns or wrappers.....	5-6
Waterproof pants or soakers...	1-2
Sweaters.....	2
Flannel squares or baby blankets.....	2-3
Bunting, or coat and cap (if climate is cold).	

All of these can be bought or made quite inexpensively. Choose diapers that are soft, absorbent, light in weight, and not bulky. Do not get the smallest size shirts and wrappers. The baby will outgrow them so quickly that they will be an additional expense. Infant size 2 allows for growing, yet is not much too

big for the average baby at first. Cotton is the best material for the shirts, since wool may irritate the baby's skin and is likely to shrink. Nightgowns may be made with a drawstring around the bottom, but they should be long enough to allow for the baby's growth. These drawstrings are not essential but some mothers like them. The best kind of nightgown is made of soft cotton or knitted material. If they open down the back, you will find them easier to put on. Drawstrings should not be used around the neck of a baby's garment because this might cause the baby to choke.

Sweaters are easier to put on if they open down the front. A bunting to wear in cold weather is nice to have but is not essential, for a small baby can be wrapped in a flannel square or a blanket when taken outdoors. If you do not have a bunting, the baby needs a warm hood or a cap when taken outdoors in cold weather.

Some large cities have "diaper services" which supply clean diapers at regular intervals. This service is helpful if it is available and not too expensive. If you use a diaper service you will not need to buy many diapers, but it is best to have 1 or 2 dozen of your own anyway.

## **Furniture**

Your baby needs a quiet corner to himself, preferably in a room where there is not much traffic and noise. If he is to sleep in your bedroom, perhaps you can arrange the furniture to give him a quiet corner. This might be done by moving the wardrobe or bureau to make a kind of partition, or else by using a folding screen.

The furniture can be very simple. Perhaps your husband is handy with tools and can make most of it. A bassinet,

basket, or box can be used as a bed for the first 2 or 3 months, but after that the baby will need a crib. Some mothers prefer to have a baby sleep in a crib from the beginning. If a basket or box is used, however, place it on a sturdy table or stand to keep it off the floor.

Select a crib with the bars close enough together so the baby cannot get his head caught between them. If you paint the crib yourself, use paint that is harmless to babies.

A table for bathing or dressing the baby is helpful. If you have only a small space, you might prefer to try a broad shelf built against the wall at a convenient height so you will neither have to stretch nor have to stoop.

A chest or separate drawer in which to keep his clothing and supplies will save you much time. You will also need a covered, rust-proof pail for holding soiled diapers, unless you use a diaper service which supplies this. You will find it comfortable to have a low chair and a footstool to use while feeding the baby, and a high stool to sit on while bathing or dressing him at the table or shelf.

## **Bedding**

For a bassinet or basket bed, use only a flat, smooth mattress. This can be bought, or made at home out of a folded cotton blanket or folded piece of quilted cotton bed pad. Never use a soft pillow as a mattress, since the baby might bury his face in it and smother. A baby does not need a pillow beneath his head.

For a crib, you will need a firm mattress and a spring that does not sag. These should fit the crib, so the baby cannot get his hand or foot caught between the crib and mattress.

You will need the following articles of bedding. Much of it can be made at

home—particularly the sheets and blankets which might be made from partly worn household sheets or blankets.

- 1 rubber sheet—big enough to tuck under the mattress on both sides.
- 5-6 quilted cotton pads about 18 inches square to put under the baby.
- 3-6 cribsize sheets (a pillowcase makes a good bassinet sheet).
- 2-3 lightweight cribsize wool or cotton blankets, depending on the season.

### **Bath supplies**

- 1 bathtub—enamelware or rubber.
- 2-4 soft towels.
- 3 soft washcloths.
- 1-2 bath towels to use in covering the bath table.
- 1 cotton bath blanket.
- Sterilized absorbent cotton.
- Covered jars for pieces of cotton.
- Rustproof safety pins.
- Plain mineral oil (and a small flat dish to hold a day's supply of oil).
- Soap and soap dish (any bland unmedicated soap will do).

You can buy a fitted tray for the bath supplies such as soap, cotton, oil, and safety pins, or you can make your own by using a flat baking pan and screw-topped jars, of the kind various foods

come in. You can use jars you already have. Wash and boil them at frequent intervals.

### **Feeding equipment**

It is better not to buy a large number of bottles and nipples until you know whether the baby will be breast-fed or not. However, even if he is breast-fed, you will need 2 or 3 nursing bottles and nipples to use for giving orange juice and boiled water. You will find it helpful to have a covered kettle or saucepan big enough to boil the bottles and other equipment, or to sterilize the formula after preparation, if you use this method. The kettle or saucepan should be fitted with a rack. Set the kettle aside to be used only for the baby's things. Other useful articles include a covered jar for sterile nipples, and a separate measuring cup, funnel, orange-squeezer, strainer, and spoon which can be sterilized and used in preparing the baby's orange juice. A long pair of forceps or ice tongs which will not rust are handy for lifting articles out of the kettle or sterilizer.

You may think this a large list of things to get ready. But if you plan ahead and buy gradually, it will not be as expensive and time-consuming as a last-minute hurry would be. And if you can collect all the baby's things together, and plan to keep them separate from the family's possessions, you will find it saves you time and energy after the baby comes.



## *Preparing for delivery*

The choice of whether your baby will be born at home or in a hospital will depend upon what your doctor thinks best and what is available. Ideally, delivery in a well-equipped hospital is the best plan. If a hospital does not have good facilities for the care of mothers and babies, it may not be so safe as your own home. However, a hospital which is well-equipped to take care of maternity patients is more satisfactory for delivery than the home. And if any complications seem likely to come up, it is better to plan for delivery in a well-equipped hospital. Your doctor will help you to decide what is best.

Most mothers have found it a good idea

to have their preparations for delivery completed at least 2 months before the baby is due. Being prepared will save many a last-minute scurry and keep you from forgetting that important item that always gets left out when you are rushed. And you will be ready if the baby should happen to come ahead of time.

### **Hospital**

If you decide on hospital delivery, your doctor may make the arrangements for you, or he may expect you to handle them. You would want to be sure that the hospital is set up to care for mothers and babies. Some hospitals have different types of accommodations, such as private,

semiprivate, or ward beds which differ considerably in cost. You will want to find out about hospital charges. Some hospitals make separate charges for delivery room, anesthetics, and nursing care for yourself and the baby. In other hospitals a lump sum is charged for the entire cost. If you happen to have hospital insurance, or belong to some group for hospitalization, find out how much of the hospital expense this will cover.

If there is a medical social worker at the hospital or clinic, she may be able to help you arrange for hospital care to suit your income. She might also have suggestions in planning the care of the rest of your family while you are in the hospital.

Pack a suitcase with the things you will need in the hospital for yourself, and have it in a handy place all ready to go. Then pack for the baby, putting his things into a separate suitcase or bundle. Leave this bundle in a safe spot for your husband to bring to the hospital later on when you are ready to take the baby home.

Many hospitals supply hospital gowns for the mother's use during the early days after delivery, but you may want a nightgown or two of your own. Some hospitals do not supply baby clothes for the time the baby is in the hospital, but most do. If they do, you will not need clothes for the baby until you are ready to go home.

You will not need many things for yourself. In fact, the less you have, the easier it will be when you pack up to come home. However, you will be happier if you have your own toilet articles and a pretty bed jacket. The following list is about what you will want:

- Bathrobe.
- Bedroom slippers.

Two or three nightgowns or pajama tops (some women like these better).

Bed jacket.

One or two nursing brassieres.

Sanitary belt (hospital will furnish pads).

Comb, brush, and hand mirror.

