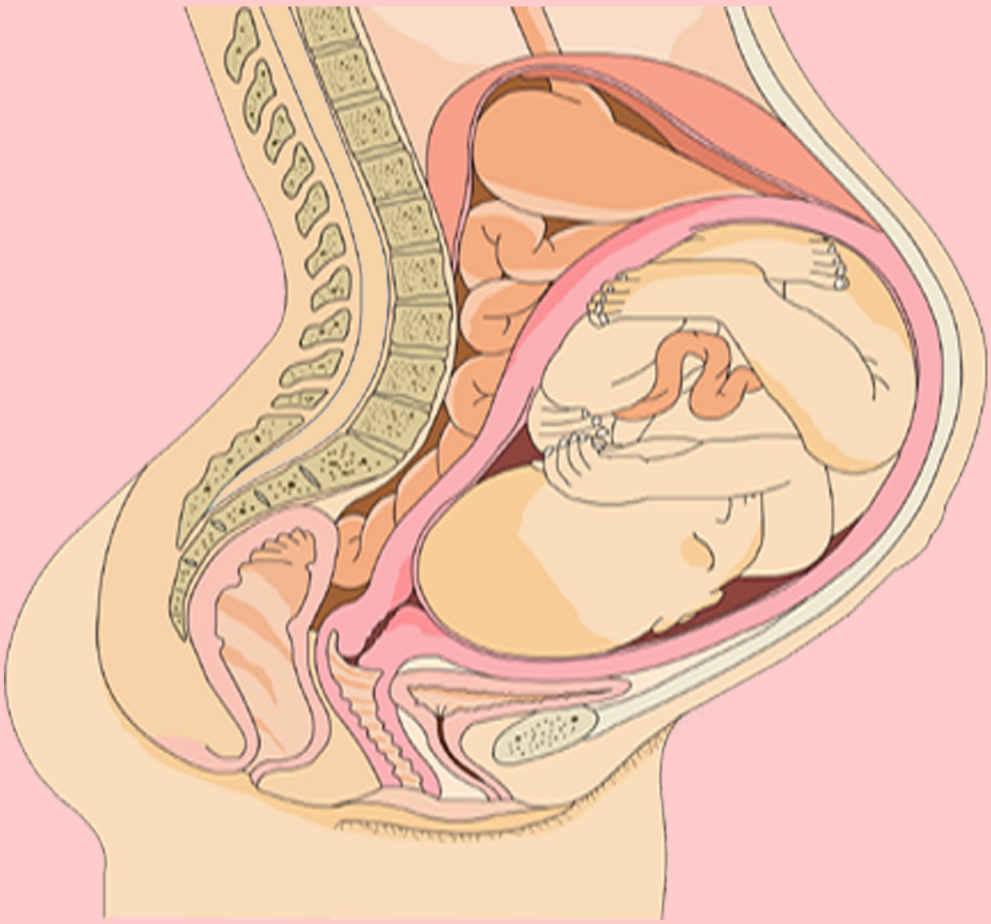
Womens Health Mantra

Health care for the modern Women

Dr.Adeeti Gupta MD FACOG
Obstetrician & Gynecologist
Laparoscopy & Urogynecology
Sexual Medicine

Tamara Pollak WHNP MS, MPH
Reproductive & Adolescent Health



Your Pregancy Booklet !

83-21 57th ave,Queens,Ny 11373
Tel:718-898-1170 Fax: 718-898-3190
www.womenshealthmantra.com

ADEETI GUPTA PHYSICIANS, PC
Adeeti Gupta, M.D.
Obstetrics & Gynecology
Laparoscopy & Urogynecology
◆ 83-21 57th Avenue ◆ Elmhurst, NY, 11373 ◆ 718-898-1170 ◆

Welcome and congratulations on your pregnancy!

We are honored to be your health care providers, and are committed to providing you with the best possible care. Our hope is to form a partnership to keep you as healthy as possible, no matter what your current state of health. With just a few positive steps, each day we can move closer to a healthier life.

Here are some important steps you can take toward better health:

- Do not smoke cigarettes or use other tobacco products.
- Drink alcohol in moderation, if at all, and never drive when you have been drinking.
- Eat a diet low in fat and high in vegetables and fruits.
- Exercise at least three times a week.
- Wear your seatbelt whenever you are in a car.
- Learn about ways to deal with stress and tension.

It will give us great pleasure to work with you towards achievement of these goals, through aid from our personal expertise, recommendations of various reading materials, and referrals to other health professionals.

Enclosed is a thorough manuscript to better acquaint you with your pregnancy so that you maintain a healthy nine months and learn the do's and dont's!

A few important points are listed below for your reference.

- If you ever have an emergency or an urgent question during pregnancy, our 24 hour answering service is at 718-898-1170. Please wait for the operator and the message will be given to the physician.
- If you have a routine question, please call the above number during regular office hours.
- You may check normal lab results by registering through the portal at www.womenshealthmantra.com
- If some results are abnormal, we may call you back to schedule an appointment to discuss the results.
- Please do not use email to contact the practice. Email is not a secure mode of communication for health related issues.

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Dr. Gupta is affiliated with the hospitals below:

New York Hospital Queens ,
56-45 Main St, New York, NY
(718) 670-2000

Flushing Hospital
146-01 45th Ave, Flushing, NY, 11355
(718) 670-5000.

If you ever need our services, we will assist you so you may have the best experience possible as we work with you to make you feel and function better.

For more information please visit www.womenshealthmantra.com

We deeply believe in what we do.

Sincerely,

Adeeti Gupta MD, FACOG

MEET OUR CARE TEAM.

1. **TAMARA POLLAK, MS, MPH**

Tamara Pollak is a passionate health advocate for adolescent girls and young women in New York City. As both a Women's Health Nurse Practitioner and a public health professional, she embraces the opportunity to provide evidence based, confidential, and accessible health-care. After she obtained her Masters in Public Health at the Johns Hopkins University in 2003, she moved on to be a clinical nurse at a level 1 pediatric trauma unit at New York Presbyterian Weill Cornell Medical Center.

Tamara recently completed her Masters of Science in the Women's Health track at Columbia University School of Nursing. She has now joined hands with Dr. Adeeti Gupta in striving to provide passionate and comprehensive health care for women at their office in Queens, NYC.

2. **BRIDGET BOND RPA-C**

Bridget Bond is an energetic and charming board certified physician assistant specializing in obstetrics and gynecology. She has been working with Dr. Gupta to help provide quality care for enhancing women's health since 2011. In addition to working as a full time physician's assistant at the premier Montefiore Medical Center, she helps out Dr. Adeeti Gupta at her office in Queens.

In case of an emergency or if you have urgent questions regarding your pregnancy, please call 718-898-1170 at all times. Please hold for the operator to be connected to Dr. Gupta or her covering physician.

If you feel that you are in labor, please go to New York Hospital Queens, Main Street, Flushing Hospital, Labor and Delivery (3rd floor). After evaluation by the health care providers in labor and delivery, Dr. Gupta or her covering physician will be informed accordingly.

Please note that email is not a secure method of communication with the practice for health related questions. In case of any such non – urgent questions, you can send a message through the portal at womenshealthmantra.com.

HOW TO NAVIGATE THIS FOLDER!!!

8321, 57th avenue, Elmhurst, NY-11373

Tel: 718-898-1170, Fax: 718-898-3190
www.womenshealthmantra.com

Table of Contents

1. You and Your Baby

Prenatal Care, Labor and Delivery, and Postpartum Care

Pregnancy is an exciting time of major change. From the very start, your growing baby changes your body and the way you live your daily life. The best way to approach pregnancy and childbirth is to be informed. As soon as you know you are pregnant, call your health care provider to schedule an appointment so you can start prenatal care right away. You will be giving your baby a healthy start in life.

Prenatal Care

Prenatal care includes regular health care visits and childbirth education. Prenatal visits allow your health care provider to monitor your health as well as that of your growing baby. You can discuss any questions or concerns you may have and learn more about your pregnancy. You will have regular appointments throughout your pregnancy.

Your first or second prenatal visit will be one of your longest. This visit will include a detailed health history, a physical exam, lab tests, and calculation of your due date.

Your health care provider will ask about your health history, including your previous pregnancies, surgical procedures, medical problems, and medications you may be taking.

Be prepared to answer questions about your family's and the baby's father's health as well.

After your health history is obtained, your height, weight, and blood pressure will be measured. You will have a complete physical exam with blood and urine tests and a pelvic exam. You also may have cervical cancer screening.

Your Due Date

The day your baby is due is called the estimated date of delivery (EDD) or the "due date." Although few women give birth on their exact due dates, the EDD is useful for many reasons. It is used as a guide for checking the baby's growth and the progress of your pregnancy. Your due date also affects the timing of prenatal tests.

Your due date is usually calculated from the first day of your most recent menstrual period, often called your last menstrual period by health care providers. You may notice that, according to this method, your last menstrual period is included even though your baby was not conceived yet. Pregnancy is assumed to occur 2 weeks after your menstrual period. Therefore, an extra 2 weeks is counted at the beginning of your pregnancy, even though you are not actually pregnant.
A normal, full-term pregnancy lasts about 40 weeks from the first day of your last menstrual period. The 40 weeks of pregnancy are divided into three **trimesters**. Each trimester lasts about 12–13 weeks (or about 3 months):

- 1st trimester: 0 –13 weeks (Months 1–3)
- 2nd trimester: 14 –27 weeks (Months 4 –7)
- 3rd trimester: 28 – 40 weeks (Months 7–9)
-

Childbirth Preparation

Many women take childbirth preparation classes to learn ways of coping with pain and reducing the discomfort associated with labor and delivery. There are a few different methods of childbirth preparation available, such as Lamaze and Bradley, but all seek to relieve discomfort through education, support, relaxation, paced breathing, and touch. Your health care provider can provide information about preparation classes offered at your hospital or birthing center.

Birth Plan

Estimating Your Due Date

1. Take the date that your last menstrual period started.
2. Add 7 days.
3. Count back 3 months.

Example: the first day of your last menstrual period was January 1. Add 7 days to get January 8. Then count back 3 months. Your due date is October 8.

Some childbirth preparation classes will help you draft a birth plan — a written outline of what you would like to happen during labor and delivery. This plan may include where

you want to give birth, the people you want to have with you, and whether you plan to use pain medications. Keep in mind that it may not be possible to follow your birth plan if unexpected events arise.

It is a good idea to go over your plan with your health care provider well before your due date. He or she can advise you about how your plan fits with his or her policies and practice, as well as the hospital's resources and policies. Discussion about your expectations up front can help reduce surprises and disappointments later.

Tests and Exams

Prenatal care involves lab tests, physical exams, and imaging exams. They are performed to monitor the health and well being of you and your baby.

Lab Tests

Certain routine lab tests are done on all pregnant women. Depending on your health history and the results of your routine tests, your health care provider may recommend that you have other tests. The following tests are performed during pregnancy:

- Blood type and **antibody** screen—Your blood type can be A, B, AB, or O. It also can be Rh positive or Rh negative. If your blood cells lack a protein called the Rh **antigen**, your blood is Rh negative. If your blood cells carry the antigen, you are Rh positive. Problems can arise when the baby's blood has the Rh antigen and yours does not. If you are Rh negative and there is a chance that your baby is Rh positive (if the baby's father is Rh positive), your health care provider may prescribe an **Rh immunoglobulin** shot to prevent harmful antibodies from forming.

- Hematocrit and hemoglobin—These tests check for **anemia**. If your hematocrit and hemoglobin levels are low, you may be advised to increase your intake of iron.

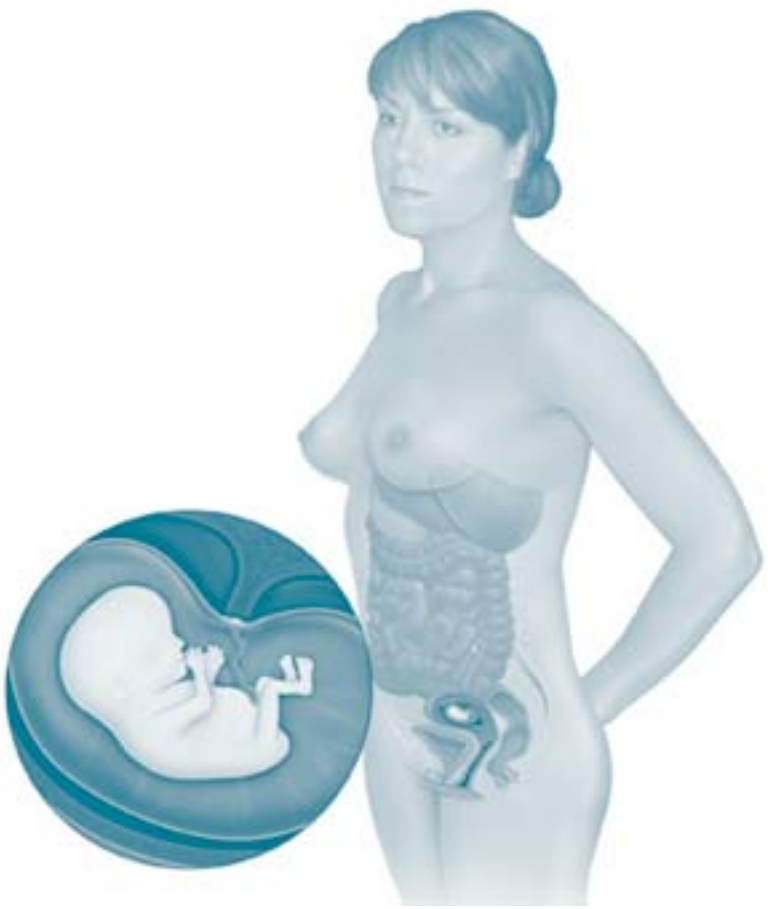
- Rubella—Your blood will be checked for immunity to rubella (German measles).

- **Glucose**—The level of glucose (sugar) in your blood is measured to test for **diabetes mellitus**.

- Sexually transmitted diseases —You will be tested for certain sexually transmitted diseases, including **syphilis**, **human immunodeficiency virus (HIV)**, and **hepatitis B virus**. You may be tested for other sexually transmitted diseases if you are at high risk.

- Urine—A urine test will be done to determine whether you have bacteria in your urine. If your test result is positive, you will need treatment.

- Risk screening — Some tests are given to pregnant women who have health conditions, such as hypertension, lung disorders, **lupus**, and obesity, to make sure these problems do not pose any risk to the baby.
  Later in pregnancy, between week 35 and week 37, you will be screened for Group B streptococci (GBS). GBS are bacteria that sometimes are present in the vagina and rectum. If your test result is positive, or if you have had a previous baby with GBS infection or you have had a urinary tract infection with GBS during this pregnancy, you will receive **antibiotics** during labor to help prevent GBS infection in your newborn.

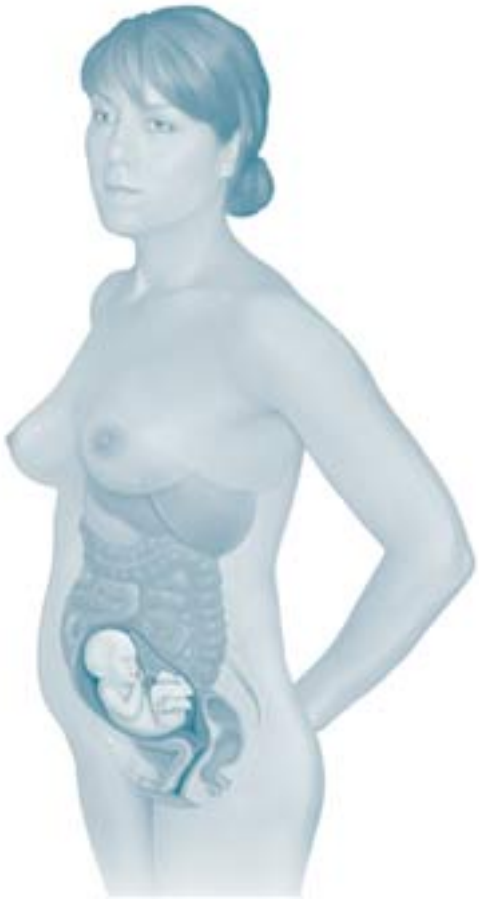


How Your Baby Grows and Changes in Your Body During Pregnancy

The First Trimester:
You:

Your menstrual period stops.
Your breasts may become larger and more tender.
Your nipples may stick out more.
You may need to urinate more often.
You may feel very tired.
You may have nausea and vomiting.
You may crave certain foods or lose your appetite.
You may have heartburn or indigestion.
You may be constipated.
You may gain or lose a few pounds.
Your Baby:

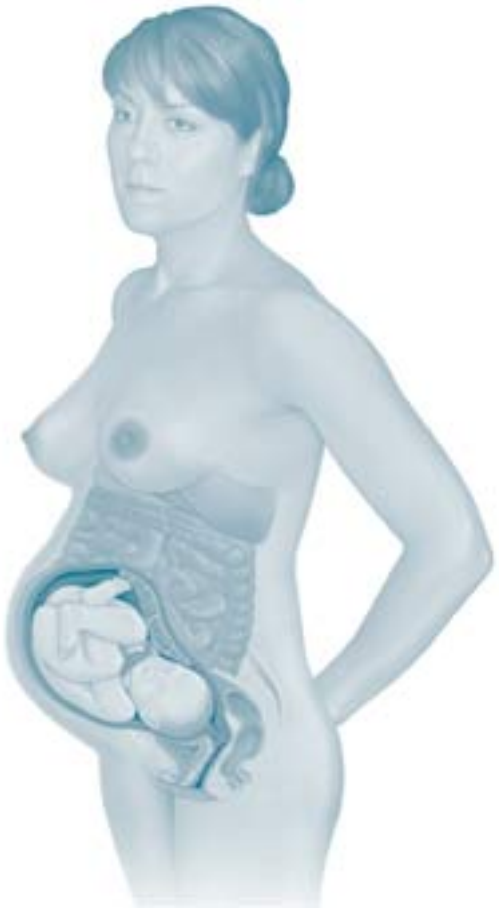
All of the major organ systems have formed.
The baby can hear sounds.



Arms and legs can flex.
The Second Trimester:
You:

Your appetite increases and nausea and fatigue may ease.
Your abdomen begins to expand. By the end of this trimester, the top of your uterus will be near your rib cage.
The skin on your abdomen and breasts stretches and may feel tight and itchy. You may see stretch marks.
Your abdomen may ache on one side or the other as the ligaments that support your uterus are stretched.
A dark line, the linea nigra, may appear down the middle of your stomach from your navel to your pubic hair.
You may get brown patches (**chloasma**, or the "mask of pregnancy") on your face.
Your areolas, the darker skin around your nipples, may darken.
Your feet and ankles may swell.
You may feel your uterus in your lower abdomen.
Your Baby:

The baby moves in response to sounds.
Sucking reflex develops.
The baby develops a protective covering on the skin called vernix.

