

# Laboratory Tests During Pregnancy

Below are brief descriptions of some of the most common laboratory tests performed during pregnancy. Of course, if you have any underlying health issues, additional tests may be required. Talk to your health care provider if you have questions about testing or any other aspect of your prenatal care.

## Routine Blood Tests:

- **Complete Blood Count**

The complete blood count (CBC) is one of the most commonly ordered blood tests. A major portion of the complete blood count is the measure of the concentration of white blood cells, red blood cells, and platelets in the blood. These tests tell your physician whether or not you have anemia, infections, or certain other problems with your blood.

*Why It's Important:* Infections in pregnant women need to be identified because of the potential effects on both mother and fetus. Women who are anemic (low iron) need to be identified so that iron therapy can be instituted. Because, on average, a woman will lose half a liter of blood at delivery, a low platelet count (inability to clot) needs to be identified and treated during pregnancy. Excessive bleeding during the delivery in a woman with clotting problems can be dangerous and can even lead to death.

- **Rubella Titer**

This blood test can tell whether you've had the German Measles (Rubella), a disease that is highly dangerous for the fetus and the mother. Even if you had a MMR (measles, mumps, and rubella) vaccination as a child, its effects may have worn off. The best time to be tested is before you become pregnant (see pre-conception counseling). However if you have not had this test, it will be done at your first or second pregnancy visit. If you are pregnant when you have the rubella test, and the test result shows that you are not immune to Rubella, you cannot be given the immunization during pregnancy, as it could harm the pregnancy. In that case, you will be immunized after you give birth. However, if we know you are susceptible to rubella, you can limit your exposure to high-risk sources, such as children who might contract it. Definitely stay far away from anyone you know who has an outbreak of the virus.

*Why it's important:* If a woman gets the infection while pregnant, she could transmit the virus to her baby. The virus could increase the baby's risk of congenital anomalies, preterm labor issues, and severe medical complications.

- **Blood type and Rh (rhesus) factor, and antibody screen**

This test determines the type of blood you have (O, A, B, AB), and Rh (rhesus) factor, a protein found on the red blood cells (whether your blood is positive [+] or negative [-] for this factor).

*Why it's important:* If your Rh status turns out to be different from your baby's there could be health problems for the baby and for your future pregnancies if your baby's blood somehow mixes with yours (such as in a car accident or during amniocentesis). This is because your body may mount an immune response to what it perceives to be a "foreign invader" (your baby's blood), and build up antibodies to prevent future "attacks", which can affect future pregnancies.

Because we cannot test the baby's blood type until birth, if your Rh factor type is negative (-), you will be automatically given a shot of RhoGAM during pregnancy to prevent any potential complications. Giving this medication prevents the mother's body from mounting an antibody response against an Rh positive baby in future pregnancies. The antibody screen detects other antibodies that may have the potential for causing blood disease in the fetus or newborn.

- **Syphilis test (also called RPR or VDRL)**

Syphilis is a treatable sexually transmitted disease (STD). Although syphilis is more common in urban areas of the U.S., it can be found anywhere. If a syphilis test comes back positive, then an FTA (Free Treponemal Antibody) test is performed. If this test is positive, then syphilis is officially diagnosed.

When a woman is pregnant, the only medicine she can take for syphilis is penicillin. If she weren't pregnant, she could be treated with other medications.

*Why it's important:* Syphilis can lead to preterm labor or even death. Syphilis can also affect the baby's growth and cause congenital anomalies. In the early part of the 20th century (1900s), 40% of all baby's deaths were related to syphilis, but in recent times syphilis has rarely been identified as a cause of death. However, because of the increase in syphilis in the U.S., increased surveillance is recommended. In the past decade alone, maternal and congenital syphilis has increased several folds in the U.S. The infection can occur during any trimester of pregnancy. Overall, untreated syphilis can be transmitted to the fetus or embryo in pregnancy, causing serious problems with the baby, including death.