Toothbrush and toothpaste.

Cosmetics.

Talcum powder or cologne for yourself.

Box of paper handkerchiefs (sometimes the hospital supplies these).

A book or magazine to read (a book on child care might be a good idea).

Fountain pen or pencil, stationery, and stamps.

In the baby's bundle for homecoming you will need:

Two or three diapers.

Shirt.

Four large safety pins.

Wrapper (or dress and petticoat).

Sweater.

Cap.

Blanket or bunting.

The amount of outer covering for the baby will depend, of course, on the weather. On a warm summer day the sweater would not be needed and the outer blanket could be a flannel square. On a winter day the baby needs both a sweater and a heavy outer wrap—a bunting, for example, or a warm wool blanket.

## Home

A delivery at home involves much more preparation. Complete this well ahead

of the expected date of the baby's birth.

If you have public health nurses in your community, you will find they know a lot about home deliveries. They will be glad to help you in planning and preparing the necessary supplies. Often the doctor or nurse will bring many of the supplies at the time of delivery. So it is a good idea to sit down with your doctor or the public health nurse at least 3 months before the baby is expected and make a list of exactly what you need and how to prepare the supplies. Certain equipment must be sterilized. It may be possible to buy these already sterilized. Or the public health nurse may be able to arrange for their sterilization. Later on one method of sterilizing at home will be described and your doctor or nurse may have additional suggestions about this.

Select a room for the delivery that is quiet, well-lighted, and as near the bathroom or a source of running water as possible. See that the bed is placed so it can be approached from either side. When the time comes for delivery, have the extra furniture moved out, leaving only the bed, several straight chairs and two or three small tables. Remove rugs and protect the floor with newspapers. If the bed is low, have the casters removed and have blocks 6 or 8 inches high placed under the legs of the bed. These blocks will bring the mattress up to about 30 inches from the floor, which will be more comfortable for you at delivery and make the doctor's and nurse's care easier. Keep the mattress from sagging by putting a firm board, such as a table leaf or ironing board across the bed, between the mattress and spring.

In making up the bed for delivery, cover the mattress with waterproof sheeting, or heavy brown paper, or several

layers of newspaper. Over this spread a clean bed sheet and tuck it in tightly. Place two delivery pads (described below) in the center of the bed, where the mother's hips will be. One pad should be in the center, the other overlapping it a little, and extending to one side of the bed. Cover the pillow with a clean pillowcase, and fold the top sheet and blanket lengthwise along the side of the bed opposite to the delivery pads. The top sheet and cover should not be tucked in at the foot of the bed.

### Supplies and sterilizing

Following is a complete list of supplies needed. How much you have to prepare will depend on what you, the doctor, and the nurse decide.

One and one-half yards of waterproof sheeting at least 36 inches wide, or 1½ yards of white table oilcloth to protect the mattress. Heavy brown paper can be used instead.

Four clean sheets and four clean pillowcases.

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

Four delivery pads. To make, take 12 opened-out sheets of newspaper and cover them with old muslin or clean white cotton material. Wash and iron the material, using a hot iron, or iron the pads after they are made. Fold the pads and put them away in a clean pillowcase.

Plenty of newspapers.

One-quarter pound absorbent cotton (new package).

One pail with cover.

Bedpan.

One covered stewpan with handle (2-quart size).

Two small enamel wash basins.

Mild soap.

Tube of plain white petroleum jelly.

Two-quart fountain syringe or enema can with rectal tip.

Hot-water bottle.

One dozen safety pins, size 0.

One dozen safety pins, size 4.

One new nail brush, stiff and cheap.

Four washcloths.

Four bath towels.

Three nightgowns (either low enough in the neck to allow for nursing or open down the front) or pajama tops.

One pair of white cotton stockings, or clean tan cotton stockings.

One dozen gauze sponges, 4 inches square. These can be bought. They may be a few cents more expensive to buy than to make, but the saving of your time and effort is worth it.

Two dozen sanitary pads.

Five dozen cotton pledgets. These can be bought already sterilized or can be made from absorbent cotton. To make one take a piece

of absorbent cotton the size of an egg, make it into a ball, twist the loose end. Put pledgets into 5 small muslin bags, and tie the bags shut with string.

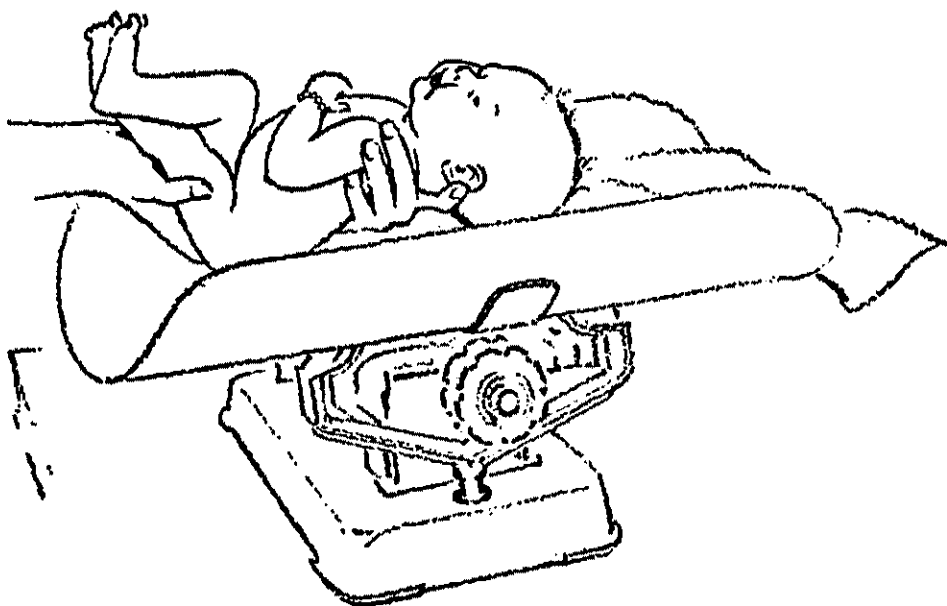
One yard of umbilical tape, or bobbin (narrow cotton) tape, or strong cotton string to tie the baby's cord.

One roll of toilet paper.

Put away unopened the packages of gauze sponges, absorbent cotton, sanitary pads, and toilet paper. If you buy the cotton pledgets they also should not be opened. If you make them at home they must be sterilized. Your doctor may bring the umbilical tape to tie the baby's cord, but if he does not, this, too, will have to be sterilized. Cut the tape into 4 pieces, each 9 inches long.

The simplest method of home sterilization is to place the materials into small muslin bags, or white cotton bags, and place the bags in an old pillowcase. Pin the pillowcase shut. Bake the pillowcase in a moderate oven (350° to 375°) for an hour. If you do not have an oven thermometer, place a large white potato in the oven. When it is done, the pillowcase has been in the oven long enough.

The pillowcase should not be opened until the time of delivery. If the articles are not used within a month, they must be sterilized again.



## *When the baby arrives*

When the baby has developed enough to get along in the outside world, a series of events take place. This is the process which doctors call labor and delivery, more commonly known as "confinement."

You may notice, sometime during the last month of pregnancy, that the baby seems to settle down lower in your abdomen. This is called "lightening." "Lightening" is more likely to happen with a first baby than with later ones. The baby has moved down a little lower into the bony canal of your pelvis so it will be ready when labor begins.

No one knows just what happens to start the process of birth. At a certain time, nature determines that the baby is ready to be born. When the uterus

is ready, the strong muscles begin to contract regularly. In this way, the baby is pushed out of the uterus, through the birth canal, and out into the world.