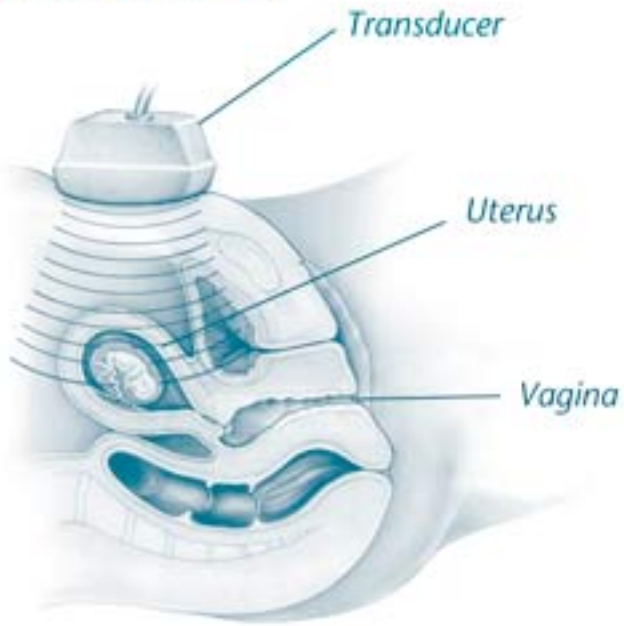


Eyes can open and close.
The Third Trimester:
You:

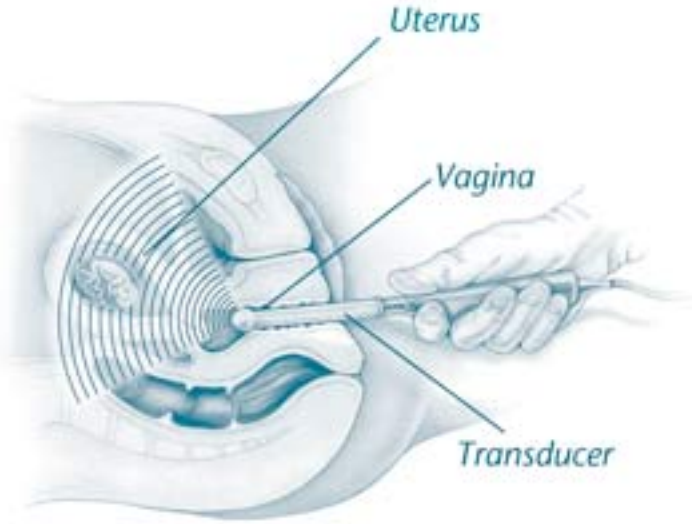
You can feel the baby's movements strongly.
You may be short of breath.
You may need to urinate more often as the baby drops and puts extra pressure on your bladder.
Colostrum— a yellow, watery pre-milk—may leak from your nipples.
Your navel may stick out.
You may have contractions (abdominal tightening or pain). These can signal false or real labor.
Your Baby:

The baby's brain, liver, and lungs finish developing.
More fat accumulates under the baby's skin.
Hair is beginning to grow on the baby's head.
The baby has definite sleeping and waking patterns.

Ultrasound Exam



Transabdominal ultrasound



Transvaginal ultrasound

During an ultrasound exam, sound waves are produced by a transducer. These sound waves are reflected off the fetus. The reflected sound waves are changed into pictures that you and your health care provider can view on a screen.

Exams

An **ultrasound** exam makes an image of your baby from sound waves. A device called a transducer produces these sound waves. The transducer is either moved across your abdomen, which is called a **transabdominal ultrasound** scan, or is placed in your vagina, which is called a **transvaginal ultrasound** scan. An ultrasound exam may be performed during a normal pregnancy for the following reasons:

- Confirm the pregnancy—This exam may be done in the first few weeks of pregnancy.
- Screen for birth defects —If you have decided to have first-trimester screening for birth defects (see "Testing for Birth Defects and Genetic Disorders"), an ultrasound exam is done between week 10 and week 14 of pregnancy for this purpose.
- Estimate the baby's **gestational age** and perform a general check of the baby's organs and features—This exam may be done at about 20 weeks of pregnancy.

Testing for Birth Defects and Genetic Disorders

Screening tests for some birth defects, such as **neural tube defects**, **Down syndrome**, **trisomy 18**, and some heart and abdominal wall defects, are offered to all pregnant women, even when there are no symptoms or known risk factors. Screening tests cannot tell you whether your baby has these defects. Screening test results only give the odds that your baby has a certain defect. To know for sure, diagnostic tests are available for a few specific birth defects. All pregnant women, regardless of age or risk factors, are offered diagnostic testing as a first option.

Screening tests for birth defects consist of blood tests and an ultrasound exam. They can be done at different times during your pregnancy:

- First-trimester screening—This screening includes a blood test that measures the levels of two proteins in your blood and a special ultrasound exam called a **nuchal translucency screening** test. These two tests are done between week 10 and week 14 of pregnancy.

- Second-trimester screening—This screening involves a blood test that measures the levels of three or four substances in your blood. This test is done between week 15 and week 20 of pregnancy.

- Combined screening—The results of first-trimester and second-trimester tests can be combined in a number of ways to increase their ability to detect Down syndrome. When tests are used together and depending on the tests used, 85–96% of Down syndrome cases can be detected.

If screening tests or other factors raise concerns about the baby, the following tests will be offered to diagnose certain birth defects:

- Targeted ultrasound exam—This exam allows a more extensive view of the baby's organs and features and is done after 18 weeks of pregnancy.

- Amniocentesis—In this procedure, a needle is used to withdraw a small sample of **amniotic fluid** and cells from the sac surrounding the fetus. The sample is sent to a lab for testing. This procedure most often is done at 15–20 weeks of pregnancy. It can help detect **chromosome** problems, such as Down syndrome; some genetic disorders, including **cystic fibrosis**; and neural tube defects.

- Chorionic villus sampling (CVS)—A small sample of cells is taken from the **placenta** and tested. This test is done after 9 weeks of pregnancy. It is used to find defects caused by chromosome problems, such as Down syndrome, and some genetic disorders, including cystic fibrosis.

- Fetal blood sampling—Blood is taken from the vein in the umbilical cord and tested for chromosomal defects when other tests results are unclear. It is done at 18 weeks of pregnancy or later.

Key Nutrients In Pregnancy	
Nutrient	**Sources**
Protein	Meat, fish, eggs, beans, dairy products
Carbohydrates	Bread, cereal, rice, potatoes, pasta
Fat	Meat, eggs, nuts, peanut butter, margarine, oils
Vitamins	
A	Green leafy vegetables, deep yellow or orange vegetables (such as carrots and sweet potatoes), milk, liver
Thiamin	Whole-grain or enriched breads and cereals, fish, pork, poultry, lean meat, milk
Riboflavin	Milk, whole-grain or enriched breads and cereals, liver, green leafy vegetables
B_6	Beef liver, pork, ham, whole-grain cereals, bananas
B_{12}	Animal foods, such as liver, milk, and poultry (vegetarians should take a supplement)
C	Citrus fruit, strawberries, broccoli, tomatoes
D	Fortified milk, fish liver oils, sunshine
E	Vegetable oils, whole-grain cereals, wheat germ, green leafy vegetables
Folic acid	Green leafy vegetables, dark yellow or orange fruits and vegetables; liver; legumes and nuts; fortified breads, cereals, rice, and pastas
Niacin	Meat, liver, poultry, fish, whole-grain or enriched cereals
Minerals	
Calcium	Milk and dairy products; sardines and salmon with bones; collard, kale, mustard, spinach, and turnip greens; fortified orange juice
Iodine	Seafood, iodized salt
Iron	Lean red meat, liver, dried beans, whole-grain or enriched breads and cereals, prune juice, spinach, tofu
Magnesium	Legumes, whole-grain cereals, milk, meat, green vegetables
Phosphorus	Milk and dairy products, meat, poultry, fish, wholegrain cereals, legumes
Zinc	Meat, liver, seafood, milk, whole-grain cereals

If diagnostic testing shows that the baby has a disorder, you will need to process the information and decide what to do. Your health care provider or genetic counselor can help guide you through your options. There is no right choice in these cases. Your health, values, beliefs, and situation all play a role in the decision.

Taking Care of Your Health

It is important to take good care of both your physical and mental health during pregnancy. Many choices you make in your daily life during pregnancy can affect your health as well as the health of your baby.

Nutrition
A well-balanced, healthy diet is crucial during pregnancy. Good nutrition is needed to meet the added demands on your body, as well as those of your growing baby.

Every diet should include proteins, carbohydrates, vitamins, minerals, and fats. These nutrients fuel your body and help your baby grow. **Table 1** gives examples of foods that are good sources of these nutrients.
The U.S. Department of Agriculture has designed an online interactive diet-planning program called "Super Tracker" (**http://www.choosemyplate.gov/**). This program gives you a personalized plan that includes the kinds of foods in the amounts that you need to eat for each trimester of pregnancy.
One of the most important things you need to do in the first 12 weeks of pregnancy (and ideally, before pregnancy) is to take 400 micrograms of the B vitamin known as folic acid every day to reduce the risk of neural tube defects. It may be difficult to get all the folic acid you need from food alone, so make sure you take a prenatal vitamin that contains the micrograms you need.

Weight Gain

During your pregnancy, it is important to watch how much weight you gain. How much you should gain depends on what you weighed before your pregnancy. To figure this out, your health care provider will calculate your body mass index (BMI) based on both your height and weight. You can find out your own BMI by using an online calculator at web sites such as**www.nhlbisupport.com/bmi**. **Table 2** shows the amount of weight you should gain based on your BMI.
If you are a normal weight before pregnancy, you need only about 300 extra calories on average per day to provide all of the necessary nutrients to keep your body running efficiently and to fuel the extra growth and development of your baby. If you are overweight to begin with, you may need less than 300 extra calories.

Keep in mind that you will gain weight differently throughout the different months of your pregnancy. During the first 3 months, you may see little gain. In fact, some women lose a few pounds because of nausea and vomiting that commonly occur in early pregnancy. You will gain most of your weight during the second and third trimesters, when your baby is growing at a faster pace.

Exercise

Being active and exercising— or even just walking—can benefit your pregnancy in many ways. Besides boosting your mood, it also can reduce backache and help with constipation. Exercise promotes muscle strength and endurance, which can be helpful during labor and delivery. Exercising now also will make it easier for you to get back in shape after the baby is born. Unless your health care provider tells you not to, you should do moderate

exercise for 30 minutes or more on most days, if not every day. The 30 minutes do not have to be all at one time; it can be a total of different exercise periods.

Many sports are safe during pregnancy, even for beginners, including walking, swimming, cycling, and low-impact or water aerobics. Those to avoid are those that have a high risk of falling (horseback riding, downhill skiing, gymnastics) and those that pose a risk of abdominal injury (contact sports and racquet sports). Follow these tips for safe exercise:

- Avoid getting overheated.
- Limit outdoor exercise in hot weather.
- Avoid exercise that makes you very tired or that has a high risk of falls or abdominal trauma.
- Drink lots of water.
- Wear good support shoes and bra.

If you have any of the following warning signs, stop exercising and call your health care provider:

- Dizziness or faintness
- Increased shortness of breath
- Uneven or rapid heartbeat
- Chest pain
- Calf pain or swelling
- Uterine contractions that continue after rest

Work

Many pregnant women have jobs outside the home. Pregnant women often work right up until delivery. However, there are some jobs that a pregnant woman may want to avoid. Discuss with your health care provider the type of work you do and be aware of the following job functions that could be harmful to your pregnancy:

- Do you come in contact with substances such as pesticides, cleaning solvents, and heavy metals?
- Do you do a lot of heavy lifting, climbing, or carrying?
- Do you stand for long periods?

If you think your job may be harmful, find out for sure by asking your personnel office, employee clinic, or union. Workplace safety hazards and tips can be found on the web sites of the Occupational Safety and Health Administration (**www.osha.gov**) and the National Institute for Occupational Safety and Health (**www.cdc.gov/niosh**).

Paid maternity-leave policies vary from company to company and state to state. The Family and Medical Leave Act protects your right to leave, with certain limits, for pregnancy-related problems or after giving birth. The law states that you can be on leave up to 12 weeks without pay during any 12-month period and have your job back afterwards.

Table 2. Amount of Weight You Should Gain During Pregnancy

Pre-pregnancy BMI	**Recommended Total Weight Gain During Pregnancy**	**Recommended Rate of Weight Gain per Week in Second and Third Trimesters***
Underweight (BMI less than 18.5)	28–40 lb	1–1.3 lb
Normal weight (BMI 18.5–24.9)	25–35 lb	0.8–1 lb
Overweight (BMI	15–25 lb	0.5–0.7 lb

25–29.9)		
Obese (BMI more than 30)	11–20 lb	0.4–0.6 lb
*Assumes a first-trimester weight gain between 1.1 and 4.4 lb BMI = body mass index Data from Institutes of Medicine (US). Weight gain during pregnancy: reexamining the guidelines. Washington, DC: National Academies Press; 2009.		

Travel

In most cases, travel is okay during pregnancy. The best time to travel is usually mid-pregnancy (between week 14 and week 28). During mid-pregnancy, your energy has returned, morning sickness is over, and moving around and sitting are still comfortable.

When choosing whether to travel by plane, car, or train, think about how long it will take to get where you are going. The fastest is often the best. Follow these tips to stay healthy while you travel:

- Have a prenatal checkup before you leave and tell your health care provider about your travel plans.
- Find the address of the local hospital for your destination. Take a copy of your health record with you.
- Take time to eat regular meals to boost your energy. Get plenty of fiber to ease constipation, a common travel problem.
- If you will be sitting for an extended period (more than a few hours), walk and stretch at regular intervals to reduce your risk of **deep vein thrombosis**. When traveling by car, make frequent stops so you can stretch your legs.
- Drink extra fluids. Take some juice or a bottle of water with you.
- Wear comfortable shoes, support stockings, and clothing that does not bind. Wear a few layers of light clothing.

Medications and Herbal Supplements
Medications cross the placenta and enter the baby's bloodstream. In some cases, a medication could cause birth defects, addiction, or other problems in the baby. This does not mean you should throw out your medicines, but you do need to be careful.

Some medicines are safe to take during pregnancy. The risks of taking some medicines may be outweighed by the effects of not taking them. Do not stop taking a medication prescribed for you without talking to your health care provider about it first. Also, tell anyone who prescribes medications for you that you are pregnant, including your dentist or a mental health provider.

Over-the-counter medicines, including herbal medications and vitamin supplements, can cause problems during pregnancy as well. Check with your health care provider before taking any over-the-counter drug, including pain relievers, laxatives, cold or allergy remedies, and skin treatments. Your health care provider can give you advice about medicines that are safe for pregnant women.

Smoking, Drinking Alcohol, and Using Drugs

If you smoke, it is best to quit as soon as you learn that you are pregnant. Smoking cigarettes is dangerous for you and your baby, and women who smoke during pregnancy are more likely to have certain problems, such as vaginal bleeding, **preterm**

birth, **stillbirth**, and small babies. Smoking is dangerous because cigarette smoke contains thousands of chemicals, including lead, tar, and carbon dioxide, that can cut off the flow of oxygen and nutrients to your baby. Secondhand smoke also is harmful. If you smoke, quit now, and ask your other family members to quit, too.
Alcohol can harm your baby's health. When a pregnant woman drinks, it quickly reaches her baby. Drinking alcohol can cause developmental disabilities in children and it increases the chance of having a miscarriage or preterm baby. It is not known how much alcohol it takes to harm the fetus. The best course is not to drink at all during pregnancy. If you did have a small amount of alcohol before you knew you were pregnant, most likely it will not harm your baby. The important thing is to avoid alcohol once you learn that you are pregnant.

Using illegal drugs —such as marijuana, cocaine, Ecstasy, and methamphetamines—also raises the risk of many serious health problems. They may cause preterm birth and birth defects and can interfere with the baby's growth. The baby also can have learning and behavioral problems. If you are using or are addicted to any illegal drug, seek help right away from a drug abuse treatment program in your area.

Domestic Violence
An abusive relationship is one in which one partner subjects the other to emotional or physical abuse. Domestic violence is the leading cause of injury to women in the United States between the ages of 15 years and 44 years. One of six abused women is first abused during her pregnancy. Abuse puts a pregnant woman at risk of vaginal bleeding, miscarriage, fetal injury, and having a low birth weight baby.

If you are being abused, tell someone you trust— a close friend, family member, your health care provider, or a clergy member. Ask the person to help put you in touch with crisis hotlines, domestic violence programs, and shelters for abused women. To find help, call the National Domestic Violence Hotline 24 hours a day at (800) 799-7233 or go to**www.thehotline.org**.

Changes During Pregnancy

As your baby grows and your body changes, it is normal for you to have some discomforts. Some of these may occur only in the early weeks of pregnancy. Others may occur only at the end. Still others may appear early, go away, and then return.

Nausea and Vomiting
Nausea and vomiting are common during the first 12–14 weeks of pregnancy. Sometimes called "morning sickness," nausea and vomiting can occur at any time of the day. The following things may help you feel better:

- Take a supplement—Your health care provider may recommend a combination of vitamin B6 and an over-the-counter medication called doxylamine. Remember to talk to your health care provider first before taking any medication, including vitamins.

- Keep snacks by the bed —Try eating dry toast or crackers in the morning before you get out of bed to avoid moving around on an empty stomach.

- Avoid smells that bother you —Foods or odors that may have never bothered you before may now trigger nausea. Do your best to stay away from them.

- Eat small and often—Make sure your stomach is never empty by eating five or six small meals each day. Try the "BRATT" diet (bananas, rice, applesauce, toast, and tea), which is low in fat and easy to digest.

- Try ginger— Ginger ale made with real ginger, ginger tea made from fresh grated ginger, and ginger candies can help settle your queasy stomach.

Breast Changes
Early in pregnancy, your breasts begin changing to get ready for feeding the baby. Many changes are taking place:

- Fat builds up in the breasts, making your normal bra too tight.
- The number of milk glands increases as your body prepares for making milk.
- The nipples and areolas (the pink or brownish skin around your nipples) get darker.
- Your nipples may begin to stick out more, and the areolas will grow larger.

Your breasts may keep growing in size and weight during these first 3 months. If they are making you uncomfortable, now is the time to switch to a good maternity bra. These bras have wide straps, more coverage in the cups, and extra rows of hooks so you can adjust the band size.

Frequent Urination

Throughout pregnancy, the kidneys work harder to flush waste products out of your body. Also, as your **uterus** grows, it puts pressure on the bladder. Your bladder may be nearly empty but still feel like it is full. The weight of your uterus on your bladder may even cause you to leak a little urine when you sneeze or cough.
Coffee, tea, and cola drinks contain caffeine, which makes you urinate more. If you consume less of these drinks, you will urinate less often. Do not cut back on other liquids. Drinking less will rob your body of vital fluids.

Mouth and Tooth Changes

Pregnancy hormones can make your gums swell and bleed, but do not let this keep you from brushing and flossing. Switching to a softer toothbrush may help lessen irritation.

Also, do not cancel your regular dental visit just because you are pregnant. A dental checkup early in pregnancy helps make sure that your mouth stays healthy.

Lower Abdominal Pain

As the uterus grows, the round ligaments (bands of tissue that support the uterus on both sides) are pulled and stretched. You may feel this stretching as either a dull ache or sharp pain on one side of your belly. Not moving for a short time or changing position may help relieve the pain.

If abdominal pain does not go away or gets worse, call your health care provider. It could be a sign of a problem.

Back Pain

Backache is one of the most common problems during pregnancy, especially in the later months. Your expanding uterus shifts your center of gravity and stretches out and weakens your abdominal muscles. This can change your posture and put a strain on your back. The extra weight you are carrying means more work for your muscles and increased stress on your joints, which is why your back may feel worse at the end of the day. Here are some tips to help lessen back pain:

- Wear low-heeled (but not flat) shoes with good arch support, such as walking shoes or athletic shoes. High heels tilt your body forward and strain your lower back muscles.

- Do exercises to stretch and strengthen your back muscles.
- Get off your feet. If you have to stand for a long time, rest one foot on a stool or a box to take the strain off your back.
- Sit in chairs with good back support, or tuck a small pillow behind your lower back.
- Use an abdominal support garment (for sale in maternity stores and catalogs). It looks like a girdle and helps take the weight of your belly off your back muscles. Some maternity pants come with a wide elastic band that fits under the curve of your belly to help support its weight.
  See your health care provider if back pain is severe or if it lasts more than 2 weeks. Back pain is one of the main symptoms of preterm labor. Once other causes are ruled out, your health care provider may recommend mild medications, rest, or physical therapy.

Heartburn

Heartburn is a burning feeling or pain in the throat and chest that is common in pregnant women. Pregnancy hormones, which relax the valve between your stomach and esophagus (the tube leading from the mouth to the stomach), are a main cause of heartburn. When the valve between your esophagus and stomach does not close, stomach acids leak into the esophagus. As your uterus grows, it adds to the problem by pressing up against your stomach.

If you are bothered by heartburn, try these remedies:

- Eat six small meals per day instead of three big ones.
- Do not drink a lot of liquid with your meals. Drink fluids between meals instead.
- Avoid foods that are known to make heartburn worse, such as citrus fruits, chocolate, and spicy or fried foods.
  Over-the-counter antacids are safe to use during pregnancy as long as they do not contain aluminum or a salicylate such as aspirin. Antacids that contain magnesium or calcium are fine. Read the labels carefully, and if you have any doubts, contact your health care provider.

