Great Expectations
a guide to enjoying your pregnancy

Overlake Obstetricians & Gynecologists, PC
All of us at Overlake Obstetricians and Gynecologists hope that your prenatal care, labor, delivery and postpartum experience will be as pleasant and fulfilling as possible. With every pregnancy there may be new experiences and questions you may have. This guide will provide you with useful information throughout your pregnancy.

Our practice consists of board certified physicians, both male and female and advanced registered nurse practitioners. These practitioners are associated because of a strong sense of mutual respect for each other and their individual practice of medicine. We try to be personally available to our patients for all their care, including labor and delivery; however, it is impossible to be on call 24 hours a day 365 days a year. The physicians routinely rotate call coverage after hours, weekends, holidays, and during vacations.

**OFFICE HOURS / APPOINTMENTS**

Our office hours are 8:30 am to 5:30 pm Monday through Friday. Please call during this time for routine questions or problems and to schedule appointments. Be advised that phone calls received after 4:30 pm with routine questions will be returned the next business day. If you need to reschedule an appointment please call at least 24 hours in advance. If you are calling after hours, our main number 425-454-3366 will prompt you to be transferred to the answering service or you may dial them directly at 425-313-2168. Please try to limit after hour and weekend calls to urgent issues.

**BENEFITS AND BILLING POLICIES**

Our obstetrical fee covers the services included in a standard vaginal delivery or cesarean section. Our physicians also perform the circumcision if you have a boy and wish him circumcised. Additional services may be required and billed during your pregnancy and delivery. In addition to the obstetrician’s bill, you may receive bills from the laboratory, hospital, anesthesiologist, radiologist and pediatrician. As a courtesy to you, we will contact your insurance company to obtain an estimate on your benefits. Remember that this is an estimate only, based on proposed services and information supplied by your insurance carrier. The estimated patient balance is due in full by your 32nd week of pregnancy. Our business office looks forward to assisting you in any way possible; you may contact us at 425-454-6674. Please notify us immediately of any possible changes in your insurance status during your pregnancy.
Great Expectations

a guide to enjoying your pregnancy
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by  
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*The information in this booklet is for general reference purposes only and cannot be relied upon as a substitute for medical care. You should have regular prenatal check-ups as well as consult with your healthcare provider about any special health questions or concerns. Each pregnancy is unique and may require a special treatment program.*  
*For the purpose of clear and concise writing, the term “he” will be used to reference the baby.*
You have GREAT EXPECTATIONS...and you have a lot of questions, too. Whether this is your first pregnancy or your third, this booklet is designed to help answer those questions. You will be going through some changes during the next few months, both physical and mental. Sometimes you will wonder, “Is this normal?” “What is going on?”

This booklet will reassure you and keep you informed. Please read it from cover to cover so you will know exactly what to expect during your pregnancy. Refer to it when you have specific questions. The answers may be right here.

For the first few weeks after your pregnancy is confirmed, all you will be able to think is, “I am really pregnant.” It is a happy and emotional revelation. Yet you may also be thinking about the impact on your life, your family, your budget and other matters. So there is work to be done and many things to learn and understand. Use this booklet as a reference guide so you can make the best of your own...

GREAT EXPECTATIONS!
The First Office Visit

The first office appointment may take longer than your other visits. Your medical history will be taken by your healthcare provider. It is important to know how healthy you are to best help you and your baby. Come early to the first exam, so you can fill out a medical history. At the first appointment, some lab tests relative to pregnancy and your general health will be done. Blood tests are especially critical since they tell your healthcare provider a great deal about your medical history, which could have an effect on you or your baby’s well-being. Depending on special needs or individual medical problems, other testing may be done. Your healthcare provider will calculate your due date, if possible, at the first appointment. It becomes a special “monitoring progress” date for you. Only 1 in 20 babies is born exactly on the calculated day, although most are born within 10 days of the expected date. A full-term baby usually goes 266 days from conception to birth. You may know exactly when you conceived. If so, tell your healthcare provider. At your initial exam, as many questions as possible will be answered.

Follow-up visits are much shorter in duration than your initial visit. The focus of these checkups is to make certain that you have not developed any problems peculiar to your pregnancy. In addition, the growth and development of your baby is monitored. Certain blood tests and other tests (e.g. sonography) are performed at predetermined intervals throughout your pregnancy to monitor your progress.

Initial Office Visits

<table>
<thead>
<tr>
<th>History</th>
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<tbody>
<tr>
<td>Physical Examination</td>
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<tr>
<td>(Includes all procedures listed in follow-up office visits.)</td>
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<tr>
<td>Laboratory</td>
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<tr>
<td>• Complete blood count</td>
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<tr>
<td>• Urinalysis</td>
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<tr>
<td>• Serology (syphilis test)</td>
</tr>
<tr>
<td>• Rubella screen</td>
</tr>
<tr>
<td>• Blood type, Rh factor and antibody screen</td>
</tr>
<tr>
<td>• Pap test</td>
</tr>
<tr>
<td>• Cervical and vaginal cultures (if necessary)</td>
</tr>
<tr>
<td>• Hepatitis B screening</td>
</tr>
<tr>
<td>• Urine culture (if necessary)</td>
</tr>
<tr>
<td>• HIV testing with consent</td>
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</table>

Follow-Up Office Visits

<table>
<thead>
<tr>
<th>Mother</th>
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</thead>
<tbody>
<tr>
<td>• Weight</td>
</tr>
<tr>
<td>• Blood pressure</td>
</tr>
<tr>
<td>• Urine specimen for sugar and protein</td>
</tr>
<tr>
<td>• Measurement of uterine growth</td>
</tr>
<tr>
<td>• Repeat blood count and antibody screen (late in pregnancy)</td>
</tr>
<tr>
<td>• Pelvic exams (late in pregnancy)</td>
</tr>
<tr>
<td>• Special blood testing (glucose screening, alpha-fetoprotein test, multiple marker genetic screening, cystic fibrosis carrier screen)</td>
</tr>
<tr>
<td>• Group B strep culture</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Baby</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Fetal heart tones</td>
</tr>
<tr>
<td>• Fetal activity</td>
</tr>
<tr>
<td>• Size and growth of baby</td>
</tr>
<tr>
<td>• Location of baby</td>
</tr>
<tr>
<td>• Sonography</td>
</tr>
<tr>
<td>• Special fetal testing</td>
</tr>
<tr>
<td>• Amount of amniotic fluid</td>
</tr>
</tbody>
</table>

DUE DATE EXAMPLE

Last Period (1st Day) . . . . . October 5
Minus 3 Months . . . . . . . July 5
Plus 1 Week . . . . . . . . . July 12
OR add 40 weeks to the first day of your period
Frequency of Office Visits

The closer you get to your due date, the more frequently your healthcare provider will need to see you. Through your sixth month, appointments will be scheduled every 4 weeks. Then, plan to go to the office every 2 weeks during the seventh and eighth months and every week during that last important month. These visits will take less time than your initial exam but are just as important to make sure your pregnancy is progressing well.

Discuss Your Stresses

If you have special circumstances like single motherhood or if you are considering adoption alternatives, talk about these issues at your initial appointment. Your healthcare provider may be able to help with suggestions and references. By being open and honest with your healthcare provider, they will be able to better help you, and you should have fewer problems during your pregnancy.

Choosing a Pediatrician

By the time you complete your hospital pre-admission form, you should have selected a pediatrician who will see your baby in the nursery and will be your baby’s provider after you leave the hospital. Your pediatrician’s full name, address and telephone number must be submitted as part of the pre-admission information. Choosing a pediatrician is a very important decision since this is the person who will be caring for your child.

This person will also be giving you advice about many issues regarding your baby’s health. If a different physician will be checking your baby in the hospital, bring that information along as well.

It is important to make sure that the doctor is on your list of “providers,” if you have an insurance plan that has a preferred provider list. If you have Medicaid, your caseworker or the Health Department can give you a list of doctors you can see.

The following list contains questions you might want to ask as you interview for a pediatrician:

- What hospital do you use?
- Can you describe your care plans for my baby during the first year?
- How do you feel about breastfeeding?
- What is your opinion on circumcision?
- What pamphlets and reading materials does your office supply regarding care for my baby?
- If you are a partner in a group practice, do other members of the group share your philosophy?
- What arrangements are made for emergency treatments during and after office hours?
- What arrangements are made to return phone calls during the weekday, weekend and after hours?
- What are your fees for a scheduled routine visit and follow-up visit?
- When do I introduce my baby to solid foods?
- How soon will you see my baby after birth?
- How do you feel about prescribing medication over the phone?
- Do you use nurse practitioners or lactation consultants?

After the interview, spend some time with your partner thinking about the visit. Were your questions answered and did you establish a relationship that made you comfortable with that healthcare provider? Remember, the pediatrician you choose is being entrusted to care for the physical and emotional well being of your child for at least the next 18 years.
“Will my baby be normal?” That is the question that all parents ask, and some with good reason. Knowing the family history of both you and your baby’s father will allow your healthcare provider to anticipate certain problems that can be minimized with proper care. Today, medical technology has allowed for better diagnoses of certain genetically transmitted diseases. Prenatal tests for more than 800 genetic disorders have been developed. A procedure called amniocentesis, usually performed from 14 to 16 weeks of pregnancy, tests the fluid surrounding the baby and allows certain diseases and other factors like the sex of the baby to be detected. Other highly specialized tests may be required, depending on the family’s medical history.

### Genetic and Family History

There are certain family medical conditions that are important to the health of your baby. The following questionnaire will help determine if you are a candidate for special genetic counseling or testing.

**You should make note of any questions that you answer “Yes” and discuss them with your healthcare provider.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Will you be 35 or older by your due date?</td>
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<tr>
<td>Have you, your baby’s father or anyone in your family had:</td>
<td></td>
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<tr>
<td>Down syndrome?</td>
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<td></td>
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<tr>
<td>Spina bifida or myelomeningocele (open spine)?</td>
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<td>Hemophilia?</td>
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<td>Muscular dystrophy?</td>
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<tr>
<td>Mental retardation?</td>
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<tr>
<td>Sickle cell disease?</td>
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<tr>
<td>Tay-Sachs disease?</td>
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<tr>
<td>Cystic fibrosis?</td>
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<tr>
<td>Have you or your baby’s father produced a child born with a defect not listed in the box above or that was stillborn?</td>
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<tr>
<td>Do you, your baby’s father or a close relative in either family have any inherited genetic or chromosomal disorder not listed?</td>
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<td></td>
</tr>
<tr>
<td>Are you, your baby’s father or a close relative of:</td>
<td></td>
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<tr>
<td>Jewish ancestry or a descendant from Eastern European people?</td>
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<tr>
<td>Mediterranean ancestry?</td>
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<tr>
<td>Have you or a previous spouse of your baby’s father had 3 or more miscarriages?</td>
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You Can Expect Some Changes

Weight Gain

Your mother may tell you that HER doctor said to gain only 10 pounds, but times have changed. Today, much more is known about fetal needs and development. An average weight gain during pregnancy is 25 to 35 pounds if you were average weight before pregnancy. This weight gain seems to best nurture you and your growing baby.

Mothers who are underweight before pregnancy may gain 28 to 40 pounds. Women carrying twins may gain as much as 45 pounds. Mothers who are very overweight should limit their weight gain to approximately 15 to 25 pounds. Fifteen pounds should be a minimum weight gain for any pregnant woman. Do not panic! Because many women have problems keeping their weight down without being pregnant, the thought of gaining 25 pounds seems horrible. Keep in mind that you will lose most of the weight when the baby is born or in the postpartum period.

Keep a chart and weigh yourself weekly. You will also be weighed at every appointment. If you are simply ravenous and start to gain weight quickly, talk to your healthcare provider. Suggestions can be made for foods that you can eat in large portions and still not gain those pounds. Refer to the Diet and Nutrition section (pages 33 through 35) of this booklet for a complete outline of suggestions.

Breast Changes

Right from the beginning, your breasts may be larger, firmer and more tender than usual. The areola, the dark area around the nipples, may get larger and grow darker in color. Halfway through your pregnancy, your breasts may start to secrete fluid (colostrum) in small amounts. Be sure to keep them clean. There are special pads you can purchase if you are leaking colostrum to protect your clothes. The veins right under your skin may become more noticeable, too. This is caused by an increased blood supply preparing your breasts for milk production. If you are planning to breastfeed your infant, no special nipple preparations are required, although it is recommended that you keep your nipples dry and wash them only with warm water. Soap is not necessary.

Urination

When your uterus expands, it puts pressure on your bladder. The need to frequently urinate is common in the first stages of pregnancy and in the last weeks. Do not try to control this issue by drinking fewer fluids. Be sure to stay hydrated and drink to thirst.

Excessive Salivation

This condition is frequently confused with vomiting in pregnancy. It is caused by excessive secretion of the salivary glands in the mouth and is quite annoying and difficult to treat. It tends to diminish in the latter half of pregnancy.

HINT: Mints, chewing gum, frequent small meals and cracker snacks can be helpful.
**Nausea**

“Morning sickness” is not necessarily confined to the morning hours. Try eating smaller meals of simple foods, avoiding spicy and highly acidic foods. Lying down immediately after eating for just a few minutes may also be helpful. If your nausea is more severe than this, try eating a dry saltine cracker just before getting up in the morning. Sometimes a little bland food in the stomach will help you keep your breakfast down. Few women suffer with nausea after the fourth month, but if unusually severe, call your healthcare provider. Medication is usually reserved for those who have significant vomiting or dehydration. While the exact causes of nausea during pregnancy are not totally understood, you may or may not experience this common problem.

*HINT: Take your prenatal vitamin or iron during the day when nausea is not a problem.*

**Heartburn**

Heartburn is another common complaint of pregnant women. It is not your heart that is burning, it is your stomach! This is common indigestion, but it can still be an aggravation. It is fine to use an antacid preparation, but do not use baking soda or sodium bicarbonate preparations for your heartburn. Before you buy an over-the-counter remedy, ask your healthcare provider to recommend the most appropriate choice. In severe cases of heartburn, you may want to elevate the head of your bed to encourage your stomach fluids to stay put! (You can add 4 inches of books beneath the head posts to elevate the head of the bed temporarily.)

**Constipation**

As mentioned earlier, you need to drink lots of fluids while you are pregnant. Drinking fluids is one way to avoid constipation, a common complaint of pregnant women. Exercise every day and eat plenty of fruits and raw vegetables. Try all the natural remedies first, including the addition of bran and bran products to your diet. If these do not work, your healthcare provider may prescribe a very mild laxative or stool softener. Do not be shy about discussing constipation because it is a common problem during pregnancy.

**Shortness of Breath**

Shortness of breath may be a problem for you during the last month or 2 when the baby is large enough to interfere with your breathing muscles. Slow down your movements and practice deep breaths from the chest. If you have trouble sleeping due to shortness of breath, prop yourself up with pillows.
**Backache**

As your womb grows, the joints in the pelvis relax, which can also cause pain in your lower back. Comfortable shoes and good posture may help, but exercise may relieve your backache more than anything else. Strong muscles can tolerate more stress without hurting.

Develop a routine of back exercises every day from the beginning of your pregnancy. There are many good books available about exercising and pregnancy. The more important routines are shown in this booklet on pages 36 through 38. Toward the end of pregnancy, some women feel that the baby is pushing on a nerve in their back causing discomfort in their lower back. Get on your hands and knees and let the baby’s weight fall toward the floor. This will relieve the pressure on your back as the baby shifts, and it may give you a great deal of backache relief.

**Insomnia**

Early in your pregnancy, you may be very tired and sleep all the time. However, at the end of your pregnancy, you may wish those days were back again. Usually, trouble with sleeping comes from the difficulty of finding a comfortable sleeping position. If you have always slept on your stomach, you are going to experience difficulty sleeping during pregnancy. Exercising a few hours before you go to bed or taking a warm bath may help you rest easier. It is important not to drink alcohol or take sleeping pills to try to solve this problem. Work with your healthcare provider to find a safer way to get enough sleep. Shortness of breath or heartburn may aggravate this situation, so prop yourself up at night. Also, an active fetus might keep you awake, so avoid drinking caffeinated beverages.

**Varicose Veins**

Varicose veins or “varicosities” are caused when the veins in your legs get weak and enlarge with blood. The veins have to work harder to carry blood back up your legs to your heart. Sometimes pregnancy can aggravate this problem. The enlarging uterus partially cuts off circulation from your legs. Exercise will help, and it is important that you do not stand for long periods of time without moving. When you sit, try to prop your legs up to allow better circulation. Varicose veins are more of a problem for women having their second or third child. Even if you are having your first baby, try to do as much as you can to aid instead of hinder the circulation in your legs.

Rest periodically with your legs up. Short walks at different times during the day will help pump your blood faster. Support panty hose help tremendously but avoid tight clothing like knee highs or thigh high stockings that could cut off circulation more. The area around the vulva can also suffer from varicosities during pregnancy. Again, rest periods spread out during your day will help. Place a pillow under your buttocks to elevate your hips and aid circulation.

**Skin Changes**

Many women get very upset about changes in the color of their skin, but these changes are common. Changing hormone levels cause most of these skin color changes, but they usually all go away or fade dramatically after the baby is born. Your skin may simply look “flushed,” like you are blushing. If you have especially pale skin, you may develop brownish markings on your face. Some women get a dark line down the middle of their abdomen, where the skin darkens considerably from the navel to the pubic hair. This is called *linea nigra*. Acne crops up to plague some, or acne may actually be helped by pregnancy in others.
Hemorrhoids

Many women suffer with hemorrhoids or get hemorrhoids for the first time while they are pregnant, but this does not necessarily have to happen to you. Hemorrhoids are enlarged veins right at the opening of the rectum. Though they are sometimes due to the blockage of circulation caused by the increased size of the baby you are carrying, hemorrhoids are also frequently caused by the straining due to constipation. If you do suffer with hemorrhoids, try lying on your side or elevate your hips on a pillow. Soaking in a warm tub can help as well. But before you use any over-the-counter ointments and remedies, be sure to ask your healthcare provider if they are safe for your baby. The medication in ointments is frequently absorbed through the skin and rectal lining and may affect your baby’s system. If you suspect your hemorrhoids are bleeding, call your healthcare provider.