- **Hepatitis B**

Women who have hepatitis B or have been infected previously can transmit the disease to their infant during or after birth, so it's important to discuss in advance the best way to deliver your baby.

*Why it's important:* Babies can become carriers and develop chronic hepatitis. Many people infected eventually die from cirrhosis or liver cancer. Special precautions can be taken during delivery to prevent the baby from becoming infected.

- **HIV Test**

In general, doctors frequently advise women who have HIV and/or AIDS not to get pregnant because of the affects that pregnancy can have on the mother's disease, and because of the risk of passing the infection from mother to baby. Because there is a chance of a false positive initial screening, women who test positive for HIV will be given a more specialized test called a *Western blot analysis*. If that tests positive, then a diagnosis of HIV infection is made.

*Why it's important:* There are medications that can be given to pregnant women who are HIV positive that greatly reduce the risk of transmission to the baby. Additionally, specialized care of the mother is required as the pregnancy itself can worsen the degree of the mother's HIV infection as it suppresses the immune system. Many doctors are careful to avoid performing any procedures during labor that may increase the chances of fetal blood mixing with the mother's blood. In the past, cesarean section was the preferred delivery method for HIV positive patients. However, today vaginal delivery is an option that is offered to HIV positive mothers if viral loads are low.

- **The One Hour Glucose Screening (Glucose Challenge Test)**

This test is also commonly referred to as Kolodex, or Glucola testing. This is a screening test for gestational diabetes, a blood test done between 24 and 28 weeks of pregnancy. The mother is given a sugar drink (Kolodex or Glucola are the name brands) and blood is taken one hour later. If the test is normal and the mother does not have other risk factors then no further testing is usually needed. If the screening test is abnormal, then a more prolonged test is needed to rule out gestational diabetes.

*Why it's important:* Like any screening test, this one won't give you a diagnosis — it's designed to identify as many women as possible who may have a problem and need more testing to find out. So a positive result doesn't mean that you have gestational diabetes. In fact, only about a third of women who test positive on the

glucose screen actually have the condition. To find out if you're one of them, you'll have to undergo a longer, more definitive exam called a glucose tolerance test (GTT).

Between two and five percent of expectant mothers develop gestational diabetes, making it one of the most common health problems during pregnancy. And because the condition rarely causes any symptoms, testing is the only way to find out if you have it.

Your practitioner may want you to be screened earlier than 24 weeks if a routine urine test shows a high amount of sugar in the urine or if you're considered at high risk. If the results are normal, you'll be screened again at 24 to 28 weeks.

### **Maternal Serum AFP Tetra Profile:**

AFP (alpha-fetoprotein) Tetra Maternal serum screening can identify pregnant women who are at an increased risk for having a baby with certain birth defects. When a woman has reached a certain point in her pregnancy (between 15 and 21 weeks), a simple blood test can estimate her risk of having a baby with open neural tube defects, Down syndrome, or Trisomy 18, compared to other women her age.

AFP Tetra is a screening test that measures four proteins in a pregnant woman's blood: AFP, hCG (human chorionic gonadotropin), uE3 (unconjugated estriol), and dimeric inhibin A (DIA). The levels of these proteins, combined with clinical information about the pregnant woman, such as weight, race, and whether she takes insulin, can help identify a woman who has a higher chance of having a baby with certain birth defects.

AFP Tetra combines four different laboratory markers to offer enhanced prenatal screening and increased detection efficiency for Down syndrome.