If you have tried these remedies and your heartburn persists or gets worse, see your health care provider.

Constipation

Constipation occurs when you have infrequent bowel movements with stools that are firm or hard to pass. It can occur for many reasons. Although there is no miracle cure for constipation, the following tips may help:

- Drink plenty of liquids, especially water and prune juice or other fruit juices.
- Eat high-fiber foods, such as fruits, vegetables, beans, whole-grain bread, and bran cereal.
- Walk or do another safe exercise every day to help your digestive system.
- Ask your health care provider about taking a bulk-forming agent. These products absorb water and add moisture to the stool to make it easier to pass. If you do take these agents, you need to drink plenty of liquids.
-

Shortness of Breath

In the later weeks of pregnancy, you may start to experience shortness of breath from time to time. Your uterus is now starting to take up more room in your abdomen, pressing against the stomach and the diaphragm (a flat, strong muscle that aids in breathing) up toward the lungs. Although you may feel short of breath, your baby is still getting enough

oxygen. To help breathe easier, move more slowly, and sit or stand up straight to give your lungs more room to expand. If there is a major change in your breathing or if you have a cough or chest pain, call your health care provider right away.

Varicose Veins and Leg Swelling

The weight of your uterus pressing down on a major vein called the inferior vena cava can slow blood flow from your lower body. The result may be sore, itchy, blue bulges on your legs called varicose veins. These veins also can appear near your vagina, vulva, and rectum. In most cases, varicose veins do not cause significant problems and are more of a cosmetic issue.

Varicose veins are more likely to occur if this is not your first pregnancy. They also tend to run in families. You cannot prevent varicose veins, but there are ways to relieve the swelling and soreness and perhaps help stop them from getting worse:

- If you must sit or stand for long periods, be sure to move around often.
- Do not sit with your legs crossed.
- Prop up your legs — on a couch, chair, or footstool — as often as you can.
- Wear support hose that do not constrict at the thigh or knee.

Hemorrhoids

Pregnant women often have hemorrhoids —painful, itchy varicose veins in the rectal area. The main causes of hemorrhoids are the extra blood flow in the pelvic area and the pressure that the growing uterus puts on veins in the lower body. Hemorrhoids often improve after the baby is born. Talk to your health care provider about using over-the-counter creams and suppositories.

Leg Cramps

Cramps in the lower legs are another common symptom in the second and third trimesters. If you are bothered by them, the following tips may help:

- Stretch your legs before going to bed.
- If you experience a cramp, flex your foot, which often brings immediate relief.
- Massage the calf in long downward strokes.
-

Skin Changes

During pregnancy your body produces more melanin — the pigment that gives color to skin. These changes are temporary and harmless. The increase in melanin is the reason your nipples become darker, for example. It also causes chloasma. This “mask of pregnancy” gives some women brownish marks around their eyes and on their noses and cheeks. These marks may fade after the baby is born, when hormone levels return to normal. In many women, the extra pigment produced in pregnancy causes the faint line running from the belly button to the pubic hair to get darker. This line, called the “linea nigra,” has always been there, but before pregnancy it was the same color as the skin around it. It, too, usually fades after delivery.

Stretch marks may appear later in pregnancy. The skin on your belly and breasts may become streaked with reddish brown, purple, or dark brown marks, depending on your skin color. Some women also get them on their buttocks, thighs, and hips. Stretch marks are caused by changes in the elastic supportive tissue that lies just beneath the skin. There are no proven remedies that keep them from appearing or to make them go away.

However, keeping your belly well moisturized as it grows may reduce itching. Once your baby is born, some of these streaks will slowly fade in color.

Emotional Changes

Your body is going through big changes now, and so are your emotions. The emotions you are feeling — good and bad — are normal. Ask loved ones to support you and be patient. If your emotions are affecting your work or personal relationships and you are concerned about these issues, see your health care provider.

Pregnant women often have fears about pregnancy, labor, and delivery; the effect a child will have on their lives, and whether they will be good parents. These fears are normal. To ease your mind, take a childbirth class to learn relaxation
methods, ways to cope with labor pain, and pain relief options. To learn infant care, enroll in a newborn-care class before your due date. Many hospitals offer these 1- or 2-day courses.

Depression. For some women, **depression** can occur during pregnancy or after delivery, even if they have no history of it. However, if you have had depression in the past, you are more likely to have it during pregnancy and after the baby is born. Women with a history of depression may need special care during and after pregnancy.
The signs of depression can seem like the normal ups and downs of pregnancy. A blue mood now and then is normal. However, you may have depression if you are sad most of the time or have any of these symptoms for at least 2 weeks:

- Depressed mood most of the day, nearly every day
- Loss of interest in work or other activities
- Feeling guilty, hopeless, or worthless
- Sleeping more than normal or lying awake at night
- Loss of appetite or losing weight (or eating much more than normal and gaining weight)
- Feeling very tired or without energy
- Having trouble paying attention and making decisions

If you have these signs and symptoms, tell your health care provider.

Preterm Labor

The following signs may suggest preterm labor:

Vaginal discharge
Change in type of discharge (watery, mucous, or bloody)
Increase in amount of discharge
Pelvic or lower abdominal pressure
Low, dull backache
Abdominal cramps, with or without diarrhea
Regular contractions or uterine tightening
If you have any of these signs and symptoms, call your health care provider right away.

Your Partner

Pregnancy can be a special time for a couple. It also can strain your relationship. The old roles are shifting, and you need to adapt to new ones. You will both spend a lot of time thinking about the baby, but try to make time for each other, too.

Some women worry whether sex during pregnancy is safe. If you are having a normal pregnancy, you and your partner can keep having sex right up until you go into labor. The **amniotic sac** and the strong muscles of the uterus protect the baby.
As your belly grows, you will have to find a position that is most comfortable for you. If you are having any complications with your pregnancy or you have a history of preterm labor, you may be advised to restrict sexual activity or to monitor yourself for contractions after sex (see Box **"Preterm Labor"**). If you cannot have intercourse, there are other ways to be intimate, such as cuddling, kissing, fondling, oral sex, and mutual masturbation.

Your Other Children

If you already have children, they may have many different feelings about your pregnancy and the new baby soon to join the family. Small children may have lots of questions about where babies come from, or they may not want to talk about the baby at all. Some children are eager to be a big brother or sister. Others resent losing center stage to the new baby. A busy teenager with his or her own hobbies and friends may show little interest in your pregnancy and the new baby.
When is the best time to share the news about your pregnancy and talk about the changes soon to come? It really depends on your child. Tell your school-aged children before you tell anyone outside your family. If you do not, they might resent being the last to know. With young children, it is a good idea to wait until they ask about your changing body. The idea of a baby growing inside you may be too hard for small children to grasp before they can see your expanded belly.

Tips for Buying and Installing a Car Seat
Some safety seats will fit in your car better than others. A well-designed seat that is easy to use is the best for you and your child. When buying a seat, keep these tips in mind:

Know whether your car has the LATCH system. LATCH stands for Lower Anchors and Tethers for Children. Special anchors, instead of safety belts, hold the seat in place. Newer cars and trucks will have the LATCH system. If either your car or your safety seat is not fitted with LATCH, you will need to use safety belts to install the car safety seat.
Try locking and unlocking the buckle while you are in the store. Try changing the lengths of the straps.
Try the seat in your car to make sure it fits.
Read the labels to check weight limits.
When installing the seat, follow these tips:

If you are using the LATCH system, place the seat on one side of the back seat, facing the rear.
If you are using the safety belts, place the seat in the middle of the back seat, facing the rear.
Lock the seat into its base, if it has one. The base should not move more than 1 inch when pushed front to back or side to side. If you are using the safety belts, make sure the lap part of the belt is tightly fastened to the car seat frame.

Labor

You cannot predict when labor will start. Still, there are some things you can do ahead of time to be ready:

- Pack—The last thing you want to be doing once labor starts is to toss items into a suitcase in a panic. To avoid this, pack your bag a few weeks before your due date. Leave it in a handy place, such as a hall closet or the trunk of your car.

- Buy a car seat—You will not be able to take the baby home from the hospital unless you have a car seat already secured in your car. By law, your baby must ride in a car seat at all times.

- **True Labor Versus False Labor**

In the last weeks of pregnancy, your uterus might start to cramp. These cramps may become uncomfortable or even painful as you get closer to your due date. These irregular cramps are called Braxton Hicks contractions, or false labor. Many women have them. **Table 3** gives you some of the ways true labor and false labor are different. One good way to tell true labor from false labor is to time the contractions. Time how long each lasts and how long it is from the start of one to the start of the next. It is hard to time labor pains if they are weak. Keep a record for an hour.

Usually, you do not need to go to the hospital as soon as your contractions begin. Ask your health care provider when you should call him or her. While you wait at home, rest if you can. Some women may find it more comfortable to walk around or to take a shower or a warm bath. Discuss eating during labor with your health care provider. You may be told not to eat or drink anything once labor has begun.

It is time to go to the hospital if any of the following occur:

- Your amniotic sac ruptures (your "water breaks"), even if you are not having any contractions. Write down the time it happens.
- You are bleeding from the vagina, more than spotting.
- The contractions come 5 minutes apart or closer.
- You have constant, severe pain. Call your health care provider right away.
  If you are less than 37 weeks pregnant and having regular uterine contractions, you may be in preterm labor. Call your health care provider right away.

Table 3. Are You Really in Labor?

Hint	**False Labor**	**True Labor**
Timing of contractions	Contractions often are irregular; they do not get closer together as time goes on.	Contractions come at regular intervals and get closer together. They last 30–90 seconds.
Change with movement	Contractions may stop when you walk, rest, or change.	Contractions keep coming no matter what you do.
Strength of contractions	Contractions often are weak and they tend to stay that way; or strong contractions are followed by weaker	Contractions steadily get stronger.

	ones.	
Pain of contractions	Pain usually is felt only in the front.	Pain usually starts in the back and moves to the front.

Stages of Childbirth

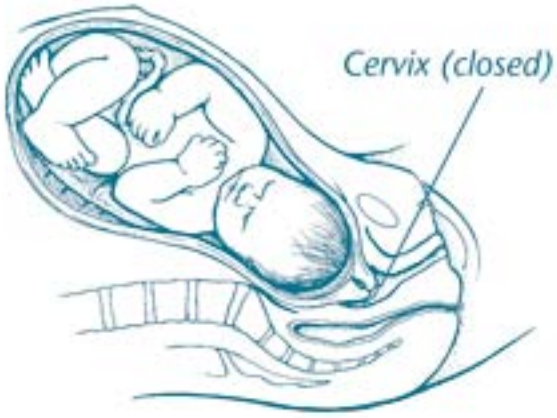
Knowing what happens in labor makes it easier for you to relax and do your part. For a woman having her first baby, labor typically lasts 12–18 hours. For women who have given birth before, it typically lasts 8–10 hours. However, every woman is different.

Labor and birth are divided into three different stages—Stages 1, 2, and 3. Stage 1 is labor; Stage 2 is the "pushing and delivery phase," in which you actively participate in pushing the baby out; and Stage 3 is delivery of the placenta. During each stage, certain changes take place in your body.

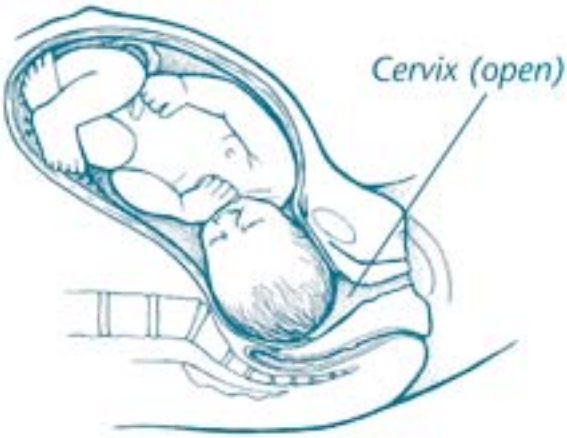
Labor begins when the uterus contracts and the **cervix** starts to open. The uterus tightens and relaxes at regular intervals, causing the abdomen to feel hard, then soft. These are contractions. They make the cervix thin out (effacement) and open as wide as it can (dilate). Early labor is often felt as a low backache that moves around to the front. As labor continues, the contractions come closer together, last longer, and are usually felt in the lower abdomen.
Contractions help the baby come through the vagina. Throughout labor, the baby moves deeper into the pelvis and farther down in the vagina. The baby's head and body move and turn for the easiest fit through your pelvis.

Stages of Childbirth

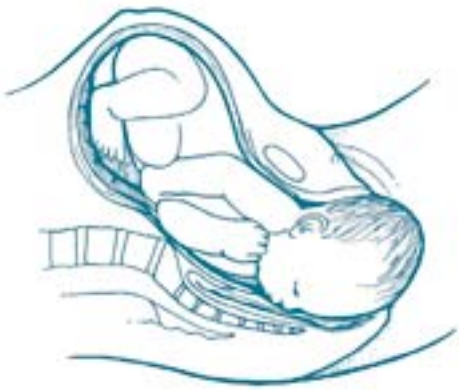
Stage 1: Early Labor



Stage 1: Active Labor



Stage 2



Stage 3

If labor does not start on its own, your health care provider may decide to induce (bring on) labor. Labor induction involves using drugs or other methods to start contractions. More than one method of labor induction may be used.

Risks of labor induction include changes in the fetal heart rate, increased risk of infection in the woman and baby, umbilical cord problems, and, rarely, rupture of the uterus. There also is an increased risk of **cesarean birth** if labor induction does not work.
Health care providers also recommend that unless there is a valid health reason, labor should not be induced before term. A baby born even a week or two early may have serious, long-term health problems because they have not finished growing.

Monitoring During Labor

Once you are in your hospital room, a labor-and-delivery nurse will be checking on you from the time you check in until after your baby is born. These nurses are trained to help women through the physical and emotional demands of labor. In teaching hospitals, a resident doctor, student nurse, or medical student also may be a part of your birth team.

Your own health care provider may be there from start to finish, or he or she may arrive shortly before you give birth. During this stage, the following things will be closely monitored:

- Your heart rate and blood pressure
- The time and length of your contractions
- How much your cervix has dilated
- The baby's heartbeat, either continuously with **electronic fetal monitoring** or at certain intervals using a **Doppler** device.

Pain Relief
Every woman's labor is different. The amount of pain you feel during labor may be completely different from the pain your mother, sister, or girlfriend had with her labor and may be different even from pain you may have experienced in prior deliveries. There are several ways to help you deal with the pain.

Relaxation techniques give some women very good control of the discomfort of labor. These techniques include breathing in certain patterns and imagining you are elsewhere. They are often taught in prenatal classes. Your labor nurse also may be able to teach you.

Analgesics are drugs that ease pain. They can be injected into a muscle or vein. These drugs may make you more comfortable and allow you to rest between contractions.

Anesthetics are drugs that remove pain. Local anesthesia numbs a small area. Regional anesthesia (**spinal anesthesia** or **epidural anesthesia**) takes away pain in the uterus and pelvic area. You may still feel the baby move through the birth canal. This type of pain relief allows you to be awake and take part in the birth of your baby without feeling as much pain.
Talk with your health care provider about your options. In some cases, he or she may arrange for you to meet with an anesthesiologist before your labor and delivery. An anesthesiologist will help you pick the best method of pain relief.

Delivery

Most women give birth to their babies through the vagina. If your health care provider thinks that continuing labor or a vaginal delivery would be unsafe for you or your baby, he or she may decide that the best option is to deliver the baby another way—either by operative delivery or cesarean delivery.

Vaginal Delivery

When your baby's head appears at the opening of the vagina, the tissue of the vagina becomes very thin and tightly stretched. Sometimes it is not possible for the baby's head to fit through the vagina without tearing the skin and muscles. Your health care provider may make a small cut in the vaginal opening while it is numbed with an anesthetic. This procedure is called an **episiotomy**.

Operative Delivery

In some cases, your health care provider may need to help delivery along by using forceps or a vacuum device. This type of delivery is called operative delivery. Operative delivery may be done for several reasons, such as your baby's heartbeat becomes slow or you are too tired to push. Using these tools to help delivery usually causes no major problems, and both have been found to be safe to use.

Cesarean Delivery

A cesarean delivery is the delivery of a baby through incisions made in the mother's abdomen and uterus. A cesarean delivery may be done if there are certain medical conditions that put you or the baby at risk or if problems occur during labor.

Many women who have had a cesarean birth can try to have a vaginal birth in a later pregnancy. This is called a trial of labor after cesarean (TOLAC). Talk to your health care provider to find out if TOLAC is an option for you.

Postpartum

In the moments after birth, you will most likely be able to hold and cuddle your baby. Your caregivers also will be busy assessing your newborn's health, as well as checking on your condition to make sure all is well.

Most women spend about 1–2 days in the hospital after a vaginal birth. If you had a cesarean birth, or if problems occur, you will likely stay longer.

Check with the hospital about who is allowed to visit. You may choose not to have visitors for a while. You may want more time to rest and get to know your baby.

Help may be available to teach you some of the beginning skills of being a parent, such as feeding, bathing, and changing the baby's diaper. These lessons can help you to feel more comfortable in the way you handle your newborn.

Before you go home, your baby may begin to get vaccines. They protect against diseases like rubella and hepatitis. Ask your baby's health care provider what shots your baby should receive and when. You also may receive a tetanus–diphtheria–pertussis (Tdap) shot before leaving the hospital if you have never received Tdap. The Tdap vaccine protects against tetanus, diphtheria, and pertussis (whooping cough). Family members who will be in contact with the baby also should get a Tdap shot if they have not had one.

Breastfeeding

Breastfeeding is the best way to feed newborns. Mother's milk best meets the baby's nutritional needs, helps the baby resist disease and allergies, and is cheaper than bottle-feeding. Breastfeeding also can help you lose your post-baby pregnancy weight.

Experts recommend exclusive breastfeeding for at least the first 6 months of life. Breastfeeding can continue for up to 1 year of age or for as long as a mother and her baby want. But even breastfeeding for a few weeks has health benefits for the baby.

Do not be upset if breastfeeding is not easy right away. Both you and the baby need to get comfortable. If the baby calms down after breastfeeding, makes urine and stools regularly, and is growing, he or she is getting enough milk.

If you are breastfeeding, you will have special nutrition and calorie needs. It is easy to add the extra nutrients you need if you are already eating a healthy diet.

Your Changing Body

While you were pregnant, your body worked around the clock for 40 weeks to help your baby grow. Now that your baby is here, there is more work to be done as your body recovers from pregnancy, labor, and delivery. It will take time for things to get back to normal.

Lochia. Once your baby is born, your body sheds the blood and tissue that lined your uterus. This vaginal discharge is called lochia.
For the first few days after delivery, lochia is heavy and bright red. It may have a few small clots. Use sanitary pads instead of tampons.

As time goes on, the flow gets lighter in volume and color. A week or so after birth, lochia often is pink or brown. By 2 weeks postpartum, lochia often is light brown or yellow. After that, it slowly goes away.

Return of Menstrual Periods. If you are not breastfeeding, your menstrual period may return about 6–8 weeks after giving birth. It could start even sooner. If you are breastfeeding, your menstrual periods may not start again for months. Some breastfeeding mothers do not have a menstrual period until their babies are fully weaned. After birth, your ovaries may release an egg before you have your first menstrual period. This means you can get pregnant before you even know you are fertile again, even if you are breastfeeding. If you do not want another baby right way, start using birth control as soon as you resume having sex. Talk with your health care provider about which method is best for you.

Your Abdomen. Right after delivery, your uterus is hard and round and can be felt behind your navel. You may still look like you are pregnant. During pregnancy, the abdominal muscles stretched out little by little. Give your body time to go back to normal. Exercise will help. Ask your health care provider when it is safe to start exercising.
You also may have backaches after delivery. Your stretched abdominal muscles do not help your back muscles support your weight. To prevent a sore back, practice good posture, support your back when you breastfeed, and try not to lift anything heavier than your baby for a while.

Easing Discomforts
After your baby's birth your body will feel sore but most aches will not last long. The following sections include some ways to relieve postpartum aches and pains.