Vaginal Discharge

You may notice an increase in vaginal discharge during your pregnancy. This mucous secretion occurs from the cervix in response to the hormones of pregnancy. All this is quite normal and there really is not much that can be done to change the situation. Of course, excessive discharges that itch or have a bad odor should be evaluated. Many women seem to get yeast or other vaginal infections that need treatment during pregnancy. However, these are not thought to be harmful to the baby.

Pica

Pica is the medical term for the unusual cravings for strange foods that you may experience during pregnancy. Healthcare professionals do not know why this happens, but many women experience it. It is important to keep eating your balanced diet, no matter what you are craving. If you feel like eating a pot of spinach at 2 o’clock in the morning, go ahead. But if you feel like eating hot chili or a gallon of your favorite ice cream...that is another issue!

A desire to eat ice or strange items such as starch, dirt or clay could indicate a nutritional deficiency as well.

Prevention is the key here! Eat correctly and add fruits, raw vegetables, bran products and lots of water to your diet every day.
Abdominal Pain
During the latter half of pregnancy, you may suffer with lower abdominal pain. This pain can occur on one or both sides of the lower abdomen, and it is usually caused by the stretching of ligaments that support the uterus (round ligament pain). This stretching may occur early in pregnancy and feel like “menstrual cramps.” Constipation can also cause abdominal pain. Resting with a heating pad may help, and you may want to try a maternity support girdle.

\begin{flushleft}
If abdominal pain is severe and continues, PLEASE CALL YOUR HEALTHCARE PROVIDER!
\end{flushleft}

Round Ligament Pain
You may experience sharp pain in one or both groin regions from stretching and spasms of the round ligaments. These cord-like structures originate beneath the groin area and extend to the top of the uterus on both sides. Round ligament pain may be aggravated by sudden movements like rolling over in bed or walking.

\begin{flushright}
\textit{HINT:} Reducing physical activity and the application of warm heat can help round ligament pain.
\end{flushright}

Swelling
As previously mentioned, pressure from the growing uterus and your changing hormones can cause swelling, especially in your legs. Swelling is due to the blockage of drainage pathways and some is caused by water retention.

\begin{flushright}
\textit{HINT:} Support hose and resting with your legs elevated may be helpful in reducing swelling.
\end{flushright}

Joint Pain
Frequently, in the latter stages of pregnancy, swelling can occur in the joints and cause pain that feels like arthritis. This is especially seen with women who develop leg swelling during the day and feel stiff, sore finger joints the following morning after resting overnight. A similar situation occurs in carpal tunnel syndrome, where a nerve that supplies sensation to the hands becomes entrapped in a tunnel of tissue in the hand because of swelling. The involved nerve produces numbness in one or both hands more frequently at night. Both conditions are improved by bed rest and sodium restriction during pregnancy and the natural fluid loss that occurs after birth.

\begin{flushright}
\textit{HINT:} A hand splint worn at night may also be helpful.
\end{flushright}

Stretch Marks
Yes, we need to talk about stretch marks! Those discolored zigzagging lines that no woman wants to see on her body can be expected right along with pregnancy. There really is nothing that can be done to avoid them. Stretch marks may show up on the breasts, buttocks and the lower abdomen. They can also appear on other areas of the body as well. Moisturizing creams probably will not do much to help because stretch marks are caused by the breakdown of elastic tissue right below the skin’s surface. Excessive weight gain is associated with stretch marks. It is important to keep weight gain under control. The good news is that stretch marks usually fade and become less noticeable after pregnancy.
**Contractions**

The uterine muscle contracts spontaneously from early pregnancy until the onset of real labor. These contractions are usually irregular and painless, known as *Braxton Hicks* contractions and may produce “false” labor if they become painful. If they become progressively closer together, last longer and become more painful, notify your healthcare provider so they can make certain you are not in early labor.

**Dizzy Spells**

During the early stages of pregnancy, you may experience dizziness or fainting. This is caused by the circulation changes happening in your body and usually goes away by the second half of pregnancy. Lying on your back toward the end of pregnancy may also cause dizziness. Lying on your left side is recommended to relieve pressure of the womb on the large vessels that return blood from the lower body to the heart.

Do not change positions suddenly. When you are lying down, ease yourself up to a standing position in stages. Do not move too quickly!

**Nose Bleeds**

Some women have frequent nose bleeds during pregnancy caused by extra blood supply in the nasal lining. You can treat nose bleeds with firm finger pressure on the side of the nose that is bleeding. Call your healthcare provider if the bleeding is heavy and/or you are unable to stop it by applying pressure. Nasal congestion is also common. Avoid nose drops unless discussed with your healthcare provider.

**Headaches**

Headaches are one of the most common complaints, along with nausea, in the first few months of pregnancy. Most headache remedies are not helpful. These headaches are caused by blood circulation changes and will usually disappear after the first half of the pregnancy. If you notice the headaches are associated with sensitivity to light, excessive nausea or vomiting, fever or other neurological signs, call your healthcare provider.

Symptoms I am experiencing:
Perinatal Mood and Anxiety Disorders are linked to mood and anxiety symptoms that occur during pregnancy.

**Perinatal Mood and Anxiety Disorders**

During pregnancy it is natural for women to experience changes in their feelings and mood. This includes feeling more tired, irritable or worried. While mild mood changes during pregnancy are common, mood symptoms can sometimes become severe enough to require treatment by a healthcare provider. If feelings of depression or anxiety persist for a few weeks or interfere with daily activities, it is time to ask for help. Depression and anxiety during pregnancy can worsen and continue into the postpartum period.

**Symptoms of Depression During Pregnancy**

- Feeling sad, depressed and/or crying a lot.
- Diminished interest in wanting to be a mother.
- Feeling worthless or guilty.
- Thoughts of harming yourself.
- Having low to no energy.
- Sleep problems – either not being able to sleep or sleeping more than usual.
- Increase or decrease in appetite or weight.
- Trouble focusing, remembering things or making decisions.
- Feeling restless or irritable.
- Having headaches, chest pains, heart palpitations, numbness, or hyperventilation.
- Strong anxiety, tension and/or fear either about the baby or that you will not be a good mother.

**Sexual Changes**

Your mood shifts come and go with other emotional changes, including your feelings about sex. Desire for sex may rise or fall significantly during pregnancy. If you lose interest in sex, do not worry. It happens to a lot of women and does not usually last long. Be sure to discuss your feelings with your partner and have him read this booklet with you. Remember, pregnancy is a natural process and a woman’s body is designed to handle it with a minimum amount of stress. Your mind is changing, too, right along with the fluctuation of your hormones.
Throughout your entire pregnancy, the well-being of you and your baby is your healthcare provider’s main concern. Thanks to medical technology, new and innovative tests are available to carefully monitor your health and the progress of your baby. Today, many fetal problems can be detected and treated while the baby is still in the womb. The different prenatal tests at times can be confusing, especially to first-time mothers. Your healthcare provider has 4 categories of tests that are utilized during pregnancy.

**Routine tests** are performed on virtually all pregnant mothers to detect conditions that might be harmful and treatable.

**Screening tests** such as blood tests or ultrasounds are part of all prenatal care. Several screening tests are performed on all pregnant mothers, regardless of family history and risk factors. Others are only used for mothers considered to be high-risk (age at pregnancy, ethnic background, etc.). If a screening test indicates the possibility of an abnormality, your healthcare provider will most likely order related diagnostic tests.

**Diagnostic tests** are used to make certain the diagnosis of a condition. It is used when screening tests might indicate a problem. It is also utilized when maternal age, family history, or your medical history indicates the likelihood of a medical problem. Diagnostic tests may carry additional risks and are not considered routine for all pregnant mothers.

**Monitoring tests** are done later in pregnancy to monitor the health of the baby as it matures in the mother’s womb.

### Routine Tests

These tests are routinely performed on all pregnant mothers during their pregnancy. They are designed to give baseline medical information about the overall health of the mother and allow for treatment of conditions that could prove harmful to the mother and/or baby during pregnancy.

These include the following:

- Complete blood count
- Serology (syphilis test)
- Rubella screen (German measles test)
- Blood type, Rh factor, and antibody screen
- HIV testing (with permission)
- Hepatitis B screening
- Urinalysis (and culture if necessary)
- Glucose tolerance test (later in pregnancy)
- Group B strep culture (later in pregnancy)
- Ultrasound (use is determined by healthcare provider)

Abnormal results on any of these tests may require special treatment or management during pregnancy. The glucose tolerance test and group B strep cultures which are performed later in pregnancy are described in more detail next in this section.
**Routine Tests** (continued)

### Glucose Tolerance Test

This safe and simple test is performed between 24 and 28 weeks of pregnancy to screen for **gestational diabetes**, a condition developed by some women only during pregnancy. Some medical practices may also, additionally screen early in pregnancy. Initially, you drink a concentrated sugar solution, and at a timed interval, your blood is drawn and tested to determine how well your body uses or metabolizes the sugar. Diabetes exists when there is a high amount of sugar in your blood due to the body’s failure to handle the sugar substances in a normal fashion. For more information on diabetes, see pages 41 and 42.

### Group B Strep Testing

Group B streptococcus (GBS) is a type of bacteria that can normally be found in the birth canal of about 25% of all healthy, adult women. Normally, its presence will cause no disease or symptoms. However, vaginal birth may subject the baby to be infected with a group B strep which can be serious in the newborn period.

Cultures taken from the vagina at 35 to 37 weeks are the most accurate method to determine if GBS is present in the birth canal. This procedure is painless and requires about 2 days to get the results. **All women who test positive for GBS will receive antibiotics during labor.** For more information, see Group B Strep on page 43.

### Screening Tests

In addition to the routine tests, there are several screening tests that are usually performed as the pregnancy progresses. As with all testing, it is important to communicate with your healthcare provider any concerns or questions. Outlined in the following section are the standard screening tests frequently performed during pregnancy. If the screening test is abnormal, diagnostic testing may be required.

### Sonography or Ultrasound

Ultrasound is utilized throughout the entire pregnancy for various situations as needed by your healthcare provider. It is frequently used to detect a problem or monitor a condition of the fetus in the mother’s womb. During the first few months of pregnancy, this test can tell if the baby is developing properly. Should vaginal bleeding occur, a sonogram can help to explain why. This test can also verify your due date and determine whether or not you are carrying twins. Unlike x-rays, sonography uses sound waves to produce an ultrasound video “picture” of the fetus moving inside your uterus. This picture is generated from an instrument that is placed either on your abdomen or in your vagina. You can actually see the baby on a special screen while your healthcare provider is performing the test. After early pregnancy if the baby is positioned correctly, your healthcare provider may be able to tell the baby’s sex. Later in pregnancy, the test can track the baby’s growth, locate the placenta, determine the volume of amniotic fluid and detect some types of birth defects.

A sonogram requires little of your time and is performed either in the office or in the hospital. A full bladder may be needed and is usually the only discomfort experienced. No harmful effects have been reported during decades of use.

### Nuchal Translucency Screening

Your healthcare provider may perform a **nuchal translucency screening (NTS)** in your first trimester. This screening is noninvasive and involves the use of ultrasound. The test will not only confirm how far along your pregnancy is, but also determine a measurement of fluid underneath the skin fold along the back of the baby’s neck. This measurement is called **nuchal translucency**. Blood samples from the mother may also be drawn to analyze hormones and proteins (markers) that are found in the blood of all pregnant women. The combination of these 2 tests can help identify pregnancies with a high risk of Down syndrome and other chromosome abnormalities.
Screening Tests (continued)

Multiple Marker Genetic Screening

In the past, pregnant mothers who were age 35 or older were offered diagnostic genetic testing in order to discover those babies with Down syndrome or other chromosomal defects. This testing consisted of chorionic villus sampling (CVS) or amniocentesis (see page 19). Both had some risk for complications. This older group of women had proportionally more pregnancies with Down syndrome and other chromosomal defects, but overall accounted for only 1 of 5 babies born with these abnormalities.

Now because of more effective screening tests, prenatal screening for Down syndrome (trisomy 21) and other chromosome defects is available to all pregnant women regardless of age or other risk factors.

Humans have 23 pairs of chromosomes with 1 of each pair coming from the mother and the father of the baby. The chromosome pairs are numbered 1 through 23. On occasion an extra chromosome can appear as part of the pair and are called trisomies (3 chromosomes rather than 2). At times 1 of the chromosome pairs may be lost and have only 1 chromosome representing the pair. All of these situations can present a problem for a developing baby.

**Down syndrome (Trisomy 21)** is the most common. These infants appear physically with flattened noses and slanted eyes. They can live into adulthood and experience a range of mild to severe mental disabilities, heart defects, hearing and visual difficulties. **Trisomy 13** and **Trisomy 18** are far more serious with many of these infants living only a few days and most not reaching their first birthdays. They have multiple severe medical problems.

Screening tests for these disorders require a special blood test and sonogram for nuchal translucency in the first trimester. A second set of blood tests are done in the second trimester. These tests combine blood protein and hormone substances (markers) with alphafetoprotein to be called the TriScreen or QuadScreen tests. The results of all these tests taken together give your healthcare provider an indication of whether diagnostic testing with chorionic villus sampling (CVS) or amniocentesis should be performed to determine whether a genetic problem truly exists.

Remember, screening tests are designed to spot a potential problem. Unfortunately, these screening tests will also identify approximately 5% of women who actually have no problem. Diagnostic testing shows with a high degree of accuracy that a problem actually exists and may be recommended. The use of nuchal translucency screening (NTS) and blood samples in the early and mid portion of pregnancy offer the best chance to identify abnormal pregnancies.

### Multiple Marker Screening

<table>
<thead>
<tr>
<th>1st trimester blood draw</th>
<th>2nd trimester blood draw</th>
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</thead>
<tbody>
<tr>
<td>10 - 14 weeks</td>
<td>15 - 20 weeks</td>
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</tbody>
</table>

Nuchal Translucency

Most of the severe chromosomal problems that occur with pregnancy are not compatible with life and result in miscarriages early in pregnancy.

At present, there is not a standard way that healthcare providers offer this combination of test to you. Different medical practices and healthcare providers will approach these tests somewhat differently depending on your test results and their preferences. The ultimate goal will be the same – to detect a potential problem and deal with it appropriately.
**Screening Tests (continued)**

### Alpha-Fetoprotein Test (AFP)

This presently is an optional blood test performed between the 16 and 18 weeks of pregnancy either alone or in conjunction with the TriScreen or QuadScreen tests done with multiple marker testing. This special blood test detects **neural tube defects**. Neural tube defects result in abnormal development of the brain or spinal cord of the fetus.

Defects in the central nervous system occur when the neural tube (the brain and spinal cord tissues) fail to close as the fetus develops. When the brain and spinal cord are exposed directly to the amniotic fluid that surrounds the baby, it is called an “open defect.” Sometimes the poorly developed neural tube is covered by skin or bone, referred to as “closed defect.”

The 2 most common neural tube defects are **anencephaly** and **spina bifida**. Babies with anencephaly are born with under developed deformities of the head and brain and usually do not survive. Those born with spina bifida can live a long time but may suffer paralysis in the lower body and legs. Also, there is often a lack of bladder and/or bowel control, which on occasion may be treated with surgery.

**As with all prenatal tests, a normal test does not guarantee a normal baby at birth.** About 20% of the infants born with neural tube defects have normal **alpha-fetoprotein** (AFP) levels. Most of these are closed defects which are typically less severe. Conversely, an initial abnormal test reading does not mean the fetus has a neural tube defect. Abnormal levels of AFP are frequent, occurring in about 50 of every 1,000 women tested. Only 1 or 2 of those 50 actually have a neural tube problem. A high AFP may be due to a miscalculation of the baby’s age or due to twins in the womb. Various other temporary fetal conditions can cause an elevated AFP reading. Second AFP tests are normal in about half of those who are retested.

If a second test also indicates an abnormal AFP, a sonogram is usually given to determine the fetal age, to look for more than 1 fetus, or scan for neural tube defects and other abnormal conditions which may be responsible for the abnormal test. If the sonogram shows a single fetus at the approximate age determined by the initial due date with no visible fetal abnormalities, an amniocentesis is performed. An abnormally high level of AFP in the amniotic fluid indicates a 90% chance that a serious problem is present. An abnormally low AFP reading may indicate that there is a chromosomal problem, such as Down syndrome.

**Cell Free Fetal DNA (Non Invasive Prenatal Testing)**

This is the newest and one of the most promising tests that appears both reliable and safe. At present, it is quite expensive and not covered by most insurance companies and is not recommended for screening of low-risk pregnancies.

A small sample of blood from a mother as early as 10 weeks pregnant can detect a small amount of DNA that has spilled into her circulation from the developing fetus and placenta. The test detects extra amounts of chromosome material associated with trisomy 21, trisomy 18 and trisomy 13. It can also detect a certain number of other chromosome problems associated with the loss or addition of a chromosome. With modern technology, results are available in about 1 week.