### **AFP Tetra screens for the following birth defects:**

- **Open Neural Tube Defects:** Open neural tube defects, such as spina bifida, occur when the baby's neural tube, or spine, does not close completely during development, leaving the spinal cord exposed. Approximately 1 in 1000 babies has an open spina bifida. The effects of open spina bifida range from bladder control problems to paralysis and mental retardation. The AFP Tetra test can identify greater than 80% of pregnancies that may have open neural tube defects.
- **Down Syndrome:** Down Syndrome, which occurs in about 1 in 800 births, is a disorder in which the baby has an extra chromosome. Chromosomes are the "units of inheritance" or "packaging" for our genetic material, or DNA. In a normal pregnancy, each baby inherits a total of 46 chromosomes, 23 from the mother, and 23 from the father. Sometimes an error in division will cause a baby to inherit too many or too few chromosomes. In Down Syndrome, instead of inheriting one chromosome 21 from the mother and one chromosome 21 from the father, the baby inherits a total of three of chromosome 21. Therefore, Down Syndrome is often called Trisomy 21. Babies with Down Syndrome have some degree of mental retardation and often have physical abnormalities, such as heart defects. AFP Tetra can detect 75% to 80% of Down Syndrome pregnancies.
- **Trisomy 18:** Trisomy 18 is also called Edwards Syndrome. It is rare and only occurs in 1 out of every 8000 births. Like Down Syndrome, Trisomy 18 is a chromosome abnormality, but is caused by the baby having three of chromosome 18. Babies with Trisomy 18 have significant birth defects and severe mental retardation. Few live beyond the age of one year. AFP Tetra can detect more than 60% of Trisomy 18 pregnancies.

### **What does it mean if my AFP Tetra test is negative?**

A negative test result significantly reduces the likelihood that your baby has an open neural tube defect, Down Syndrome or Trisomy 18; however, AFP Tetra is not diagnostic and cannot completely rule out the possibility of these problems. AFP Tetra does not screen for any other defects.

### **Does a positive AFP Tetra test result mean that my baby has a birth defect?**

No. AFP Tetra is a screening test; it cannot diagnose problems with your baby or pregnancy. The test can only identify those women who are more likely to have a baby with an open neural tube defect, Down Syndrome or Trisomy 18. Normally a positive AFP Tetra result will only mean that more diagnostic testing may be offered.

### **What other tests are offered if my AFP Tetra test is positive?**

Follow up options are determined privately between the couple and the physician/nurse practitioner. In general, most women with a positive test result are referred for genetic counseling, ultrasound and amniocentesis.

- **Genetic Counseling** is a communication process between patient and a trained specialist, such as a certified genetic counselor, perinatologist (high risk pregnancy physician), or the patient's obstetrician. Genetic counseling is designed to help you understand your test results and follow-up options and may include a discussion of your family and pregnancy history.
- **Ultrasound** is the use of high frequency sound waves and a computer to create images of the developing baby. Ultrasound is an important tool to help determine gestational age, or how far into the pregnancy you are. The levels of the proteins measured in the AFP Tetra test vary with each week of pregnancy, so unless the exact gestational age used during the AFP Tetra analysis was accurate, your test results may not be accurate. If ultrasound dating changes your gestational age by 10 days or more, your physician/nurse practitioner will ask the lab to recalculate your test results. Your result may change after the gestational age adjustment.

Ultrasound may also reveal the presence of twins, which will affect the AFP Tetra result. Certain birth defects, such as open spinal bifida, may also be seen on ultrasound. Babies with Down Syndrome and Trisomy 18 may have certain features that can be seen on ultrasound, but in general, neither can be diagnosed by ultrasound alone.

- **Amniocentesis** is a test wherein a sampling of your baby's amniotic fluid is tested for definitive chromosome analysis. In amniocentesis, a very thin needle is inserted into the uterus through the abdomen and a small amount of amniotic fluid is removed. You will feel very little pain during the procedure, and you'll probably be advised to take it easy for a few hours afterward. An amniocentesis has a risk of miscarriage of about 1%. An amniocentesis can give an accurate diagnosis of chromosomal abnormalities, as a count of all chromosomes is performed through DNA analysis.

Before you decide to have this procedure, think about whether you want to know the results and what you would do with the knowledge. Some women, for instance, want to know everything about their fetus, including any genetic abnormalities, in order to be prepared. Some women want to know the results because they might choose to terminate the pregnancy. Some women do not want to know the test results because they feel they would maintain the pregnancy no matter what the results were, and a bad result would only be upsetting to them during their pregnancy. No one can make these decisions but you, so it is important to consider all the options before you decide to have amniocentesis or any prenatal screening for chromosomal defects.