Uterine Contractions. For a few days after giving birth, you will feel your uterus contract and then relax as it shrinks back to its normal size. These cramps are sometimes called afterbirth pains. You can find some relief by taking an over-the-counter pain reliever.
Perineal Pain. Your perineum is the area between your vagina and rectum. If you have stitches in this area from an episiotomy or tear, you will likely have a few weeks of swelling and pain as the perineum heals. To help ease the pain and heal quicker, try these tips:

- Apply cold packs or chilled witch-hazel pads to the area.
- Ask your health care provider about using a numbing spray or cream to ease pain.
- If sitting is uncomfortable, sit on a pillow.
- Sit in a bathtub of warm water just deep enough to cover your buttocks and hips (called a sitz bath).

Hemorrhoids. If you had hemorrhoids during pregnancy, they may get worse after delivery. These sore, swollen veins also can show up for the first time now because of the intense straining you did during labor. In time, hemorrhoids will get smaller or go away. For relief, try medicated sprays or ointments, sitz baths, and cold witch-hazel compresses. Also, try not to strain when you have a bowel movement because this can make hemorrhoids worse.

Painful Urination. In the first days after delivery, you may feel the urge to urinate but may not be able to pass any urine. You may feel pain and burning when you urinate. During birth, the baby's head put a lot of pressure on your bladder, your urethra (the opening where urine comes out), and the muscles that control urine flow. This pressure can cause swelling and stretching that gets in the way of urination.

To lessen swelling or pain, try a warm sitz bath. When you are on the toilet, spray warm water over your genitals with a squeeze bottle. This can help trigger the flow of urine. Running the tap while you are in the bathroom may help too. Be sure to drink plenty of fluids as well. This pain usually goes away within days of delivery.

Many new mothers have another problem: involuntary leakage of urine, or urinary incontinence. With time, the tone of your pelvic muscles will return and the incontinence will go away in most cases. You may feel more comfortable wearing a sanitary pad until the problem goes away. Doing Kegel exercises also will help tighten these muscles sooner (see Box **"Kegel Exercises"**).

Swollen Breasts. Your breasts fill with milk about 2–4 days after delivery, and they may feel very full, hard, and tender. The best relief for this engorgement is breastfeeding. If you are not breastfeeding, avoid rubbing your breasts. Wearing a good-fitting support bra or sports bra may help ease the pain. Severe engorgement should not last more than about 36 hours.

Cesarean Incision. If you had a cesarean birth, your health care provider will tell you how to take care of your incision after delivery. It will take a few weeks to heal. You should check your incision for numbness, soreness, and pain. If you have fever or heavy bleeding, or the pain gets worse, call your health care provider and follow his or her advice. These may be signs of infection.

Kegel Exercises

Kegel exercises are used to strengthen the muscles that surround the openings of the rectum, vagina, and urethra. Just like doing sit-ups to flatten your abdomen, these exercises only work when the right muscles are used, the "squeeze" is held long enough, and enough repetitions are done.

When you begin the exercise program, place a hand on your abdomen to make sure you do not squeeze those muscles. Also do not squeeze your thighs or buttocks. Squeeze the pelvic muscle that you use to stop the flow of urine. Hold for 10 seconds. Repeat the exercise 10–20 times in a row at least three times a day.

Postpartum Sadness and Depression

Women have many different emotions after childbirth. Having a baby can be an exciting time. For some women, this is a time of stress and, at times, sadness.

Baby Blues. Nearly 70 – 80% of new mothers get the baby blues. About 2–3 days after birth, you may begin to feel anxious, sad, and upset. For no clear reason, you may feel angry with the new baby. These feelings are scary, but they fade quickly. The baby blues tend to last from a few hours to a week or so. Most often, they go away without treatment. Until then, the following things may help:

- Talk to your partner or a good friend about how you feel.
- Ask your partner, friends, and family for help.
- Get out of the house each day, even if it is only for a short while.
- Join a new mothers' group and share your feelings with the women you meet there.

Postpartum Depression. For some women, new motherhood brings with it more intense feelings. About 10% of new mothers have postpartum depression. This is marked by feelings of despair, severe anxiety, or hopelessness that get in the way of daily life. It can occur after any birth, not just the first.

Postpartum depression is more likely to occur in women who have had one or more of the following:

- Mood disorders before pregnancy
- Postpartum depression after a previous pregnancy
- Recent stress, such as losing a loved one, family illness, or moving to a new city

If you are prone to depression, seek professional help and enlist support from your loved ones before your baby arrives. Treatment and counseling will help relieve postpartum depression. Talk to your health care provider right away if you have any of these signs of depression:

- Baby blues that last for more than 2 weeks
- Strong feelings of depression or anger that come 1– 2 months after birth
- Not finding pleasure in things that used to make you happy
- Intense concern and worry about the baby
- Lack of interest in or feelings for the baby or your family
- Panic attacks, such as being afraid to be left alone with the baby
- Thoughts of harming the baby or yourself

Return to Daily Living

Having a baby will change the way you live your daily life. Your relationship with your partner will be affected. Your old routines may no longer work. If you plan for these changes in advance, you will be a lot more relaxed as you start your life with the new baby.

Your partner also is going through a lot of changes right now. The needs and concerns of partners can be overlooked, with the focus on you and the baby. It is important to spend time together as a family.

Returning to Work

If you work outside of the home, there are many factors to take into account when thinking about going back to work, such as finances and child care. You also will want to decide about going on with breastfeeding when you go back to work.

No matter what you choose to do, try to discuss it with your partner before the baby is born. Be careful to build in some time for yourself.

Sex and Birth Control
Your health care provider will suggest when you can resume having sex. Although there is no set time limit, it likely will be a month or so after delivery.

Before you and your partner start having sex again, it is important to choose a birth control method. Talk with your health care provider—preferably before you have your baby—about which method of birth control you plan to use after the baby is born. You also should discuss how long to plan between pregnancies.

Postpartum Visit
You will have a postpartum visit with your health care provider to make sure that your body has recovered from pregnancy and birth and that you are not having any problems. This visit usually is done within 6 weeks of the birth of your baby. If you had a cesarean birth, your health care provider may want to see you sooner to check the incision.

Use this time to bring up any questions or concerns you have about the healing process, breastfeeding, birth control, weight loss, sex, or your emotions. To help you remember everything you want to talk about, write down any questions you have and bring them with you to this visit.

In Summation

You can give yourself the best chance of having a healthy pregnancy and baby by leading a healthy lifestyle before and during pregnancy. Work with your health care provider to get regular prenatal care. Learn as much as you can before the birth of your baby about your own body and what to expect during pregnancy, childbirth, and the postpartum period.

Glossary

Amniotic Fluid: Water in the sac surrounding the fetus in the mother's uterus.
Amniotic Sac: Fluid-filled sac in the woman's uterus in which the fetus develops.
Anemia: Abnormally low levels of blood or red blood cells in the bloodstream. Most cases are caused by iron deficiency, or lack of iron.
Antibiotics: Drugs that treat infections.
Antibody: Protein in the blood produced in reaction to foreign substances.
Antigen: A substance, such as an organism causing infection or a protein found on the surface of blood cells, that can induce an immune response and cause the production of an antibody.
Cervix: The opening of the uterus at the top of the vagina.
Cesarean Birth: Birth of a baby through incisions made in the mother's abdomen and uterus.
Chloasma: The darkening of areas of skin on the face during pregnancy.
Chromosome: One of 46 structures that are located inside each cell in the body and contain the genes that determine a person's physical makeup.
Cystic Fibrosis: A genetic disorder that causes problems with digestion and breathing.
Deep Vein Thrombosis: A condition in which a blood clot forms in veins in the leg or other areas of the body.
Depression: Feelings of sadness for periods of at least 2 weeks.
Diabetes Mellitus: A condition in which the levels of sugar in the blood are too high.
Doppler: A form of ultrasound that reflects motion—such as the fetal heartbeat—in the form of audible signals.

Down Syndrome: A genetic disorder caused by the presence of an extra chromosome and characterized by mental retardation, abnormal features of the face, and medical problems such as heart defects.
Electronic Fetal Monitoring: A method in which electronic instruments are used to record the heartbeat of the fetus and contractions of the mother's uterus.
Epidural Anesthesia: A form of anesthesia where medication is administered through a catheter that lessens labor pain (analgesia) or provides pain relief for a cesarean delivery (anesthesia).
Episiotomy: A surgical incision made into the perineum (the region between the vagina and the anus) to widen the vaginal opening for delivery.
Gestational Age: The number of weeks that have elapsed between the first day of the last normal menstrual period and the date of delivery.
Glucose: A sugar that is present in the blood and is the body's main source of fuel.
Hepatitis B Virus: A virus that attacks and damages the liver, causing inflammation.
Human Immunodeficiency Virus (HIV): A virus that attacks certain cells of the body's immune system and causes acquired immunodeficiency syndrome (AIDS).
Lupus: An autoimmune disorder that causes changes in the joints, skin, kidneys, lungs, heart, or brain.
Neural Tube Defects: Birth defects that result from incomplete development of the brain, spinal cord, or their coverings.
Nuchal Translucency Screening: A test in which the size of a collection of fluid at the back of the fetal neck is measured by ultrasound to screen for certain birth defects, such as Down syndrome, trisomy 18, or heart defects.
Placenta: Tissue that provides nourishment to and takes waste away from the fetus.
Preterm: Born before 37 weeks of pregnancy.
Rh Immunoglobulin: A substance given to prevent an Rh-negative person's antibody response to Rh-positive blood cells.
Spinal Anesthesia: A form of anesthesia where medication is administered into the spinal fluid to lessen labor pain or provide anesthesia for a cesarean delivery.
Stillbirth: Delivery of a dead baby.
Syphilis: A sexually transmitted disease that is caused by an organism called Treponema pallidum; it may cause major health problems or death in its later stages.
Transabdominal Ultrasound: A type of ultrasound in which a device is moved across the abdomen.
Transducer: A device that emits sound waves and translates the echoes into electrical signals.
Transvaginal Ultrasound: A type of ultrasound in which a device specially designed to be placed in the vagina is used.
Trimesters: The three 3-month periods into which pregnancy is divided.
Trisomy 18: A genetic disorder that causes serious problems with development. Most infants with trisomy 18 die within the first year of life.
Ultrasound: A test in which sound waves are used to examine internal structures. During pregnancy, it can be used to examine the fetus.
Uterus: A muscular organ located in the female pelvis that contains and nourishes the developing fetus during pregnancy.

2. Easing Back Pain During Pregnancy

Back pain is one of the most common discomforts during pregnancy. As your baby grows, your uterus expands to as much as 1,000 times its original size. This amount of growth—when centered in one area—affects the balance of your body and may cause discomfort.

Causes of Back Pain

Back pain in pregnancy has many possible causes. It usually is caused by strain on the back muscles. In mid-pregnancy, when your uterus becomes heavier, your center of gravity changes. Your posture changes in response. Most women begin to lean backward in the later months of pregnancy, which makes their back muscles work harder.

Weakness of the abdominal muscles also can cause back pain. The abdominal muscles normally support the spine and play an important role in the health of the back. During pregnancy, these muscles become stretched and may weaken, causing some back pain. These changes also make you more prone to injury when you exercise.

Pregnancy hormones may contribute to back pain. To make your baby's passage through your pelvis easier, a hormone relaxes the ligaments in the strong, weight-bearing joints in the pelvis. This loosening makes the joints more flexible, but it can cause back pain if the joints become too mobile.

What You Can Do

To help prevent or ease back pain, be aware of how you stand, sit, and move. Here are some tips that may help:

- Wear low-heeled (but not flat) shoes with good arch support.
- Ask for help when lifting heavy objects.
- When standing for long periods, place one foot on a stool or box.
- If your bed is too soft, have someone help you place a board between the mattress and box spring.
- Do not bend over from the waist to pick things up—squat down, bend your knees, and keep your back straight.
- Sit in chairs with good back support, or use a small pillow behind the low part of your back.
- Try to sleep on your side with one or two pillows between your legs for support.
- Apply heat or cold to the painful area or massage it.
  Exercises for the back can help lessen backache. They strengthen and stretch muscles that support the back and legs and promote good posture—keeping the muscles of the back, abdomen, hips, and upper body strong. These exercises not only will help ease back pain but also will help prepare you for labor and delivery. Staying active during pregnancy can help with back pain. Water exercise and walking are safe to do during pregnancy and are great for the back.

Diagonal Curl

This exercise strengthens the muscles of your back, hips, and abdomen. If you have not already been exercising regularly, skip this exercise.

1. Sit on the floor with your knees bent, feet on the floor, and hands clasped in front of you.
2. Twist your upper torso to the right until your hands touch the floor. Do the same movement to the left. Repeat on both sides 5 times.

Forward Bend

This exercise stretches and strengthens the muscles of your back.

1. Sit in a chair in a comfortable position. Keep your arms relaxed.
2. Bend forward slowly, with your arms in front and hanging down. Stop bending if you feel any discomfort on your abdomen.
3. Hold for 5 seconds, then sit up slowly without arching your back. Repeat 5 times.

Back Press

This exercise strengthens the muscles of your back, torso, and upper body and promotes good posture.

1. Stand with your back against a wall with your feet 10–12 inches away from it.
2. Press the lower part of your back against the wall.
3. Hold for 10 seconds, then release. Repeat 10 times.

Upper Body Bends

This exercise strengthens the muscles of your back and torso.

1. Stand with your legs apart, knees bent slightly, with your hands on your hips.
2. Bend forward slowly, keeping your upper back straight, until you feel the muscle stretch along your upper thigh. Repeat 10 times.

Backward Stretch

This exercise stretches and strengthens the muscles of your back, pelvis, and thighs.

1. Kneel on hands and knees, with your knees 8–10 inches apart and your arms straight (hands under your shoulders).
2. Curl backward slowly, tucking your head toward your knees and keeping your arms extended.
3. Hold for 5 seconds, then return to all fours slowly. Repeat 5 times.

Rocking Back Arch

This exercise stretches and strengthens the muscles of your back, hips, and abdomen.

1. Kneel on hands and knees, with your weight distributed evenly and your back straight.
2. Rock back and forth for a count of 5.
3. Return to the original position and curl your back up as far as you can. Repeat 5–10 times.

3. Nutrition During Pregnancy

Healthy eating is important during pregnancy. Good nutrition is needed to meet the added demands on your body as well as those of your growing baby. Although it may take a little effort, planning and eating healthy meals and snacks during pregnancy will have major benefits for you and your baby. If you have not been eating a healthy diet, pregnancy is a great time to change old habits and start healthy new ones.

Good Nutrition

While you are pregnant, the foods you eat give you the ***nutrients*** you need to fuel your body's activities and help your baby grow. Eating a variety of healthy foods is the best way to give you and your growing baby the nutrition you both need. You also can get nutrients from pills containing vitamins and minerals (also called "supplements").

Planning Healthy Meals

Planning healthy meals during pregnancy is not hard. The United States Department of Agriculture has made it easier by creating **www.choosemyplate.gov**. This web site helps everyone from dieters and children to pregnant women learn how to make healthy food choices at each mealtime. Healthy eating benefits not only you and your baby but also sets up good eating habits for your entire family.
With My Plate, you can get a personalized nutrition and physical activity plan by using the "Super Tracker" program. This program shows you the foods and amounts that you need to eat each day during each ***trimester*** of pregnancy. The amounts are calculated according to your height, pre-pregnancy weight, due date, and how much you exercise during the week. The amounts of food are given in standard sizes that most people are familiar with, such as cups and ounces.

The Five Food Groups

To get an idea of how My Plate works, **Table 1** shows the foods that a pregnant woman of normal weight before pregnancy should eat for each trimester of pregnancy. You will notice that food is broken down into the following five groups:

1. Grains—Bread, pasta, oatmeal, cereal, and tortillas are all grains. Make one half of them whole grains. Whole grains are those that have not been processed and include the whole grain kernel. They include oats, barley, quinoa, brown rice, and bulgur. Products made with these foods also count as whole grains. Look for the words "whole grain" on the product label.
2. Fruits—Fruits can be fresh, canned, frozen, or dried. Juice that is 100% fruit juice also counts. Make one half of your plate fruits and vegetables.
3. Vegetables—Vegetables can be raw or cooked, frozen, canned, dried, or 100% vegetable juice. Use dark, leafy greens to make salads
4. Protein foods—Protein foods include meat, poultry, seafood, beans and peas, eggs, processed soy products, nuts, and seeds. Include a variety of proteins and choose lean or low-fat meat and poultry.
5. Dairy—Milk and products made from milk, such as cheese, yogurt, and ice cream, make up the dairy group. Make sure any dairy foods you eat are pasteurized. Choose fat-free or low-fat (1%) varieties.

Oils and fats are another part of healthy eating. Although they are not a food group, they do give you important nutrients. During pregnancy, the fats that you eat provide energy and help build many fetal organs and the placenta.

Oils in food come mainly from plant sources, such as olive oil, nut oils, and grape seed oil, and can be found in certain foods, such as some fish, avocados, nuts, and olives. Most of the fats and oils in your diet should come from plant sources. Limit solid fats, such as those from animal sources. Solid fats also can be found in processed foods.

Table 1. Daily Food Choices
Here is the recommended daily food intake for a pregnant woman who is a normal weight and gets less than 30 minutes of exercise each day.

	First Trimester	**Second Trimester**	**Third Trimester**	**Food Examples**
Total calories per day	1,800	2,200	2,400	
Grains	6 ounces	7 ounces	8 ounces	1 ounce is 1 slice of bread, ½ cup of cooked rice, ½ cup of cooked pasta, 3 cups of popped popcorn, or 5 whole wheat crackers
Vegetables	2½ cups	3 cups	3 cups	2 cups of raw leafy vegetables count as 1 cup
Fruits	1½ cup	2 cups	2 cups	One large orange, 1 large peach, 1 small apple, 8 large strawberries, or ½ cup of dried fruit count as 1 cup of fresh fruit
Dairy foods	3 cups	3 cups	3 cups	1 cup is two small slices of Swiss cheese or 1/3 cup of shredded cheese
Protein foods	5 ounces	6 ounces	6½ ounces	1 ounce of lean meat, poultry, or seafood; 1 egg; 1 tablespoon of peanut butter; ½ ounce of nuts or seeds; or ¼ cup of cooked beans count as 1 ounce
Fats and oils	5 teaspoons	7 teaspoons	7 teaspoons	Olives, some fish, avocados, and nuts
"Empty" calories	No more than 161 calories	No more than 266 calories	No more than 330 calories	These calories come from added sugars and solid fats that provide little nutritional value

Key Vitamins and Minerals

Vitamins and minerals play important roles in all of your body functions. During pregnancy, you need more folic acid and iron than a woman who is not pregnant (**see Table 2**). Taking a prenatal vitamin supplement can ensure that you are getting these extra amounts. A well-rounded diet should supply all of the other vitamins and minerals you need during pregnancy.

Table 2. Key Vitamins and Minerals During Pregnancy

Nutrient (Daily Recommended Dietary Amount)	**Why You and Your Baby Need It**	**Best Sources**
Calcium (1,300 milligrams for ages 14–18 years; 1,000 milligrams for ages 19–50 years)	Builds strong bones and teeth	Pasteurized milk, cheese, and yogurt; sardines; dark, leafy greens
Iron (27 milligrams)	Helps red blood cells deliver oxygen to your baby	Lean red meat, poultry, fish, dried beans and peas, iron-fortified cereals, prune juice
Vitamin A (770 micrograms)	Forms healthy skin and eyesight; helps with bone growth	Carrots, dark green leafy vegetables, sweet potatoes
Vitamin C (85 milligrams)	Promotes healthy gums, teeth, and bones; helps your body absorb iron	Citrus fruit, broccoli, tomatoes, strawberries
Vitamin D (600 international units)	Builds your baby's bones and teeth; helps promote healthy eyesight and skin	Sunlight, fortified milk, fatty fish such as salmon
Vitamin B_6 (1.9 milligrams)	Helps form red blood cells; helps body use protein, fat, and carbohydrates	Beef, liver, pork, ham, whole-grain cereals, bananas
Vitamin B_{12} (2.6 micrograms)	Maintains nervous system; needed to form red blood cells	Meat, fish, poultry, milk (vegetarians should take a supplement)
Folic Acid (600 micrograms)	Helps prevent birth defects of the brain and spine	Dark green leafy vegetables, orange juice, beans, fortified cereals, enriched bread and pasta, nuts

Folic Acid

Folic acid, also known as folate, is a B vitamin that is important for pregnant women. Taking 400 micrograms of folic acid daily for at least 1 month before pregnancy and 600 micrograms of folic acid daily during pregnancy may help prevent major birth defects of the baby's brain and spine called ***neural tube defects***. Many foods contain folic acid, such as fortified cereal, enriched bread and pasta, peanuts, dark green leafy vegetables, orange juice, and beans. It may be hard to get the recommended amount of folic acid from food

alone. For this reason, all pregnant women and all women who may become pregnant should take a daily vitamin supplement that contains the right amount of folic acid. If you have already had a pregnancy affected by a neural tube defect or if you are taking an antiseizure medication, you should take a higher daily dose of folic acid (4 milligrams) as a separate supplement beginning 1 month before trying to become pregnant and during the first 3 months of your pregnancy.