**Currently, it is only recommended for "increased risk" pregnancies with 1 or more of the following:**

- Advanced maternal age (>35 years)
- Personal or family history of chromosome abnormalities
- Fetal ultrasound abnormality associated with a possible chromosome problem
- Positive genetic screening test

It appears most useful for those who have positive multiple marker genetic screening test results as outlined above indicating the possibility of a genetic defect. If this test is negative, most chorionic villus sampling (CVS) and amniocentesis procedures are avoided which carry a small risk of miscarriage.
Cystic Fibrosis Carrier Testing

Cystic fibrosis (CF) is a genetic disease that produces problems with breathing and digestion. It causes the lungs and intestines to produce a thick mucus that tends to clog these systems. Medications are available to treat the problems, but they become more difficult to manage as one ages. The severity of symptoms are milder with some individuals, and more severe with others. Rarely do individuals with CF live past their forties.

The purpose of CF carrier testing is to identify those couples at increased risk for giving birth to a child with CF. Anyone could be a carrier and would have no indication that they carried the gene for CF. The risk of being a carrier is higher among certain ethnic groups and those families that already have a history of CF.

The genes that determine genetic diseases come in pairs – one from the father and the other from the mother. In order to develop cystic fibrosis, both abnormal genes must be present in the baby. Individuals that have only one gene of the pair abnormal for CF are known as cystic fibrosis carriers. Both parents must be carriers in order for a child to be born with cystic fibrosis.

A simple blood test can determine if a mother is a carrier of CF, and the results can be available within 1 to 2 weeks. If the mother is determined to be a carrier, then the father of the child should be tested. A negative test does not completely eliminate the risk of being a carrier since rare abnormalities in the CF gene are not included in all CF testing. If both parents test positive as CF carriers, chorionic villi sampling (CVS) or amniocentesis can be performed to determine if the unborn child has both genes and will be affected. Only 1 in 4 of the unborn children tested will have the disease. The decision to accept or decline testing is entirely up to the individual or couple. Insurance companies may not cover this screening test.

Risk of being a CF carrier with no family history of CF:

<table>
<thead>
<tr>
<th>ETHNICITY</th>
<th>CARRIER RISK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
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</tr>
<tr>
<td>Ashkenazi Jewish</td>
<td>1 in 26</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1 in 46</td>
</tr>
<tr>
<td>African American</td>
<td>1 in 65</td>
</tr>
<tr>
<td>Asian</td>
<td>1 in 90</td>
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</table>

Fetal Fibronectin (fFN) Test

The fetal fibronectin (fFN) test is used to determine your risk of giving birth to your baby early (before 37 weeks). This test is safe and simple and consists of collecting a small amount of vaginal secretion on a swab much like a Pap smear. It can be performed between 22 and 35 weeks of pregnancy and is reported as positive or negative.

A negative test means you are at low risk of having a premature birth within the next week or so. On the other hand, a positive result means you are at increased risk to give birth prematurely. Treatment for a positive test will depend on other factors related to the pregnancy. The test may be repeated every 1 to 2 weeks depending on other variables. However, this test is not done routinely and its use is for special circumstances related to preterm labor.
Diagnostic Tests

As explained earlier, the indication of an abnormality from a screening test usually requires one of the following diagnostic tests for further evaluation. Diagnostic tests carry additional risks and are not considered routine for all pregnant mothers.

Chorionic Villus Sampling, or CVS

Chorionic villi are tiny outgrowths from the placenta. These outgrowths attach to the mother’s uterine tissue to allow the placenta to form. An actual sample of the placental tissue is removed to obtain the chromosome test. **Chorionic villus sampling (CVS)** is used to diagnose abnormalities in the fetus and is performed during the ninth to eleventh week of pregnancy. It offers the advantage of an earlier and more rapid diagnosis than amniocentesis. Unlike amniocentesis, which analyzes substances obtained from the fluid surrounding the baby, CVS uses small fragments of the placental tissue to grow the chromosomes for further analysis. This test is not as widely available as amniocentesis. Therefore, it may not be an option for you. There is a very small risk of miscarriage with this test.

Amniocentesis

**Amniocentesis** involves withdrawing and testing a small amount of the amniotic fluid surrounding the fetus. It provides very reliable information about:

- Rh disease, or blood incompatibilities between mother and baby.
- Genetic defects such as Down syndrome, cystic fibrosis and others.
- Certain defects related to abnormal brain and spinal cord development, or neural tube defects.
- Fetal maturity near the end of pregnancy.

The timing of an amniocentesis will vary depending upon the initial reason for evaluation. Genetic and neural tube defects with this test, for example, are usually investigated after 15 weeks and before 20 weeks. Fetal maturity and blood incompatibility are evaluated much later in the pregnancy.

Amniocentesis is generally performed in conjunction with sonography to prevent injury to the baby, the cord and the placenta. Only 1 or 2 tests can be run on a sample of amniotic fluid, so it is important that your healthcare provider knows what problems to look for before the procedure is done. An amniocentesis is considered 99.5% safe and usually involves little risk. But still, this is not a routine test. It is performed only to detect a highly probable medical problem. You should not be concerned about the loss of amniotic fluid. Only a small amount is withdrawn, and your body rapidly replaces it with no harm to the baby. Most women report that an amniocentesis is relatively painless, but does have a very small risk of miscarriage.

Fetal Maturity Tests

Tests can be performed on amniotic fluid late in pregnancy to determine the maturity of the fetal lungs. The maturity of the baby’s lungs has more to do with its ability to survive than does its weight at birth. Babies born with immature lungs can suffer from a condition called **respiratory distress syndrome**, or **hyaline membrane disease**, which is a leading cause of death in newborns. This condition results from a lack of certain chemical substances that allow the lungs to mature which make it possible for the oxygen we breathe to be transferred from our lungs to our blood. The blood carries oxygen to cells throughout our bodies. Without oxygen, our body cells die.

There are 2 major chemical substances that are found in the amniotic fluid surrounding the baby that measure lung maturity. By amniocentesis, these substances can be collected and measured. Levels indicating fetal lung maturity typically occur sometime after 35 weeks of pregnancy. This information is extremely valuable when complications of the mother or baby call for early birth or when there is an uncertain due date. Size of the baby is not a determining factor in lung maturity.
Monitoring Tests

In addition to the screening and diagnostic tests, there are tests available to monitor the well-being of the unborn baby. These tests are important and generally performed later in pregnancy.

**Fetal Movement Test (Kick Count)**

Did you know your baby has a sleep-wake cycle lasting from 20 minutes to 2 hours? This and many other factors influence the mother’s ability to feel her baby move. Women typically feel that first “flutter” of life – called **quickening** – between 16 and 20 weeks of pregnancy. Fetal movement is more noticeable in mid pregnancy and may diminish as the pregnancy progresses to term. The baby’s position, the mother’s blood sugar level, her occupation and eating habits, as well as sound, light and physical stimulus to the uterus also can affect fetal movement. Finally, each fetus has a movement rhythm that is typical for them and each pregnant mother has a different ability to recognize her baby’s movement.

The **kick count** refers to spontaneous fetal movements experienced by the pregnant mother. The American Congress of Obstetricians and Gynecologists (ACOG) recommends that you note the time it takes to feel 10 kicks, twists, turns, or rolls. A healthy baby should have at least 10 kicks in less than 2 hours. Most babies will take less than 30 minutes. If you do not feel 10 kicks in a 2-hour period, recount within 1 to 2 hours. If you get the same result, contact your healthcare provider.

**Non-Stress Test and Contraction Stress Test**

Late in pregnancy, prior to the onset of labor, a fetal monitor may be used to determine the well-being of the baby and to help determine when the baby should be born. This type of testing is most frequently used if a baby is past due or there are complicating medical conditions in the mother, such as high blood pressure, Rh disease, bleeding or kidney disease. It is also helpful in evaluating a fetus who is not growing properly, or whose growth has significantly slowed down.

The **non-stress test (NST)** is used to evaluate fetal heart rate patterns, especially during fetal movements. A test that identifies a rise in fetal heart rate with baby movement is reasurance of fetal well-being, and the test is called **reactive**. A non-reactive test may indicate a sleepy baby, medication effect, or a problem with the baby. This may require further testing.

The **contraction stress test (CST)** will allow your healthcare provider to evaluate how the fetal heart reacts to uterine contractions. Certain fetal heart tracing characteristics occur in both healthy and unhealthy fetuses. The uterine contractions can be induced by a medication called pitocin (synthetic oxytocin) which is administered intravenously. Another way to stimulate contractions is through the **nipple stimulation test**. This will encourage the natural release of the hormone oxytocin. The “stress” created by the contractions will tell you if the baby is doing well and receiving an appropriate amount of blood and oxygen.

**Biophysical Profile**

This complex test combines various parameters from the ultrasound exam (including fetal movements, breathing motions and amount of amniotic fluid) with the non-stress test findings to “score” each pregnancy. The total score is helpful in evaluating the well-being of the baby, and it helps to determine, in part, how your healthcare provider will manage your pregnancy. This is a more extensive evaluation than the non-stress or contraction stress tests and requires more time to gather the information.
There are several diseases and infections that may cause serious problems for your unborn baby. You should be aware of the various possibilities and understand your risk potential. As with all pregnancy-related issues, if you feel you might have a certain disease or infection, notify your healthcare provider immediately. The following pages outline many of the common diseases and infections that may be harmful to not only the mother but also her unborn baby.

**Genital Herpes**

Genital herpes is a viral disease that affects the sexual organs in both men and women. A newborn can experience serious permanent neurological damage and even death if he is infected during birth. Approximately 50% of infants born to mothers experiencing their first outbreak at the time of giving vaginal birth will be infected with the virus. Mothers with recurring infections (recurrent herpes) are not nearly as likely to infect their newborn babies. Your healthcare provider absolutely must know if you or your husband or partner have ever had herpes, so that proper precautions can be taken for the birth. You should tell your healthcare provider about every flare-up you have during your pregnancy, so they can examine you and take a culture if it is necessary.

The recommended treatment of genital herpes has varied considerably over the past several years. Your healthcare provider may perform cultures wherever active lesions are present. If you have no history of recent flare-ups or visible lesions at the time of your labor, a vaginal birth is recommended.

**German Measles**

German measles, a viral disease, can be very harmful in the first 3 months of your pregnancy when your baby’s organs are developing. It can cause birth defects involving your baby’s eyes, ears and heart. Several skin rashes associated with fever mimic German measles, but blood tests can rule it out.

If you suspect you have been exposed to German measles, call your healthcare provider immediately. They may already have a blood test from this pregnancy or one of your previous pregnancies that confirms whether you should be concerned about this disease. Remember, you must actually contract the disease in order to put your developing baby at risk.

Once you have had the illness, you are immune for life. If your blood test results show you have never had this infection, your healthcare provider will probably recommend you get immunized after this pregnancy. *Most mothers have immunity to German measles because of vaccinations early in childhood.*
Hepatitis B in Pregnancy

Hepatitis is an infection of the liver caused by many different viruses. If you have ever been infected by the hepatitis B virus and become pregnant, there may be problems for your newborn baby. A certain number of people who contract hepatitis B develop chronic hepatitis – a condition that can eventually destroy the liver. Also, it can allow the infected person to give the virus to others without knowing it. This is the problem with the pregnant mother and her baby.

A very high number of mothers who test positive for hepatitis B will unknowingly infect their newborn babies. Approximately 1 out of 4 of these infected babies will not survive from the infection. By detecting this infection in the pregnant mother, the vast majority of these newborns can be treated at birth. This prevents the baby’s infection and eliminates the baby’s risk of dying from the disease. It also prevents the child from unknowingly passing the infection on to others as they age. Your healthcare provider will perform this relatively simple and inexpensive blood test early in your pregnancy. Your baby’s healthcare provider may routinely immunize your newborn infant against this immediately following birth.

Toxoplasmosis

Toxoplasmosis is an infection that you can get from eating raw or under-cooked meat or by transfer from cats.

Generally, cats get the parasites from mice or rats, then excrete the organism in their stool. If you get infected during your pregnancy, you may experience mild flu-like symptoms. It is during this illness that your baby will become infected. Your unborn child may suffer permanent eye and neurological damage.

Precaution is the key to avoiding this disorder. Ask someone else to empty your cat’s litter box while you are pregnant. Wash your hands carefully after you handle your cat.

**HINT:** Delegate cat litter cleaning duty to your partner and wash your hands after holding your cat.

Listeriosis

Listeriosis, a serious infection usually caused by eating food contaminated with the bacterium *listeria monocytogenes*. It is an important public health problem in the United States. Pregnant women typically experience fever and other non-specific symptoms, such as fatigue and aches. However, infections during pregnancy can lead to miscarriage, stillbirth, premature delivery or life-threatening infection of the newborn. See page 33 for more information.

Chicken Pox (Varicella)

Most women have already had chicken pox during their childhood or have been immunized. That is why the disease is so uncommon during adulthood. It is, however, likely to be more severe in adults and pregnant women who do contract the virus. Pregnant women can develop chicken pox pneumonia, which can be quite serious and life-threatening.

Very seldom has the development of chicken pox during early pregnancy been implicated in miscarriage and congenital malformations. There is an injection called varicella-zoster immunoglobulin that can be given to a pregnant woman who becomes infected. This treatment may prevent her from developing a severe form of the disease if given within 96 hours of exposure. If you become infected at or near the time of giving birth, your healthcare provider will also give your baby a special immunoglobulin injection to prevent the serious infection. Fortunately, once you have had this disease, you do not have to worry about being exposed to someone who has chicken pox while you are pregnant. You have life-long immunity!
Acquired Immune Deficiency Syndrome (AIDS)

AIDS is caused by a virus that attacks the body’s natural ability to defend itself against infection and sickness. The immune system helps you recover from colds and flu and allows wounds to heal. When the immune system fails, such as in individuals with AIDS, the body is an easy target for infections and certain cancers that rarely attack normal immune systems.

The 3 most common ways to contract AIDS are by sharing intravenous needles, having sex with an infected person, or mothers passing it to their unborn babies. The risk of an infected mother passing the virus to her newborn child is high, occurring 10 to 50% of the time. Medication can now reduce the risk to less than 10% in the newborn baby. There is no evidence that the disease can be contracted by casual contact with others, or through water, the environment or food. You can significantly reduce the risk of getting AIDS if you use condoms during sex and avoid sharing needles if you use drugs. A simple blood test will determine if you have been exposed to the virus. However, it may be years before AIDS symptoms become obvious, if ever. Between the time of exposure and the development of noticeable signs of the disease, symptoms are non-specific or nonexistent.

All women are encouraged to be tested for HIV, the virus that causes AIDS, during the early part of pregnancy. Repeat testing closer to the birth is recommended for all women considered high risk. This includes current or former drug users and those whose sexual partners use intravenous drugs, engage in bisexual activity, or have AIDS. There is no vaccine to prevent AIDS today, and there is no apparent cure once you have it. Therefore, the most effective way to protect yourself and your baby is to learn about the disease and avoid becoming infected. Because a blood test may not reveal abnormalities until several months after infection, women who have been recently exposed should be tested periodically.

Treatment of mothers with the HIV virus with medication has markedly reduced the risk of their unborn babies having AIDS at birth.

This has prompted screening of all pregnancies for the HIV virus with patients having the option to decline to be tested if they request.

Influenza (Flu)

Beware of flu epidemics. During pregnancy, you are more likely to contract the flu. The development of pneumonia is a grave concern. Your healthcare provider will generally recommend giving you a vaccination if you happen to be pregnant during flu season, but there is no evidence to link this illness with birth defects or miscarriage. It is considered a safe vaccine to take during pregnancy.
Immunizations

In general, it is best for you to have all vaccinations before you become pregnant. You should be vaccinated against measles, mumps, rubella and chickenpox several months before you become pregnant. Pregnant women should be vaccinated for influenza during the flu season (November to March). If you need vaccinations because of foreign travel, it may be best to postpone that trip until after the baby is born.

Vaccinations are safe for both you and your baby if you are breastfeeding. If vaccinations are needed during pregnancy, waiting until the fourth month is safest.

Cytomegalovirus (CMV)

Cytomegalovirus (CMV) is a common virus that can infect almost anyone. It is related to the viruses that cause chickenpox, herpes simplex and mononucleosis. Once you are infected, the virus remains with you for life, but it is not always active. Most people do not know they have CMV because it causes mild or no symptoms. However, if you are pregnant or have a weakened immune system, this virus is cause for concern.

CMV usually remains dormant if you are healthy. It spreads through body fluids and breastmilk. People with weak immune systems have a greater risk of becoming ill from the virus. If you are pregnant and develop an active infection, you can pass the virus to your baby.

If you have symptoms, blood tests can determine whether you have the disease. There is no cure for the virus, but drugs can help treat newborns and people with weak immune systems.

Mumps

Mumps is uncommon during pregnancy because of the childhood vaccine and low infection rate in susceptible adults. However, it does appear to increase the rate of miscarriages and premature labor. Newborns rarely have abnormalities just because their mothers had the mumps during pregnancy.

Tdap (Diphtheria, Tetanus, Pertussis Immunization)

The Centers for Disease Control (CDC) recommends that pregnant women who have not been previously vaccinated against diphtheria, tetanus and pertussis with Tdap receive one during the third trimester or late second trimester of pregnancy. Mothers are the primary source for infant transmission of pertussis (whooping cough). By getting vaccinated during pregnancy, antibodies are transferred to the newborn, likely affording protection against pertussis in the infant’s early life. DTaP or Tdap (depending on the family members age) is recommended for all family members and caregivers of the infant at least 2 weeks before coming into close contact with the infant.

Women, including those who are breastfeeding, should receive a dose of Tdap in the immediate postpartum period if they have not previously been vaccinated or the status of the vaccination is unknown.
A pregnancy is considered high-risk when a medical condition or pregnancy-related complication threatens the well-being of you or your baby. Unfortunately, your healthcare provider can’t always predict high-risk pregnancies, but if complications should arise, you will be monitored very closely. Special testing may be performed in order to appropriately monitor your condition and to determine the best time for your baby to be born. More frequent visits may be required or referral to a high-risk specialist may be suggested.