### **False labor**

All during pregnancy, the muscles of the uterus are getting ready for the labor of helping the baby to be born. From time to time they tighten and release. This process of growing tight and then relaxing is called a contraction. These contractions ordinarily cause no discomfort, and you may not even feel them. However, they sometimes become stronger late in pregnancy. If so, you may have episodes of what the doctors call "false labor." In false labor the con-



tractions are strong enough so that you can feel them, but they are irregular, which makes them different from real labor. They may come and go, off and on, over a period of several hours. You need not worry about them, for they are not a sign of any trouble. Sometimes, however, these contractions are hard to tell from real labor, so let your doctor know whenever you feel any strong contractions.

### Beginning of true labor

Real labor is characterized by regular, forceful contractions of the muscles of the uterus. These contractions become stronger and more frequent as labor progresses. If you put your hand on your abdomen, you can feel the muscles tighten and then relax. Labor may begin as a feeling of pull or tightness in your back that gradually spreads around over your abdomen. Or it may be noticed as a feeling of increased pressure in the lower part of your abdomen that spreads upward. Some women describe the contractions as "business-like," which they are. They are working to open the mouth of the uterus so the baby can come out. They are very regular, which makes them different from false labor. If the contractions come regularly by the clock you will know you are in labor. They may be an hour apart at first, or they may come only 10 to 15 minutes apart. The time in between gets shorter and shorter as labor goes along. During the intervals you probably will feel relaxed and sleepy, and you may be able to doze.

The bag of waters may break at the beginning of labor, or it may not break until just before the baby is born. It often breaks early in labor with a first baby. Whether the bag of waters breaks early or late does not make any difference

in the length of labor, or cause any difficulties to the mother or baby in the normal case.

Notify your doctor as soon as you think labor has begun. He will tell you when he thinks you should go to the hospital, or when he expects to get to your home.

### Length of labor

You may ask, "How long will labor last?" And your doctor will answer that he cannot tell you exactly. The length of labor differs in every woman and in every pregnancy. The labor time does not necessarily depend on whether you are tall or short, fat or thin. The first baby usually takes a little longer to be born than later babies, because your body has never had this experience before. Most women will have their first babies within 16 to 18 hours after the beginning of labor. Their later babies may take less than 8 to 10 hours. But this is not a hard and fast rule; these are only average figures. Recent studies have shown that women who have had a good diet and good care during pregnancy tend to have shorter labors. Your mental attitude has a lot to do with it, too. If you are not afraid, you will find it easier to relax and get some rest between your contractions, and the time will seem shorter.

### Preparing you for delivery

After you have started in labor, and at a time when the doctor thinks it is advisable, certain things will be done to get you ready for the baby's birth. These preparations will be done by the nurse in the hospital, or by a nurse or assistant if you have the baby at home. The hair on the lower part of the abdomen and around the vaginal opening may be shaved and

the area will be carefully cleansed. This is done to prevent any infection when the baby is born. And the doctor will often order an enema, to clean out the rectum and lower bowel.

## Stages of labor

Labor is usually described as being divided into three periods, or stages. In the first stage, the contractions of the uterus cause the opening at the lower end of the uterus, the cervix, to be stretched so the baby can pass out of the uterus into the birth canal. In the second stage, the baby passes down through the birth canal and out through the vaginal opening, which stretches to allow him to be born. In the third stage, the placenta and membranes (the afterbirth) are loosened from the uterus and passed out. At the end of labor, the uterus is entirely empty, except for the remains of its thick lining.

The first stage of labor is by far the longest. During pregnancy, the cervix softens and relaxes, so that when labor begins it is thin and has opened to about a half inch. There is usually a small amount of mucus present, as a sort of plug. During the first stage of labor, the cervix must open to a diameter of about 4 inches in order to let the baby's head pass through. The cervix, as well as the lining of the vagina, have all been softened in pregnancy so they can stretch as much as is needed. As the baby is pushed against the cervix by the strong contractions of the uterus, the opening gradually gets bigger and bigger, until finally the baby can pass through. As the cervix opens, the mucous plug becomes loosened and passes out, often with a small amount of blood. This is called the "show."

In this first stage, the doctor may make several rectal examinations. The mother cannot tell how fast the cervix is opening; the doctor must determine this. By placing his gloved finger in the mother's rectum, he can feel the cervix through the thin wall separating the vagina and rectum. This examination tells him how much the cervix is opening. A rectal examination is easier and safer than a vaginal examination, although at times a vaginal examination is necessary.

The second stage of labor is much shorter, usually only one-half hour to 2 hours long. The strong abdominal muscles begin to help the muscles of the uterus push the baby out, and you will have what are called "bearing-down" feelings. You will have a strong urge to push with each contraction and your doctor may tell you to hold your breath and push hard. Pushing at this time helps, but if you try to bear down before your body tells you it is ready, you will just tire yourself needlessly.

You may wonder how the baby can get through this narrow passage safely. The bony passage in the center of the pelvis is usually filled with the soft tissues of the vagina, uterus, rectum, bladder, and the passage from the bladder—the urethra. During pregnancy, the uterus and bladder are pulled up into the abdomen out of the way. During labor, the urethra is pressed up against the pubic bone, and the rectum becomes flattened against the backbone. All the space is then available for the vagina to stretch and let the baby pass through. Unless the baby is very large or there is some complication, the baby will go through this narrow area without damage to himself or to you. It is sometimes necessary for the doctor to make a small cut in the vaginal opening,

if this region seems likely to tear a little as the baby emerges. This cut is called an "episiotomy." It will be closed with a few stitches after the baby is born. Neither the cut nor the stitches will be painful, because the doctor will use either a local or a general anesthetic. Episiotomies are often needed with a first baby. With later babies, the vaginal opening is more elastic and will usually stretch enough to let the baby out without tearing.

After the baby is born, the doctor clamps the umbilical cord and cuts it. The placenta begins to separate from its attachment to the lining of the uterus. In a short time—usually 10 to 15 minutes—the muscles of the uterus contract once more and the placenta and membranes are pushed out. This is the third stage of labor. A moderate amount of bleeding, from the area where the placenta was attached, accompanies the afterbirth but this bleeding soon becomes slight.

Shortly after the placenta passes out some women have a brief shivering chill which lasts only a minute or two. This chill is thought to be a normal release of muscular or nervous tension.

### **Positions of the baby**

Most babies are born head first. This is the easiest way, for the baby's head, which is the largest part of its body, can help to stretch the cervix more quickly. Sometimes the baby is born feet or buttocks first. A baby in this position is called a breech baby. If the baby comes as a breech, labor may be a little longer.

### **Medicine and anesthetics**

Many women have been needlessly frightened by tales of the pain of labor. Yes, the contractions can be painful.

The muscles of the uterus are working hard. It takes some force to push the baby down the birth canal. Much depends, however, on your reaction to pain and discomfort, and whether or not you are afraid. Fear and anxiety help to make muscles tense, and can in this way add to the discomfort of labor. Women who know how to relax may experience very little discomfort.

Doctors differ in opinion as to whether any medicines to relieve pain are advisable or necessary during labor. If given too early, some medicines slow up the birth of the baby. Late in labor, certain medicines can be given to reduce discomfort without interfering with the progress of labor. Not all medicines work in the same way for all women, and too much medicine makes some babies groggy. Your doctor can decide what is best for you as he watches your progress.

Every doctor who takes care of women during childbirth has his own preference for medicines. This preference is based on his experience and his knowledge of each patient's particular needs. It is best to let the doctor decide which medicine, if any, is best for your individual care. Do not try to persuade him to use something new that you have heard or read about. New methods are often reported in the newspapers or magazines before they have been accepted as safe for general use. Some of these methods prove to be suitable only for certain types of patients.