Iron

Your body to make a substance in red blood cells that carries oxygen to your organs and tissues uses iron. During pregnancy, you need extra iron—about double the amount that a non-pregnant woman needs. This extra iron helps your body make more blood to supply oxygen to your baby. The daily-recommended dose of iron during pregnancy is 27 milligrams, which is found in most prenatal vitamin supplements. You also can eat foods rich in a certain type of iron called heme iron. The body absorbs heme iron more easily. It is found in animal foods, such as red meat, poultry, and fish. Non-heme iron is found in vegetables and legumes, such as soybeans, spinach, and lentils. Although it is not as easily absorbed as heme iron, non-heme iron is a good way to get extra iron if you do not eat animal foods. Iron also can be absorbed more easily if iron-rich foods are eaten with vitamin C-rich foods, such as citrus fruits and tomatoes.

Calcium

Calcium is used to build your baby's bones and teeth. All women, including pregnant women, aged 19 years and older should get 1,000 milligrams of calcium daily; those aged 14–18 years should get 1,300 milligrams daily. Milk and other dairy products, such as cheese and yogurt, are the best sources of calcium. If you have trouble digesting milk products, you can get calcium from other sources, such as broccoli; dark, leafy greens; sardines; or a calcium supplement.

Vitamin D

Vitamin D works with calcium to help the baby's bones and teeth develop. It also is essential for healthy skin and eyesight. All women, including those who are pregnant, need 600 international units of vitamin D a day. Good sources are milk fortified with vitamin D and fatty fish such as salmon. Exposure to sunlight also converts a chemical in the skin to vitamin D. Many people do not get enough vitamin D. If your health care provider thinks you may have low levels of vitamin D, a test can be done to check the level in your blood. If it is below normal, you may need to take a vitamin D supplement.

How Much Weight Should You Gain During Pregnancy?

Pre-pregnancy Weight	**Body Mass Index**	**Weight Gain (pounds)**
Underweight	Less than 18.5	28–40
Normal weight	18.5–24.9	25–35
Overweight	25.0–29.9	15–25
Obese	30 or more	11–20

Pregnancy and Weight Gain

Data from Institute of Medicine. Weight gain during pregnancy: reexamining the guidelines. Washington, DC: The National Academies Press; 2009.

The amount of weight gain that is recommended depends on your health and your ***body mass index (BMI)*** before you were pregnant (see box **"How Much Weight Should You Gain During Pregnancy?"**). If you were underweight before pregnancy, you should gain more weight than a woman who was a normal weight before pregnancy. If you were overweight or obese before pregnancy, you should gain less weight.

The amount of weight you should gain differs by trimester. During your first 12 weeks of pregnancy—the first trimester—you may gain only 1–5 pounds or none at all. In your second and third trimesters, if you were a healthy weight before pregnancy, you should gain between one half pound and 1 pound per week. During this stage, you will need to consume about 300 extra ***calories*** per day. That is equal to the amount of calories in a glass of skim milk and half of a sandwich. Have healthy snacks on hand, such as yogurt or fresh fruit, which can give you the extra calories you need during the day.

Overweight and obese women are at an increased risk of several pregnancy problems. These problems include ***gestational diabetes***, high blood pressure, ***preeclampsia***, ***preterm*** birth, and ***cesarean delivery***. Babies of overweight and obese mothers also are at greater risk of certain problems, such as birth defects, ***macrosomia*** with possible birth injury, and childhood obesity. If you are overweight or obese, you and your health care provider will work together to develop a nutrition and exercise plan. If you are gaining less than what the guidelines suggest, and if your baby is growing well, gaining less than the recommended guidelines can have benefits, such as decreased risks of needing a cesarean delivery and of having a very large baby. If your baby is not growing well, changes may need to be made to your diet and exercise plan.

Special Concerns

As you plan how you will eat healthfully during your pregnancy, it is important to keep in mind a few special issues.

Caffeine

Although there have been many studies on whether caffeine increases the risk of ***miscarriage***, the results are unclear. Most experts state that consuming fewer than 200 milligrams of caffeine (one 12-ounce cup of coffee) a day during pregnancy is safe. Remember that caffeine is found not only in coffee, but also in teas, colas, and chocolate. Make sure you count these sources in your total caffeine amount for the day.

Special Diets

If you have special dietary needs, you need to keep them in mind as you plan your pregnancy diet. For example, if you are a vegetarian, make sure you get enough protein from foods such as soy milk, tofu, and beans and that your intake of iron, vitamin B12, and vitamin D is sufficient. If you are ***lactose intolerant***, you can get calcium from sources other than dairy products or buy lactose-free products. Talk with your health care provider about your dietary needs and how you can adapt them to pregnancy.

Fish and Shellfish

Omega-3 fatty acids are a type of fat found naturally in many kinds of fish. They may be important factors in your baby's brain development both before and after birth. To get the most benefits from omega-3 fatty acids, women should eat at least two servings of fish or shellfish (about 8–12 ounces) per week and while pregnant or breastfeeding.

Some types of fish have higher levels of a metal called mercury than others. Mercury has been linked to birth defects. To limit your exposure to mercury, follow a few simple guidelines. Choose fish and shellfish such as shrimp, salmon, catfish, and pollock. Do not eat shark, swordfish, king mackerel, or tilefish. Limit white (albacore) tuna to only 6 ounces a week. You also should check advisories about fish caught in local waters.

Food Safety

Pregnant women can get food poisoning like anyone else. However, food poisoning in a pregnant woman can cause serious problems for both her and her baby. Vomiting and diarrhea can cause your body to lose too much water and can disrupt your body's chemical balance. Several types of bacteria can cause food poisoning. It is important to contact your health care provider as soon as possible if you have these signs and symptoms.

Listeriosis is a type of food-borne illness caused by bacteria. Pregnant women are 13 times more likely to get listeriosis than the general population. Listeriosis can cause mild, flu-like symptoms such as fever, muscle aches, and diarrhea, but it also may not cause any symptoms. However, it can lead to serious complications for your baby, including miscarriage, stillbirth, and premature delivery. If you think you have eaten food contaminated with this bacteria (for instance, if you have eaten food that has been recalled due to a listeriosis outbreak in your area) or if you have any of the symptoms of listeriosis, contact your health care provider. ***Antibiotics*** can be given to treat the infection and to protect your unborn baby. To help prevent listeriosis, avoid eating the following foods during pregnancy:

- Unpasteurized milk and foods made with unpasteurized milk, including soft cheeses such as feta, queso blanco, queso fresco, Camembert, brie, or blue-veined cheeses unless the label says "made with pasteurized milk."
- Hot dogs, luncheon meats, and cold cuts unless they are heated until steaming hot just before serving.
- Refrigerated pate and meat spreads
- Refrigerated smoked seafood

In addition, follow these general food-safety guidelines:

- Wash food. Rinse all raw produce thoroughly under running tap water before eating, cutting, or cooking.
- Keep your kitchen clean. Wash your hands, knives, countertops, and cutting boards after handling and preparing uncooked foods.
- Avoid all raw and undercooked seafood, eggs, and meat. Do not eat sushi made with raw fish (cooked sushi is safe). Food such as beef, pork, or poultry should be cooked to a safe internal temperature.

4. A Father's Guide to Pregnancy

If you are like most expectant fathers, you are both excited and anxious about this big step in the lives of you and your partner. You can help your partner by understanding the changes she is going through and by being a prepared and supportive father-to-be.

This pamphlet explains

- why the father's role is important to a healthy pregnancy
- the physical and emotional changes your partner will experience during pregnancy
- sex during and after pregnancy
- what happens during prenatal care visits
- how to help during labor and delivery
- what fathers can do after the baby is born

Becoming a Father

A father can play an important role in his partner's pregnancy. Your job as a father begins long before your baby is born. Research has shown that women with supportive partners have fewer health problems in pregnancy and more positive feelings about their changing bodies.

Physical and Emotional Aspects of Pregnancy

Pregnancy lasts about 40 weeks, which is equal to 9 months. The 9 months of pregnancy are divided into three 3-month periods called **trimesters**.
The "due date" that you are given by your partner's health care provider is only an estimate of when the baby will be born. Most babies are born 2 weeks before or after the due date. The due date is based on the day the mother's last menstrual period started. Several web sites offer "due date calculators" that you can use, or try this simple formula: take the date of the first day of her last menstrual period and subtract 3 months. Then add 7 days to get the due date.

Do not be surprised if this due date changes. Most women receive an **ultrasound** examination at 18–20 weeks of pregnancy. This exam gives an estimate of the actual age of the fetus. The due date may be changed as a result.

Early Pregnancy: First Trimester
The first 14 weeks of your partner's pregnancy is called the first trimester. During this time, most women need more rest. Women in early pregnancy also may have symptoms of nausea and vomiting. Although commonly known as "morning sickness," these symptoms can occur at any time during the day or night.

Domestic Violence

Many pregnant women are abused by their husbands or partners. Abuse during pregnancy can pose a risk to both the woman and her baby. Dangers of this violence include miscarriage, vaginal bleeding, low birth weight, and injury. The National Domestic Violence hotline offers assistance with addressing this difficult family issue. Call 1-800-799-SAFE (7233) or TTY 1-800-787-3224.

Early pregnancy can be an emotional time for a woman. Mood swings are common. You may have mixed feelings as well. You may feel left out as she focuses on her changing body and emotions. One way to feel more involved is to go with your partner to her prenatal care visits and when tests are performed. Read books about pregnancy together and talk about what you have read. Listen to your partner and offer support.

Mid-Pregnancy: Second Trimester

For most women, the second trimester of pregnancy (weeks 14–28) is the time they feel the best. As the woman's body adjusts to being pregnant, she usually begins to feel better physically. Her energy level improves, and morning sickness usually goes away.

As your partner's abdomen grows, the pregnancy becomes more obvious. Soon you both will be able to feel the baby move and listen to the heartbeat during prenatal care visits.

Late Pregnancy: Third Trimester

In the third trimester of pregnancy (weeks 28–40), your partner may feel some discomfort as the baby grows larger and her body gets ready for the birth. She may have trouble sleeping, walking quickly, and doing routine tasks.

It is normal for both of you to feel excited and nervous as you wonder when her labor will start.

Pregnancy and Sex

Many couples worry whether it is safe to have sexual intercourse during pregnancy. Unless your partner's health care provider has told her otherwise, you can have sex throughout the entire 9 months. Sex is not harmful because the baby is protected within the **uterus** and is cushioned by fluid. There may be times when your partner does not feel comfortable enough to have intercourse. You two can experiment to find which positions are easiest for her.
If the health care provider says that you and your partner should not have intercourse, there are other ways to be intimate during her pregnancy. Cuddling, kissing, fondling, mutual masturbation, and oral sex can fill the void until you can have intercourse again.

Lifestyle Changes

It is important for your partner to have a healthy lifestyle while she is pregnant. You both can change your daily habits to include a well-balanced diet, plenty of rest, and exercise.

While she is pregnant and breastfeeding, your partner must not smoke or drink alcohol. For you and other family and friends who may spend time with your partner, not smoking around her also is important because the chemicals in secondhand cigarette smoke can harm your unborn baby. Secondhand smoke is harmful after the baby is born as well. Babies exposed to secondhand smoke have an increased risk of developing asthma and sudden infant death syndrome.

Risks

Most pregnancies proceed normally, without problems. Sometimes, however, health problems in the mother may increase the risks of complications for both the mother and the baby. For example, pregnant women with **diabetes** are at greater risk for miscarriage, birth defects, and having a large baby. High blood pressure that has been present before pregnancy may affect the growth of the baby.
Also, some women develop high blood pressure or diabetes for the first time while they are pregnant. Your partner will be monitored throughout pregnancy for these conditions.

As a father-to-be, you can make sure your partner sees her health care provider regularly—starting as soon as she can—and follows his or her instructions to stay as healthy as possible.

Prenatal Care

Your partner will have regular health care appointments during her pregnancy. At each visit, her health is checked, as well as that of the growing baby. Most women have monthly prenatal care visits. In the last trimester, visits usually become more frequent.

If your partner is agreeable, it may be helpful for you to go to some of your partner's prenatal visits. At one of the early visits, you and your partner will be asked about your personal and family health histories. Some diseases run in families and are passed down from parent to child. If you have a strong family history of a certain disease, you may have a **gene** for the disease that can be passed to your baby. Be sure that your partner knows your history if you cannot be there. For some of these diseases, prenatal tests can be done to find out if the baby may be affected.
Your partner may have these tests and exams at the first visit:

- Complete physical exam with blood and urine tests
- A **pelvic exam**
- Blood pressure, height, and weight measurements
  All pregnant women are offered testing for **human immunodeficiency virus (HIV)** and are given a routine test for **syphilis**. Many women also receive routine tests for other **sexually transmitted diseases**.
  Later prenatal care visits may include the following tests and exams:

- Checking the baby's heart rate. By about week 12, the health care provider may be able to hear the baby's heartbeat.
- Measuring your partner's blood pressure
- Testing her urine for signs of diabetes
- Measuring her weight
- Measuring the height of the uterus to gauge the baby's growth
- Checking the position of the fetus (later in the pregnancy)
  Some tests are performed at certain times. For example, at weeks 18–20, an ultrasound exam usually is done to check the baby's development. It also is sometimes possible to find out the baby's sex. Other tests include the following:

- Screening tests for birth defects (between weeks 8 and 20)
- Blood test to screen for **gestational diabetes** (between weeks 24 and 28)
- Screening test for group B streptococcus (between weeks 35 and 37). This infection can be passed from mother to baby during birth.
  In addition to these tests, others may be given depending on a woman's risk factors or health
  history. Her health care provider will explain which tests are recommended for your partner and tell you when they need to be done.

Things To Think About Before The Birth

Do you want to cut the umbilical cord? You may be asked if you want to cut the cord after the baby is delivered. Talk with your health care provider and your partner if you are not sure.
Do you know your partner's wishes regarding pain relief during labor? You and your partner can discuss the options beforehand. Remember, however, that decisions about pain relief

should be made by your partner, and that her decisions may change when she is actually in labor. Offer support for whatever she decides.

Are you planning to stay with your partner in the hospital after the baby is born? If you have other children, confirm arrangements for their care if you do plan to stay. Pack an overnight bag with the things you will need.

Do you know how you will get to the hospital? If you are driving, plan the route to the hospital, and map out a backup route in case there is a delay. Consider the following things ahead of time to ensure that the trip to the hospital is smooth:

—Transportation. Is your car reliable? Is the gas tank filled? Will you be available at all times, or do you need to ask someone else to fill in if necessary?

—Communication. Can your partner reach you at any time of day? Does she have your cell phone number? Office number? Can you reach her at any time?

—Time of day. Find out how much time the drive will take at different times of the day.

—Time of year. Do not forget to allow for bad weather. If your baby is due during snow season, make a backup plan.

Labor and Delivery

As your partner nears weeks 38–40, her labor can start any day. There is plenty you can do to help make the labor and delivery as smooth as possible.

Getting Ready

Learning about labor and delivery, being familiar with the hospital, and installing an infant car seat are good ways to prepare for the birth:

- Enroll in childbirth classes. Classes are a great way to learn what to expect during labor and delivery. You also will learn how to support your partner during childbirth. Classes may be offered at the hospital where your partner will give birth.
- Take a tour of the hospital. During the tour is a good time to ask about the hospital's policies on who can be in the room during labor and delivery (even cesarean births), whether you can stay overnight in the room with your partner and baby, and if you can take pictures or videotape the birth. Do not forget to find out where to park the car at the hospital.
- Install an infant car seat. You will need a safety seat for your baby's first ride home from the hospital. Plan to get a safety seat well before the due date and make sure that it is installed correctly. You will need time to practice using the seat in your car before your baby's first car ride.

What to Expect

When your partner starts labor, your role as labor coach begins. Every pregnancy is different, and there is no way of knowing how long your partner's labor will last. Labor happens in three stages. It may last between 10 hours and 20 hours (see **"Stages of Labor"** box). For some women, it lasts much longer, while for others it is much shorter. Your role during this time is to give your partner emotional support and comfort.

If an emergency occurs during labor or delivery, you may be asked to leave the room. You should leave right away. It is not meant to exclude you. Although there may not be time to explain why at that moment, someone will explain the reasons to you later.

Sometimes babies are born by cesarean delivery—through an incision in the mother's abdomen and uterus. It is a possibility with all deliveries. A cesarean birth is major surgery. Although some are planned in advance, many happen unexpectedly. If your partner has a cesarean delivery, she will need more time to recover.

Stages of Labor

First Stage
Mild contractions begin that are 5–15 minutes apart, and each one lasts 60–90 seconds.
Your partner's water may break, resulting in a trickle or a gush of fluid.
Your partner's cervix dilates (opens).
As the first stage progresses, contractions get stronger. They come as often as 3 minutes apart and each one lasts about 45 seconds. If your partner wants pain-relieving drugs, they will be given at this time.
If the baby's head is pressing on your partner's backbone, she may have back pain. She may feel the urge to push but should not do so until the health care provider tells her to push.
Second Stage
Contractions may slow. They are about 2–5 minutes apart and last 60–90 seconds.
She is told to push or bear down with each contraction.
The baby's head begins to show and the doctor guides the baby out.
Third Stage
The umbilical cord is cut.
The **placenta** is delivered.

How to Help

Although your partner is the one giving birth, there is plenty you can do to help during labor and in the delivery room:

- Help distract your partner during the first stage of labor. Listen to music with her or watch a movie.
- Unless she has been told to stay in bed, take short walks with your partner.
- Time her contractions.
- Offer to massage her back and shoulders between contractions.
- Help her with the relaxation techniques you learned in childbirth class.
- Encourage her during the pushing stage.
  Some fathers decide not to attend labor and birth. If you make this decision, there are other ways to support your partner. Take an active role in caring for her and the baby after the birth, before and after they leave the hospital.

The Postpartum Period

The postpartum period is the first 6 weeks after birth. Your partner's body will be going through dramatic changes as she recovers from the physical stress of birth and adjusts to caring for a newborn.

At the Hospital
After the baby is born, you can most likely take your new family home after 1–2 days. If your partner had a cesarean birth, however, she and the baby may need to stay in the hospital longer.

While your partner is resting, you can help spread the news to family and friends. Have a list on hand of the phone numbers of the important people to call from the hospital. When it is time for your partner and baby to be discharged from the hospital, you will need to have the car seat installed in the car before you will be allowed to drive away.

At Home

Most women will feel tired and sore for a few days to a few weeks after childbirth. Women who have had a cesarean delivery may take longer to heal. Also, having a new baby in the house can be stressful. You, your partner, and any other children you have need to adjust to a new lifestyle. Talking over your concerns with your partner and with others can help you cope. You also can talk to other parents about how they adjusted to a new baby.