If you now have or should develop any of the following conditions, your pregnancy may be considered high-risk:

- Viral illnesses like herpes, hepatitis B, AIDS, German measles, cytomegalovirus, chicken pox
- Bleeding late in pregnancy
- Post-date pregnancy
- Breech birth or other abnormal presentations
- Nicotine, alcohol or other substance abuse
- Incompetent cervix
- Age 40 or older; age 15 or younger
- History of miscarriages, stillbirths or previous neurologically impaired infants
- Rh disease
- Multiple pregnancy (twins, triplets, etc.)
- Diabetes
- Heart disease
- High blood pressure
- Preterm labor

Call your healthcare provider immediately if you experience any of the symptoms listed below.

These symptoms may indicate serious complications of pregnancy that need immediate attention:

- Bleeding from nipples, rectum, bladder or coughing up blood
- Vaginal bleeding, no matter how slight (unless small amount after a pelvic exam)
- Swelling of hands or face
- Dimness or blurring of vision
- Severe or continuous headaches
- Abdominal pains that do not go away with heat and rest or a bowel movement
- Chills or fever over 100º F
- Persistent vomiting
- Painful or burning urination
- Decrease in fetal movement
- Sudden or slow escape of fluid from the vagina
Month 1

During your first month of pregnancy, your baby reaches ½ inch in length and is called an *embryo*. Cells that make up your ovum (fertilized egg) begin to differentiate and form the embryo, amniotic sac and placenta. Amazingly, the circulatory system and other vital organs have begun to form, including the heart, brain, lungs, eyes and ears. The placenta and umbilical cord are developing, and the baby is well protected from harm in a sac of liquid called *amniotic fluid*. The sex of your baby is determined at the moment of conception by the chromosomes of the father.

Month 2

By 2 months, arms and legs are starting to form, and the embryo is beginning to look more human. Elbows take shape and your baby begins bending and flexing. Fingers and toes are growing and facial features are becoming more pronounced. Eyelids form, but remain closed. Nostrils become distinct and the nose moves into the correct position. The head seems huge compared to the body because the brain is growing at a very rapid pace. By the end of 2 months, the embryo is about 1 inch long and weighs less than 1 ounce.

Month 3

By 3 months, the baby is called a *fetus*. It is starting to grow faster and is now 4 inches long and weighs just more than 1 ounce. Fingernails and toenails are growing and, for some, a little hair may sprout. Eyelids are fused shut and irises begin to develop. If you could see inside the uterus, you could determine the sex. At this time, the heartbeat may be detected. Your little one is moving, shifting and dancing already, although it is too soon for you to feel it.

Month 4

During the fourth month, many women begin to “look” pregnant. After all, the fast-growing fetus is now more than 6 inches long and weighs about 5 ounces. The baby’s teeth, eyelids, eyelashes and extremities are developing in detail and moving into the correct position. Hands are becoming more functional and the baby may play with his fist. Baby’s neck is getting longer and the chin is not resting on his chest. The fetus can hear and swallow. Very fine hair called lanugo covers the baby’s body to protect the skin in its watery womb. This is generally shed prior to birth.
Month 5

During the fifth month, you may feel the baby move for the first time. A word about this...if you feel that little flutter of life one day and not again for several days, DO NOT BE ALARMED. Your baby is suspended in a sea of amniotic fluid and you may not be able to feel every move he makes. The fetus may get very active for a day or two, then settle down for a few days. He needs rest, too! Cartilage and bones begin to form. The basic structure of the eye is well underway and is already positioned like a newborn. The fingers and toes are webbed and short in length. Also, during the fifth month, the sucking reflex develops and the baby may suck his thumb. The baby has now grown to 10 inches in length and weighs ½ to 1 pound.

Month 6

By this time, the fetus resembles a miniature infant except for his reddish, wrinkled skin. The fetus is very thin and will begin to put on fat during the remaining weeks. Your baby measures about 12 inches in length and weighs about 1 to 1½ pounds. It starts to move with increased frequency. His eyes begin to open and eyelids and eyebrows are fully formed. Hair begins to grow. Your baby can now hear you talk, read and sing. Fingernails have grown to the end of their fingers. Your baby sometimes sucks his thumb and can also hiccup.

Month 7

During the last 3 months, you will gain the most weight and your baby is growing incredibly fast – up to 14 inches long by now and weighing 2 to 2½ pounds. With special care, babies born now can survive. The baby kicks, stretches and responds to sound. The eyelids and nostrils have opened and the baby is able to perceive light, smell and taste. Lungs form tiny air sacs called alveoli and the baby begins to make primitive breathing movements. The skin thickens and becomes dull. Structures of the spine begin to form. Your baby’s hearing continues to develop and he may begin to recognize your voice as well as your partner’s.

Month 8

At this stage, the fetus is about 17 inches long and weighs around 4½ pounds. The baby’s bones and nails are hardening and wrinkles disappear as fat begins depositing under the skin. Mother’s immunity will be transferred to baby to help him fight infection after birth. The lanugo (hair) begins to shed with the downy hair only on his back and shoulders. Babies born during this month are still premature but have a very good chance of survival. Many babies are now moving into position. Head first is the most common and best for giving birth. All vital organs, except the lungs are mature. Regions of the brain develop significantly. Baby’s skull remains soft and flexible for the birth.

Month 9

The baby’s size and activity level during the last month may cause the mother considerable discomfort. You may have difficulty sleeping and need to urinate more frequently than before because the baby is putting more pressure on your bladder. The fetus usually settles into a head-down position awaiting birth. Lungs are now fully mature and ready to function. Regular fetal sleep patterns develop and will continue after birth. Your baby adds fat tissue to protect the vital organs and provide warmth. The baby starts storing iron in his liver to prepare for life outside the womb. The vernix, a greasy white material, coats the baby’s skin and the lanugo is almost completely gone. At full term, the average baby weighs 7½ pounds and measures 20 inches in length.
Work

You will probably be physically able to work during your entire pregnancy, but you should take some precautions. Do not continue in a job that exposes you to chemicals or radiation that may be harmful to your baby. Some physical activities may become impossible because of changes in your body structure. Try to arrange for short rest periods when you can sit and put your feet up. Some workplaces may have a break room where you can sit or lie down for a few minutes, 3 or 4 times a day.

If you have complications, it is unwise to continue certain jobs, especially in the latter stages of your pregnancy. Teachers, childcare providers and healthcare workers are at risk because of exposure to harmful viruses. You may expose yourself to harmful agents in some occupations such as farming and factory work along with those in the printing, dry cleaning, craft and electronics industries. Exposure to toxic agents does not necessarily mean that you have been exposed to harmful levels. Safety measures can greatly reduce your risk of harmful exposure. Discuss your job situation with your healthcare provider.

Travel

If you follow certain guidelines, travel is usually no risk to you or your baby. However, you should not plan to travel long distances the last 4 to 6 weeks of your pregnancy. Restrict your travel earlier if you are having twins, bleeding or have pregnancy-related high blood pressure. When you do travel a great distance, make sure you get up and walk around at least every hour to keep your circulation moving, and reduce your chances for a blood clot. If you experience any complications with your pregnancy, it may be best not to travel at all, especially far away from home. A copy of your medical record to carry with you may prove helpful. You may also need a note from your healthcare provider if you plan to travel by plane. Foreign travel has special requirements and considerations and should be discussed in detail before arrangements are made. If any problems arise during the trip, go to the nearest medical facility immediately.

HINT: If an emergency arises and you must travel during the last 4 to 6 weeks of your pregnancy, ask your healthcare provider for advice.

Baths

Some women wonder if it is safe to bathe while they are pregnant, especially during the last months. It is! The only danger to you is not being able to get out of the tub. So, in the last couple of months, you should bathe while someone’s around to help you in and out of the tub. This will minimize your chance of falling at a time when you are not as likely to be able to catch yourself. The only time it is not wise for you to bathe is when your membranes rupture (your water breaks). If this occurs, you should contact your healthcare provider immediately or go to the hospital!
**Tampons**

Since you will be having more vaginal discharge than usual, you may wonder about using tampons. Because it is important to keep your vagina as free from irritation as possible, your healthcare provider will probably recommend that you try using one of the lightweight mini-pads instead. They are really quite comfortable, and you will not have to worry about accidentally introducing extra germs into the already sensitive balance of your vagina.

**Clothing**

Comfort is the word in clothing...not fashion. Because your breasts will be getting larger and heavier, get a good supportive bra. If you plan to wear hose, buy pantyhose instead of knee highs or thigh highs. Be sure to purchase pantyhose that allow adequate ventilation in the vaginal area. You will want to allow as much circulation to your legs as you can. Support hose may help your legs if they are feeling tired or if you suffer from varicose veins.

Wearing a good pair of shoes that are secure and comfortable is sensible – you do not want to be unsteady on high heels while you are pregnant. Low, rubber-soled shoes are the best.

**Seat Belts**

Seat belts are safety devices that protect you and your baby in important ways. It is best for you to wear both the shoulder and lap belts if possible. Place your lap belt under the bulge in your abdomen, across your hips and thighs. Wearing your safety belt makes you 60% less likely to be injured or killed in an accident. You should not turn off air bags because you are pregnant. However, it does make sense to push your seat back as far as possible from the dashboard. Most fetal injuries relate directly to the seriousness of the mother’s injuries, rather than to the use of the seat belt itself. If you are involved in an automobile accident, even a minor one, see your healthcare provider in order to make certain you and your baby have not suffered any ill effects.

**Rest**

Rest is essential. Do not let yourself get worn out during work or play. Get a good 8 to 10 hours of sleep each night and do not feel guilty about taking a nap in the middle of the day. Toward the end of your pregnancy, you may even feel like taking 2 or 3 naps a day. If you are working, try to arrange for extra 10 to 15 minute breaks and space them throughout the day.

Remember, you will be more tired than usual in the early stages of pregnancy. That is just your body trying to tell you something – “Rest.”
Caring for Yourself

Teeth
 Proper dental care is very important. Do not hesitate to see your dentist for dental problems, but tell them you are pregnant so precautions can be taken when giving x-rays or prescribing medications. Frequent brushing, dental flossing and proper diet can minimize your dental problems during pregnancy. Swollen and bleeding gums are common problems for pregnant women. You can minimize bleeding by using proper oral hygiene.

Insecticides and Household Chemicals
 You should avoid heavy or prolonged exposure to as many household chemicals as possible. These chemicals can absorb into your system through your skin. If you must use strong household cleansing agents, wear gloves and work in well-ventilated areas. Also avoid insecticides, pesticides and weed killers.

If you have your house sprayed for bugs, allow it to air out before you return. Give up using aerosol sprays and use mechanical pump sprayers instead. Use the same caution for hair dyes and permanents. Healthcare professionals are just beginning to understand the potentially hazardous effects many chemicals have on pregnant women and their unborn babies.

When you get all excited about painting your new nursery, be sure to use latex paint if at all possible. You want to avoid lead-based paint because it has the potential to harm your baby. Although oil-based paint and organic solvents like turpentine, paint thinner and lacquer have not been proven to be harmful, they do produce strong fumes that you should avoid.

Sex
 You may not want to have sex if it is uncomfortable during the last 4 to 6 weeks, when you feel so clumsy and your due date is approaching. Orgasms will not start labor, cause bleeding or other problems in a normal pregnancy. If you have a history of miscarriages, pregnancy-related vaginal bleeding or other complications, your healthcare provider will probably suggest you do not have sex. Otherwise, there is absolutely no reason to interrupt your normal sex life. Do not worry. Your baby is well-protected by fluid, muscle and bone. Your motions are not going to bother the baby one little bit. It is much healthier for your relationship if you continue to be sexually intimate. Avoid intercourse if there is any suspicion that your membranes have ruptured.

Douching
 There is rarely a need to douche during pregnancy. If it is necessary, your healthcare provider will provide instructions.

Saunas and Hot Tubs
 Very hot water and steam should be avoided especially during the early part of your pregnancy. You can harm your baby if you raise the temperature of his environment over 100°F for prolonged periods of time. So, avoid hot tubs while you are pregnant. If you need to soak your aching feet, that is fine. Avoid immersing your entire body into the hot tub with elevated water temperatures. Saunas should also be avoided.

Your pregnancy should not interrupt your normal sex life.
**Hard Drugs**

*Substance abuse* during your pregnancy victimizes your unborn child. Amphetamines, barbiturates, crack, narcotics and cocaine have all been linked with low-birth weight babies and premature birth. These newborns often begin life by fighting withdrawal symptoms. They also run the risk of **sudden infant death syndrome (SIDS)**.

Some drugs reach your developing baby easier than drugs taken by mouth. These include drugs taken intravenously, nasally or by inhalation (cocaine, “crack,” and marijuana). These illicit drugs have proven adverse effects during pregnancy. Infants born to drug-addicted mothers can actually be born addicts themselves and may suffer withdrawal symptoms immediately following birth. Certain medications you take while pregnant can have permanent effects on your baby or may be associated with transient medical disorders during the newborn period.

**Alcohol**

Remember, whatever goes into your body will also affect your baby. **Avoid alcohol** while you are pregnant. Drinking alcohol during pregnancy can cause birth defects, learning disabilities, behavioral problems and mental retardation in your baby. **Fetal alcohol syndrome** is the medical term that describes the many physical and mental problems that affect children born to mothers who drank during their pregnancy. The adverse effects of drinking depend on the amount consumed, the stage of pregnancy, and certain susceptibilities in the mother and her baby. **The effects of even small amounts of alcohol on the unborn baby are still unclear. Therefore, the safest course to take while you are pregnant is not to drink alcohol at all.** If you have a drinking problem, you are not alone. Please discuss this with your healthcare provider. If you find you cannot stop having a drink or 2 several times a week, you and your healthcare provider will need to work together quickly to address this issue. Your baby’s health is at stake. Do not be embarrassed about any problem you may have with alcohol. Did you know that 1 in 10 people has some type of drinking problem? Talk to your healthcare professional!

**Domestic Violence**

Domestic violence is the use of physical, sexual and/or psychological cruelty or force to establish and maintain control.

You may be a victim of domestic violence if a spouse, partner, family member or caretaker:

- hits, slaps, punches, chokes, kicks, pushes, shoves, or spits on you.
- threatens or scares you with a weapon.
- forces or pressures you to have sex when you do not want to do so.
- threatens to take your children away.
- blames you for his/her violent behavior.
- withholds affection as punishment.
- takes away your house keys, car keys or money.
- keeps you from seeking medical attention.
- says that you deserve to be hit.
- tries to isolate you from your family and friends.

**Seek help through your healthcare provider or local agencies designed to deal with domestic violence.**
CARING FOR YOURSELF

**Medications**
Avoid using medications of any kind during your pregnancy, unless your healthcare provider specifically prescribes one for you. This also applies to over-the-counter drugs and herbal preparations. Do not even take an aspirin without consulting your healthcare provider because medicines you take will be circulated to your developing baby as well. Even hemorrhoid treatments and cold medications should be cleared before use. Any of these types of drugs may contain ingredients that could be harmful or associated with transient disorders during the baby’s newborn period.

**Smoking**
Do you smoke or does someone else living in your home smoke? Now is the time to quit. Protect your health and the health of your baby now and for years to come. Even passive smoking or breathing in smoke from cigarettes/cigars can be dangerous. Passive smoke includes both the smoke exhaled by the smoker and the smoke from the cigarette/cigar. This smoke is 2 to 3 times more harmful than that exhaled since it has not passed through the cigarette’s filter. Children who breathe in this second-hand smoke are at higher risk of developing serious medical problems, especially if they are under 2 years of age.

If you smoke, you will have a greater chance of miscarriage or stillbirth. You will also run a greater risk of having a premature baby as well as increasing your baby’s risk of crib death or SIDS.

**Caffeine**
You should avoid consuming large amounts of caffeine. This chemical is a powerful stimulant to your central nervous system and its effects on your unborn child have not been conclusively tested. Recent studies found that women who consumed an equivalent of 2 or more cups of coffee per day doubled the risk of miscarriage. And according to the March of Dimes, high caffeine consumption may slightly increase the risk of preterm labor or low birth weight, which could make a difference for a baby who is already at risk for these problems. Caffeine is a stimulant, so it increases your heart rate and metabolism and can cause insomnia, nervousness and headaches. It contributes to heartburn by stimulating the secretion of stomach acid. It is also a diuretic, so you can become dehydrated easier.

**Artificial Sweeteners**
Here is information on some of the artificial sweeteners and their place (if any) when you are expecting. Always check with your healthcare provider about using these processed substitutes in excess.

**Splenda® (Sucralose):** This “yellow packet” appears to be safe during pregnancy and has been approved by the FDA for pregnant women to consume.

**Equal®, NutraSweet® (Aspartame):** The FDA approved this “blue packet” for pregnant women, though they do recommend you limit your consumption of aspartame during pregnancy.

**Sweet’N Low® (Saccharin):** The FDA has deemed saccharin safe, but there have been some questionable studies. It is suggested that saccharin gets to your baby through the placenta, and when it travels there, it is slow to leave. For that reason, you might want to stay away from the “pink packets.”

**Stevia®:** The latest sugar substitute to hit the market, this sweetener is derived from a South American shrub. Stevia has not been approved by the FDA as a sweetener (it is considered a dietary supplement), and no clear research proves it is safe during pregnancy. Your best bet is to check with your practitioner before using it or use another substitute.