During the second stage of labor, when the contractions are coming close together and when the "bearing down" sensations begin, some doctors give an anesthetic—such as gas—with each contraction. Then as the time comes for the baby to be born, a local injection or an

anesthetic which puts you to sleep may be used.

### **Use of forceps**

Not too many years ago forceps, or "instruments," were used only for complicated births when the baby could not be born naturally. So, many women dreaded the idea of a forceps delivery, for they were afraid it would do real harm to them or to the baby. Forceps are still used for some difficult deliveries, but nowadays in normal deliveries forceps may be used at times simply to lift the baby's head out. Forceps are used only after the mother has been put to sleep or the pelvic region is made numb by local anesthetics. If carefully handled, forceps should not damage the baby. They sometimes cause a small bruise on the baby's cheek, but this will disappear within a few days.

### **Cesarean section**

Cesarean section is a major abdominal operation and is only done when there is some reason why normal birth is not possible, or if normal birth through the vagina would be dangerous to the mother. The operation consists of mak-

ing a cut through the lower part of the abdominal wall into the uterus and lifting the baby and placenta out through this opening. The openings are then sewed up as in any operation.

The period of convalescence after a Cesarean section is longer than that after normal labor, since the abdominal wound must heal. Aside from this, it is not much different. There is no reason why you cannot breast-feed your baby and take as much care of him as you feel able to do after a section.

### **Food during labor**

After you have started in labor, your doctor will probably tell you not to eat any solid foods. However, liquids such as fruit juice, or clear soup, black coffee, or tea can be drunk during the first stage. Your doctor will advise you what is best to do. Drinking water is perfectly safe at all times—in fact is a good idea—unless you are nauseated.

If the baby is born at home, you will probably be given a hot drink such as tea after the baby comes. Also, you can have fruit juices and other liquid foods. Your doctor will advise you when to eat solid food.



## *Getting back on your feet*

### **Practical matters**

For the first day after the baby's birth, you will not want to do much except sleep. After all, you have been working hard and need some rest. But after that you will probably feel like sitting up, admiring your flatter tummy, and taking notice of the world again.

Doctors and hospitals vary in their practice as to how long you will be kept in bed. Some doctors get you up for a while the next day, others keep you in bed for a week, and there are all sorts of in-betweens. It may depend, too, on how long your labor was and whether or not you have any stitches.

The physical care you need will depend to some extent on how long you stay in

bed. Your doctor will tell you when it is safe to take tub baths. One of the important things is to keep the area around the vaginal opening as free from infection as possible. Avoid touching this area. While you are in bed the nurse will cleanse the region. She will show you how to give yourself this care after you get up.

Most doctors will let you eat a regular diet as soon as you feel like it. You may be given a light diet of soup and soft foods the first day, but after that you will probably find yourself eating heartily. You need to eat the same foods that you ate during pregnancy, plus an extra pint of milk a day, and another serving of oranges, grapefruit, or tomatoes, if you are breast-feeding.

As you begin to work about the house you will need more protein food in order to keep up your supply of breast milk. Another serving each day of lean meat, eggs, dried beans, or dried peas will supply the extra protein you need.

### Changes in the uterus

During the first 6 weeks after the baby's birth, the uterus shrinks from its large size of about 2 pounds down to about 2 ounces. This process is called involution, which means "turning in" or becoming smaller. No one knows exactly how this change takes place, but it is just as amazing and perfect a process as is the growth of the uterus during pregnancy. A part of this extra material is absorbed into the blood stream as the uterus grows smaller, but some of it is passed out of the body as "lochia."

This discharge from the vagina after the birth of the baby is often called menstruation, but it really is not the same. The remains of the thick lining of the uterus are passed out in this way after the baby's birth, so the uterus can shrink. At first the discharge comes quite freely and is very bloody, but it gradually becomes less in amount and finally is colorless. It will probably disappear in 3 to 4 weeks after the baby is born. If bleeding continues after the second week, notify your doctor.

Use sanitary pads during this time. It is not safe to use any sort of tampon or to put anything into the vagina to absorb the discharge. A serious infection might result.

### After-pains

During the first week after the baby's birth, you may notice occasional cramp-like contractions in your abdomen. These cramps are called "after-pains" and

are very much like the cramps of a menstrual period. They happen more often with a second or third baby than with a first baby. The after-pains are contractions of the uterus as it pushes out clots of blood and tissue which collect in the uterine cavity. They will probably stop in a few days. You may notice them more when you are breast-feeding the baby, since the sucking of the baby at the breast seems to stimulate these contractions.

### Changes in the breasts

True milk does not appear in the breast for at least 3 days after the birth of the baby. It seems to take that long for the various internal substances which control the beginning of milk secretion to get under way. The coming of milk into the breasts is called lactation.

During the time before the true milk is secreted, the breast secretes a thin, watery fluid called colostrum, which is rich in protein and nourishes the baby until the milk is formed. This period before the milk comes in also gives you a chance to help the baby learn how to suck. We will discuss this important subject of breast feeding further when we talk about the newborn baby.

About the third day after the baby's birth, you will notice that your breasts are becoming tense and firm, with the veins standing out clearly. This firmness of the breasts means that the secretion of milk is ready to begin. Your breasts may be a little painful at this time, but the discomfort can often be relieved by wearing a good nursing brassiere.

If for any reason you cannot or should not nurse your baby, the doctor will give instructions on how to dry up the breasts.

It is important to have your breasts supported properly during these early days

after the baby's birth. Even while you are in bed, you should wear a firm, well-fitting brassiere. A good nursing brassiere is best. Sagging breasts are not a result of breast feeding, but may be caused by poor support during pregnancy and the nursing period.

## Urination

You will pass a large amount of urine during the first day or two after the baby's birth because of certain chemical readjustments in your body. It is important not to let the bladder get too full. One of the first things the nurse will suggest when you are settled in your room after the baby's birth is that you try to empty your bladder. You should empty it every 6 hours at least.

Most women have no trouble in passing urine after delivery. But sometimes the urethra is pressed so tightly against the pubic bone during the baby's birth that it becomes numb. This numbness makes it difficult to pass urine normally. If you have this trouble, it may be necessary for the doctor or nurse to pass a small tube called a catheter into the bladder to draw off the urine. Catheterization is not painful, only a little uncomfortable. It may not be necessary more than once or twice, since the numbness usually passes away in a few hours.

## Constipation

Constipation is very common in the first week or two after the baby's birth. This is partly because you are spending so much time in bed and partly because the pressure against the rectum during labor may have made it a little numb. Your doctor may prescribe a mild laxative or changes in your diet. Avoid strong laxatives. In addition to their "cramping tendencies," they may get into

your milk and give the baby loose bowel movements.

## Exercises

While you are in bed, move about as much as possible, even to sleeping on your stomach. Moving about will help you get your strength back more quickly. Your doctor may recommend certain exercises, both while you are in bed and later on. If your doctor has you get up within the first few days after the baby's birth, you may not need to do exercises.

Each doctor has his own preference for exercises he recommends. Some doctors today feel special exercises are no longer needed if a woman is getting up and about actively within a few days after the baby's birth. Others may have certain exercises they feel are particularly helpful.

The simplest exercises are done lying flat on your back in bed, with arms at your sides, and without a pillow. One exercise is to raise your head from a flat position and try to touch your chin to your chest several times. After a few days, try to sit up without bracing yourself or moving your legs. This exercise is hard to do at first, so try it once the first time, twice the next day, and so on.

