



Ultrasound Exam in Pregnancy

What is an ultrasound exam?

An ultrasound exam - also known as a “sonogram” - is a way to take a picture of your internal organs without using X-rays. Ultrasound uses harmless sound waves that are directed at organs in the body. The sound waves are turned into a picture (or “image”) on a monitor, much like a computer screen. The sound waves used in ultrasound exams have been safely used for many years.

Why is ultrasound used in pregnancy?

Taking pictures of the growing baby (the fetus), the placenta, and the amniotic fluid that surrounds the baby can be very helpful. Ultrasound can provide important information about your pregnancy. It can:

- Determine the estimated due date of the baby
- Show the size of the baby and if it is growing properly
- Find out whether there is more than one baby (twins or triplets)
- Check the location and development of the placenta (the “afterbirth” or the organ that connects the fetus with the mother) as well as the baby
- Measure the amount of amniotic fluid (“bag of waters” that surrounds the baby)
- Detect some (but not all) birth defects
- Learn if there has been a miscarriage

How are prenatal ultrasound exams done?

Ultrasounds are usually done either in the doctor’s office (or other medical professional’s office) or in the Radiology or Perinatology Departments. If there are any preparation instructions, they will be given to you before your ultrasound appointment.

Prenatal ultrasounds can be done in more than one way:

- *Transabominally*. This method is the most common, and uses a transducer (the instrument that sends the sound waves) placed on the mother’s belly area. A warm gel is smeared on the skin to improve the connection between the skin and the transducer. This method is used throughout pregnancy.
- *Transvaginally*. This method uses a thin transducer placed gently into the vagina. This is often done in early pregnancy (less than 13 weeks), and sometimes later in pregnancy to look at the lower part of the uterus called the cervix.
- *Combination* of both types. This may be done for some women at any time in the pregnancy.

When are prenatal ultrasound exams done?

Prenatal ultrasound exams can be done any time in pregnancy. The exam can provide different kinds of information during the various stages of your pregnancy.

1st trimester: In early pregnancy (less than 13 weeks) an ultrasound may be done to confirm that you are pregnant and to check the baby’s heartbeat. We can also use it to estimate your due date and to find out if you are having twins. A specialized type of ultrasound may also be used in the 1st trimester to estimate the risk of a chromosome defect, like Down syndrome (called “nuchal translucency ultrasound”).

2nd trimester: Later in pregnancy, an ultrasound is offered around 18-20 weeks. Sometimes this test is called a “Level 1 ultrasound” or a “screening ultrasound.” At this stage of pregnancy, the ultrasound is done to check that the baby is growing normally, to look at the location of the placenta, and to be sure that there is enough amniotic fluid. It can also look for serious birth defects. It is important to remember that many birth defects cannot be found during your ultrasound. Also, a normal ultrasound is not a 100 percent guarantee of a healthy baby.

3rd trimester: Ultrasound is sometimes done later in pregnancy if there is a question about the size or position of the baby, the amount of amniotic fluid, or the location of the placenta.

What is the difference between a Level 1 and a Level 2 ultrasound?

When you have a Level 1 ultrasound, the technologist takes many pictures of your developing baby, your uterus, the amniotic fluid, and the placenta. A doctor (radiologist or perinatologist) reviews the images carefully. The results are then reported to your doctor or other medical professional.

Sometimes, the doctor may feel that it would be helpful to do a more detailed ultrasound, called a Level 2 ultrasound. If some structures were not well seen during the first ultrasound, or there are other concerns, you will be advised to have a Level 2 ultrasound. This does not necessarily mean that there is something wrong with your baby or your pregnancy. Level 2 ultrasounds are generally done in the same way as Level 1 ultrasounds. But the technologist and the doctor both take pictures of the baby. You will usually be given the results of your level 2 ultrasound at the time of the exam.

You may be scheduled for a Level 2 ultrasound instead of a Level 1 ultrasound if you have a personal or family history of a problem that can be detected with ultrasound, such as an earlier pregnancy with a birth defect.

What if I am told to repeat my ultrasound exam?

If you are asked to come back for a Level 2 ultrasound, you may be concerned about your baby’s health. However, it is important to remember that in many cases the Level 2 ultrasound shows that everything looks fine. If your Level 2 ultrasound determines that the baby has a problem or that there is a complication in your pregnancy, you will be offered an appointment with medical specialists to talk about the findings. These specialists may include:

- A genetic counselor
- Your doctor or other medical professional
- A radiologist
- A perinatologist
- A geneticist
- A pediatric specialist

You may also be offered more tests, for example, an amniocentesis (a study of the baby’s chromosomes) or a fetal echocardiogram (a detailed ultrasound of the baby’s heart). These tests may be able to clarify or confirm the ultrasound results.

Your doctor or other medical professional will help you gather as much information as possible about what the ultrasound seems to show about your baby if a birth defect seems possible. Some birth defects can be repaired after the baby is born, but others may have an impact on your baby’s life. In rare cases, a birth defect may be so serious that it is unlikely that the baby will live. There are many support groups available to couples who find out that there is a severe problem with their unborn baby. We are here to help with any decisions that you may need to make.

Should I have a prenatal ultrasound?

Ultrasound is the safest way to get information about your baby before it is born. Ultrasounds have been a part of prenatal care for many years. There are no known risks from prenatal ultrasound to the mother or the baby. However, most experts agree that prenatal ultrasound exams should only be done when ordered by a doctor or other medical professional to obtain medical information. We do not recommend ultrasound exams just to find out the sex of the baby, though this information can sometimes be available.

While ultrasound can be helpful in finding potential problems, in some cases, doctors may not be sure how serious the problems will be. This kind of uncertainty can cause stress and worry for some women, and it can lead to additional diagnostic testing. In most cases, though, the ultrasound results are normal and reassuring.

Keep in mind that not all birth defects can be found by an ultrasound exam. A normal ultrasound is not a 100 percent guarantee that the baby has no health problems or birth defects.

What if I decide not to have an ultrasound exam?

If you decide that you do not want to have an ultrasound, there is a chance that you might not know that:

- You are having twins or triplets
- Your baby has a birth defect or is not growing normally
- The placement of the placenta is abnormal
- Your baby's estimated due date is incorrect

If you have concerns about having an ultrasound, please talk with your doctor or other medical professional.

Other resources

- Connect to our Web site at kp.org to access health and drug encyclopedias, Healthy Living programs, health classes, and much more.
- Contact your Kaiser Permanente Health Education Center or Department for health information, programs, and other resource.
- Visit kp.org/mydoctor and enter your OB/GYN's name, then view the left side navigation bar. There you can:
 - Click on “Prepare for Your Procedure or Childbirth” to see an interactive online program about childbirth.
 - Click the “Healthy Beginnings Pregnancy online Newsletter” link to sign up for our weekly online newsletter.

This information is not intended to diagnose health problems or to take the place of medical advice or care you receive from your physician or other health care professional. If you have persistent health problems, or if you have additional questions, please consult with your doctor.