**X-Ray Studies**
Dental and other limited diagnostic x-rays may be performed during your pregnancy if necessary. If your x-ray studies are elective, postpone them until after you give birth. Be sure to tell the x-ray technician about your pregnant condition, so they can shield your baby when x-rays are taken.
According to the U.S. Food and Drug Administration (FDA), about 300 extra calories are needed daily to maintain a healthy pregnancy. When you are breastfeeding, you need a total of 500 extra calories each day to stay healthy and to produce nutritious breastmilk. Your diet should be balanced and contain the appropriate amount of calories and nutrients in order to fulfill these special needs. The U.S. Department of Agriculture has recently replaced the familiar food pyramid with MyPlate to assist adults in choosing foods that provide them with the nutrients they require. You may lose up to 20 pounds in the postpartum period. More weight loss will be easier with moderate exercise and a smart eating program. The food guide can serve as a reference to both balance and moderation.

The Food Guide states that for a 2,000 calorie diet, you need the amounts from each food group below.

**Grains** – Make half your grains whole: Eat at least 3 oz. of whole-grain cereals, breads, crackers, rice or pasta every day. 1 oz. is about 1 slice of bread, about 1 cup of breakfast cereal, or ½ cup of cooked rice, cooked cereal or pasta. Eat 6 oz. every day.

**Vegetables** – Vary your veggies: Eat more dark-green veggies like broccoli, spinach and other dark leafy greens. Eat more orange vegetables like carrots and sweet potatoes. Eat more dry beans and peas like pinto beans, kidney beans and lentils. Eat 2½ cups every day.

**Fruits** – Focus on fruits: Eat a variety of fruit. Choose fresh, frozen, canned or dried fruit. Eat the actual fruit and go easy on fruit juices. Eat 2 cups every day.

**Dairy** – Get calcium-rich foods: Go low-fat or fat-free when you choose milk, yogurt and other milk products. If you do not or cannot consume milk, choose lactose-free products or other calcium sources such as fortified foods and beverages. Get 3 cups every day.

**Protein** – Go lean with protein: Eat 5½ oz. every day. Choose low-fat or lean meats and poultry that can be baked, broiled or grilled. Vary your protein routine – choose more fish, beans, peas, nuts, and seeds.

Be sure to include fish in your diet that is high in the very beneficial Omega-3 fatty acids. They are so healthy for you and your baby. You can safely consume 12 oz. of salmon, chunk light tuna, sardines, or anchovies each week without fear of getting too much mercury.

**The Importance of Including Omega-3 Fats in Your Diet**

Many recent research studies have shown the benefits of including Omega-3 fats, most importantly DHA (Docosahexaenoic Acid), in your diet especially during pregnancy and breastfeeding.

**Benefits to your baby:**
- DHA is a major building block in eye and brain tissue and has been shown to help with brain and vision development.
- Increasing the amount of Omega-3 fats in the diet has been associated with a reduced risk of premature birth.

**Benefits to you:**
- Reduced risk of heart disease.
- Helps maintain a better mood during and after pregnancy.
- Helps lower the bad cholesterol and raise the good cholesterol.

The FDA and EPA recommend that pregnant women avoid fish such as shark, tilefish, mackerel, and swordfish which may have a high mercury content.
Proper Dietary Balance and Calorie Intake While Pregnant

Sensible weight control during pregnancy is a balance between diet, exercise and rest. Weight gain from fluid retention during the latter stages of pregnancy can play an added role. Discuss with your healthcare provider the best weight gain for you. An acceptable weight gain during pregnancy can range from 25 to 35 pounds in an average weight individual. Women who are overweight can gain less, but it is definitely not the time for a woman who is overweight to try to lose weight, but she should closely monitor her weight gain.

In order to gain weight in a healthy manner, eat a variety of foods each day for breakfast, lunch, dinner and snacks. Be sure that your meals include the correct number of servings of the basic foods you need each day. As well as eating properly, make sure that you are getting enough water. Try to drink about 6 to 8 glasses of liquids each day primarily consisting of water.

Foods containing excess sodium may promote fluid retention in pregnancy.

Find the Balance Between Food and Physical Activity

- Be sure to stay within your daily caloric need.
- Be physically active during pregnancy (unless instructed otherwise) as outlined on pages 36 through 38.

Know the Limits on Fats, Sugars and Salt (Sodium)

- Make most of your fat sources from fish, nuts and vegetable oils.
- Limit solid fats like butter, stick margarine, shortening and lard, as well as snacks that contain trans fats.
- Check the Nutrition Facts label to keep saturated fats, trans fats and sodium low.
- Choose food and beverages low in added sugars which contribute calories with few, if any, nutrients.

U.S. Department of Agriculture and Health and Human Services
Basic Nutrients for a Healthy Pregnancy

Your healthcare provider or nutritionist can help you with a food plan. You can also go to www.ChooseMyPlate.gov for nutritional facts and healthy choices. An overview of the basic nutrients is as follows:

**Carbohydrates:** This group has the largest number of recommended servings and should provide more than half of the total calories in your diet. These consist of sugars and starches and are the main source of energy. You can obtain these nutrients from grains, cereals and starchy vegetables. Starches such as potatoes and corn provide both energy and fiber. Fiber is also available in whole grains, fruits and vegetables.

**Proteins:** During your pregnancy, you need more protein for the development of the baby. Nutrients from proteins maintain muscles and fight diseases. Proteins come mainly from meat, fish, poultry, nuts, beans, and dairy products.

**Fats:** Fats help your body use carbohydrates, proteins and vitamins, but are high in calories. Fats should provide no more than 30% of your daily calories. Fats are either saturated or unsaturated. Saturated fat is "solid fat" at room temperature and is present in meats and whole milk products. Try to choose lean cuts of meat and low-fat or skim milk. Cook using low-fat techniques such as baking or broiling.

**Omega-3 Fatty Acids:** If it is difficult to get enough Omega-3 fatty acids from your diet alone, then talk to your healthcare provider about a supplement to take for your baby’s health. It is recommended that pregnant women get a minimum of 300 mg of DHA per day and a total of 650 mg of all the Omega-3 fats per day.

**Vitamins and Minerals:** During pregnancy you need more iron, folic acid, calcium and phosphorous. These and other nutrients help to produce more blood and build your baby’s bones. Usually you can obtain these nutrients in your diet from meats, beans, peas, green leafy vegetables, dairy products, whole grain breads, and cereals. Your healthcare provider will usually prescribe a prenatal vitamin supplement.

**Folic Acid:** Folic acid is necessary for the healthy growth of your baby during pregnancy. An insufficient amount in your diet could increase the risk of certain birth defects. Women should take folic acid before they become pregnant because it is needed in the first few weeks of pregnancy and diminishes the risk of neural tube defects.

Folic acid can be obtained from dark, leafy vegetables such as spinach and citrus fruits like oranges. Some enriched breads and cereals also are a good source.

Although these foods are helpful, it is difficult to get sufficient quantities of this nutrient from your diet alone. Your healthcare provider may recommend a supplement if necessary. Pregnant women, as well as those considering pregnancy, need supplementation with a pill containing 0.4 to 0.8 mgs of folic acid daily.

**Breastfeeding Women**

Women who are breastfeeding will need more food, vitamins and minerals than while they were pregnant. It is important to maintain enough protein, calcium and fluids while breastfeeding. Eat a range of nutritious foods and drink whenever you are thirsty. When you are breastfeeding, you need 500 more calories each day to stay healthy and to produce nutritious breastmilk.
Whether you are going to have a “natural” childbirth with little or no anesthesia or whether you choose some pain reducing drugs, you still need to exercise during your entire pregnancy to develop muscle strength for labor.

Exercise helps with backaches, circulation, insomnia and weight control. If you experience certain complications during your pregnancy, you and your baby may require a more sedentary activity level with little exercise. If you are expecting twins or have high blood pressure, a weak cervix, or a condition in which it appears that your fetus is not growing properly, bed rest or little exercise may be recommended. Common sense, listening to your body’s signals and talking with your healthcare provider are the main guides to exercising during pregnancy.

Walking is an excellent exercise. Normally, you do not have to limit your exercise, except when it risks injury to you or your baby. When exercising, drink lots of water and wear good shoes and a support bra. **You should stop any exercise if you develop shortness of breath, chest pain, extreme fatigue, dizziness, uterine contractions, decreased fetal movement or leakage of fluid from the vagina.**

Certain types of exercise are safer during pregnancy than others. Walking and swimming are 2 such examples.

Cycling is good early in pregnancy, but can become more difficult later in pregnancy because of balance issues and the risk of falling. Stationary or recumbent biking is more acceptable. Aerobic classes such as water and low impact aerobics and those especially designed for pregnancy are beneficial. Other exercises such as running, racquet sports and weight training should be done in moderation. These exercises are more appropriate for those pregnant women who did them prior to pregnancy.

Certain physical activities should be avoided during pregnancy. These activities in general increase the risk of injury to you and your baby. These activities include contact sports such as soccer and ice hockey. Downhill snow skiing poses a risk of falls and injuries as well as altitude sickness, making it harder to breath and limiting the supply of oxygen to your baby. Scuba diving should be avoided during pregnancy. Other activities such as horseback riding and water skiing increase the risk of falling and injury.

**Sensible Guidelines to Apply When Exercising**

- Avoid impact exercise such as jumping or jarring activities.
- Avoid becoming overheated – be careful in hot or humid weather.
- Avoid excessive stress to your lower back area.
- Limit the intensity of your exercise program to the same level as you set when you were not pregnant.
- Exercise for shorter periods of time and rest frequently.
- Reduce weight-bearing exercise (running, weight machines) in favor of non-weight-bearing exercise (swimming, stationary cycling).
- Avoid any exercises lying flat on your back late in pregnancy.
Here are a few exercises to help during pregnancy:

**The Pelvic Rock**

Pelvic rocking helps to relieve a sore back by stretching the lower back muscles. This is probably the most common exercise taught in childbirth classes, and for good reason – it is excellent. You can use it before and after giving birth; first to give the fetus good support and then to firm those abdominal muscles. You can do it lying on your back, standing or in the “all fours on the ground” position.

*Lying Down*

Lie flat on your back, hands on the floor at your sides. Rock your pelvis up by raising the small of your back off the floor. Return to starting position. This is a small movement. Do not stress your back.

*Standing Up*

Keep your back straight, tighten your buttocks, bend your knees slightly and rock your pelvis back and forth. This is actually a belly dancing technique, called the hinge. To enjoy your daily exercising more, put on some music and slowly walk about doing this exercise. Your abdomen and bottom should work like a hinge, while the rest of your body stays upright. Once you get the hang of it, you will understand why belly dancing is so popular as a form of exercise, even for pregnant women – it is fun!

*All Fours*

Get on your hands and knees with your legs and hands parallel to the floor. Pull your buttocks down and slightly arch your back, tilting your pelvis forward. Then push your buttocks out and back, tilting your pelvis back. Keep these movements small to keep your back relatively flat.

**Kegel Exercises**

You can also do Kegel exercises to tone muscles in the pelvic area and improve circulation. These exercises should be continued postpartum to promote rapid healing and to improve the tone of the vagina. What you want to do is control and relax certain sets of pelvic muscles, 1 at a time. First, contract your muscles like you are holding back urination. Then, tighten your muscles like you are holding back a bowel movement. Finally, contract the vaginal muscles. It may take some practice to isolate each of these sets of muscles but keep practicing. Relax and contract each set of muscles separately, contracting them harder and longer each time.

*HINT: You can do Kegel exercises anytime.*
**The Squat**

Stand with your lower and upper back against a wall. Lower your body slowly down the wall, with your hands against it, until you are in a squatting position. Keep your feet parallel and your heels flat against the floor, then slowly raise yourself back up. A variation of the squat: hold on to a heavy piece of furniture that will not tip over, squat down, keeping your heels flat on the floor and your back straight, and letting your knees spread open. Slowly raise back up. This exercise will help your back, and it is good practice for proper lifting of heavy weights. Always lift heavy objects with your back straight, squatting and using your leg muscles to propel you up. Practice both types of squat exercises daily.

**Stress and Tension**

You do not need additional stress during this special period in your life. You may experience some moodiness. Do not put yourself in situations that you know will cause you stress. Do not plan too many busy activities – rest as much as possible. Use periods of total quiet during your day to sit and breathe deeply for a few minutes, relaxing your body and your mind. Exercising during pregnancy is absolutely vital to a healthy pregnancy, an easy birth, and a speedy postpartum recovery. Do not skimp in this area with excuses of “not enough time.”

*HINT: Be good to yourself during pregnancy. If your in-laws want to come spend 2 weeks during your eighth month and they make you nervous, ask them to postpone their visit.*
Caring for the Rest of the Family

Fathers or Partners

While you are pregnant, the father or partner is also going through changes, anxieties, fears, doubts, joys and stresses – just like you! Try to include your partner in the pregnancy as much as possible. This can be one of the closest emotional times in your relationship, so take time to discuss your expectations and fears. Attend birthing classes together, and try to make your partner a part of your daily exercises, like an evening walk. Visit your healthcare professional together and encourage questions about the pregnancy. As always, communication is important because your partner may feel left out and not really a part of the pregnancy. Talk about the fears, concerns and delights both of you are experiencing. Pregnancy is a special time for both of you.

Other Children

If this is not your first child, give other children advance notice about the new baby. They will become curious as your pregnancy progresses. Do not take their fears lightly. They may feel left out and have questions and worries about their position in the family. They need to be reassured before and after the birth that they are still loved. Consider including your partner and children in prenatal visits to the healthcare provider.

Do not tell your children only how great having a baby is going to be. Tell them the truth! Babies are a lot of fun and a lot of trouble, too. They cry and are messy. Still, they are wonderful.

Prepare your children for the reality of having a new baby in the house, and there will be less room for fear and resentment. Ask your child, “How do you feel about this baby?” before and after the birth. Then just listen. And do not say, “That’s silly” or “You shouldn’t feel that way.” Children usually have very mixed feelings about a new baby. Try including them in the pregnancy by letting them help buy baby clothes, paint the nursery and plan for the baby’s arrival. Do not be shy about your body. Let them see how it is expanding. Pregnancy is a beautiful experience, so do not hide it.

Ask your healthcare provider about an appropriate time to bring the older children to the office so they can hear the baby’s heartbeat.
Early Pregnancy Bleeding

There are many causes of bleeding during pregnancy. Possible causes vary depending upon when it occurs. There are 2 serious causes of early pregnancy bleeding – miscarriage and ectopic pregnancy. Many times the bleeding will be temporary and will resolve with the pregnancy progressing normally.

**Miscarriage** is the most common serious cause of early bleeding and occurs in 15 to 20% of all pregnancies, usually within the first 3 months. Most miscarriages cannot be prevented. They are nature’s way of dealing with pregnancies that are not developing properly. A miscarriage is characterized by bleeding more than a heavy period and associated with cramping.

**Ectopic pregnancy**, a pregnancy located outside the womb (usually in a fallopian tube), is another serious cause of early bleeding. Ectopic pregnancies occur in less than 1% of all pregnancies and are almost always associated with severe pain. Most of the bleeding is internal, which can be life-threatening because of its hidden nature.

Late Pregnancy Bleeding

Bleeding late in pregnancy can be serious, but the most common cause is “bloody show,” one of the first signs of labor. This is caused by the thinning of the cervix and is usually associated with thick mucus. Cervical irritation and pelvic exams can also cause bleeding. The most serious late-pregnancy bleeding is caused by either placenta previa or placental abruption. These conditions occur most often in the final 3 months of the pregnancy.

**Placenta previa** results when the placenta partially or completely covers the cervix. As your cervix thins in preparation for labor, massive bleeding occurs. The other serious cause of late bleeding, **placental abruption**, occurs when the placenta prematurely detaches from the inner lining of the womb. This is usually accompanied by abdominal pain. Either condition may lead to the demise of the unborn baby and other possible serious problems.

If bleeding is serious or a non-reassuring fetal tracing is detected by the fetal monitor, a cesarean birth may be required. Most bleeding is the result of minor causes that require no treatment. However, late pregnancy bleeding can indicate a serious problem. **You should report all bleeding to your healthcare provider immediately.**

**If You Experience Bleeding:**

<table>
<thead>
<tr>
<th>Early in your pregnancy</th>
<th>Your healthcare provider may perform a pelvic exam and sonogram to determine the cause.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late in your pregnancy</td>
<td>You may be hospitalized for observation and evaluation.</td>
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</table>

Problems During Pregnancy

If You Experience Bleeding:
High Blood Pressure in Pregnancy

Fewer than 10% of pregnant women develop high blood pressure, also known as **preeclampsia** or **toxemia of pregnancy**. The cause of this potentially serious condition is unknown. When changes of blood pressure are detected and treated early, the mother and the baby can avoid serious problems. If untreated, however, high blood pressure can cause permanent damage to the eyes, kidneys, brain and liver of the mother. The fetus can suffer from a lack of oxygen and nutrients which can lead to growth problems, mental retardation or even death. Teenage mothers are more likely to develop the disorder, usually during the last 3 months of their first pregnancy. Women who are overweight, diabetic or over 35 are also at risk. Mothers with kidney disease, twins or a history of high blood pressure with a preceding pregnancy are also likely candidates.

High blood pressure is caused when the blood vessels in the body contract, increasing the pressure and decreasing the amount of blood flowing to the uterus, the placenta and the fetus.

Mild changes in blood pressure for a brief period are unlikely to cause problems. However, prolonged and severe spasm of the vessels can be potentially harmful to mother and baby. A sudden weight gain of more than 2 pounds per week or swelling of the face and hands can indirectly signal a problem with high blood pressure. Some women experience no distinct symptoms at all. **Headaches, visual disturbances or pain in the upper abdomen may indicate a more serious blood pressure problem.**

Healthcare professionals treat each case of preeclampsia differently depending upon a variety of factors usually determined by special testing and by how close you are to your due date. Bed rest at home or hospitalization may become necessary, but the eventual birth of your baby will cure the disorder.