Another good exercise is to lie on your back and raise one leg at a time, trying to bring it as far up as possible without bending your knees or raising your head. Try to keep your back flat. Or you can bend your knee and pull your leg in as close to your body as you can. Try these two exercises first with one leg, then the other. Each day try to do them one more time. You will gradually be able to bring both legs up together, but this may take several weeks.

You will probably be discouraged to find how hard it is to do these exercises at first. But take it easy and do each one

slowly until you can repeat it several times without getting tired. You will soon find you can do more and more. It will take several months, though, to get your full strength and your old "figure" back again, so don't try to hurry it too much.

### Visitors

Many hospitals limit the number of visitors a new mother may have, and it is a good plan to do this at home, too. You need rest and quiet for the first few days after the baby's birth. You need to regain your strength, and you need to have time to get used to all the new responsibilities. It is very tiring to have to be polite and talkative when all you want to do is have some time to yourself. If the baby is in the room with you, as some hospitals are now doing, it is even more important to limit the number of people who come in. All hospitals keep visitors out of the room when the baby is nursing. Both you and the baby need to devote all your energies to learning this new experience, and it is easier to do this without distractions.

### Going home

Some hospitals give instruction about baby care to new mothers just before the mother and baby go home. This is helpful even if you have had such instruction during pregnancy. It is easier to see the reason for doing certain things now that the baby is here.

How long you will stay in the hospital depends on what your doctor considers necessary and to some extent on the hospital's time limit. Some women stay for 10 days, others may go home as early as the third or fourth day.

If it is possible at all, plan to have someone help you when you first return from the hospital. You probably will not

feel like doing much toward running the house for several weeks. You can probably take care of the baby yourself without much trouble, but try to have someone else take over the responsibility for the housework. If you cannot afford to hire someone, perhaps a friend or relative would come. Even if she only comes in every day to cook the dinner or clean the house, it will help a great deal. Many communities have public health nurses or visiting nurses, who can visit your home during these early days and show you how to care for the baby. Your husband can help, too, during this time in doing many little things to make it easier for you. Many men have fun cooking and cleaning and taking care of the children, even of the baby.

Before you go home, or sometime during the second or third week, your doctor may examine you to see if your pelvic organs are returning to normal. This examination is called a postpartum examination. He will want to do a more complete internal examination at the end of 6 weeks, to see if the uterus has satisfactorily returned to its normal nonpregnant size.

Avoid intercourse during the time your organs are returning to normal. Most doctors advise that you wait 6 weeks after the baby is born before resuming sexual relations.

Your doctor will tell you when you can begin to do other things—for example, how soon you can go up and down stairs, and when to drive a car. Except for the special points we have talked about, you can begin to do more things as soon as you feel equal to them.

Some women have trouble with backache after the baby's birth. Mothers do not remember that they bend over a thousand times a day. If you can plan



your work to eliminate all extra bending, you may not be troubled with backache. Sit down as much as possible when taking care of the baby. You will find this helps a lot. Some doctors advise wearing a well-fitting corset for a period after the baby's birth, but this depends a lot on your posture and how much support your back seems to need.

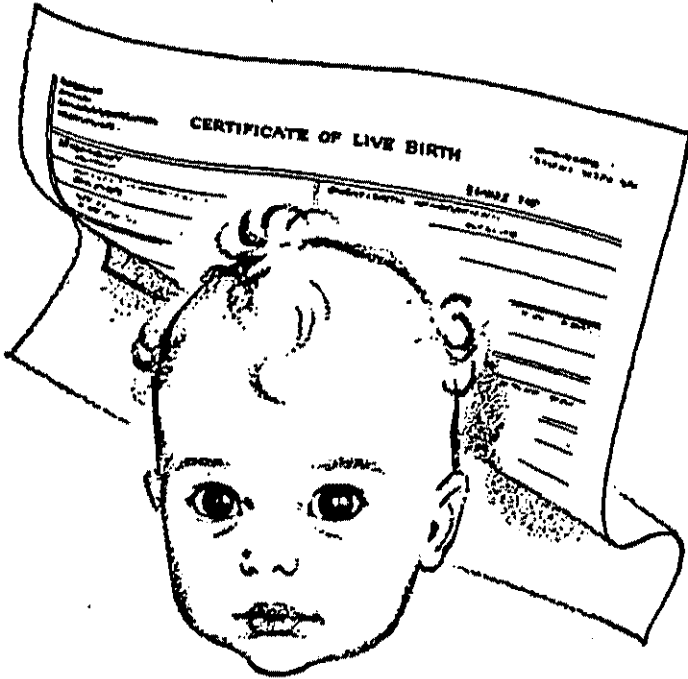
### **Return of menstruation**

The time when menstruation returns varies. A woman who does not breast-feed her baby will usually menstruate within 5 to 6 weeks after the baby's birth. A woman who is breast-feeding may not have a period during the entire time she is feeding the baby. However, some women do begin to menstruate during this time, and most of them have a period by 5 to 6 months after the baby's birth.

Absence of menstruation during the nursing period does not mean that you cannot become pregnant then. During this time the ovaries begin to function again even before you begin to menstruate.

Menstruation need not interfere with breast-feeding, and the baby does not need to be weaned if menstrual periods begin. A nursing baby may be fussy during your menstrual period, but this does not mean the milk is harmful. During menstruation the milk supply is often decreased, which is probably why the baby complains.

The first menstrual period is likely to be abnormal. It may be longer or shorter than usual, or may stop and start again. Later periods, however, should become more regular.



## *The newborn baby*

As soon as your baby is born, his body begins to adjust to his new environment. His first squalls show that his lungs are filling with air. As he breathes in and out, his body tissues are supplied with the oxygen they need.

After the cord is clamped and cut, the baby is wrapped in a clean, warm, cotton blanket. A new baby loses body heat very fast and must be kept warm. The cord is tied with tape, and the clamp is then removed. Some doctors put a dressing over the cord stump, but others consider this unnecessary. The small piece of cord still attached to the baby's navel will dry up within a few days, and drops off after 7 to 15 days.

Next, the doctor will put drops in each of the baby's eyes. This precaution is required by law in nearly every State and is a means of preventing eye infection.

If your baby is born at home he will not need any mark of identification. In a hospital, however, he will be "tagged," perhaps with adhesive tape or a bead necklace bearing your name. Sometimes his footprints and your fingerprints are put on the same piece of paper in the hospital record. This identification is done right after birth.

No doubt you have heard tales of some mothers' surprise when they first see their newborn babies. Some babies are pink and white and plump; others are long

and red and scrawny. But even if your baby does not look just as you expected, he will change a lot in the first few days.

At birth, your baby may weigh anywhere from  $5\frac{1}{2}$  to 10 or 11 pounds—the average being  $7\frac{1}{2}$  pounds. He is usually about 19 to 22 inches long. His skin is covered with a white substance called vernix. His scalp has a lot of fine, soft baby hair. His head is big in proportion to his body, and may be a little lopsided from being squeezed a bit as he came down through the narrow, bony canal of your pelvis. The bones of the baby's head are flexible and can be molded in this way without harm. Any lopsidedness will disappear in a few days. The bones of the baby's head will not grow together for several months. The soft spot right on top of his head, called the fontanelle, is the last place to close.

His tiny arms and legs are so bowed that they do not look at all like an adult's. They wave about and kick aimlessly. His eyelashes and eyebrows are so fine you can hardly see them. When he opens his eyes, they roll about in a startling manner, for he has not learned how to focus them. It may take him 6 weeks or longer to learn this. When he cries, there are no tears, for the tear glands are not quite ready to function. He sleeps a lot. He does not yet know how to smile or to respond.