- **Early Screen/NTD**  
Early genetic testing is available for women who desire detection of birth defects earlier than the AFP Tetra screening. The test involves an ultrasound to measure the nuchal fold in the back of the baby's neck, plus some additional blood tests from the mother. This test can be done between 10 weeks and 3 days, and 13 weeks and 6 days of gestation. Studies show that this early screen may be slightly more accurate than the AFP Tetra.

*Why it's important:* Detection of genetic problems require referral to the Department Maternal Fetal Medicine at EVMS for counseling to help the family to make important decisions, such as whether or not to terminate the pregnancy, or to plan and prepare for the baby's arrival. Babies born with genetic defects require delivery at a high risk center so that trained neonatologists will be available to provide the specialized care they may need.

### **Routine Urine Tests:**

Microscopic urinalysis screens are performed at every prenatal visit, typically using a dipstick (reagent) strip to test for the following substances in your urine:

- **Sugar**

It's normal to occasionally have a small amount of sugar in your urine during pregnancy, but if you have elevated levels at a couple of prenatal visits in a row or a very high level at one visit, it could mean you have gestational diabetes. Your provider may have you take a glucose challenge test (Glucola) to find out if that's the case. (Even if your urine test results are normal, you'll have a glucose challenge test between 24 and 28 weeks to check for this relatively common condition.)

- **Protein**

Excess protein in your urine can be a sign of a UTI, kidney damage, or certain other disorders. Later in your pregnancy, it can also be a sign of preeclampsia if it's accompanied by high blood pressure. If you have protein in your urine but your blood pressure is normal, your sample will be sent to the lab for a culture to see whether you have a UTI.

- **Ketones**

Ketones become present in the urine when the body starts breaking down stored or ingested fat for energy. This can happen when you're not getting enough carbohydrates (your body's usual source of energy). If you're suffering from severe nausea and vomiting or you've lost weight, your practitioner may check your urine for ketones. If your ketone reading is high and you can't keep any food or liquid down, you may need intravenous fluids and medication. If ketones are found in combination with sugar, it could be a sign of diabetes.

- **Blood cells or bacteria**

Blood cells or nitrites (produced by certain bacteria) in your urine can signal a urinary tract infection. If the dipstick test shows that you have nitrites or enzymes that indicate bacteria or blood cells in the urine, a urine sample will be sent to the lab to see whether you have a UTI. Your provider will routinely check for sugar and protein, but may check for the other indicators if there is reason to suspect that something's amiss.

*Why it's important:* Urinalysis can identify several relatively common problems occurring during pregnancy and help with early intervention and treatment.

### **Routine Cervical and Vaginal Tests:**

- **Pap Smear**

A Pap smear will be done if you haven't had one already in the previous year. Doctors are looking for precancerous changes in the cervix. If the test shows abnormal cells on the cervix, the physician or nurse practitioner might perform a colposcopy for further diagnosis. However, cervical biopsies and treatment for abnormal cervical changes typically cannot be performed during pregnancy because of the risk of preterm labor.

*Why it's important:* Early diagnosis and treatment of abnormal cells on the cervix can prevent cervical cancer.

- **Chlamydia and Gonorrhea Cultures**

Your provider will also check for chlamydia and gonorrhea through a separate culture from the vagina. The treatment for both chlamydia and gonorrhea is antibiotics.

*Why it's important (gonorrhea):* Gonorrhea can cause potential blindness in a newborn. It can also cause chorioamnionitis, which is an infection of the membrane surrounding the bag of water that surrounds the baby. This can result in premature rupture of membranes, resulting in premature births and subsequent infant complications.

*Why it's important (chlamydia):* If a mother has chlamydia, half of all babies who pass through her birth canal will get the infection, which could cause conjunctivitis or chronic pneumonia.