Diabetes

There are several kinds of diabetes, all relating to the delicate balance of sugar (glucose) in the blood. Insulin is a hormone that regulates the body's main source of energy – glucose.

When the body fails to produce enough insulin or produces too much glucose, the level of sugar in the blood becomes too high, which can be dangerous for you and your baby. **Gestational diabetes** is a type of diabetes that only occurs in pregnant women. The condition usually subsides after pregnancy, but women who have had gestational diabetes are more likely to develop permanent diabetes later in life.

Some women are more likely to develop gestational diabetes than others, particularly those who have previously given birth to a large infant weighing 9 pounds or more and women who are obese. Women who have had stillborn babies or a family history of diabetes may also develop gestational diabetes.

Gestational diabetes is a serious condition because it can lead to the birth of a large baby, which may mean a difficult vaginal delivery or cesarean birth. Babies born to gestational diabetics are also prone to having low blood sugar levels and jaundice after birth, which can lead to permanent neurological problems.
Diabetes (continued)

Pregnant mothers with gestational diabetes may also have too much fluid surrounding the baby, which can cause premature labor and increase the risk of respiratory distress syndrome in the baby. They are also more susceptible to urinary tract infections and high blood pressure.

Because it is important to detect and treat gestational diabetes, your healthcare provider will test your blood at 24 to 28 weeks of pregnancy, regardless of predetermining factors. This simple and safe test requires only that you drink a sugar cola and have a blood sample checked one hour later. This is called a 1-hour glucose tolerance test. If the test reveals a high level of glucose in your blood, your healthcare provider will conduct a more extensive 3-hour glucose test to make a more definitive diagnosis of your condition.

A dietician or a person specially trained in modification of diet to lower blood sugar will assist you in your diet changes. The dietary principles used to lower blood sugar involve a reduction of calories and eating smaller and more frequent meals consisting of more complex carbohydrates such as rice, pasta, bread, corn, cereal and beans. Foods with simple sugars should be limited or excluded from your diet. By being carefully screened and treated for gestational diabetes, you will be more likely to have an uneventful pregnancy and a successful birth of a healthy baby.

Rh Disease and its Prevention (RhoGam)

A routine blood test will be performed at one of your prenatal checkups to determine your blood type and Rh factor. The most common blood type is Type O; the most common Rh factor is positive. People with Type A, B, O or AB positive blood have a positive Rh factor (Rh +). Those with Type A, B, O or AB negative blood have a negative Rh factor (Rh -).

If your blood type is Rh negative, and the father’s is Rh positive, the baby could inherit the father’s positive blood type. This could cause a problem during pregnancy or, more frequently, when the baby is born. When your blood type is Rh negative, your body’s immune system can recognize the baby’s Rh positive blood cells that escape into your circulation. These cells are different than yours. Because they are different than yours, your body will produce antibodies to destroy your baby’s red blood cells. These Rh antibodies not only attack the baby’s Rh blood cells that are in your circulation but also cross the placenta to destroy the baby’s blood cells in its circulation. These antibodies may not be a problem during your first pregnancy, but can lead to a serious disease with subsequent pregnancies called hemolytic disease of the newborn.

These kinds of antibodies can also be produced as a result of a blood transfusion, amniocentesis, turning of a breech baby, pregnancy termination, tubal pregnancy and miscarriage.

When your body produces a high level of antibodies, more of your baby’s blood cells are destroyed. Eventually, this produces anemia in your baby, which can lead to the baby’s death prior to birth. Live births can be complicated by severe jaundice (yellow skin), which can lead to mental retardation, hearing loss or cerebral palsy. With each successive pregnancy, the risk of hemolytic disease of the newborn increases.

Fortunately, your healthcare provider can prevent hemolytic disease of the newborn most of the time by giving you a special injection of gamma globulin (RhoGam) that prevents your immune system from reacting to your baby’s red blood cells. The RhoGam finds the fetal red cells in your circulation and neutralizes them, so you do not produce antibodies against your own baby’s red blood cells. This injection is routinely given at 28 weeks of pregnancy to all pregnant mothers and within 72 hours following the birth in only those mothers whose babies are Rh positive.
Preterm Labor

Labor usually occurs sometime after 37 weeks of pregnancy (40 weeks is term). A baby born before 37 weeks is premature. These infants may require special care in breathing and maintaining their body temperatures. Prematurity can be a serious risk to your newborn baby, but preterm labor can often be stopped if you catch it early enough.

If you have one or more of these symptoms, you may be in premature labor and you should call your healthcare provider immediately:

- Uterine contractions – more than 4 in 1 hour
- Menstrual cramps – may come and go or be constant
- Abdominal cramps – with or without diarrhea
- Low backache – comes and goes or constant
- Pelvic pressure – feels like baby pushing down
- Change in vaginal discharge – a sudden increase in amount or it may become mucus-like, watery or slightly bloody

Group B Strep (GBS)

Only 1 to 2% of all babies who are exposed to Group B streptococcus (GBS) bacteria during pregnancy become infected. Babies can develop early infections during the first week of life or later after they leave the hospital. The early infections can be quite severe and can affect the baby’s lungs, blood, spinal cord or brain. These infections can lead to the baby’s death in 15% of affected babies. Cultures done at 35 to 37 weeks of pregnancy have the best chance to predict which mothers carry the GBS bacteria that might be passed to the newborn at birth. However, these cultures cannot always determine which mother will have the bacteria at the time of giving birth. The best way to prevent GBS infection in the baby is to treat the mother during labor. All mothers who had positive GBS cultures are treated with antibiotics during labor and birth. Mothers having repeat cesarean births may not be treated.

Certain factors increase the risk of a GBS infection in the newborn. These mothers may benefit from the use of antibiotic treatment during labor and birth regardless of previous culture results. These include:

- Temperature at or above 100.4º F during labor
- Pregnancy less than 37 weeks
- Duration of membrane rupture of 18 or more hours
- Women who had babies previously infected with GBS
- Women with GBS positive urine cultures
Changes in the Very Last Weeks

You can expect even more changes during the last weeks of your pregnancy. You will be anxious to give birth at this point. It may seem you have been pregnant forever. You will also be tired and need more rest. One day, you may notice a difference in how you are carrying the baby. This is when the baby “drops” or settles down into the bony part of your pelvis. When this happens, you may be able to breathe easier. (Sometimes this will not happen until you are ready to give birth to your baby.)

Your breasts enlarge even more near the end of the pregnancy, and you may leak colostrum. Your appetite may diminish, and you may be nauseated. Pressure is sometimes reported in the vaginal area, and you may feel the need to urinate frequently.

Childbirth Classes

There are a number of educational courses to prepare couples for pregnancy and the eventual birth of their newborn. Mothers who take these classes report they need less pain medicine and anesthesia during labor and have had more positive feelings about their birth experience. Expectant fathers or partners are more helpful during labor when they have attended these childbirth classes. Remember, no matter what type of birth you have, you will still find the information from the classes very helpful. You should learn as much as possible about this process.
You may think that 9 months is a long time to get ready for your baby. You will be amazed at how fast the time flies. Take the time to prepare for your infant now and save yourself from a stressful race to get everything accomplished a week before your due date.

Here is a list of 12 things to help you prepare:

1. **Become educated.**
   - Go to as many classes that you can to learn about baby care, childbirth, breastfeeding, and infant CPR.
   - Call your chosen birthing facility for a list of classes and times.
   - Remember – knowledge is power.

2. **Prepare baby’s room.**
   Start with the basics:
   - Crib.
   - Changing table.
   - Dresser.
   - Rocking chair.

3. **Safety is always a priority so baby proof now.**
   - Safety cover plates for electrical wall plugs.
   - Under sink hazardous solutions.

4. **Get a car seat and know how it works.**
   Car seats are required by law:
   - You will need an infant car seat to take baby home from the hospital.
   - Know how to use it properly before the baby is discharged from the hospital.
   - Carefully read the instructions and make a few “trial runs” installing the car seat.

5. **Stock up on necessary items.**
   - Baby wipes.
   - Diapers.
   - Laundry detergent.

6. **Food ready to go.**
   - Freeze meals for easy preparation.
   - Stock up on nutritious snacks (raisins, nuts, granola bars, etc.).
   - Have a plan for friends and family to bring meals to you.

7. **Line up help from family and friends.**
   They can help you with:
   - Cleaning.
   - Laundry.
   - Errands.
   - Meal preparation.
   - Assistance with your other children.

8. **Arrange pet sitter.**
   - Arrange with someone ahead of time to care for your pet while you are in the hospital.
   - Make sure they meet with your pet so there is a connection.
   - Let them know your pet’s routines.

9. **Take a tour of your hospital or birthing facility.**
   - It is nice to know where you need to go when you are in labor.
   - Make sure you pre-register at the hospital for your admission and get most of the paperwork out of the way.

10. **Pack your bag.**
    A few weeks before your due date, have a bag ready to grab and go.
    Essentials for your bag:
    - Nursing bra.
    - Sleepwear.
    - Underwear.
    - Baby clothes.
    - Baby blanket.
    - Personal products – i.e. toothbrush, toothpaste, etc.

11. **Choose a healthcare provider for your baby before you go into labor.**
    Here are a few questions to help you choose your baby’s care giver:
    - Interview a pediatric physician so you can make a decision on the one you prefer.
    - Which hospital does the pediatrician use?
    - What are the qualifications of the pediatrician?
    - Do they accept your insurance plan and how does the office process billing and claims?
    - Is there emergency coverage available 24/7?

12. **Take care of yourself.**
    - Make sure that your needs are not pushed to the bottom of the priority list.
    - Take the time to get the rest you need.
    - Pamper yourself every now and then.
First babies are notoriously slow about being born. You should plan to monitor your first few contractions in the comfort of your home. You should prepare to leave for the hospital when your membranes rupture or when your contractions are from 5 to 7 minutes apart. Prepare to leave earlier if you live quite a distance from the hospital. Check with your healthcare provider about eating or drinking anything if you think you are in labor.

False labor is a common occurrence and unless you want to get all excited and run to the hospital needlessly several times, it is important to know the difference between true and false labor.

False labor involves cramps or contractions of the lower abdomen, similar to true labor, but there is a vital difference. False labor does not cause a change in the cervix, it does not come in regular intervals, and it may disappear altogether if you change positions or walk around. Time the minutes from the start of one contraction to another for several contractions. If you have one contraction now and one 45 minutes later and another 3 hours later, then you are having false labor, especially if you walk around during these contractions and they seem to ease up or stop.

On the other hand, if you time your contractions and find they are evenly spaced coming closer and closer together and do NOT go away if you change position or walk around, then you are possibly experiencing true labor. Some labor contractions cause back pain and some cause lower abdominal pain. When you think you are in labor, sit down and time your contractions. There is no need to immediately panic and rush for the phone, especially if this is your first baby and your membranes have not ruptured. Labor usually takes a while.
Vaginal Birth

The first stage of labor starts with the onset of labor and is completed when the cervix is completely dilated to 10 centimeters.

The first stage of labor can take quite a long time, especially with a first baby. It is not at all uncommon for the first stage of labor to last 12 to 14 hours. That does not mean that you will be having continuous contractions for 14 hours. Do not try to fight these contractions by tensing all your muscles. Your uterus is doing the work for which it was designed. Tensing muscles will only make the contractions feel worse. Try to RELAX even while you are having a contraction. Concentrate on relaxing your muscles.

The second stage of labor starts with the cervix becoming fully dilated and is completed with the birth of the baby.

The second stage of labor is much shorter than the first stage. By now your cervix has dilated enough for the passage of the baby’s head and when the head has descended enough, you will be prepared for the birth of your baby. If your hospital has LDRP’s (labor, delivery, recovery, postpartum) or LDR’s (labor, delivery, recovery) you will remain in your labor room for the birth. The contractions now are very close together and the baby is being pushed out. You may be “pushing” involuntarily as your uterus contracts.

It may feel like your bowels are moving, but do not worry about this. It is just the pressure of the baby’s head on the rectum. Each time you have a contraction, the baby moves farther and farther down the birth canal.

You may have heard a lot about episiotomies. An episiotomy is a surgical incision made in the perineum which is the space between the vagina and the anus. Although this is not a routine procedure, your healthcare provider will not know if you will need an episiotomy until the head is crowning. It is at this point when they will determine if one is necessary or not. Talk to your healthcare provider about the procedure and any concerns that you may have about it.

As you bear down or push, the baby begins to appear. Finally, the baby is born. Mucus or amniotic fluid may be removed from your baby’s mouth and nose with a suction bulb. As your baby takes a breath of air, he may begin to cry. You may feel so many emotions at that moment or you could be totally exhausted from all the work of labor. There is no right or wrong way as to how you should feel.

The third stage of labor begins after the birth of the baby and is completed with the delivery of the placenta.

Your work is not totally over. The third stage of labor is the passing of the afterbirth, or placenta. This usually takes just a few contractions and takes only a few minutes more. Then it is time for some well-earned rest and bonding with your newborn baby.
**Vaginal Birth After Cesarean (VBAC)**

In the past, most thought that once a woman had a cesarean birth, any future babies should be a repeat cesarean birth. VBAC has evolved as an option obviously not for everyone but can be accomplished in many instances where it is attempted. Vaginal Birth After Cesarean (VBAC) can be associated with a shorter hospital stay. It can allow for a speedier recovery and the resuming of normal activities. Cesarean births involve major surgery and some type of anesthesia. Infection, bleeding and wound complications occur more frequently with cesarean births.

The first factor that is considered in the option for VBAC is the type of uterine incision that was used with your previous cesarean birth. The skin incision that you have on your abdomen is not necessarily in the same direction as your uterine (womb) incision. Your previous surgical records are important in evaluating this factor. Certain other factors may not allow an attempted VBAC such as twins, breech birth, above-average sized babies and the location of the placenta. Many women who have had a previous cesarean birth may attempt VBAC. Special medical precautions will be taken to protect both you and your baby. You will have an IV in your arm, and special monitoring will be performed on your baby to alert your healthcare provider of any signs of fetal distress.

VBAC may be an option for certain women with a previous cesarean birth, but no labor and birth is risk-free. You should know the risks of VBAC and weigh these against the benefits before you decide. Many healthcare providers offer VBAC as an option while others do not.

**Cesarean Birth**

Cesarean birth involves removal of the baby through the mother’s abdominal wall. It is used when a vaginal birth is not possible or there is danger to the baby. There are numerous reasons for cesarean births. Some are known prior to labor, but many are not known until after labor begins and progresses. Any one or a combination of these conditions can lead to cesarean birth.

- **Previous cesarean birth** – The previous scar in the uterus may be weak and allow rupture of the uterus during labor. Therefore, a trial of labor may be allowed, but as with any delivery method it has risks and benefits.
- **Fetal response to labor** – If the baby’s heartbeat appears abnormal or non-reassuring during labor.
- **Cephalopelvic disproportion** – The baby’s head or body is too large to pass through the birth canal.
- **Abnormal presentations** – If a baby’s legs and buttocks (breech birth), or arm or side (transverse-lie), present first this may create a great risk to the baby’s well-being.
- **Prolapsed cord** – The baby’s umbilical cord drops out of the vagina ahead of the baby and can endanger the baby by cutting off its oxygen supply.
- **Maternal bleeding** – The placenta can separate from the uterus prematurely and disturb the oxygen supply to the baby (abruptio placentae). Additionally, the placenta can become positioned over the cervix and prevent passage of the baby (placenta previa).
- **Maternal medical condition** – Preeclampsia, genital herpes, diabetes, heart disease, severe Rh disease, and certain other known medical conditions in the mother can lead to a cesarean birth in some situations.
All expectant mothers and their support persons are encouraged to attend a prepared childbirth class. This will serve to educate you about the birth process and take away fears. The classes will serve every laboring couple, even though some may elect anesthesia. Each person has a different tolerance to pain and you should not feel a sense of failure if you request, or your healthcare provider suggests, medication for pain relief.

Many types of medications and anesthetics are available to reduce the discomfort of childbirth. There is not a single technique of pain relief that is appropriate for everyone.

After labor begins, your healthcare provider will give careful instructions about the dosage and timing of the various medications (if required) so as not to slow your labor or cause your baby to be sleepy at birth. If you desire not to take pain medication, please inform them prior to or during labor.

Each woman’s labor is unique and the amount of pain felt by one woman can be quite different than that felt by another woman. Each may require different techniques to get pain relief.

**Two Major Types of Anesthesia:**

**Regional anesthesia** is given in the birth canal or the lower region of the back near the spinal cord. The different locations of administration produce various numbing effects.

- **Local block** – anesthetic given just prior to the birth, if necessary, to numb the lower birth canal.
- **Spinal or saddle block** – anesthetic injected into the lower back just prior to the birth producing numbness of the lower abdomen, legs and birth canal for birth.
- **Epidural block** – anesthetic injected through a catheter in the lower back producing numbness of the lower abdomen, legs, and birth canal for labor and birth.

**General anesthesia** is not frequently used for vaginal births unless a complication arises. It is more often used for cesarean births in emergency situations.
After Baby’s Arrival

Skin-to-Skin Contact

No one can prepare you for the first time you look into the eyes of your new baby. It is a special experience like no other. This experience can be enhanced by skin-to-skin contact when you have your unwrapped baby placed tummy-down on your chest under a blanket.

Safe, snugly, skin-to-skin contact engages your baby’s senses. He can hear and feel your familiar heartbeat. Those little arms and legs discover the feel of your skin. This contact also helps regulate your baby’s temperature, heart rate, respirations and blood sugar. Babies are usually alert and peaceful during skin-to-skin contact. Studies show that babies held skin-to-skin cry less and fall asleep more quickly.