Postpartum depression. The first days and weeks after having a baby is a time of adjustment. It can be trying for both of you. New parents often are overwhelmed by the demands placed on them. It is very common for new mothers to feel sad, upset, or anxious after childbirth. Many new mothers have mild feelings of sadness called postpartum blues or "baby blues." When these feelings are more extreme or last longer than a week or two, it may be a sign of a more serious condition known as postpartum depression. Postpartum depression also can occur several weeks after the birth. Women with a history of depression are at greater risk for this condition.
A new mother may be developing—or already have—postpartum depression if she has any of the following signs and symptoms:

- The baby blues do not start to fade after about 1 week, or the feelings get worse.
- She has feelings of sadness, doubt, guilt, or helplessness that seem to increase each week and get in the way of normal functions.
- She is not able to care for herself or her baby.
- She has trouble doing tasks at home or on the job.
- Her appetite changes.
- Things that used to bring her pleasure no longer do.
- Concern and worry about the baby are too intense, or interest in the baby is lacking.
- Anxiety or panic attacks occur. She may be afraid to be left alone with the baby.
- She fears harming the baby. These feelings are almost never acted on by women with postpartum depression, but they can be scary. These feelings may lead to guilt, which makes the depression worse.
- She has thoughts of self-harm or suicide.

Women with postpartum depression need to seek treatment. Often, women with postpartum depression are not aware that they are depressed. It is their partners who notice the signs and symptoms. If your partner shows any of these signs, assist her in getting the help she needs. Her health care provider can give additional information and suggest resources.

Breastfeeding. With few exceptions, breastfeeding is the best way to feed the baby. Mother's milk has the right amount of all the nutrients the baby needs, such as sugar, protein, vitamins, and fat. It also strengthens bonding between mother and baby. Some fathers feel left out when watching the closeness of breastfeeding. But if your partner has chosen to breastfeed, there are ways you can share in these moments:

- Bring the baby to her for feedings.
- Burp and change the baby afterward.
- Cuddle and rock the baby to sleep.
- Help feed your baby if your partner pumps her breast milk into a bottle.

Sexual Intercourse. There is no set "waiting period" before a woman can have sex again after giving birth. Some health care providers recommend waiting 4–6 weeks. The chances of a problem occurring, like bleeding or infection, are small after about 2 weeks following birth. If your partner has had an **episiotomy** or a tear during birth, the site may be sore for more than a week and she may be told to not have intercourse for a while. You two should discuss when to resume sexual intercourse with your partner's health care provider.

When your partner does feel ready to have sex again, it is a good idea to use a water-based lubricant. Her vagina may be less moist than usual, especially if she is breastfeeding.

Even if a woman is not having a period or is breastfeeding, she can become pregnant. Research suggests that getting pregnant less than 6 months after giving birth can increase the risk of certain pregnancy problems, such as preterm birth. You should use some type of birth control when you start having sex again.

5. Cord Blood Banking

Cord blood is the blood from the baby that is left in the **umbilical cord** and **placenta** after birth. It contains cells called hematopoietic (blood-forming) stem cells that can be used to treat some diseases. It is now possible to donate cord blood to a public bank or store it in a private bank for future use.
This pamphlet explains

- the difference between stem cells and other cells
- how the stem cells in cord blood can be used to treat disease
- when stem cells cannot be used to treat disease
- how cord blood is collected and stored

What Are Stem Cells?

Most **cells** can make copies only of themselves. A skin cell can make another skin cell, for example. Stem cells are like blank slates. They can mature into different kinds of cells. The blood-forming stem cells found in cord blood make new blood cells to replace old ones in the body.

How Are Cord Blood Stem Cells Used?

Blood-forming stem cells in cord blood can be used to treat some types of illnesses, such as disorders of the blood, **immune system**, and **metabolism**. They also are used to offset the effects that cancer treatments have on the immune system. Other uses are being studied. Stem cells occur in places other than cord blood. They are found in blood and **bone marrow** in adults and children. Using cord blood to treat disease has some benefits over using bone marrow. For example, it is harder to collect bone marrow than it is to collect cord blood. Collecting bone marrow poses some risks and can be painful for the donor.

What Are the Limits to Stem Cell Use?

Stem cells are not a "miracle cure." Only a few diseases can be treated with stem cells. There also are other limitations:

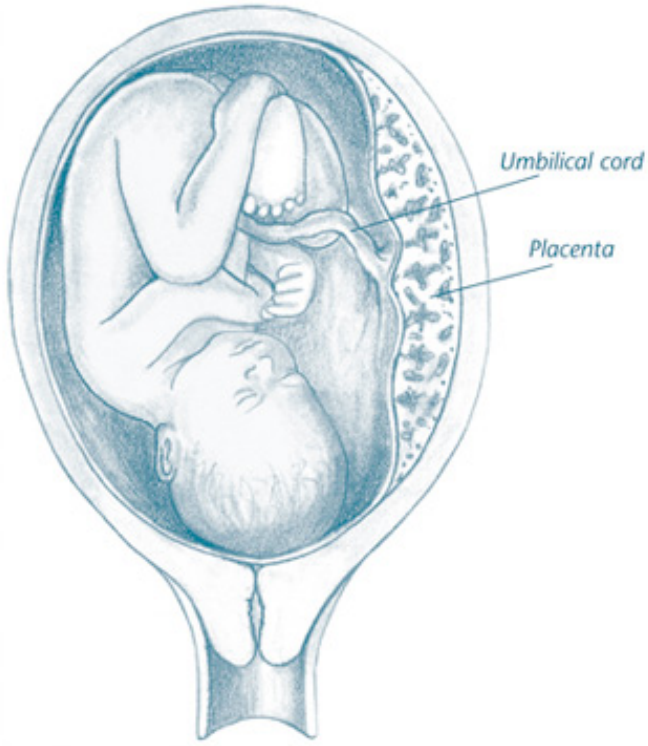
- If a baby is born with a genetic disease, the stem cells from the cord blood cannot be used for treatment because they will have the same **genes** that cause the disorder.

- A child's stem cells cannot be used to treat that child's leukemia, a cancer of the blood. However, stem cells from a healthy child can be used like any other donated organ to treat another child's leukemia. Careful matching of the recipient and donor are done to make sure that the stem cells will work.

How Is Cord Blood Stored?

Cord blood is kept in one of two types of banks: public or private. They differ in important ways that may affect your choice.

Public Cord Blood Banks



Blood in the baby's umbilical cord and placenta contains stem cells that can be used to treat some diseases. After the baby is born, some of this blood can be saved in a private or public bank for future use.

Public cord blood banks operate like blood banks. Cord blood is collected for later use by anyone who needs it. The stem cells in the donated cord blood can be used by any person who "matches." The cord blood is tracked in a database so that a unit can be found quickly when needed.

Public banks do not charge to collect cord blood. The National Marrow Donor Program (**www.marrow.org**) is a network that has a list of public banks. Public banks are not available in all areas.
Donors to public banks must be screened before birth. Screening entails a detailed medical history of the mother and father and their families. The goal is to learn of any blood or immune system disorders or other problems. Donors also are asked about their lifestyles. Many people will not meet these screening standards.

Some of the following factors rule out donating to public banks:

- Travel to certain countries
- Exposure to some vaccines
- Use of illegal drugs
- High-risk sexual behavior
- History of cancer on either side of the family
- Mother or father being adopted

Before the mother gives birth or right after, more screening is done. The mother's blood is checked for certain diseases. This is the same kind of screening that is done when you donate blood to a blood bank.

Private Cord Blood Banks

Private banks store cord blood for "directed donation." The blood is held for use in treating your baby or relatives.

Private banks most often charge a yearly fee for storage. There also will be a fee for collecting the cord blood. Some doctors may have a financial or other conflict of interest in a private bank. Your doctor should tell you about any conflicts.

How Is Cord Blood Collected?

Cord blood is collected by your health care provider or the staff at the hospital where you give birth. Not all hospitals offer this service. Some charge a separate fee that may or may not be covered by insurance. Certain steps must be done in advance:

- The bank must be notified far in advance (usually 6 weeks or more) of the due date.
- A family medical history must be provided.
- A consent form must be signed before labor begins.
- Collection materials must be obtained.

If you choose a private bank, you will sign a contract and pay a fee before the baby is born. The process used to collect cord blood is simple and painless. After the baby is born, the umbilical cord is clamped. Blood is drawn from the cord with a needle that has a bag attached. After the bag is sealed, the placenta is delivered. The process takes about 10 minutes.

Sometimes, not enough cord blood can be collected. This problem can occur if the baby is premature or if there is more than one baby and they share a placenta. It also can occur for no reason. If an emergency occurs during delivery, it may not be possible to collect cord blood.

Problems with the mother may not allow any cord blood to be collected. These problems make it more likely for cord blood to carry an infection:

- Herpes or genital warts
- Infection of the placenta or amniotic fluid

Making A Decision

The decision about whether to store cord blood needs to be made several weeks before delivery. Whether to donate cord blood is up to you. You have three choices:

1. Donate the cord blood to a public bank to possibly help others.
2. Store the cord blood in a private bank in case your child or a relative has a disease that can be treated with stem cells.
3. Do not donate cord blood.

There are some points to think about when making your choice:

- Many diseases cannot be treated with a person's own stem cells.
- The chance that cord blood stem cells will be needed to treat your child or a relative is very low—about 1 in 2,700. However, research is being done into new uses for stem cells. Research also may uncover new ways of treating disease that do not involve stem cells.
- Currently, it is not known how long cord blood can successfully be stored.

If you decide to store cord blood, you will need to choose a cord blood bank. Listed are some questions to ask yourself when deciding on a bank:

- What will happen to the cord blood if a private bank goes out of business?
- Can you afford the collection fee and yearly storage fee for a private bank.

6. Screening Tests for Birth Defects

Screening tests can give information about a pregnant woman's risk of having a baby with certain birth defects or genetic conditions. Some pregnant women may have other tests, depending on their medical histories, previous pregnancies, family or ethnic backgrounds, or exam results.
This pamphlet explains

- common birth defects
- how to decide about prenatal testing
- understanding test results
- types of screening tests

Common Birth Defects

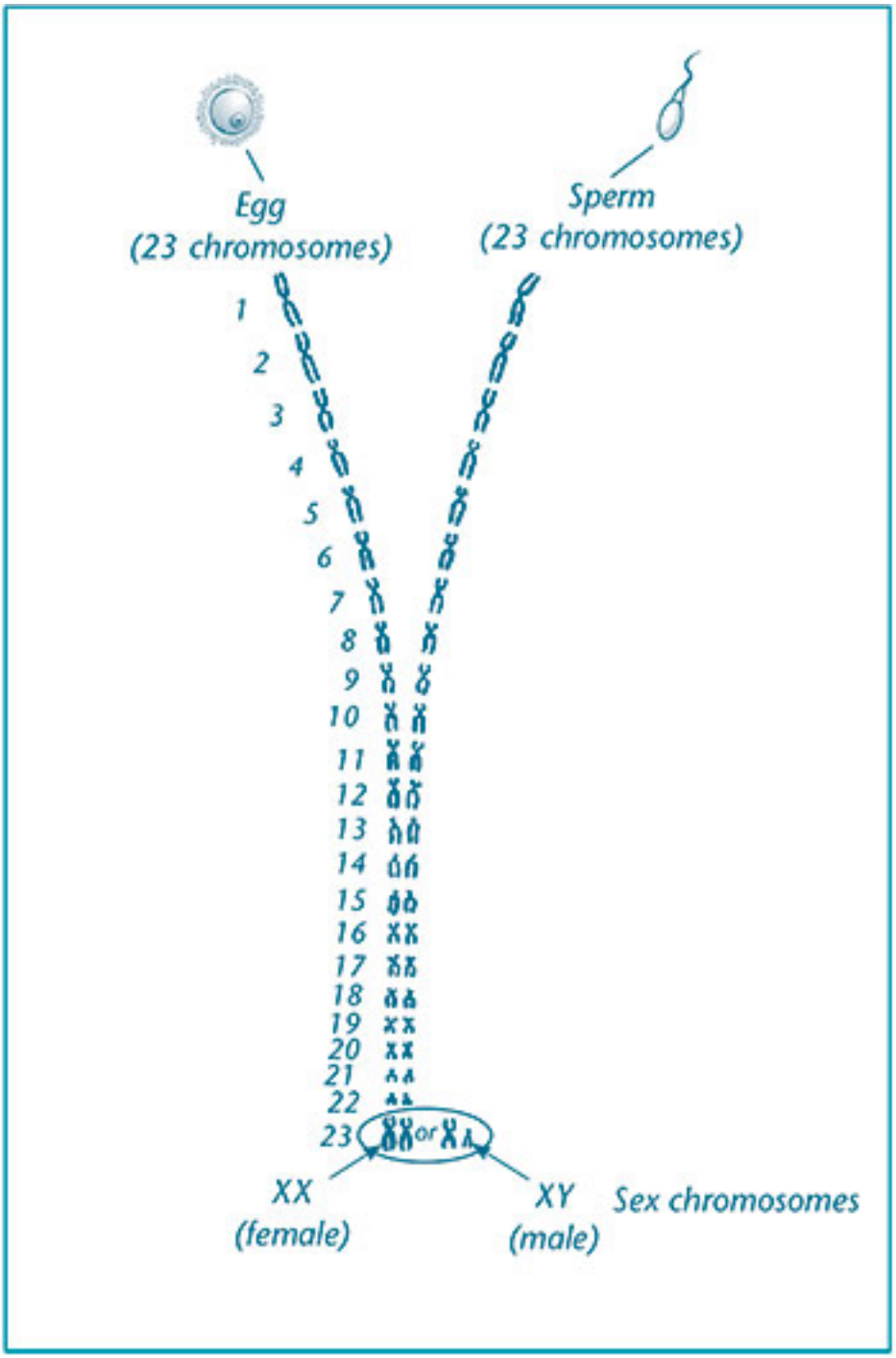
Each year, about 3 in 100 babies are born with a birth defect. A birth defect is a problem that is present at birth, although it may not be noticed until the child is older. Birth defects may affect any part of the body, including major organs such as the heart, lungs, or brain. The defect may affect the baby's appearance, a body function, or both.

There are different types of birth defects. Some birth defects result from **aneuploidy**, in which there are missing or extra **chromosomes** (**see box**). Although any woman at any age can have a child with a chromosome disorder, the risk increases as a woman ages. The most common aneuploidy is called a **trisomy**, in which there is an extra chromosome. A common trisomy is **trisomy 21** (**Down syndrome**). Other trisomies include **trisomy 13** (**Patau syndrome**) and **trisomy 18** (**Edwards syndrome**). A **monosomy** is a condition in which there is a missing chromosome. A common monosomy is **Turner syndrome**, in which a female has a missing or damaged X chromosome.
Inherited disorders are caused by defective **genes**. These disorders are passed down by parents to their children. Some inherited disorders are more common in certain races and ethnic groups, such as **sickle cell disease** (African American),**cystic fibrosis** (non-Hispanic white), and **Tay–Sachs disease** (Ashkenazi Jewish, Cajun, and French Canadian). Defective genes can occur on any of the chromosomes. Disorders caused by genes on the **sex chromosomes** are called **sex-linked disorders**. An example of a sex-linked disorder is **hemophilia**. This disease is caused by a defective gene on the X chromosome.
Birth defects also may be caused by exposure to harmful agents, such as medications, chemicals, and infections. Some birth defects may be caused by a combination of factors. For about 70% of babies born with birth defects, the cause is not known.

Many birth defects are mild, but some can be severe. Babies with birth defects may need surgery or other medical treatments. For some birth defects, such as chromosome disorders, there is no treatment. Sometimes, symptoms can be managed, such as those of trisomy 21. For other disorders, such as trisomy 13 and trisomy 18, the baby may die.

Genes and Chromosomes
A gene is a small piece of hereditary material called **DNA** that controls some aspect of a person's physical makeup or a process in the body. Genes come in pairs and are located on chromosomes. Chromosomes also come in pairs. Most **cells** have 23 pairs

of chromosomes for a total of 46 chromosomes. **Sperm** and **egg** cells each have 23 chromosomes. During **fertilization**, when the egg and sperm join, the two sets of chromosomes come together. In this way, one half of a baby's genes come from the mother and one half come from the father.
A baby's sex depends on the sex chromosomes it gets. Egg cells only contain an X chromosome. Sperm cells can carry an X or a Y. A combination of XX results in a girl and XY results in a boy.



7. Prenatal Testing for Birth Defects

Many types of prenatal tests are available to help address concerns about birth defects:

- **Carrier** tests—Carrier tests are a type of screening test that can show if a person carries a gene for an inherited disorder. Carrier tests can be done before or during pregnancy. Cystic fibrosis carrier screening is offered to all women of reproductive age because it is one of the most common genetic disorders.
- Screening tests—These tests often are part of routine prenatal care and are done at different times during the first and second **trimesters** of pregnancy. Screening tests assess the risk that a baby will have Down syndrome and other trisomies, as well as **neural tube defects**. These tests do not tell whether the **fetus** actually has these disorders. There are no risks to the unborn baby with having these screening tests.
- **Diagnostic tests**—Diagnostic tests can provide information about whether the fetus has a genetic condition and are done on cells obtained through **amniocentesis**, **chorionic villus sampling**, or, rarely, fetal blood sampling. The cells can be analyzed using different techniques.
  If a screening test shows an increased risk of a birth defect, diagnostic tests may be done to determine if a specific birth defect is present. Diagnostic testing may be done instead of screening if a couple is at increased risk of certain birth defects. Diagnostic testing also is offered as a first choice to all pregnant women, even those who do not have risk factors.

Deciding Whether to Be Tested

Although screening tests for birth defects are offered to all pregnant women, it is your choice whether to have them done. Knowing whether your baby is at risk of or has a birth defect beforehand allows you to prepare for having a child with a particular disorder and to organize the medical care that your child may need. You also may have the option of not continuing the pregnancy.

Most babies with birth defects are born to couples without risk factors. However, the risk of birth defects is higher when certain factors are present. Your health care provider or a **genetic counselor** can help find out if you are at increased risk of passing on a genetic disorder by taking a family health history. You are at increased risk if

- you have a genetic disorder
- you already have a child who has a genetic disorder
- there is a family history of a genetic disorder
- you belong to an ethnic group that has a high rate of carriers of certain genetic disorders

If you are at increased risk of having a child with a birth defect, you may consider having diagnostic testing instead of screening tests. The main benefit of having diagnostic testing instead of screening is that it tells you whether or not the baby will be born with a chromosome disorder or a specific inherited disorder. The main disadvantage is that invasive diagnostic tests can pose some risks to the pregnancy, including miscarriage and leakage of amniotic fluid.

Your health care provider or a genetic counselor can discuss all of these options with you. You may decide not to have any testing. If you do decide to have testing, you should understand the advantages, disadvantages, and limitations of each test.

Understanding Test Results

You will not get a "yes" or "no" result with a screening test. Screening test results are reported as the risk that a specific defect is present. This risk takes your age into account. For example, a screening test result for Down syndrome of "1 in 872" means that there is a 1 in 872 chance that your baby will have Down syndrome. This is considered low risk. Results may be described as "negative" if the risk is lower than a certain cutoff point and described as "positive" if the risk is higher than the cutoff point.

With any type of testing, it is important to be aware of the possibility of false-positive and false-negative results. A screening test result that shows there is a problem when one does not exist is called a false-positive result. A screening test result that shows there is not a problem when one does exist is called a false-negative result. Your health care provider should have information about the rates of false-positive and false-negative results for each test that is offered.

Types of Screening Tests

A variety of screening tests are available. The type of screening tests that you will be offered depends on which tests are available in your area, how far along you are in your pregnancy, and your health care provider's assessment of which tests best fit your needs (**see Table 1**).