Most little babies cry when they are hungry. Some cry when they are wet or uncomfortable; some do not. Some cry more than others.

These little newborns get a great deal of satisfaction and comfort from being held and cuddled and sung to. This attention won't spoil them. Instead, they need it to make them feel warm and loved and secure. Some hospitals are recognizing the importance of this by

making it possible for the baby to spend a great deal of time in his mother's room. The baby's crib might be brought in and left in the room, or a few hospitals have small individual nurseries connected with the mother's room. This second plan is called "rooming-in." By either of these arrangements the mother can see her baby as often as she wishes. She also has a chance to find out what some of the baby "noises" mean and learn something of how to take care of him. Then she won't be completely lost when she goes home and has the entire responsibility on her hands.

### Birth registration

All States now have laws requiring that a baby's birth be registered. Births are usually reported by the doctor or midwife in attendance. After the information has been sent in to the State Bureau of Vital Statistics, the mother receives a notification that the birth has been registered. When you give the doctor or midwife the necessary information, be sure the date of birth, the name, and the sex of the child are entered correctly. Then check the record you receive. Few mistakes are made, and they can be easily corrected if caught early.

### Breast feeding

Most healthy women are able to breast feed their babies, although there are some who cannot. Breast feeding takes a little time and patience for both the mother and baby to learn, but once learned it is easier than making formula and can be a very satisfying experience.

Unless there is a medical reason why breast feeding is unwise, give it a fair trial. That means keeping at it for more than just a few days. The baby will learn to suck better if he is hungry. For

this reason many doctors have stopped the practice of giving the baby bottle feedings during these early days when the baby is learning how to get milk from the breast. A healthy, normal infant will probably learn to suck effectively from the breast within the first few days after birth, although he may be very lazy at first.

Breast milk is a natural food containing most of the necessary food elements in the easiest form for the newborn baby to use. It is clean, when the mother is healthy, and is always at the right temperature. The close relationship between a mother and her baby during breast feeding is important for them both. Even during pregnancy a mother cannot have that same feeling of closeness and joy in her baby that she gets while nursing him. Breast feeding is one of the first ways a baby can feel the security and love of his mother. Babies need this feeling of closeness to the mother. It helps them to grow into healthy, happy, well-adjusted children.

Successful breast feeding depends to a large extent on a desire to breast-feed the baby. This desire helps to promote a good supply of milk. The calm, placid, well-adjusted mother finds it easiest to breast-feed her baby, for many so-called "nervous" factors can influence the supply of milk. Getting too excited, too tired, or over-anxious can slow up your milk supply. So it is important for you to talk out your worries, and to have some help when you go home, so you will be less likely to get tired out and feel upset.

The baby may not be brought to you for breast feeding until 12 to 24 hours after birth. After this first feeding, the time between feedings may depend upon several things: the size and weight of the baby, how often he seems to need feed-

ing, and whether or not you and your doctor want to try a self-regulating feeding plan. Some doctors recommend a 3- or 4-hour interval between feedings. Others feel that it is better for a baby to make his own schedule and be fed whenever he is hungry. The doctors who recommend this latter method call it the self-regulating or self-demand plan of feeding. A self-regulating schedule may not work for all mothers and babies. But many mothers who have tried it like it, and their babies thrive on it. Talk to your doctor if you want to try this plan.

During these early feedings, the nurse will help you in teaching the baby how to get milk from your breast. Even though babies are born knowing how to suck, some of them have trouble in learning to take the nipple in their mouths and get results. They may get tired at first and become fussy and fretful. This is particularly true in the days before the milk is formed. During this time let your baby suck for a short time on each breast—about 5 to 10 minutes. Let his cheek touch your breast. Then he will root around and find the nipple. See that he gets the nipple well into his mouth. After the milk begins to come, on the third day or so, he will suck longer, and often can get all he wants from one breast at that feeding.

In teaching the baby to suck, hold the top of your breast away from his nose so he can breathe easily. If the breast presses against his nose, he may stop sucking because he cannot breathe. In trying to breathe, he may swallow air, which fills up his stomach and makes him fretful. After the feeding, hold him up against your shoulder, or have the nurse do so. Pat his back gently so he can belch up any air he may have swallowed.

Keep your nipples clean, and they will be less likely to crack or become sore. If you bathe them completely once a day and wear a clean nursing brassiere, you may not need to wash the nipples between each feeding. However, it is best to wipe off any milk remaining on the nipples with a clean cloth. If your nipples are unusually tender, the doctor may advise you to put a little clean cold cream on them between feedings. Wash this off, though, before the baby is fed. Also, the doctor may recommend that you put a clean pad of gauze or soft cotton cloth over the nipples to protect them between feedings.

After the milk has started, it will continue to form as the baby sucks. But if he does not learn to suck well, your milk supply will gradually dry up.

### **Bottle feeding**

Some mothers are not able to breast-feed their babies, or for other reasons breast feeding seems inadvisable. In these instances, the doctor will probably suggest that bottle feedings be given. These mothers should not feel guilty about their inability to breast feed. It does not mean they cannot be good mothers. Bottle feedings will not deprive the baby of a good start in life if they are properly given.

As we have mentioned before, one of the important reasons for breast feeding is the contact with the mother's arms and body and the feeling of closeness and security a baby gets from being held during feedings. A bottle-fed baby can be given this same security if the mother holds the baby in her arms to feed him, just as she would at her breast. This can be done in the hospital as well as at home, and is strongly recommended by doctors who know that the close contact between

mother and baby during feeding is important.

Propping a bottle for a baby, or feeding him in his crib is not a good practice. It may give rise to feeding problems, nervousness, and other difficulties later on. If a mother is too ill to give the baby the bottle herself, or is away from home at the time of a feeding, the nurse or helper should hold the baby in her arms to feed him, just as the mother does. A self-regulating plan of feeding can be used with a bottle-fed baby, too.

### **Bathing**

Some hospitals still give sponge baths with soap and water to new babies, but many doctors believe this is not important. Your baby may be given an oil bath on the first day after birth, or he may not be bathed at all for several days. Many doctors feel that the vernix on the baby's skin helps to prevent skin infections in the early days of life, so they leave it on to wear off by itself. Most of it disappears in a few hours. Most babies get their first real baths on the seventh or eighth day after birth. Tub baths are delayed until the cord stump has fallen off and the navel is healed.

During the early days, a little oil may be placed in the folds of the skin. Whenever the diaper is changed the region around the genitals and buttocks should be carefully cleaned with oil. A new baby's skin often becomes dry and scaly, but this is nothing to worry about and will correct itself as the baby gets older.

### **The first few days of life**

The biggest danger to tiny babies is infection. Good hospitals take care to keep them away from people with colds, sore throats, intestinal upsets, or skin infec-

tions. If the baby is born at home, follow this same plan. Some hospitals have the nurses wear masks in caring for the babies, and the mothers wear a mask while breast feeding. Others do not require this. There is no real need for masks if the persons caring for the baby are free from infection.

Most new babies lose weight for the first few days, and may not begin to regain their birth weight until they are 5 to 7 days old. This weight loss is due largely to loss of water and the passage of intestinal material which accumulated in the baby's bowel before birth. It is a perfectly normal adjustment and is nothing to worry about unless the baby does not begin to gain by the end of the first week.

In the first few days the breasts of some babies seem to grow bigger and get a little reddened. A few drops of milk may even ooze out of the baby's nipple. This can happen with either a boy or a girl baby, but it is not very common. It simply means that some of the internal substances which were getting your breasts ready for feeding also passed into the baby's body before birth. Your internal secretions get into the baby's body in the same way that food materials and oxygen went across the placenta from your body into his. This swelling of the baby's breasts will disappear gradually. It is important not to press or rub the baby's breasts during this time.