- **Group B Streptococcus (GBS) Culture**

Group B streptococcus is a bacterial strain present in approximately 20-25% of women. GBS poses no threat to the mother, but poses risks to the baby. The GBS test is designed to screen for those mothers who may be carriers for this bacteria. A vaginal GBS culture will be taken from the vagina between 35-37 weeks gestation. If the test is positive, antibiotics are given at the time of labor to reduce any possible infection to the newborn. Antibiotics will also be given to women in preterm labor or if they have ruptured their bag of water for a prolonged period of time.

*Why it's important:* GBS infection is a common contributor to sepsis of the newborn, and it can carry a high mortality and morbidity rate for the baby, especially if the baby is born prematurely. However, sepsis of newborns occurs in less than 1% of all births, so it is considered rare. Antibiotics can be given to the mother in labor to reduce the likelihood of any infection in the newborn.

# Exercise During Pregnancy and Post Partum

- Regular exercise (at least three times per week) is preferable to intermittent activity. Competitive activities are discouraged. Lap swimming is encouraged.
- Vigorous exercise should not be performed in hot, humid weather or when you have a temperature. Do not allow yourself to become overheated.
- Ballistic movements (jerky, bouncy motions) should be avoided. Exercise should be done on a wooden floor or tightly carpeted surface to reduce shock and provide a sure footing.
- Deep flexion or extension of joints should be avoided because of connective tissue laxity. Activities that require jumping, jarring motions or rapid changes in direction should be avoided because of joint instability.
- Vigorous exercise should be preceded by a 5-minute period of muscle warm-up. This can be accomplished by slow walking or stationary cycling with low resistance. Strenuous exercise should be avoided. Do not exercise to the point of feeling light headed and profuse sweating.
- Vigorous exercise should be followed by a period of gradually declining activity that includes gently stationary stretching. Because connective tissue laxity increases the risk of joint injury, stretching should not be taken to the point of maximum resistance. Some form of activity involving the legs such as walking should be continued for a brief period of “cool down” following exercise.
- Care should be taken to gradually rise from the floor to prevent a drop in blood pressure.
- Heart rate should be measured at peak activity. Maternal heart rate should not exceed 140 beats per minute. You should be able to carry on a conversation while exercising. Do not exercise to the point of exhaustion.
- Fluids should be taken liberally before, during, and after exercise to prevent dehydration. If necessary, activity should be interrupted to replenish fluids.
- Women who have led sedentary lifestyles should begin physical activity at low intensity and advance their activity levels very gradually.
- No exercise should be performed in the supine position (lying flat on your back) after the fourth month of gestation is completed.
- Exercise that involves the Valsava maneuver (holding the breath and bearing down) should be avoided.
- Maternal core temperature should not exceed 100.4°F. Dress in layers.

The safest and most comfortable exercises for expectant mothers are:

- Walking — it is easy and everyone can do it, even if you didn't exercise before pregnancy.
- Low impact aerobic classes or pregnancy exercise videotapes done at home.
- Swimming — it uses many different muscle groups and puts less gravitational strain on the joints.

Remember, the key to exercising during pregnancy is moderation. Don't go for the burn and don't exercise to exhaustion. A good rule of thumb is to slow down if you can't comfortably carry on a conversation while moving. Unless you have a medical condition which restricts exercise, mild to moderate exercise is very safe during pregnancy. It's good for you as long as you don't overdo it and heed your body's warning signs such as:

- Intense pain anywhere, but especially your back or pelvic region
- Excessive fatigue
- Shortness of breath
- Feeling faint
- Vaginal bleeding
- Difficulty walking
- Contractions
- Marked decrease in movement of the baby

If you develop any of the above symptoms during or after exercising, stop immediately and call your doctor.