Table 1. Prenatal Screening Tests

Screening Test	**Test Type**	**What Does It Screen for?**	**Down Syndrome Detection Rate**
Combined first trimester screening	Blood test for PAPP-A and hCG, plus an ultrasound exam	Down syndrome Trisomy 13 Trisomy 18	82–87%
Second trimester single screen for neural tube defects	Blood test for AFP	Neural tube defects	85%
Second trimester triple screen	Blood test for AFP, hCG, and estriol	Down syndrome Trisomy 18 Neural tube defects	69%
Second trimester quad screen	Blood test for AFP, hCG, estriol, and inhibin-A	Down syndrome Trisomy 18 Neural tube	81%

		defects	
Integrated screening	Blood test for PAPP-A and an ultrasound exam in the first trimester, followed by quad screen in the second trimester	Down syndrome Trisomy 18 Neural tube defects	94–96%
Integrated screening (blood test only)	Same as integrated screening but no ultrasound exam	Down syndrome Trisomy 18 Neural tube defects	85–88%
Contingent sequential	First trimester combined screening result: Positive: diagnostic test offered Negative: no further testing Intermediate: second trimester screening test offered	Down syndrome Trisomy 18 Neural tube defects	88–94%
Stepwise sequential	First trimester combined screening result: Positive: diagnostic test offered Negative: second-trimester screening test offered	Down syndrome Trisomy 18 Neural tube defects	95%
Abbreviations: AFP, alpha fetoprotein; hCG, human chorionic gonadotropin; PAPP-A, pregnancy-associated plasma protein A			

Cell Free Fetal DNA Test

A screening test called the cell free fetal DNA test is available for certain women. A small amount of fetal DNA circulates in the mother's blood. This DNA mainly comes from the **placenta**. The cell free fetal DNA in a sample of the mother's blood can be screened for Down syndrome, trisomy 13, trisomy 18, and sex chromosome abnormalities. In women who are at high risk of having a baby with a chromosome disorder, this test is 98% accurate in detecting cases of Down syndrome and has a low rate of false-positive results. This test can be done as early as 10 weeks of pregnancy in some women. Results take about 1 week to process.
At this time, the cell free fetal DNA test is recommended only for women who have an increased risk of having a child with a chromosome disorder, such as women who are older than 35 years or who already have a child with a chromosome disorder. It is not recommended for women at low risk of having a baby with a chromosome disorder or women carrying more than one baby because it has not been tested sufficiently in these groups.

The cell free fetal DNA test has certain limitations. It does not screen for neural tube defects. An additional screening test needs to be done to check for these disorders.

8. What to Expect After Your Due Date

Waiting for the birth of a child can be both an exciting and anxious time, especially if your pregnancy extends past the due date. The average length of pregnancy is 280 days, or 40 weeks. Most women give birth between 38 weeks and 41 weeks of pregnancy. A pregnancy that lasts longer than 42 weeks is called "post term." About 6 out of 100 women give birth at 42 weeks or later.

This explains

- how your due date is set
- causes of post term pregnancy
- risks of post term pregnancy
- tests that check fetal well-being
- how labor can be started if needed

Your Due Date

The date your baby is due—your due date—is calculated from the first day of your last menstrual period (LMP). The due date is used as a guide for checking your pregnancy's progress and tracking the growth of the ***fetus***. It is only an estimate of when your baby will be born (see box).
An ***ultrasound*** exam may be performed to help confirm the age of the fetus. This exam is most accurate for setting the due date when it is done before 20 weeks of pregnancy. It is less reliable when performed later in pregnancy. This is one reason why early prenatal care is important.

Causes of Post term Pregnancy

How To Estimate Your Due Date

You can estimate your due date by adding 40 weeks (280 days) to the first day of your last menstrual period. This assumes that you conceived exactly 2 weeks after the first day of your last menstrual period. It also assumes that you will carry the baby for 38 weeks.

Here is another way to calculate your due date:

1. Take the date that your last normal menstrual period started.
2. Add 7 days.
3. Count back 3 months.

Example: The first day of your last menstrual period was January 1. Add 7 days to get January 8. Then count back 3 months. Your due date is October 8.

The most common cause of post term pregnancy is an error in calculating your due date. For some women, it may be difficult to recall when their last menstrual period occurred. If the LMP is incorrect, the due date also will be incorrect. When a post term pregnancy truly exists, the cause usually is unknown.

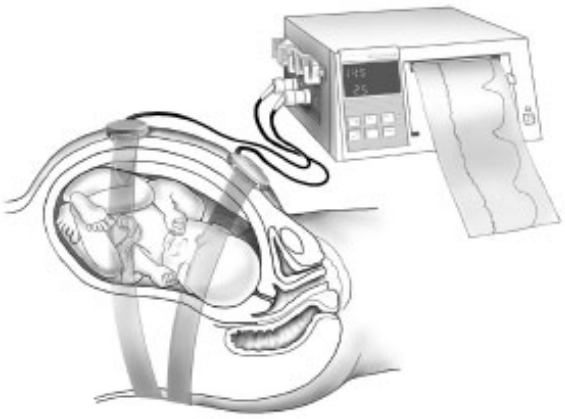
Risks of Post term Pregnancy

Health risks for the baby and mother increase if a pregnancy is prolonged past 42 weeks. The more prolonged the pregnancy, the greater the risks. However, problems occur in only a small number of post term pregnancies. Most women who give birth after their due dates have healthy newborns.

After 42 weeks, the ***placenta*** may not work as well as it did earlier in pregnancy. Also, later in pregnancy, the amount of ***amniotic fluid*** often begins to decrease. Less fluid may cause the ***umbilical cord*** to become pinched as the baby moves or as the ***uterus*** contracts. If pregnancy goes past 42 weeks, a baby has an increased risk of certain problems. These problems include ***dysmaturity syndrome***, ***macrosomia***, ***meconium aspiration***, fetal injury, and ***stillbirth***. Women who are pregnant after 42 weeks are at increased risk of problems during labor and ***cesarean birth***.

Tests for Fetal Well-Being

Electronic Fetal Monitoring



Electronic fetal monitoring is used to perform the nonstress test, the biophysical profile, and the contraction stress test. Two belts are placed around the mother's abdomen to hold sensors that measure fetal heart rate and the frequency of uterine contractions.

When a baby is not born by the due date, tests may help your health care provider check on the baby's condition. Keep in mind that no test can provide 100% assurance. These tests cannot always find a problem even if one exists, or the results may show that there may be a problem when one does not exist.

Fetal movement counting (sometimes called "kick counts") is a test that can be done on your own at home. Healthy babies generally tend to move the same amount each day. A kick count is a record of how often you feel your baby move. Your health care provider will explain how to do a kick count. The usefulness of kick counts in reducing the risk of serious problems is not clear. Some health care providers do not use kick counts for this reason.

Other tests that may be done involve electronic fetal monitoring. Electronic fetal monitoring uses two belts placed around the mother's abdomen to hold sensors that measure fetal heart rate and the frequency of uterine contractions. These tests are done in the health care provider's office or hospital and may include the following:

- Nonstress test (NST)—This test measures the baby's heart rate for a specific period of time, usually 20 minutes. Results of the nonstress test are classified as reactive (reassuring) or non-reactive (nonreassuring). A nonreactive result does not necessarily mean that the baby is not healthy. Nonreactive nonstress test results often are followed by other tests to give more information.
- Biophysical profile (BPP)—This test involves monitoring the fetal heart rate as well as an ultrasound exam. It checks the baby's heart rate and estimates the amount of amniotic fluid. The baby's breathing, movement, and muscle tone also are checked.
- Contraction stress test (CST)—The CST assesses how the baby's heart rate changes when the uterus contracts. To make your uterus contract mildly, you may be asked to rub your nipples through your clothing or you may be given ***oxytocin*** through a vein. At times, your uterus may contract on its own, especially if the test is done late in pregnancy. Results are classified as reassuring or nonreassuring. Results also can be equivocal (the results are not clear) or unsatisfactory (there were not enough contractions to produce a meaningful result).
  If a test result is abnormal, you may need to repeat the same test or have a different test. In some cases, delivery may be recommended.

Labor induction is the use of medication or other methods to start labor. Whether your labor will be induced depends on the following factors:

- Your condition and your baby's condition
- How far along your pregnancy is
- If your ***cervix*** has begun to soften (called "ripening") and open in preparation for delivery
- Results of tests for fetal well-being
  Methods used to induce labor include the following:

- Ripening or dilating the cervix—If your cervix has not started to soften, medications can be used to start the process. ***Prostaglandins*** are natural chemicals made by the body that soften the cervix and stimulate the uterus to contract. Medications containing prostaglandins may be placed in the vagina or taken by mouth to ripen the cervix. Special devices may be placed in the cervix to dilate it. For example, a catheter (small tube) with an inflatable balloon on the end can be inserted to widen the cervix.
- Stripping or sweeping the amniotic membranes—Your health care provider sweeps a gloved finger over the thin membranes that connect the ***amniotic sac*** to the wall of your uterus. This procedure may start labor within 48 hours.
- Rupturing the amniotic sac—Your health care provider makes a small hole in the amniotic sac to release the fluid ("breaking the water"). Most women go into labor within hours of their water breaking. If labor does not occur, another method may be added to start your labor.
- Using oxytocin—This hormone, given through an intravenous (IV) tube in your arm, causes the uterus to contract. The dosage may be slowly increased over time and is carefully monitored.

Cesarean Birth

If test results are abnormal and there is concern that the baby is not doing well, a cesarean delivery may be needed to deliver the baby right away. Cesarean birth is the birth of a baby through incisions made in the abdomen and uterus. Risks of cesarean birth include injury to or infection of the uterus and nearby organs, bleeding, blood clots, and reactions to the *anesthesia* used.

9. Newborn Circumcision

Circumcision is the surgical removal of the layer of skin, called the **foreskin**, that covers the **glans** (head) of the penis. Whether to have your son circumcised is your decision. If you choose this procedure for your baby, it usually is done soon after birth.
This pamphlet explains

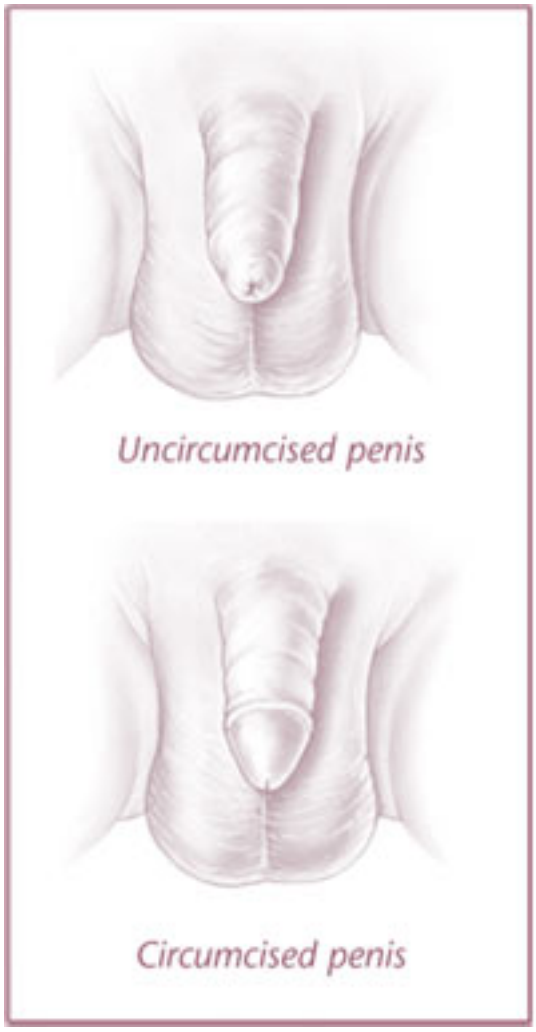
- how circumcision is done
- things to think about when making the decision
- possible benefits and risks
- how to care for your newborn boy

How Circumcision Is Done

Circumcision may be performed before or after the mother and baby leave the hospital. It only is performed if the baby is healthy. If the baby has a medical condition, circumcision may be postponed.

Circumcision takes only a few minutes. During the procedure, the baby is placed on a special table. Various surgical techniques are used, but they follow the same steps:

- The penis and foreskin are cleaned.
- A special clamp is attached to the penis and the foreskin is removed.
- After the procedure, a bandage and petroleum jelly are placed over the wound to protect it from rubbing against the diaper.



It is recommended that an **anesthetic** be used for pain relief. Before the procedure, your health care provider should discuss the type of anesthetic that will be used and answer any questions you may have about circumcision.

Making the Decision

Circumcision is an elective procedure. That means that it is the parents' choice whether to have their sons circumcised. It is not required by law or by hospital policy. Because it is an elective procedure, circumcision may not be covered by your insurance policy. To find out, call your insurance provider or check your policy.

For some people, circumcision is a part of certain religious practices. Muslims and Jews, for example, have circumcised their male newborns for centuries. Others may choose circumcision so that the child does not look different from his father or other boys.

Although many newborn boys in the United States are circumcised, the number of circumcisions has decreased in recent years. It is less common in other parts of the world. Some parents choose not to circumcise their sons because they are worried about the pain the baby feels or the risks involved with the surgery. Others believe it is a decision a boy should make himself when he is older. However, recovery may take longer when circumcision is done on an older child or adult. The risks of complications also are increased.

It is important to have all of the information about the possible benefits and risks of the procedure before making a decision. You may want to start thinking about this decision during pregnancy to give yourself enough time to explore all of the facts.

Possible Benefits

Circumcised infants appear to have less risk of urinary tract infections than uncircumcised infants. The risk of urinary tract infection in both groups, however, is low. It may help prevent cancer of the penis, a rare condition.

Some research suggests that circumcision may decrease the risk of a man getting **human immunodeficiency virus (HIV)** from an infected female partner. It is possible that circumcision may decrease the risk of passing HIV and other **sexually transmitted diseases** from an infected man to a female partner. However, at the present time, there is not enough information to recommend routine newborn circumcision for health reasons. There also are hygienic reasons for circumcision. **Smegma** is a thick white discharge containing dead cells. It can build up under the foreskin of uncircumcised males. This can lead to odor or infection. However, a boy who has not been circumcised can be taught to wash his penis to get rid of smegma as a part of his bathing routine.

Possible Risks

All surgical procedures carry some risk. Complications from a circumcision are rare, but they can occur. Possible complications include bleeding, infection, and scarring. In rare cases, too much of the foreskin or not enough foreskin is removed. More surgery sometimes is needed to correct these problems.

Caring for Your Newborn

If your baby boy is circumcised, a bandage with petroleum jelly may be placed over the head of the penis after surgery. The bandage typically falls off the next time the baby urinates. Some heath care providers recommend keeping a clean bandage on until the penis is healed, while others recommend leaving it off.

In most cases, the skin will heal in 7–10 days. You may notice that the tip of the penis is red and there may be a small amount of yellow fluid. This usually is normal.

Keep the area as clean as possible. Use a mild soap and water to clean off any stool that gets on the penis. Change the diapers often so that urine and stool do not cause infection. Signs of infection include redness that does not go away, swelling, or fluid that looks cloudy and forms a crust. Call your health care provider right away if you notice any of these signs.

If your baby boy is not circumcised, washing the baby's penis and foreskin properly is important. The outside of the penis should be washed with a mild soap and water. Do not attempt to pull back the infant's foreskin. The foreskin may not be able to pull back completely until the child is about 3–5 years old. This is normal.

10. Breastfeeding Your Baby

More and more women are choosing to breastfeed their babies—and for good reason. Breast milk provides the perfect mix of vitamins, protein, and fat that your baby needs to grow. It also protects your baby against certain diseases. Although some women may not be able to breastfeed for a variety of reasons, for most women, breastfeeding (or "nursing") is the best way to feed their babies.

Benefits of Breastfeeding

It is recommended that babies breastfeed exclusively at least for the first 6 months of life. This means that you should not give your baby any other liquids or foods before he or she is 6 months old (unless your baby's health care provider recommends otherwise). The longer your baby is fed breast milk, the better for you and your baby. Your baby can continue to breastfeed beyond his or her first birthday as long as you and your baby want to.

Benefits for Your Baby

Breastfeeding is best for your baby for the following reasons:

- The **colostrum** that your breasts make during the first few days after childbirth helps your newborn's digestive system grow and function.
- Breast milk has **antibodies** that help your baby's **immune system** fight off viruses and bacteria. Babies who are breastfed have a lower risk of respiratory infections, asthma, obesity, allergies, and colic than babies who are not breastfed. They also have fewer ear infections and less diarrhea.
- Breast milk is easier to digest than formula. Breastfed babies have less gas, fewer feeding problems, and less constipation than babies who are fed formula.
- Breastfeeding decreases the risk of **sudden infant death syndrome (SIDS)**, especially when the mother breastfeeds exclusively for at least 6 months.
- If your baby is born **preterm**, breast milk can help reduce the risk of many of the short-term and long-term health problems that preterm babies face.

Benefits for You
Breastfeeding is good for you as well:

- During breastfeeding, the hormone **oxytocin** is released. Oxytocin causes the uterus to contract and return to its normal size more quickly.
- Breastfeeding may help with postpartum weight loss. Women who breastfeed for longer than 6 months tend to weigh less than women who do not breastfeed.
- Women who breastfeed have lower rates of breast cancer and ovarian cancer than women who do not breastfeed. It also has been shown to reduce the risk of heart disease and rheumatoid arthritis.
- Breastfeeding saves time and money. You do not have to buy, measure, and mix formula.

How to Breastfeed

Although breastfeeding is a natural process, it may take some practice and patience to master. Mothers and babies have to learn together.

Getting Started

Babies are born with all the instincts they need to breastfeed. A healthy newborn usually is capable of breastfeeding without any specific help within the first hour of birth. Those who do so may have an easier time breastfeeding than babies who are not breastfed immediately after birth. To help give you a good start, tell your health care provider during pregnancy that you want to breastfeed. When you are admitted to the hospital in labor, remind your health care team that you plan to breastfeed. Immediately after the birth, your baby should be placed in direct skin-to-skin contact with you if possible.

Get Your Baby "Latched On"

To begin breastfeeding, the baby needs to attach to or "latch on" to your breast. A nurse or lactation consultant (a health care provider with special training in breastfeeding) can help you find a good position (see box **"Good Positions for Breastfeeding"**). Cup your breast in your hand and stroke your baby's lower lip with your nipple. This stimulates the baby's rooting reflex. The rooting reflex is a baby's natural instinct to turn toward the nipple, open his or her mouth, and suck. The baby will open his or her mouth wide (like a yawn). Pull the baby close to you, aiming the nipple toward the roof of the baby's mouth. Remember to bring your baby to your breast—not your breast to your baby.

Check the Baby's Latch

The baby should have all of your nipple and a good deal of the **areola** in his or her mouth. The baby's nose will be touching your breast. The baby's lips also will be curled out on your breast. The baby's sucking should be smooth and even. You should hear the baby swallow. You may feel a slight tugging. You may feel a little discomfort for the first few days. You should not feel severe pain. If you do, talk to your nurse or lactation consultant. If the baby is not latched on well, start over. To break the suction, insert a clean finger between your breast and your baby's gums. When you hear or feel a soft pop, pull your nipple out of the baby's mouth.

Do Not Watch the Clock

Let your baby set his or her own schedule. Many newborns breastfeed for 10–15 minutes on each breast, but some may feed for longer periods. A baby who wants to breastfeed for a long time—such as 30 minutes on each side—may be having trouble getting enough milk (see box **"Is My Baby Getting Enough Milk?"**) or may be just taking his or her time to feed.

Breastfeed on Demand

Is My Baby Getting Enough Milk?

For the first few weeks, check for these signs to tell if your baby is feeding enough. Your baby should

breastfeed at least 8–12 times in 24 hours
be happy and content for an average of 1–3 hours between feedings
wet six or more diapers a day
have three or four bowel movements a day by the time he or she is 5–7 days old; during

the first month, the baby may have a bowel movement after each feeding
gain an appropriate amount of weight at each well-baby visit with your pediatrician
If you are concerned your baby may not be getting enough milk, tell your health care provider.

When babies are hungry, they will nuzzle against your breast, make sucking motions, or put their hands to their mouths. Crying usually is a late sign of hunger. It is recommended that you breastfeed at least 8–12 times in 24 hours, or about every 2–3 hours, in the baby's first weeks of life. When full, the baby will fall asleep or unlatch from your breast.

Switch Sides

When your baby empties one breast, offer the other. Do not worry if your baby does not continue to breastfeed. The baby does not have to feed at both breasts in one feeding. At the next feeding, offer the other breast first. You may want to attach a safety pin to your shirt or bra to remind yourself which breast to start with at the next feeding.

Avoid Pacifiers

Until your baby gets the hang of breastfeeding, experts recommend limiting pacifier use to only a few instances. You may only want to give a pacifier to help with pain relief (while getting a shot, for instance). After about 4 weeks, when your baby is breastfeeding well, you can use the pacifier at any time. Pacifier use at nap or sleep times may help reduce the risk of SIDS.