Some little girl babies may also have a few drops of blood appear from the vagina during the early days after birth. This bleeding is caused in somewhat the same way as the breast enlargement. It is nothing to worry about and will disappear shortly.

## **Caring for the newborn baby at home**

If the baby is born at home, or if you go home from the hospital very early (such as the third or fourth day after the baby's birth), you may be able to arrange for a public health nurse in your community to come in for a while each day to help you get started. Many local health departments or community agencies provide this kind of service for new mothers. These nurses can do a great deal to make your early days at home easier and happier. Not many mothers nowadays can afford the luxury of a private nurse at home, and even a short visit from a public health nurse each day will help to straighten out a lot of details. It would be a good idea to find out before the baby comes if your community has such a service.

## **The premature baby**

A premature baby is a baby that is born more than 2 weeks before the expected time. Because it is difficult to determine the exact time a baby is due, all babies weighing less than 5½ pounds are considered premature. Even if the baby is full-term according to the mother's reckoning, if it weighs less than 5½ pounds it needs special care and should be treated as premature.

Premature babies need special care, because their bodies are not so ready to get along in the world as those of larger babies. They may need to live in an incubator for a while, where there is carefully regulated temperature and humidity and where they can have extra oxygen. If they are very tiny they should not be handled any more than is absolutely neces-

sary. This restriction may make it impossible for a mother to care for her premature baby during these early days. It may mean that she cannot see him except through the windows of the incubator. She may not be able to take him home from the hospital when she goes, or perhaps cannot keep him at home if he was born there. The length of his stay in the hospital depends to some extent on whether he is very tiny or is just under 5½ pounds. Most premature babies are not sent home until they weigh 5½ to 6 pounds.

Probably the mother will not be able to breast-feed the baby at first, although the doctor may want her to learn how to express her milk by hand or with a breast pump so it can be fed to the baby. Some mothers learn to do this skillfully, and can even keep up their milk supply well enough to begin breast feeding the baby when he is big enough to come home.

A premature baby should be born in a hospital, if possible, where there are good facilities to take care of him. If he is born at home, and is quite small, every effort should be made to get him to a hospital which has special equipment and staff for the care of premature babies.

There may be a special service for premature babies in your local hospital, or in another hospital in the State. Some of these have been established under the direction of the State or local health departments. Some hospitals and health departments have specially equipped ambulances to take a premature baby to a hospital. Caring for a small, premature baby at home is a big and difficult undertaking, and should not be tried unless there is absolutely no way to get good hospital care for him. A larger premature baby, such as one weighing 4 pounds or

over, may be cared for at home, if he is born there. The public health nurse can help you a lot in caring for a premature baby.

### Enjoying your baby

Many new mothers are so bewildered by the responsibilities and "do's and don'ts" that they get themselves tired and upset during the early days of the baby's life. This difficulty is particularly likely to come up when she and the baby first go home. Friends and relatives are anxious to be helpful, but at times they only add to the confusion.

You can prevent some of this confusion if you have already become acquainted with the doctor who is going to be taking care of your baby. If he is not the same doctor who delivered your baby, make it a point to talk with him sometime during your pregnancy. Then, after the baby comes, you will find it easier to discuss things. He will probably want to see you and the baby in the hospital. Bring up questions and problems with the doctor or the nurse, and spend as much time as you can just enjoying your baby.

It will not hurt him to be picked up and cuddled when he cries, and this is one of the ways he learns the comfort and security that will be so important to him as he grows.

If the baby is on a self-regulating schedule, you may find that he will settle down to his own routine about the time you are feeling well enough to get out and do a few things yourself. Many mothers have found this way of caring for the baby a comfortable and satisfying experience.

With all of his helplessness, this little newborn baby is a real person, and he is beginning to take his place in the world.

## Appendix

### Birth of the baby without medical attendance

Sometimes a baby is born before the doctor arrives, or before the mother can leave home to get to the hospital. This emergency is unusual, and is not as likely with a first baby as it is with later babies.

If you are faced with this problem, try not to feel frightened. When a baby is born so quickly that you cannot get the doctor in time, it nearly always means the birth is very normal. You would probably have had time to get the doctor, or to get to the hospital if the birth was going to be difficult.

Certain things can be done which will make it easier for both you and the baby. You cannot do these yourself. So get someone to stay with you until the doctor comes.

### Instructions to the helper

1. Be sure the doctor or ambulance has been called.
2. See that the mother is comfortably lying down.
3. Wash your hands thoroughly.
4. Do not touch the area around the vaginal entrance.
5. Place a clean towel under the mother's hips for the baby to come on to. If you have time, protect the bed with newspapers.
6. Let the baby come naturally.
7. If the bag of waters has not broken, and the baby is born still inside the

sac, puncture the sac with a pin or tip of scissors. Wipe the sac and fluid away from his face and head with the inside of a clean handkerchief.

8. As soon as he is born, wipe the baby's mouth, nose, and face with the inside of a clean handkerchief. Do not use cotton or paper tissues.
9. Move him carefully to a clean spot between the mother's legs, with his head elevated a little and away from any fluid or secretions. *Do not stretch the cord.* Let it remain a little slack.
10. If the doctor has been called and is on his way, you do not need to tie the baby's cord. Leave it attached. Leave the baby in a clean spot between the mother's legs, but cover his body with a blanket or towel to prevent chilling. Leave his head uncovered so he can breathe.
11. If you have not been able to reach the doctor, or if he cannot get there within an hour, the cord should be tied.
  - (a) Tie the cord *tightly* in two places about 2 inches apart with clean pieces of tape or strong twine. The tie nearest the baby should be about 6 inches from his navel.
  - (b) Cut the cord *between* the two ties with a clean pair of scissors.



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- (c) Wrap the baby in a clean flannel square or blanket, with his face uncovered, and lay him on his side in a warm place.
12. Let the afterbirth come by itself. *Do not pull on the cord to make it come out.* Save the afterbirth in a basin or newspaper for the doctor to examine.
  13. As soon as the afterbirth has passed out, place your hands over the mother's uterus (a firm lump just below the mother's navel).
  14. Cup your hands around the mother's uterus and massage the uterus several times to keep it firm. If it does not stay firm, hold your hands around it until it does.
  15. Clean the mother's buttocks and lower thighs, but do not touch the area around the vaginal entrance.
  16. Make the mother comfortable and see that the baby is warm and breathing. Give the mother a hot drink, such as tea, if she wishes.
  17. Do not leave the mother until the doctor comes.