# Can I do this while I'm pregnant?

## YES you can:

- Shower
- Bathe up to 36 weeks. ***Do not go in hot tubs or Jacuzzis.***
- Have dental work (make sure that your dentist knows that you are pregnant)
- Swim. Do not go in rough water, body surf, scuba diving. No diving, jumping or belly flops. Lap swimming is excellent exercise during pregnancy.
- Have intercourse unless you have had problems, such as placenta previa, or if it causes pain, bleeding or contractions.
- Exercise regularly – walking is usually best. If you have been exercising regularly (i.e. running, aerobics, etc.) you may continue on a modified basis for pregnancy. (See exercise guidelines)
- Travel – up to 35 weeks. Try to empty your bladder every one to two hours and get up to stretch and move around. It is a good idea to let your provider know if you are going out of town. Travel from 35 weeks and beyond is not advised as insurances may deny out of the area deliveries.
- Paint – make sure that the room is well ventilated.
- Have your hair colored, permed, straightened, etc. – consult with your stylist as the effect on your hair may be different.

# Common Pregnancy Concerns

- **Breast Tenderness:** Wear a good support bra. The tenderness will decrease as your pregnancy progresses.
- **Swelling:** A certain amount of swelling is normal during pregnancy. It happens most often in the feet and legs and usually appears in the last few months. It may happen more often in the warmer weather. Because swelling in the hands and face may mean there is another problem, let your physician or nurse practitioner know.
  - Put your legs up whenever possible.
  - Rest, preferably on your left side, as much as possible.
  - Increase your intake of water (8 to 10 glasses a day)
  - Reduce your amount of salt.
  - Never take medication such as diuretics (fluid pills for the swelling) – unless prescribed by your physician or nurse practitioner.
  - Wear support hose.
- **Vaginal Discharge:** Increased vaginal discharge is normal in pregnancy. If it becomes itchy or foul smelling, please let your physician or nurse practitioner know.
- **Cramping:** A certain amount of cramping in pregnancy is normal, especially the first twelve weeks. Unless you have bleeding or fluid leakage along with the cramping, there is usually no need to be alarmed. If you do start cramping, drink several large glasses of water and lie on your left side. If the cramping does not subside in one hour, call the office.
- **Exposure to Sun (Sunbathing/Use of a Tanning Booth):** Sunbathing or use of tanning booth increases the risk for skin cancer – especially MELANOMA. If you must tan, be sure to use sunscreens that provide high protection against both UVA and UVB. Also, you should be aware that pregnant women are more likely to burn than non-pregnant women. Remember to use a suntan lotion with sunscreen preparation of SPF 30 or more. Drink plenty of fluids to prevent dehydration.
- **Leg Cramps:** Leg cramps are fairly common during pregnancy because of the added fluids and weight on your body. To relieve pain during a cramp, stretch your leg and flex your foot, pointing or pulling your toes upward. Massaging the area is helpful, as is applying heat or a cold pack that will help relax the muscle. To prevent cramps, stretch before and after you exercise and before going to bed. Be sure to eat a healthy and balanced diet that is rich in potassium and calcium, the minerals that are most frequently deficient when leg cramping occurs. Ask your doctor if you should take a vitamin or mineral supplement to ensure that you are getting enough in your diet. Drink at least six to eight glasses of water each day and sleep on you side with a pillow between your knees to keep nerves from being pinched.

- **Whooping Cough:** Whooping cough, also known as pertussis, causes coughing fits so bad that it is hard to breathe. Each year in the U.S., hundreds of babies are hospitalized for whooping cough. Babies are too young to get the shot, but you should get a pertussis booster shot (Tdap) with every pregnancy to protect you and your baby. Ask your doctor for a Tdap shot. You can receive the vaccine between 27 and 36 weeks of pregnancy.

# Pregnant Women:



**Pregnant Women Need Tdap Protection**  
As an adult you can catch whooping cough because the vaccine you received as a child may have worn off. Whooping cough shots safely prevent the disease.

**You should get a pertussis booster shot (Tdap) with every pregnancy regardless of receiving a previous vaccine Tdap.**

By protecting yourself from the disease, you also protect your baby.

Ask your doctor for a Tdap shot. You can receive a Tdap vaccine between 27 and 36 weeks pregnant (late 2nd or 3rd trimester).