Dealing With Challenges

When you start breastfeeding your baby, you may find getting started challenging or have some difficulty at first. It is normal for minor problems to arise in the days and weeks when you first begin breastfeeding. The good news is that with a little help, most problems can be overcome. If any of the following problems persist after trying these tips, call your health care provider or ask to see a lactation specialist:

- Nipple pain—Some soreness or discomfort is normal when beginning breastfeeding. Nipple pain or soreness that continues past the first week or does not get better usually is not normal. Nipple pain may be caused by the baby not getting enough of the areola into his or her mouth and instead sucking mostly on the nipple. Check the positioning of your baby's body and the way he or she latches on. Make sure the baby's mouth is open wide and has as much of the areola in the mouth as possible. Applying a small amount of breast milk to the nipple may speed up the healing process. Try different breastfeeding positions to avoid sore areas.
- Engorgement—When your breasts are full of milk, they can feel full, hard, and tender. Once your body figures out just how much milk your baby needs, the problem should go away in a week or so. To ease engorgement, breastfeed more often to drain your breasts. Before breastfeeding, you can gently massage your breasts or express a little milk with your hand or a pump to soften them. Between feedings, apply warm compresses or take a warm shower to help ease the discomfort.
- Blocked milk duct—If a duct gets clogged with unused milk, a hard knot will form in that breast. To clear the blockage and get the milk flowing again, try breastfeeding long and often on the breast that is blocked. Apply heat with a warm shower, heating pad, or hot water bottle.
- Mastitis—If a blocked duct is not drained, it can lead to a breast infection called mastitis. Mastitis can cause flu-like symptoms, such as fever, aches, and fatigue. Your breast also will be swollen and painful and may be very warm to the touch. If you have these symptoms, call your health care provider. You may be prescribed an antibiotic to treat the infection. You may be able to continue to breastfeed while taking this medication.

A Healthy Lifestyle While Breastfeeding

While you are breastfeeding, it is important to maintain the healthy nutritional and lifestyle habits you had during pregnancy. Remember, almost everything you put into your body also goes to your baby in your breast milk.

Eating Right

When you are pregnant, your body stores extra nutrients and fat to prepare for breastfeeding. The following tips will help you meet the nutritional goals needed for breastfeeding:

- You need an extra 450–500 calories a day while breastfeeding. For a woman whose weight is in the normal range, this works out to be about 2,500 total calories per day.
- Eat a variety of foods, including whole grains, fruits and vegetables, low-fat dairy products, lean meats, poultry, and seafood.
- Your health care provider may recommend that you continue to take your prenatal multivitamin supplement while you are breastfeeding. The baby's health care provider may recommend that you give your baby 400 international units of vitamin D daily in drop form. This vitamin is essential for strong bones and teeth.
- Stay hydrated by drinking plenty of fluids and drink more if your urine is dark yellow. It is a good idea to drink a glass of water every time you breastfeed.
- Avoid foods that may cause stomach upset in your baby. Common culprits are gassy foods, such as cabbage, and spicy foods.
- Drinking caffeine in moderate amounts should not affect your baby. A moderate amount of caffeine is about 200 milligrams a day, which is the amount in two to four cups of brewed coffee. Remember that tea, chocolate, and soft drinks also contain caffeine.
- If you want to have an occasional alcoholic drink, wait at least 2 hours after you drink to breastfeed.
- Always check with your health care provider before taking prescription or over-the-counter medications to be sure they are safe to take while breastfeeding.

Avoiding Smoking and Drug Use

Just like during pregnancy, you should not smoke while you are breastfeeding. If you or someone you live with smokes, get help to quit right away. Babies exposed to cigarette smoke have an increased risk of asthma. Cigarette smoke also has been linked to an increased risk of SIDS.

Illegal drugs such as cocaine, marijuana, heroin, and methamphetamines can be harmful to your baby if you use them while breastfeeding. Taking prescription drugs (such as codeine, tranquilizers, or sleeping pills) for nonmedical reasons also can be harmful. If you need help with quitting smoking or stopping drug use, talk with your health care provider or ask about a substance abuse hotline in your area.

Storing Breast Milk

After pumping, you can refrigerate your milk, store it in a cooler, or freeze it for later.
You can store breast milk at room temperature for 3–4 hours (optimal) up to 6–8 hours (acceptable under very clean conditions).
Store breast milk in small amounts (2–4 ounces) to avoid waste. Store milk in clean glass or BPA-free plastic bottles or special milk collection bags.
Breast milk can be kept in the refrigerator (39°F or below) for 3 days (optimal) up to 5–8

days (acceptable under very clean conditions). It can be frozen (0°F) for 6 months (optimal) up to 1 year (acceptable under very clean conditions).
To thaw frozen breast milk, put the bottle or bag in a bowl of warm water. You also can let milk slowly thaw in the refrigerator. Do not use a microwave because it destroys the milk's disease-fighting qualities and can scald you and your baby. Never refreeze milk that has been thawed.

It is important to use a birth control method before you begin having sexual intercourse again. The ideal time to choose a method is while you are still pregnant. Talk to your health care provider about your options.

In general, methods that contain estrogen, such as combination birth control pills, the vaginal ring, and the skin patch, should not be used during the first month of breastfeeding. Estrogen may decrease your milk supply. Once breastfeeding is established, estrogen-containing methods can be used.

Returning to Work

By law, your employer is required to provide a reasonable amount of break time and a place to express milk as frequently as needed for up to 1 year following the birth of a child. The space provided by the employer cannot be a bathroom, and it must be shielded from view and free from intrusion by coworkers or the public. You also will need a safe place to store the milk properly (see box **"Storing Breast Milk"**).
During an 8-hour workday, you should be able to pump enough milk during your breaks. Using a double pump that pumps both breasts at the same time is even quicker.

Finally...

Breastfeeding is the healthiest way to feed your baby. Before giving birth, let your health care provider know of your desire to breastfeed so that you can get the support you need from the very start. Keep in mind that many new mothers have problems breastfeeding at first. Do not be afraid to ask for help if you need it.

Cradle hold. *Sit up straight and cradle your baby in the crook of your arm. The baby's body should be turned toward you and his or her belly should be against yours. Support the baby's head in the bend of your elbow so that he or she is facing your breast.*

Side-lying position. *Lie on your side and nestle your baby next to you. Place your fingers beneath your breast and lift it up to help your baby reach your nipple. This position is good for night feedings. It also is good for women who had a cesarean birth because it keeps the baby's weight off the incision. Put your lower arm forward to hold your head, and place a pillow between your knees to keep you from rolling over.*

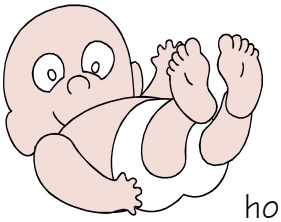
Cross-cradle hold. *As in the cradle hold, nuzzle your baby's belly against yours. Hold him or her with the arm opposite to the side you are breastfeeding from. For instance, if you are breastfeeding from your right breast, hold the baby in your left arm. The baby's bottom rests in the crook of your left arm and your left hand supports the baby's head and neck. This position gives you more control of the baby's head. You may need to support the baby's head with pillows. It is a good position for a newborn who is learning how to nurse.*

Football hold. *Tuck your baby under your arm like a football. Sit the baby up at your side, level with your waist, so he or she is facing you. Support the baby's back with your upper arm, and hold his or her head level with your breast. This hold is good for breastfeeding twins and for women who had cesarean births.*

Your Baby's Activity Record

A guide to counting your baby's movements

What is Fetal Movement Counting?



Healthy babies are usually active. Unborn babies sleep for short periods of time, but most of the time they will kick, roll, twist and turn. Counting your baby's movements is a way to tell how your baby is doing. A healthy baby usually moves at least 10 times in 2 hours.

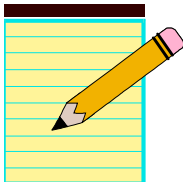
Doctors and midwives usually recommend that you begin counting movements around the 7th month of pregnancy (about 28 weeks). As you get to know your baby's movement pattern, you will be able to report any changes to your care provider.

There are different ways to monitor a baby's movement. You may wish to ask your prenatal care provider which method he or she prefers.

How do I Count My Baby's Movements?

1. Choose a time of day that your baby is usually active. Try to count around the same time each day. (It may be best to count after a meal.)

2. Get in a comfortable position. You can lie down or sit in a chair with your feet up.



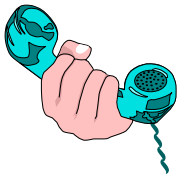
3. Write down the date and time that you begin counting your baby's movements.

4. Continue counting until your baby has moved 10 times. Count any movements including kicks, rolls, swishes, or flutters.

5. After your baby has moved 10 times, write down the time on your chart.

6. If you can't feel your baby move, try to wake the baby by drinking a glass of juice or walking around for few minutes. Then start counting again.

What Should I do if My Baby Doesn't Move?



Call your doctor or midwife right away if:

- Your baby has not moved 10 times in 2 hours
- You notice a significant decrease in your baby's activity

Example

On Sunday, October 14th, you begin counting your baby's movements at 7:05 PM. By 7:40 PM, you have felt your baby kick or move 10 times. You would fill in your chart this way:

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date	**10/14**						
Start Time	**7:05**						
Stop Time	**7:40**						
Minutes to reach 10	**35**						

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date							
Start Time							
Stop Time							
Minutes to reach 10							

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date							
Start Time							
Stop Time							
Minutes to reach 10							

Babies are such a nice way to start people.
~Don Herrold

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date							
Start Time							
Stop Time							
Minutes to reach 10							

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date							
Start Time							
Stop Time							
Minutes to reach 10							

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
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Minutes to reach 10							

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
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Start Time							
Stop Time							
Minutes to reach 10							

	Sun	Mon	Tue	Wed	Thu	Fri	Sat
Day & Date							
Start Time							
Stop Time							
Minutes to reach 10							

Post partum instructions

Congratulations on being a new mother !

This is a happy time for you and your family. However, it brings a lot unanticipated changes in your life which may seem overwhelming and difficult to cope with. Hopefully this can help answer some questions that may arise.

1. How can I avoid pain/ cracked nipples during breast feeding?

If you are breast feeding, then try to feed from each breast completely until its empty.
Massage the base of the breast to avoid the baby sucking hard looking for milk.
If breasts are still full after completing feeding, please pump and store the breast milk.
You can freeze the breast milk and date it in appropriate containers.
If the nipples get sore and cracked, you can use your own breast milk and apply it to the nipples. It has healing properties.
If the above doesn't work, you can use A&D cream or any non medicated emollient cream and wipe off the cream with Luke warm wet cotton swab before the next feed.
If they are still hurting and cracked , you can ask for a prescription for antibiotics cream (bactroban) which can be applied every 8 hours but needs to be cleaned off with a moist cotton swab before next breast feed.
You may buy a "nipple shield" which is easily available in any pharmacy , which can help the baby latch on and avoid cracking of nipples.
If the breasts get hard and painful, use warm compresses, massage gently and express or pump the breast milk or feed the baby directly from the breast.

2. Can I take any medications for painful breasts?

- Tylenol extra strength 500mg. 2 tab every 6-8 hours as needed.
- Motrin/Advil 600mg orally every 8 hours as needed for pain.

If the pain/ fever or chills persist, please go to the Emergency room or call your doctor.

3. I am getting fever with chills, what should I do?

Check your breasts, if they are hard and painful, see above.
If breasts are soft and you are still having fever with chills, please call your doctor.

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4. Drink plenty of fluids, 10-15 glasses of water.

Drink low fat milk, yoghurt (avoid if lactose intolerance or mil allergy)and fresh fruit juices (avoid juices if you have diabetes).

5. What foods should I avoid?

Avoid gassy foods like black beans, Brussels sprouts etc.
Avoid spicy and greasy foods.
Avoid orange juice, marinara sauce etc if they cause heartburn for you.

6. What food should I eat?

Eat healthy. Plenty of fiber and whole gain foods. Eat fresh fruits rather than juices. Eat plenty of salads. Make sure they are thoroughly washed.

7. How much activity am I permitted and what is the right posture?

When breast feeding, please sit in a chair with straight back to have back support. Use pillow or boppy pillow to support your arm while breast feeding. Avoid bending or slouching while breast feeding. It causes back ache.
Please keep legs elevated on an ottoman or another chair while feeding or sitting done to avoid swelling of legs.

8. My ankle swelling has increased, what should I do?

It is common for ankles and calves to get swollen after delivery. This happens due to redistribution of body fluids after pregnancy.
Please keep legs elevated on an ottoman or another chair while feeding or sitting done to avoid swelling of legs.
When sleeping, please keep 1-2 pillows under your feet to help decrease the swelling.

9. When should I call the doctor if my legs hurt?

If the back of your calves gets very painful and tender to touch or you see redness or if

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you have fever with chills, please call your doctor or go to the nearest emergency room.

10. I am not getting much sleep, what should I do ?

Taking care of a new born baby is very exhausting and overwhelming. If you have help from friends, relatives or significant other, PLEASE LET THEM HELP. It is tempting to try to do everything possible for the new born baby yourself, however you need sleep and rest to allow your body to recover. Try to make time to sleep when the baby is sleeping.

11. I am having vaginal bleeding. Is it normal?

You may have bleeding equivalent to you normal period for upto 1-2 weeks. It is called Lochia. It usually slows down after 2 weeks, If you still have very heavy bleeding, please call your doctor.

12. When should I consider going to the emergency room.

Please call your doctor or go to the nearest emergency room if you have any of the following

- Heavy vaginal bleeding with clots
- Fainting
- Fever with or without chills more than 101 degrees F
- Calf tenderness
- Difficulty breathing
- Severe depression, suicidal or homicidal thoughts
- Severe abdominal pain
- Uncontrollable vomiting

13. When am I supposed to go for a follow up appointment?

If you had a normal vaginal delivery, please schedule an appointment to see you doctor within 4-6 wks. if you had a cesarean section, please see your doctor 1 wk after surgery and then 4-6 wks after the first post-op appointment.

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Post op instructions

Dear M/s _____
You had _____surgery on _____

Your follow up appointment is on _____

Please call 718-898-1170 to confirm.

This is an outline of some commonly asked questions for post operative care.

1. Which medications should I buy over the counter to help in my recovery?

- Pepcid 20mg twice daily. The first pill, first thing in the morning before food and the the night time 30 min before dinner.
- Colace 100mg orally twice daily - buy over the counter.
- Tylenol or **Acetaminophen** extra strength 500mg. 2 tab every 6-8 hours as needed.
- **Motrin/Advil** 600mg orally every 8 hours as needed for pain.
- Mylanta 2 teaspoons orally 8 hours if feeling heartburn or gassy.

2. Which prescription medications do I need?

Percocet - 1-2 tablets every 8 hours as needed. They can cause constipation or make you nauseous so avoid it if you are nauseous or constipated.
Antibiotics - as prescribed

3. What can I eat or drink?

Drink at least 10-15 glasses of water every day.
Eat easy to digest, light foods like chicken soup, sandwiches etc
Yoghurt, low fat milk , ginger ale
High fiber diet, if unable to tolerate high fiber diet
Take Metamucil 2 teaspoons daily in water/ milk or yoghurt

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Eat Salads (thoroughly washed) and light dressings.
Can eat fresh fruits, spinach, whole grains etc.
Please take into account any food allergies that you may have.

4. Which Foods should I avoid?

Avoid a lot of cheese, spicy food, marinara sauce, orange juice
Avoid very greasy foods
Take into account you food allergies

5. Can I shower? If so, how?

Please shower and clean your entire body INCLUDING the INCISION area with mild soap and water. Do not rub vigorously. After shower, just gently pat dry with a soft towel and leave the wound are open to sit.

Wear loose clothes. Avoid tight fitting clothes which do not let air circulate easily.
Shower daily

6. How much weight can I lift?

Do no lift weights heavier than 5 pounds.
Try not to bend, if you have to, use your knees to lower yourself and lift something.
You can climb stairs slowly, one step at a time.
When getting up from the bed, first turn on the side and then lift yourself up to void direct strain on the stitches.

7. When should I call the doctor or go to Emergency Room?

1. High grade fever with or without chills > 101 deg F.
2. Difficulty breathing
3. Chest tightness
4. Fainting
5. Heavy vaginal bleeding
6. Continuous vomiting
7. Increasing swelling or redness of the abdomen.
8. Foul smelling discharge from the vagina or from the incision.

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DO's

You can walk around the house and even go outdoors around the house slowly.
When resting, keep your legs elevated on a pillow to avoid leg swelling.
Take the incentive spirometer home and continue to take deep breaths 20 times every hours.
Do NOT stay in bed all the time. Complete bed rest may lead to increased risk of blood clots.

DONT's

No heavy weights to be lifted.
No intercourse, tampons, douching until you get clearance from doctor.
No smoking
Do not use an abdominal belt to support the incision.

Disclaimer

The above are only general recommendations. Any food or drug allergies have to be taken into consideration prior to following the recommendations.

PRENATAL CLASSES

DISCLAIMER

Dr. Gupta does not hold any financial affiliations or has any conflicts of interest in relation to the information provided in this booklet. The listed sources are only suggestions and by no means mandatory. We encourage our patients to make their own informed choices as an empowered individual.

We are listing only two resources for prenatal class educators in Queens. Please feel free to call them and reach your own decision.

1. **Patty Boucher, Clinical Nurse Manager, Labor and Delivery**, Flushing Hospital Medical Center. Patty has been a labor and delivery nurse for over 25 years and has been holding prenatal education classes for 15 years. She also conducts tours for expecting parents at the hospital. Please contact her at **718-670-5239** or **631-525-3499** to schedule a class/ tour.

2. **Child birth Tutors –** These classes are held in Forest Hills, Queens. They are run by Mari Carmen RPA-PC. She is an experienced Physicians Assistant who works at Labor & Delivery, New York Hospital of Queens. She has put together a detailed educational program in conjunction with a physical therapy professional to help prepare expectant mothers ail through the birthing process equipped with the right knowledge and a healthy anticipation.
   You can get in touch with her at **917-225-3237** to schedule a class.

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Maternity Care

We have a special place in our hearts for mothers and babies. Our first hospital, (opened in Manhattan in 1892), was dedicated just to them. Since moving to Queens in 1957, we have had the privilege to deliver nearly 100,000 babies.

Preparing for Childbirth Classes

- Prepared Childbirth
- Breast-feeding
- Newborn Care
- Sibling Counseling

Call (718) 670-1-MOM (1666) for times, fees, and locations.

Fertility services

If you're having trouble getting pregnant, our team of fertility specialists can help. They are in a wide variety of services including re-opening tied tubes.

High-risk pregnancy care

Women who have special health problems before or during pregnancy may be in the high-risk pregnancy category. Maternal-fetal medicine specialists, specially trained obstetricians and pediatricians, evaluate and treat women throughout pregnancy and manage premature labor.

Obstetrical anesthesiology

Directions

Travel Directions to Flushing Hospital

From Manhattan –Queens Midtown Tunnel to Long Island Expressway to exit 24 (Kissena Blvd.). At traffic light turn left and continue 1 mile to 45th Avenue. At 45th Avenue, turn right and travel 1/4 mile to hospital.
From Eastern Long Island – Long Island Expressway to exit 24 (Kissena Blvd.). At second traffic light (Kissena Blvd.) turn right and continue 1 mile to 45th Avenue. At 45th Avenue, turn right and travel 1/4 mile to hospital.
From Staten Island and Brooklyn – Belt Parkway eastbound to exit 18 (Van Wyck Expressway northbound). Continue along Van Wyck Expressway to exit 12A (Long Island Expressway eastbound). Stay on service road to Kissena. Turn left onto Kissena and take 45th Avenue (1 mile). At 45th Avenue, turn right and travel 1/4 mile to hospital.
From Bronx and Westchester – Whitestone Bridge to Whitestone Expressway (stay right after exiting bridge). to 20th Avenue Exit. At traffic light, turn left. Continue to Parsons Blvd. (second light). At Parsons Blvd. Turn right and continue 1 mile to hospital.
Public Transportation – IRT #7 train to last stop (Main Street) to either #26 or #27 bus. Or take Queens Line #65.
Get directions with map

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