During skin-to-skin contact, your baby will quietly get to know you. The time you spend together after giving birth gives you a special opportunity to begin to bond with your baby. You will feel more confident about this new relationship.

But let us not forget about partners or other family members! They can also hold the baby skin-to-skin to help him feel calm and cozy. Skin-to-skin contact establishes an emotional attachment between parents and their newborns.

Breastfeeding tends to come more naturally when your baby is placed skin-to-skin. A newborn’s sense of smell helps him find the breast and latch on. Skin-to-skin contact helps babies stay awake during a feeding, and research shows that they usually breastfeed exclusively for a longer time as well.

Research during the last 30 years has demonstrated the value of skin-to-skin contact for babies and their mothers, both at the time of birth and in the years ahead.

Molding of the Baby’s Head

Since a baby’s head has been conforming to the birth canal, their skull may be distorted and appear oblong in shape. Do not worry, your newborn baby’s head will not look like this for long. The swelling may take a few hours to a couple days to go away.

Molding of the head

Appearance days later

Your baby’s head may look distorted when first born, but do not worry, it will return to a normal shape in a few days.
Emotional Changes

Now that your months of Great Expectations have taken the form of a baby boy or girl, you can expect more physical and mental changes in yourself in the weeks following birth. Your hormone levels will return to normal, and in the process, your moods may swing much the same as in the beginning of pregnancy. You may feel down or become depressed. These “baby blues” are common for some new mothers. Usually, the sadness does not last longer than a few days. *If your depression or anxiety symptoms become more severe or persist, contact your healthcare provider.*

Physical Changes

In the 4 to 6 weeks following birth, the changes of pregnancy are gradually reversed as the body begins to return to its non-pregnant state. The amount of time required for this process varies, depending on the type of birth you had and other associated medical conditions. The first 6 weeks following the birth of your baby is called the *postpartum period.*

The normal changes of the pregnant uterus to accommodate a developing baby are not reversed overnight. During pregnancy, the uterus increases approximately 11 times its non-pregnant weight, weighing more than 2 pounds immediately after giving birth and is about the size of a grapefruit. It can be felt just below the umbilicus. In about 6 weeks, the uterus will return to its normal weight, a mere 2 ounces, and is the size of a small lemon.

Urination Problems

If you have problems urinating right after giving birth, let your healthcare provider know. Some women do. This can be caused by the type of anesthesia, the size of the baby or just general discomfort, especially with stitches. But you need to completely empty your bladder. If you have too much trouble in the hospital, your healthcare provider may empty your bladder with a catheter. This is painless. But once you leave the hospital, you should not be experiencing difficulty urinating.

Intimacy

You can usually resume sexual intercourse after your 4 to 6 week checkup. Your healthcare provider will let you know when your body has healed properly.

Friends Can Help

Girl or boy, your baby will have a number of basic needs. Friends can be very helpful. Think of those close friends who have had babies in the last 5 years. Chances are they still have plenty of wearable and usable items that their children have outgrown.

Your Figure Will Return

Your stomach is not going to be instantly flat. Do not expect to leave the hospital and be back to your pre-pregnant size. Your stomach will not get back to normal right away, but with exercise, your abdomen should flatten out again in very little time. Depending upon your condition, your healthcare provider may recommend that you start light exercising just a few days after giving birth. You may be asked to wait a while longer if you had a cesarean birth.
A Baby has Real Needs

The time to prepare for “homecoming” is throughout your pregnancy.

Specialty and department stores have a complete array of items you may need – and many you may not “need,” but desire. Also check the baby section of your drug store for items you may find convenient. If you have any doubts about what you will need, just get together with 3 or 4 mothers. Hours later, you will have a long list.

Here is a practical list of needs you may want to consider:

- Crib
- Portable crib
- Baby recliner/carrier
- Blankets
- Changing table
- Cleaning soaps for gentle skin
- Cotton swabs for cleaning ears and nose
- Diaper bucket and bag
- Disposable diapers
- Front carrier
- Infant car seat
- Oil, lotion, soap, vaseline, baby towels, and wash cloths
- Outer clothing
- Rattles and playthings that aid small muscle and large muscle development as well as sensory stimulation
- Baby thermometer
- Stroller
Great Expectations

It is your job as a new mother to make sure your baby will have a good nutritional start. With your choice to breastfeed, you have joined the majority of women who understand the evidence that breastfeeding is the best and most ideal way of feeding your baby. In addition to being a great nutritional start, breastfeeding also contributes to emotional development of your baby. Breastfeeding will also promote wellness in your infant due to the presence of antibodies in breastmilk.

There is no doubt that breastmilk contains all the nutrients required and is perfectly matched for your baby’s needs for proper growth and development. Studies prove that breastmilk provides optimal health and benefits the newborn for as long as you choose to breastfeed.

*If you decide to breastfeed, here are a few things you should do:*

- Become well-informed about breastfeeding through information you can obtain from your lactation consultant, healthcare provider or take classes on breastfeeding from your healthcare provider’s office or hospital.
- Attend a breastfeeding support group meeting or contact your lactation consultant who can answer questions.

**Anatomy of the Breast**

The breasts are delicate organs made of glandular, connective and fatty tissue. The nipple contains tiny openings through which the milk can flow. These tiny openings are surrounded by muscular tissue that cause the *nipple* to stand erect when stimulated. Surrounding the nipple is an area of darker skin called the *areola*. This area will become darker and larger in size during pregnancy due to hormonal changes. The areola contains pimple-like structures near its border that are called *Montgomery glands*. These glands secrete a substance that helps to lubricate and cleanse the area.

**Breastfeeding Benefits**

**For Baby:**
- Easily digested
- Perfectly matched nutrition
- May have protective effect against SIDS
- Less gastrointestinal disturbances, ear infections and allergies
- Stimulates senses of taste and smell
- Filled with antibodies that protect against infection
- Skin-to-skin, eye and voice contact

**For Mother:**
- Convenient
- Economical
- Helps the uterus return to its normal size faster
- Helps with weight loss
- Reduces the risk of osteoporosis
- Less likely to develop uterine, endometrial or ovarian cancer
- Reduces the risk of breast cancer

**For Baby and Mother:**
- A beautiful and intimate way a mother can bond with baby
- Contributes to a very special and loving relationship

According to the American Academy of Pediatrics (AAP) Policy Statement on Breastfeeding, women who do not have health problems should exclusively breastfeed their infants for at least the first 6 months of life. The AAP suggests that women try to breastfeed for the first 12 months of life because of the benefits to both the mother and baby.
Physiology of the Breast

Stimulation of the nipple by the baby’s sucking sends messages to the tiny pituitary gland in the brain. It in turn secretes a hormone called prolactin. Prolactin stimulates the milk gland cells within the breast to begin producing milk. Another hormone that is released is known as oxytocin. Oxytocin causes the cells around the milk glands to contract and squeezes the milk down the milk ducts and out of the nipples. This response is known as let-down or milk ejection reflex. This hormone also aids in the mother’s ability to relax.

Sensations you may or may not notice during let-down:
• Tingling sensation.
• Warm upper body sensation.
• Feeling your breasts become full.

It may take a minute to several minutes until the milk ejection reflex occurs. Some mothers only know that their milk has let-down by seeing milk in the baby’s mouth.

A list of things other than nursing that may cause the milk to let-down:
• Your baby crying.
• Thought of your baby.
• Smell of a baby or baby products.
• Massaging your breast gently before using a breast pump.

By 16 weeks of pregnancy, your breasts are fully capable of producing milk. Some women will notice drops of fluid on the nipple during these early months. This fluid, known as colostrum, is the “first milk.” It is what the baby will receive until you begin producing a higher volume milk 3 to 5 days after the birth of your baby.

Facts about colostrum:
• Commonly called “Liquid Gold,” it can be yellow to clear in color.
• Very high in protein.
• Easily digested.
• Serves as a laxative and helps clear the baby’s intestinal tract.
• Beneficial in loosening mucus in baby.
• Provides protection by containing antibodies and passive immunities.
• Coats the stomach and intestines and protects from any invading organisms.

Preparation for Breastfeeding

There is very little that you need to do to prepare for breastfeeding. Your body has already done most of the necessary preparation. As mentioned on page 53, the Montgomery glands, situated all around the areola, secrete a substance that lubricates and helps to cleanse the area. Prepare yourself by becoming knowledgeable about your important role in nurturing your baby. Take classes and speak with a breastfeeding educator, lactation consultant or member of your healthcare team to get your questions answered. Your body was made to breastfeed your baby so surround yourself with positive encouragement from your loved ones and healthcare team.

Helpful suggestions for breastfeeding mothers:
• Education is the best preparation.
• Have someone knowledgeable about nursing bras help you with the purchase of a well-fitting bra.
• If leaking colostrum, you may want to purchase breast pads. The pads may be either disposable or washable. Do not use a “mini-pad” inside your bra. The sticky area on them prevents air from being able to circulate and may cause nipple soreness.
• Be careful about underwire bras. The wires may place pressure on the ducts and cause a blockage of milk if not properly fit.
• You may find that you will need to buy a bra that is 1 to 2 cup sizes larger toward the end of your pregnancy.
Nipple Types
Assessment of your nipples is important. Occasionally a mother will exhibit an inverted nipple. Nipples may appear "flat" but will stand erect when stimulated. If you have concerns, talk with your healthcare provider or lactation consultant for advice. This should not discourage someone from trying to nurse because a positive nursing experience is possible. A simple test you can do is the “pinch test.” When pinching or stimulating the nipples, they should stand erect and not be drawn inward.

Supply and Demand
Milk production is regulated by supply and demand. The more milk that is removed, the more that is made. The less milk that is removed, the less that is made.

Breastfeeding Relationship
A good breastfeeding relationship takes time. As a new mom, you may tend to have unrealistic expectations of yourself and your newborn. You may become discouraged if things are not going well. Although a lot of reactions and responses are innate, breastfeeding is a learned experience and it will take time for you and the baby to be comfortable with one another.

Breastfeeding: When and How
Initiate breastfeeding as soon as possible after your baby is born. While in the hospital, learn as much as you can from your nurse about your baby. ASK QUESTIONS! Have the nurse watch the baby latch-on, so you can go home feeling comfortable and confident that you know and understand the proper latch and position techniques. There are different positions in which to hold your baby while nursing.

Tips for successful breastfeeding in hospital:
- Skin-to-skin
- Start within 1 hour of birth
- Breastfeed frequently
- Keep your baby in the room with you
- No artificial nipples unless medically needed (including water or formula)
- Learn to recognize hunger signs

Readiness is important, and there are three “C’s” you must review with yourself every time you start to breastfeed.

1. Calm
   Holding your baby skin-to-skin is very helpful to calm you and your baby in the early days after birth.

2. Comfortable
   Have pillows all around you for support and elevate your legs with a little stool. This will take pressure off of your bottom and help with your comfort level.

3. Close
   Hold and position the baby close to you. Proper positioning and latch-on are the keys to successful breastfeeding. Remember, even though breastfeeding is a natural process, it is also a learned process. Breastfeeding classes are beneficial. They can enhance your breastfeeding experience by teaching you how! Your instructor will review position and proper latch-on techniques that are important for a great start.

   Talk to your lactation consultant, healthcare provider or your hospital about available breastfeeding classes.

As long as your baby nurses frequently and is allowed to finish the feeding completely, he will have all the milk needed for proper growth and development.
Correct Latch-On

Getting the baby to latch-on correctly is one of the most important steps in successful breastfeeding. The baby must open his mouth wide enough to get a good amount of the areolar tissue into the mouth. The baby’s lips are flanged out. It is the compression of the milk ducts and the baby’s tongue resting over the lower gum that allows the milk to be drawn out as the baby sucks and milk release occurs. If the baby latches on to just the nipple, you will become sore and the baby will get a limited supply of milk.

The following guidelines will help you to properly position and latch the baby to your breast:

• Prepare yourself by washing your hands, getting comfortable and deciding on a feeding position.

• Align your baby’s chest next to your tummy and align his nose with your nipple. You want him to extend his neck in order to have his jaw open wide.

• Hold your breast in a “C” hold and gently lift and support the breast. Make sure your fingers are well away from the areolar tissue. (“C” hold means 4 fingers underneath the breast and the thumb on top.)

• Run your nipple lightly above the baby’s upper lip – this will promote the rooting response.

• Be patient until the baby opens his mouth the widest. Let the baby take the lead. Do not allow him to only latch on to your nipple! This will cause your nipples to break down and become sore and cracked. It can be very painful if the baby only sucks on the nipple!

• Baby’s head is slightly tilted back.

• Aim your nipple toward the roof of his mouth.

• Baby’s chin should approach breast first.

• Lower lip should be positioned further from the nipple than the top lip. This is called an asymmetrical or “off-centered” latch.

• When the baby opens wide, quickly and gently pull him toward your breast.

• Correct latch-on is a learned response. Be patient with yourself and your baby.

Signs of a Good Latch-On

• All of the nipple and as much of the areola as possible in baby’s mouth.

• Lips flanged or turned out.

• Tongue over lower gum.

• Baby stays on breast.

• Absence of pain.

• Listen and watch for milk transfer or swallowing.
To take the baby off the breast, slide your finger into the corner of the baby’s mouth, between his mouth and your breast, to break the suction. Do not pull the baby off your breast. This will traumatize your nipples and cause them to become sore.

Burping
You may try to burp the baby after the feeding to get rid of any air swallowed. Not all babies will burp within the first few days after birth.

Effective ways of burping:
• Over the shoulder.
• Lying belly down across your lap.
• Sitting in your lap with chin supported.

Usually the pressure on the baby’s belly is enough to bring up the air. Pat the baby’s back gently or stroke the back with an upward motion. Sometimes the baby will not burp. If he did not get a lot of air in the stomach during the feeding, burping may not occur. After a few minutes, resume with the feeding.

Guidelines and Technical Points for Frequency and Duration of Feedings

Once breastfeeding is established, the best way to ensure a good milk supply is by allowing your baby to determine the frequency and duration of breastfeeding sessions.

Most babies need and naturally request at least 8 to 12 feedings in a 24-hour period.

In the early sleepy days, your baby may not request feedings often enough. You may need to:
• Watch for hunger cues.
• Keep baby interested and awake.
• Massage and compress your breast during the feeding to increase milk flow to the baby. This will gently “remind” him to continue sucking.

Nurse until baby shows signs of being full.
• Self-detaches.
• Sucking less vigorously.
• Becomes sleepy.
• Breast will feel less full.
• Listen for nutritive sucking.
• First 3 days may be difficult to hear swallowing. If heard, it sounds like a soft “Ca-Ca” or a soft expiration.

After larger volume milk arrives, you will hear definite suck-to-swallow ratio changes.

Offer both breasts each feeding; this helps to stimulate milk production.
• Keep baby interested and awake.
• If he chooses to take only 1 breast at a feeding, make sure you then begin with the other breast at the next feeding.
• Alternate the breast with which you begin each feeding. This will help with proper milk removal of the breasts. To help you remember this, use a safety pin on your bra strap of the side last nursed.

Following these steps will ensure proper milk removal completely and regularly, increase milk production, reduce breast engorgement and nipple tenderness and maximize infant weight gain. Your baby may have a sleepy week or 2 and you may be challenged to keep the baby interested in the feeding.
How do I Know the Baby is Getting Enough to Eat?

The most common concern that you will have is whether the baby is getting enough to eat. Unfortunately, there are no ounce markers on the breast for you to see the exact amounts he is taking in. This can be unnerving at times. There are many clues, though, that indicate that everything is going well.

Be attentive to the following:

- Baby eating at least 8 to 12 times every 24 hours.
- Baby wetting diapers
  - 1 diaper in the first 24 hours after birth.
  - 2 on the second day of life.
  - 3 on the third day of life.
  - 6 to 8 wet diapers of urine that are light yellow in color once milk is in greater supply.
- Baby will be passing meconium for first 1 to 2 days. Meconium is a newborn infant’s first stools. It is thick, greenish-black and sticky.
- Stool changing to mustard color, runny and seedy in texture once the milk is in greater supply – 3 to 4 of these stools per day beginning by day 4 in the first month. May also stool a little after each feeding during the first month.

If you have any concerns about how the baby is doing, call your baby’s healthcare provider. Most offices will allow you to bring the baby in for a weight check. Sometimes that is all you need to make you feel better! Weight gain is an important clue that the baby is feeding well.

Other Positive Signs

- Audible swallowing – actually hearing the milk being swallowed is more obvious when mother’s milk is in greater supply.
- Breast feels less full after feeding.
- Baby satisfied – falls away from the breast at the end of feeding.

Expect initial weight loss of the baby after the birth, but should be back to birth weight by day 10. Weight gain of 4 to 7 ounces per week once milk is in greater supply.

Engorgement

Your breasts may become heavier and swollen 3 to 4 days postpartum. This is caused by an increased flow of blood to the breast, swelling of the surrounding tissue and the accumulation of milk. The breasts may be swollen and uncomfortable for some, and you may experience a throbbing sensation and discomfort with the milk ejection reflex, or let-down. Some will become only slightly full. As with labor, all women are different in their experience. Breast swelling usually lessens within 24 to 48 hours.

Allowing yourself to become engorged beyond the initial breast swelling associated with milk surge should be avoided. If the baby refuses to eat or you have to skip a feeding, then pump or manually express your milk. Engorgement sends signals to the brain to slow down milk production. As mentioned earlier, milk production is regulated by supply and demand. If you slow down your feedings, you will see a significant decrease in your milk production. If you are experiencing some engorgement, you may try pumping to soften your breasts a little before feedings. This will allow easier latch-on for the baby. It will not cause you to “make more milk” while you are dealing with engorgement.