**Circle Your Baby with Protection**  
To protect your baby, make sure that you and these people are up-to-date on their whooping cough shots:

- anyone who lives with your baby, or
- anyone who takes care of your baby
- keep your baby away from sick people

**Treat Whooping Cough Early**  
Call your doctor or your baby's doctor if:

- you become sick. Early signs of whooping cough can look like a mild cold and get worse fast; or
- you are around someone with whooping cough or a bad cough

**Protect yourself. Protect your family. Get Vaccinated!**

**Pertussis is on the Rise. Get Vaccinated with Every Pregnancy**

**Babies Are Most At Risk**  
Whooping cough (also known as pertussis) causes coughing fits so bad that it is hard to breathe.

Each year in the U.S., hundreds of babies are hospitalized for whooping cough and some die.

Babies, who are too young to get the shot, most often catch whooping cough from a family member.

**DPH** Georgia Department of Public Health

**Have questions? Talk with your Doctor.**  
[www.dph.ga.gov/pertussis/](http://www.dph.ga.gov/pertussis/)

# Morning Sickness

Morning sickness (a queasy, nauseating feeling) can come anytime during the day. There are many things that trigger morning sickness, and many things you can do to help prevent or alleviate the nausea and vomiting or morning sickness.

Few women experience severe symptoms of morning sickness (also known as hyperemesis). Most symptoms of morning sickness go away after a few weeks. If symptoms persist for longer than a few weeks, are severe (where you can't keep anything down for longer than 1 hour), and debilitating, call your obstetrician or visit an emergency room immediately. You can become quickly dehydrated and may require an IV to replace fluids lost during vomiting.

## Triggers That May Cause Morning Sickness:

- Smells/odors (such as food, pet, body odor, fragrances, deodorants, garbage, fuel, paint)
- Fatigue (especially if you were up all night with morning sickness)
- Areas or rooms with stale, damp air
- Foods (greasy, spicy, foreign)
- Empty stomach (accumulated acid in stomach)
- Noises (sudden noise, loud music, traffic, sirens, construction sites)
- Abrupt, sudden movements (motion sickness)
- Bright, glaring lights
- Hot/cold weather, humidity

## Morning Sickness Remedies:

- Eat small, frequent meals high in protein and fiber (takes longer to digest).
- Get plenty of rest (take naps during the day or when you feel most nauseated).
- Keep a bag of snacks (unsalted pretzels, nuts, granola bars, dried fruit, breadsticks, crackers) with you at all times to keep your stomach comfortable.
- Chew Tums or other safe antacids when nauseated or after vomiting.
- Drink lots of non-alcoholic, non-caffeinated beverages throughout the day (water is preferable).
- Keep a small snack and beverage by your bedside to consume before you get out of bed.
- Take your time getting out of bed in the morning; slowly change positions when lying down.
- Keep moist, unscented towelettes nearby to refresh your face after nausea and vomiting.
- Exercise (brisk walk, swimming, bicycle riding, yoga, stretching).
- Get fresh air by either going outside or opening windows.
- Identify triggers and avoid them as much as possible.

# Nutrition in Pregnancy

The old pregnancy adage, “you are eating for two” can really carry too much weight when women mistakenly see this as a green light to overeat. The truth is, **eating for two means eating better, not necessarily more or at least not much more.** It takes a total of 55,000 extra calories to make a baby. That may sound like a lot but the average pregnant woman only needs to add about 300 additional calories per day beyond her normal calorie intake (for most women this is between 1800 and 2000 calories total per day).

Good nutrition is very important, and can be easy to accomplish during your pregnancy. You and your baby are nutritionally inseparable. How you take care of yourself, including how well you eat during pregnancy, directly affects both how you feel, and your baby. Pregnancy is a good time to fine tune an already good diet and improve a poor diet by eating nutritious, well balanced meals.