## Glossary

- Abdomen.**—The region of the body between the lower rib margin and the pubic bone; the lower front half of the body. Sometimes called the belly, or, incorrectly, stomach.
- Abortion.**—The medical term for early miscarriage. Abortion also refers to illegal miscarriage.
- Afterbirth.**—The placenta and membranes, which pass out of the uterus after the baby is born.
- Aftercare.**—Medical and nursing care of the mother after birth of the baby. Sometimes called “postnatal” or “postpartum” care.
- Albumin.**—A normal body substance found in the blood which occasionally gets into the urine if the kidneys are not working right.
- Anemia.**—A condition of the blood in which there is either not enough hemoglobin or not enough red blood cells.
- Anesthetic.**—A type of medicine which is used to prevent feeling pain. There are two kinds, general anesthetics and local anesthetics. General anesthetics, such as gas or ether, are used to put a person to sleep; local anesthetics are injected beneath the skin or into the spinal canal to deaden special areas of the body.
- Bag of waters.**—The bag of membranes, enclosing the baby in the uterus, which is attached to the placenta and is filled with fluid.
- Bladder.**—The organ in which the urine is collected as it drains down from the kidneys, and from which it passes out of the body.
- Blood pressure.**—The pressure of the blood in the arteries caused by the pumping of the heart and movement of blood in the blood vessels.
- Breech baby.**—A baby born feet or buttocks first.
- Bunting.**—An outer wrap for a small baby which consists of a hood attached to a small blanket.
- Catheterization.**—Passing a small tube through the urethra into the bladder to draw out the urine.
- Cervix.**—The lower end of the uterus.
- Cesarean birth.**—Birth of a baby by an abdominal operation.
- Colostrum.**—The thin watery fluid which begins to seep from the nipples about the fourth month of pregnancy, and which serves to nourish the baby after birth until the milk begins to form.
- Conception.**—The union of the male and female sex cells.
- Confinement.**—The birth of the baby.
- Constipation.**—Failure of the bowels to pass feces (waste products) out of the body, or difficult passage of hard bowel movements.
- Contraction.**—The tightening of a muscle.
- Convalescence.**—The period of recovery after childbirth, an operation, or an illness.
- Delivery.**—Birth of the baby.

- Episiotomy.**—A small cut made in the vaginal entrance at the birth of the baby to allow him to be born without tearing the skin of the entrance.
- Fallopian tubes.**—The two small tubes leading from the uterus to the ovaries.
- Fertilization.**—The entrance of the male cell into the female cell and its union with the female nucleus.
- Fontanelle.**—The soft spot on the top of the baby's head where the skull bones have not yet grown together.
- Forceps.**—An obstetrical instrument which helps to lift out the baby's head.
- Hemoglobin.**—The red coloring matter of the blood which is concerned with carrying oxygen.
- Involution.**—The return of the uterus to normal size after the birth of the baby.
- Kidneys.**—The two organs located deep in the body on either side of the backbone near the waistline in which the urine is formed.
- Labor.**—The period at the birth of the baby which is marked by regular contractions of the uterus, opening of the cervix, and changes in the birth canal so that the baby can pass through.
- Lanolin.**—A purified animal fat similar to cold cream.
- Leucorrhœa.**—Whitish vaginal discharge.
- "Lightening."**—The settling of the baby lower down in the abdomen toward the end of pregnancy.
- Lochia.**—The discharge of blood and tissue from the uterus after the birth of the baby.
- Maternity care.**—The care of a mother during the prenatal period, at delivery of the baby, and after the baby's birth.
- Menstruation.**—The regular monthly flow of blood which occurs in the non-pregnant woman during the child-bearing years—approximately from 13 to 45 years of age. Sometimes called the "monthlies" or the "period."
- Minerals.**—Certain elements such as iron, calcium, phosphorus, which are present in foods and in body cells.
- Miscarriage.**—Birth of the baby during the early part of pregnancy, before it has reached an age when it could possibly live outside the mother's body.
- Morning sickness.**—The feeling of nausea or discomfort which sometimes comes during the first 3 months of pregnancy. So-called because it is more often noticed in the morning.
- Mucous membrane.**—The thin membrane lining the mouth, the nose, the inside of the digestive tract, and the vagina.
- Mucus.**—The colorless sticky material secreted by glands in certain parts of the mucous membrane to keep it moist.
- Nausea.**—A feeling of discomfort in the stomach which often leads to vomiting.
- Obstetrician.**—A doctor who specializes in the care of pregnant women and the delivery of babies.
- Ovaries.**—The two small, internal, oval-shaped organs which produce the female cells.
- Ovum.**—The female sex cell. (Plural—Ova.)
- Oxygen.**—A gas which is present in the air and which is absorbed by the blood from the air we breathe. It is necessary for the proper functioning of the body cells.
- Pelvic examination.**—Internal examination of the uterus and ovaries done by the doctor.
- Pelvic measurements.**—Measurements made by the doctor of the size of the birth canal.
- Pelvic organs.**—The organs of a woman's body which are in the hollow of

- the pelvic bones. These are the uterus, vagina, ovaries, Fallopian tubes, bladder, and rectum.
- Pelvis.**—The circle of bone forming the support of the trunk, and to which the leg bones are attached.
- Placenta.**—The organ at the end of the umbilical cord which is attached to the lining of the uterus and through which the baby gets nourishment.
- Postpartum examination.**—Examination of the pelvic organs to see that they are returning to normal after the birth of the baby.
- Pregnancy.**—The period of time from conception to birth or miscarriage.
- Prenatal care.**—Medical care and supervision before the birth of the baby.
- Pubic bone.**—The front bone of the pelvis.
- Rectum.**—The lower end of the bowel.
- "Show".**—The small amount of mucus and blood which appears during the early part of labor.
- Spermatozoon.**—The male sex cell. (Plural—Spermatozoa.)
- Sphincter muscle.**—A circular muscle at the end of the bowel which controls the emptying of the bowel.
- Stethoscope.**—The instrument through which a doctor can hear heart beats, breath sounds, and other internal noises.
- Tampon.**—A small cotton plug put into the vagina to absorb menstrual flow, or to apply medicine to the vagina or cervix.
- Umbilical cord.**—The round cord which is attached to the baby's abdomen and connected at the other end to the placenta. It contains the blood vessels that carry the baby's blood to and from the placenta.
- Urethra.**—The short passage between the bladder and the outside of the body.
- Urination.**—Passing urine out of the body through the urethra.
- Urine.**—Water solution of waste products which is filtered through the kidneys and passes out of the body through the bladder and urethra.
- Uterus.**—The organ of the woman's reproductive system in which the baby grows. Sometimes called the womb.
- Vagina.**—The passageway between the outside of the body and the lower end of the uterus. Sometimes called the birth canal.
- Vaginal douche.**—Irrigation of the vagina with water or a solution of medicine.
- Vernix.**—The white, creamy covering over the baby's skin during the last part of pregnancy.

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## *Suggested reading on pregnancy and baby care*

### **Pamphlets**

Infant Care. Children's Bureau Publication No. 8, 1945, Federal Security Agency.

So You're Expecting a Baby. Children's Bureau Folder No. 1, 1947.

Breast Feeding. Children's Bureau Folder No. 8, 1947.

(Single copies of these 3 pamphlets can be obtained by writing to the Children's Bureau, Federal Security Agency, Washington 25, D. C.)

### **Books**

Expectant Motherhood, by Nicholson J. Eastman. Little, Brown and Co., Revised edition, 1947. An excellent general discussion of pregnancy and childbirth by the Professor of Obstetrics of Johns Hopkins Hospital.

Pocket Book of Baby and Child Care, by Benjamin Spock, Pocket Books, Inc., 1946. Price 35c. This comprehensive, readable little book covers many

questions of child care, from birth through adolescence, and can be found at most drugstores or newsstands where Pocket Books are sold.

Babies Are Human Beings, by C. Anderson Aldrich and M. M. Aldrich. Macmillan Co., 1938. The needs of babies and their behavior in relation to the satisfaction of those needs.

Baby: A Mother's Manual, by Stella B. Applebaum. Ziff-Davis Co., 1946. Every step in baby's care shown by photographs, accompanied by brief explanations.

Let's Talk About Your Baby, by H. Kent Tenney. The University of Minnesota Press, Revised edition, 1947. General discussion of baby care.

All About Feeding Children, by Milton J. E. Senn and Phyllis Newill. Doubleday, 1944. Contains many helpful ideas on both breast and bottle feeding, as well as material and recipes useful in feeding older children.

# prenatal care

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