Engorgement can be caused by feeding infrequently, skipping feedings, having difficulty with the baby latching-on or not keeping baby alert or feeding vigorously.
Time of Awareness and Perseverance

Some Effective Treatment Measures for Breastfeeding Mothers

- Wear a sleep bra even at night, but make sure it is not too tight (this tends to suppress milk production).
- Apply warm compresses 5 minutes prior to breastfeeding.
- Nurse frequently.
- Manually express or pump milk to soften the areola and nipple – the baby cannot latch-on if it is too hard (common problem with breast engorgement).
- Apply cold compresses to breasts after nursing to relieve the swelling and soothe the discomfort.

Sore Nipples

Usually, extreme soreness is due to improper positioning and latch-on which can be relatively easy to fix. If you cannot identify the problem, call your healthcare provider or a lactation consultant. Do not let the problem get worse. Remember, breastfeeding should feel comfortable – it should not hurt.

Cracked Nipples

Cracked nipples are usually due to improper positioning and latch-on or traumatic removal from the breast. Excessively dry tissue is another reason for this problem. Treatments for cracked nipples include correcting the improper positioning and latch-on and proper breaking of suction before removing the baby from the breast. Dab some expressed breastmilk into the area and allow to dry. You can also talk to your lactation consultant or healthcare provider about applying lanolin onto the affected area. Wearing breast shells in your bra between feedings can further protect your tender skin and keep the lanolin on your nipples and not your bra.

Mastitis

If the blocked duct persists, it can become inflamed and a breast infection may be possible. It is not the breastmilk that becomes infected, but the tissue surrounding the blockage. Mastitis needs immediate medical attention. Treatments consist of nursing frequently, applying warm compresses, massaging while nursing, getting plenty of rest and drinking fluids. Antibiotic therapy is generally used when infection is present.

Blocked Ducts

Blocked ducts are felt as pea-size or larger lumps under the skin and in the substance of the breast and are sore to the touch. Fever is usually absent.

**Causes of blocked ducts:**
- Change in frequency of feeding or skipping feedings.
- Nursing from only 1 breast.
- Over-abundant milk supply.
- A tight bra or underwire bra that puts too much pressure over a duct.
- Nursing the baby in the same position every feeding.
- Breast surgery.

**Treatment for blocked ducts:**
- Warm shower or compress to affected area.
- Frequent feedings.
- Hand express or pump gently after feedings.
- Massaging of affected area toward nipple while nursing.
- Placement of the baby in a position where the baby’s chin is facing the blockage.
- Apply cold compress to breast to soothe any discomfort.
Frequently Asked Questions

**Are my breasts too small?**

Breast size has nothing to do with milk production. Do not let anyone tell you differently.

**How can my partner find me the least bit attractive?**

Sexuality and recapturing closeness as a couple takes time. You and your partner both may feel overwhelmed. Some women are embarrassed about all the changes to their bodies and feel unattractive and distant toward their partner. Men, do not take this temporary diminished interest as a rejection. Talk to one another about sex...laugh with one another, and make time for yourselves away from the baby. Sharing feelings about sexuality is the most effective way to get back together both physically and emotionally. *Communication is the key!*

**Why do my breasts leak all the time?**

You may be out in public and hear another baby cry, causing your milk to let-down. Applying gentle pressure to the nipple will usually stop the flow of milk. Disposable or washable breast pads are available to wear on the inside of your bra to protect your clothes from obvious wet spots! Make sure to change them as needed so the dampness does not break down your nipple tissue. Leakage becomes less problematic as time goes on.

Dietary Suggestions for the Mother

A nursing mother needs about 500 additional calories per day. Milk production is independent of what you eat the first 4 weeks because it derives the calories it needs for production from the fat accumulated during the pregnancy. A well-balanced, healthy diet is recommended.

Another important aspect of nursing is that you may find yourself very thirsty. The best advice is to drink to thirst. You must listen to what your body needs. The body takes water from your system to make breastmilk. If you drink at least 6 to 8 glasses of fluids per day, it may also prevent constipation. When you sit down to nurse, have water or juice so you get your daily requirements. No foods are universally restricted from your diet. Your baby will let you know! Gastric disturbances may be displayed by the baby if you consume a particular food. If the baby exhibits a diaper rash, it may also be due to something you ingested. So think back and try to discover the culprit. If dairy is the culprit, it may take 2 weeks for it to stop bothering the baby once it is eliminated from your diet.

Storage of Breastmilk

Make sure when storing breastmilk that you label and date the container so that you can be sure that your baby is receiving breastmilk that is not outdated. You may want to store breastmilk in 2 to 4 ounce amounts to cut down on waste. Please make sure that the containers you choose to use are clean. You may find conflicting information on the best type of container to use when storing breastmilk, whether to use glass or plastic. Ask your hospital lactation consultant about the advantages and disadvantages of each and choose accordingly. Never microwave or boil breastmilk. Microwaving could cause "hot spots" in the milk because it heats unevenly and could potentially burn the baby’s mouth and throat. Also, it can alter the protein make-up of the breastmilk and may destroy the antibody composition of the milk. All you need to do is run the milk under warm, tap water. You can also place it in a bowl of warm water to thaw or warm the milk, bringing it to room temperature. Roll the container gently between your hands to evenly distribute the thawed breastmilk. It will separate upon storage and the creamy portion of the milk needs to be redistributed.
A Special Note to Dad and Partner

Believe it or not, your role is no less complicated or stress free than the new mother’s. Even though you did not carry your child for the past 9 months, once the baby is here, it hits you….I am now responsible for this new life in so many ways. You will find that your love and admiration for your wife or partner is like never before. Watching her give birth is like no other experience. You may be filled with a sense of pride and joy for your new family.

At the same time, you are already adding up what you make financially and how much it will take to raise this child over the next 20 years! Talk about putting pressure on yourself. Please know that this roller coaster of emotions is normal. You may even experience some conflicting emotions. Some new dads or partners feel a sense of being a spectator rather than an involved participant especially if mom is breastfeeding. There are many things you can do to be a part of your new baby’s everyday routine.

Suggestions for father or partner:

- Take turns getting up in the middle of the night. You can get the baby, change his diaper and take him to mom for a feeding. When he is done, change his diaper and put him back in his crib. This helps to decrease burnout. It is awfully hard for only one person to always be the one getting up in the middle of the night!
- Choose a time during the day that you can be involved in bath time.
- Take the baby for a walk if the weather permits. This gives you one on one time with your infant and allows mom that special alone time.
- Know that you also need some personal time for the things you like to do. Together you can work out a schedule that benefits both of you.

Do not fall into the stereotype of thinking that you are the man and taking care of baby is “women’s work.” You will miss out on the most rewarding and remarkable times with your baby.

Going Back to Work and Continuing to Breastfeed

In the past, employers have recognized 6 weeks as a reasonable time to recover from the birth of a baby. Your healthcare provider may require that you stay home longer because of a special medical problem. Financial considerations may require that you return to work earlier. It is well documented that the longer a woman can be with her baby and establish a good breastfeeding relationship with her child, the better she will maintain her milk supply with pumping while separated from the baby.

Hints for breastfeeding mothers who return to work:

- Discuss your needs with your employer.
- Organize your day to incorporate regular pumping sessions.
- Wear comfortable clothes with easy access for pumping.
- Find a place to store your breastmilk.
- Take healthy snacks and drink plenty of water.

There are great breast pumps on the market today that can help support your decision to continue to breastfeed. Check with your hospital or lactation center for breast pump rental and purchase prices.
**EARLY FEEDINGS**

**First 24 hours**

- Many babies are sleepy in the first 24 hours and are in recovery mode from birth.
- Healthy term newborns are born with sufficient fluid stores, therefore they do not need water or formula unless there is a medical problem.
- Unwrap the baby and remove the hat and hand covers and place the baby skin-to-skin on your chest or next to your breast to help wake the baby.
- Once the baby is positioned, a blanket over the baby will prevent a chill while the mother’s body keeps the baby’s temperature stable.
- You may need to continue with some “gentle” stimulation to keep your baby nursing, such as stroking their legs, feet and back.
- Some babies will wake easily when you unwrap them or change their diaper.
- If your baby does not awaken and nurse after 10 to 15 minutes, continue skin-to-skin.
- A newborn’s sleep cycle is about 45 minutes to an hour so try again then or anytime the baby shows feeding cues.
- Unrestricted feeding in the first 24 hours is important as the baby is learning how to breastfeed and is establishing your milk supply.

**24 to 48 hours of age**

- Babies during this period begin to be more awake and alert and breastfeed better.
- Offer the breast anytime the baby starts exhibiting feeding cues.
- Attempt to nurse your baby at least 8 times in 24 hours. Many babies will breastfeed 10 to 12 times in a 24 hour period.
- Allow baby to breastfeed as long as they desire. Feedings will average 5 to 30 minutes.
- Allow your baby to release himself from the breast unless you become uncomfortable and need to change position.
- After long periods of sleep some babies will go through a “marathon nursing phase” where they want to nurse “all the time” and can’t be put down. This is a good sign as the baby is allowed to stimulate the mother’s body to establish an adequate milk supply. It is NOT because you do not have enough milk.
- Allowing your baby to eat as often as he wants is best.
- If your baby does finally fall asleep during this frequent feeding phase, you can usually get a break from nursing if your baby is held or cuddled. If you put him down, he may soon awaken and want to nurse again not because he is hungry but because this is comforting and as close to “home” as he can get.
- Your little one has realized that he is no longer in the warm comfortable environment of your womb where they listened to your heartbeat, tummy rumblings and breathing. The most comforting place to your baby is at your breast.

**48 to 72 hours of age**

- This is the time that your milk will begin transitioning from colostrum to mature milk.
- The breast will become heavier and fuller over the next few days as the volume increases.
- Milk volume is related to frequency and duration of feeds as well as effectiveness of the baby at the breast.
- You should be hearing more swallows from the baby at this time.
- Charting your baby’s feedings and wet and dirty diapers will help you determine your baby is getting enough.
- Do all pacifying at the breast. Continue to avoid artificial nipples until your baby is nursing reliably and gaining weight.
Whether this is your first or fourth baby, the thrill of seeing your infant for the first time is priceless. All of those months of Great Expectations have come to life with the miraculous gift of birth.
Amniocentesis: Usually performed from 14 to 16 weeks of pregnancy, it tests the fluid surrounding the baby and allows certain disorders and other factors like the sex of the baby to be detected.

Areola: The dark ringed area around the nipple.

Bloody Show: Bloody discharge caused by the thinning of the cervix and is usually associated with thick mucus and may be one of the first signs of labor.

Braxton Hicks Contractions: Intermittent uterine contractions with unpredictable frequency throughout pregnancy. These contractions are most often painless, and occur more frequently as the pregnancy progresses.

Cesarean Birth: The method used to deliver a baby through a surgical incision in the mother’s abdomen and uterus.

Colostrum: It is the forerunner to breastmilk and may be yellow to almost colorless. It is present in the breasts during pregnancy and the initial fluid that baby will receive for approximately 2 to 3 days until breastmilk is established.

Contraction: The rhythmical tightening and relaxation of the uterine muscles that cause changes to occur to the cervix.

Due Date: The due date is usually computed from the first day of the last regular period then subtracting three months, and adding seven days. Only 1 in 20 babies is born exactly on the calculated day, although most are born within 10 days of the expected date.

Ectopic Pregnancy: The development of a pregnancy outside the womb usually in a fallopian tube, and is a serious cause of early bleeding and pain.

Embryo: A fertilized egg that has begun the cell division stages of growth and differentiation from fertilization to the beginning of the third month of pregnancy.

Epidural: An anesthetic is injected through a catheter in the lower back producing numbness of the lower abdomen, legs, and birth canal.

Excessive Salivation: It is caused by excessive secretion of the salivary glands in the mouth and is quite annoying and difficult to treat. It tends to diminish in the latter half of pregnancy.

False Labor: Involves cramps or contractions of the lower abdomen, similar to real labor. False labor does not cause a change in the cervix.

Fetal Alcohol Syndrome: The medical term that describes the many physical and mental problems that affect children born to mothers who drank during their pregnancy.

Fetus: What the baby is referred to after the third month of pregnancy until delivery.

Folic Acid: One of the B vitamins that is a key factor for the fetus. Lack of adequate folic acid during pregnancy was found to increase the risk for the baby to have a birth defect involving the spinal cord and brain.

Genetic Disorder: A disease caused by an alteration of a gene or group of genes in a person’s genetic material.

Gestational Diabetes: A type of diabetes that occurs in pregnant women and usually subsides after pregnancy.

Glucose Tolerance Test: A simple and safe test requires only that you drink a sugar cola and have a blood sample tested 1 hour later.

Group B Streptococcus (GBS): Is a type of bacteria that can normally be found in the birth canal of up to 1/3 of all women. Some babies who are exposed to GBS bacteria during labor and birth become infected.

Herpes: A virus that causes small sores in clusters on the genitals. The infection can infect the baby at birth.

Hemorrhoid: A dilated blood vessel inside the anus and beneath its thin lining (internal), or outside the anus and beneath the surface of the skin (external).

High-Risk Pregnancy: A medical condition or pregnancy-related complication that threatens the well-being of you or your baby.

Kegel Exercises: An exercise contracting the pelvic floor muscles that improves pelvic floor muscle tone and helps prevent urinary incontinence.

Kick Count: Refers to spontaneous fetal movements experienced by the pregnant mother. You should note the time it takes to feel 10 kicks, twists, turns or rolls.

Lactation Consultant: A Lactation Consultant is a health professional who specializes in the clinical management of breastfeeding.

Latch-On: The baby positioned on the breast with the entire nipple and at least an inch of the areolar tissue in his mouth. The compression of the suck and the baby’s tongue resting on the lower gum allows the baby to draw milk through the nipple.

Masatitis: Infection of the breast causing breast soreness, fever and flu-like symptoms.

Milk Ejection Reflex (Let-Down): The release of milk from the milk glands stimulated by the baby as he nurses.

Miscarriage: The spontaneous loss of a pregnancy before 20 weeks gestation.

Montgomery Glands: Pimple-like structures near the border of the areola. These glands secrete a substance that aids in lubricating and cleansing the area.

Non-Stress Test: Used to evaluate fetal heart rate patterns, especially during fetal movements.

Oxytocin: A hormone secreted from the pituitary gland that stimulates the milk gland cells in the breast to begin producing milk.

Quickening: The first flutter of life felt by a pregnant mom.

Rh Factor: An antigen found in the red blood cells of most people. Those who have an Rh factor are said to be Rh positive (Rh+), while those who do not are Rh negative (Rh-).

RhoGam: An injection given to mothers who are Rh negative. This injection routinely given at 28 weeks of pregnancy and within 72 hours following birth.

Round Ligament Pain: Pain in one or both groin regions from stretching or spasm of the round ligaments.

Sonogram: The use of sound waves to produce a “picture” of the developing fetus inside the uterus. It also is called an ultrasound.

Toxoplasmosis: An infection that you can get from eating raw or under cooked meat or by transfer from cats.

VBAC: “Vaginal Birth After Cesarean”
ACTIVITY
Continue your normal routine. Most sports are permissible with moderation; keep your heart rate below 140. Intercourse is not restricted during normal pregnancy unless bleeding, cramping or leaking of amniotic fluid occurs. Avoid excessive fatigue, heavy lifting (over 30 pounds), and high impact activities. Airplane travel is not recommended after 34 weeks.

MORNING SICKNESS/NAUSEA
No medication is available. You may try Vitamin B6 50mg twice a day or sea bands. Eat crackers before getting out of bed in the morning, frequent meals (every 2 hours), high carbohydrates (baked potatoes, toast, etc.) and high protein snacks at bedtime (hard cheese, etc.). Avoid foods difficult to digest, spicy foods, caffeine, cigarettes and cigarette smoke. Call the office if you are unable to keep any food or fluids down for over 24 hours.

Colds or Flu Symptoms
(Call for fever over 101°F)
Halls cough drops, Cepacol lozenges, Chloroseptic, Robitissum DM or regular Tylenol. A vaporizer humidifier may also help.

PAIN
Extra strength Tylenol.

CONSTIPATION
Increase your dietary fiber (fruits, vegetables oatmeal, whole grain foods) and increase fluid intake. Metamucil, Citrucel, Milk of Magnesia or DDS, Colace capsules, 1 or 2 a day.

DIARRHEA
No treatment for mild cases, just increase fluid intake. Call the office for severe cases or if symptoms persist beyond 2 days.

HEMORRHOIDS
Tucks, Anusol or sitz baths. If symptoms are severe call the office.

VAGINAL YEAST INFECTIONS
Monistat or Gynelotrimin, externally only, if this does not help call the office.

HEART BURN
Tums, Mylanta, Zantac 75 or Pepcid AC.

LEG CRAMPS
Calcium 500mg daily at bedtime.

CALL OUR OFFICE IN THE EVENT OF:
• Vaginal bleeding or spotting
• Pelvic cramping or unusual abdominal pain
• Temperature over 101°F
• Leakage of fluid from the vagina
• Decreased or absent fetal movement

LABOR – WHEN TO CALL
If this is your first child:
• Contractions 5 minutes apart for about 1 hour
• When your water breaks

If you have previously delivered:
• Strong and regular contractions, even if more than 5 minutes apart
• When your water breaks

WHERE TO CALL
AFTER HOURS CALL
LAbOR AND DELIVERY
Overlake Hospital Medical Center
425-688-5351
Swedish Medical Center - Issaquah
425-313-4242
During office hours call
425-454-3366