## Some basic guidelines are:

- Make every bite count. Before taking a bite of food ask yourself, “Is this nourishing me and my baby?” If the answer is yes, go ahead and enjoy yourself. But if the answer is no, think twice and make a better food selection for you and your baby.
- All calories are not created equal in the nutrition world. The nutritive value found in a 150 calorie doughnut made with white sugar and refined white flour will never compare with the nutrition found packed into a whole grain muffin sweetened with natural sugars and fruit.
- Never skip meals. Your baby needs regular nourishment at regular intervals. Even if you are not hungry, your baby is. If morning sickness or heartburn makes you feel miserable after eating, try eating five or six small meals spaced a few hours apart throughout the day rather than the traditional three large meals. See tips for dealing with morning sickness.
- Water Up. You need to drink 8-10 glasses of water per day.
- Limit caffeine to less than three cups per day. Caffeine is fine in moderation, but it has a diuretic effect (drawing fluids and calcium from the body, making you urinate more frequently). It may also interfere with your sleep.
- Take a daily prenatal vitamin containing iron. Most women are anemic during pregnancy. When you take your vitamins or iron supplements, take them with a vitamin C rich juice, such as orange juice. Don't take them with soda or milk because they can interfere with the absorption of iron.

# Warning Signs During Pregnancy

During pregnancy, you may experience many different symptoms and body changes. While many are common and routine, knowing the ones that are not common is just as important. Warning signs during pregnancy are the changes in the normal standards that let the pregnant woman know to call her doctor. These warnings should not be ignored.

Some of the most frequent warning signs in pregnancy include:

1. Fever
2. Significant weight gain in one week (greater than two pounds)
3. Severe headaches, especially combined with visual changes
4. Decreased fetal movement
5. Abdominal pain
6. Bleeding
7. Cramping – A certain amount of cramping in pregnancy is normal, especially the first twelve weeks. Unless you have bleeding or fluid leakage along with the cramping, there is usually no need to be alarmed. If you do start cramping, drink several large glasses of water and lie on your left side. If the cramping does not subside in one hour, call the office.
8. Pain and redness in calves
9. Shortness of breath at rest

If you experience any of these symptoms, please contact your physician's office or answering service.

# Baby's Movements

Most mothers-to-be eagerly await that first reassuring flutter, just to know their baby is growing and developing. Sometime between **18-25 weeks into pregnancy**, moms will begin to feel movement. For first-time moms, it may occur closer to 25 weeks, and for second or third-time moms, it may occur closer to 18 weeks.

Don't panic if you're not sure what you're feeling. For a couple of weeks it may be difficult to distinguish between gas and the real thing, but very soon, you will notice a pattern. You will gradually learn your baby's sleeping and waking cycles when he or she is most active, and what seems to trigger activity.

Being attentive to your baby's movements will help you notice any significant changes. Setting aside time every day when you know your baby is active to count kicks, swishes, rolls, and jabs may help identify potential problems and can help prevent stillbirth. Though strongly recommended for high-risk pregnancies, counting fetal movements beginning at 28 weeks may be beneficial for all pregnancies.

## Counting your baby's movements

There are numerous ways to count your baby's movements and numerous opinions on how many movements you are looking for within a certain amount of time. The American Congress of Obstetricians and Gynecologists (ACOG) recommends that you time how long it takes you to feel 10 kicks, flutters, swishes or rolls. Ideally, you want to feel at least 10 movements within 2 hours. You will likely feel 10 movements in less time than that.

You might want to start a notebook or use the various charts below. In a notebook, record the time you feel the first fetal movement, place a check mark for each movement you feel until you reach 10, then record the time of the tenth movement. This will help you observe patterns and discover how long it normally takes for your baby to move 10 times. Keep in mind you are looking for significant deviations from the pattern.

It can become easy to expect an exact amount of time every time you do your kick counts; however, there can be a wide range of time differences. So remember to look for significant deviations from the pattern over the course of a few days.

## When should I call my physician?

If you have followed the above recommendations and have not felt 10 kicks by the end of the second hour, wait a few hours and try again. If after trying a second time, you do not feel 10 movements within 2 hours you should contact your health care provider. Or, if you notice a significant deviation from the pattern over the course of three to four days.