

Pregnancy Ultrasounds

What is a pregnancy ultrasound? An ultrasound is a test used during pregnancy. It's a safe way to check the health of an unborn baby. During an ultrasound, sound waves are sent through your abdomen or vagina by a device called a transducer. The sound waves bounce off structures inside your body, including your baby and your reproductive organs. Then, the sound waves transform into images that your provider can see on a screen. It doesn't use radiation, like X-rays, to see your baby.

Why might I need a pregnancy ultrasound?

An ultrasound is one of the few ways your pregnancy care provider can see and hear your baby. It can help them determine how far along you are in pregnancy, if your baby is growing properly or if there are any potential problems with the pregnancy. Ultrasounds may occur at any time in pregnancy depending on what your provider is looking for.

What can be detected in a pregnancy ultrasound? A pregnancy ultrasound does two things:

- Evaluates the overall health, growth and development of the fetus.
- Detects certain complications and medical conditions related to pregnancy.

In most pregnancies, ultrasounds are positive experiences and pregnancy care providers do not find any problems. However, there are times this is not the case, and your provider detects birth disorders or other problems with the pregnancy.

Reasons why your provider performs a prenatal ultrasound are to:

- Confirm you're pregnant.
- Check for ectopic pregnancy, molar pregnancy, miscarriage or other early pregnancy complications.
- Determine how far along you are in your pregnancy and your due date.
- Check your baby's growth, movement, and heart rate.
- Look for multiple babies (twins, triplets).
- Examine your pelvic organs like your uterus, ovaries, and cervix.
- Examine how much amniotic fluid you have.
- Check the location of the placenta.
- Check your baby's position in your uterus.
- Detect problems with your baby's organs, muscles, or bones.

Ultrasound is also an important tool to help providers screen for congenital conditions (conditions your baby is born with). A screening is a type of test that determines if your baby is more likely to have a specific health condition. Your provider also uses ultrasound to guide the need during certain diagnostic procedures in pregnancy like amniocentesis or chorionic villus sampling.

An ultrasound is also part of a biophysical profile (BPP), a test that combines ultrasound with a nonstress test (external heart rate monitor) to evaluate if your baby is getting enough oxygen.

How many ultrasounds do you have during your pregnancy?

Most pregnant people have one or two ultrasounds during pregnancy. However, the number and timing vary depending on your pregnancy care provider and if you have any health conditions. If your pregnancy is high risk or if your provider suspects you or your baby has a health condition, they may suggest more frequent ultrasounds.

When do you have your first pregnancy ultrasound?

The timing of your first ultrasound varies depending on your provider. Some people have an early ultrasound (also called a first-trimester ultrasound or dating ultrasound). This can happen as early as seven to eight weeks of pregnancy. Providers do an early ultrasound through your vagina (transvaginal ultrasound). Early ultrasounds do the following:

- Confirm pregnancy.
- Check for multiple fetuses.
- Measure the size of the fetus.
- Help confirm gestational age and due date.
- Detect some fetal abnormalities.

Anatomy scan

You can expect an ultrasound around 18 to 20 weeks in pregnancy. This is known as the anatomy ultrasound or 20-week ultrasound. During this ultrasound, your pregnancy care provider can see your baby's sex (if your baby is in a good position for viewing their genitals), detect birth disorders like cleft lip or find serious conditions related to your baby's brain, heart, bones or kidneys.

Types of ultrasounds

The two main types of pregnancy ultrasound are transvaginal ultrasound and abdominal ultrasound. Both use the same technology to produce images of the baby. Your pregnancy care provider performs a transvaginal ultrasound by placing a wand-like device inside the vagina. They perform an abdominal ultrasound by placing a device on the skin of the belly.

Transvaginal ultrasound

During a transvaginal ultrasound, your pregnancy care provider places a device inside the vaginal canal (like how a tampon is placed). In early pregnancy, this ultrasound helps to detect a fetal heartbeat or determine how far along you are in your pregnancy (gestational age). Images from a transvaginal ultrasound are clearer in early pregnancy as compared to abdominal ultrasound.

Abdominal ultrasound

Your pregnancy care provider performs an abdominal ultrasound by placing a transducer directly on your skin. Then, they move the transducer around the belly (abdomen) to capture images of your baby. Sometimes slight pressure must be applied to get the best views. Providers use abdominal ultrasounds after about 12 weeks of pregnancy.

Traditional ultrasounds are 2D. More advanced technologies like 3D or 4D ultrasound can create better images. This is helpful when your provider needs to see your baby's face or organs in greater detail. Not all providers have 3D or 4D ultrasound equipment or specialized training to conduct this type of ultrasound.

Other types of ultrasounds

Your provider may recommend other types of ultrasounds. Examples of additional ultrasounds are:

- **Doppler Ultrasound:** This type of ultrasound checks how your baby's blood flows through its blood vessels. Most Doppler ultrasounds occur later in the pregnancy.
- **Fetal echocardiogram:** this type of ultrasound looks at your baby's heart size, shape, function and structure. Your provider may use it if they suspect your baby has a congenital heart condition, if you had another child that had a heart condition or if you have certain health conditions that warrant taking a closer look at the heart.

How do I prepare for the test?

There's no special preparation for an ultrasound. Some pregnancy care providers ask that you come with a full bladder and don't use the restroom before the test. This helps them view your baby better with the ultrasound. You can bring a support person, but bringing children is discouraged as this is an important test that requires complete focus.

What should I expect during a pregnancy ultrasound?

You'll lie on a padded examining table during the test. Most ultrasounds occur in a dimly lit room, which helps your ultrasound technician (or sonographer) see the screen. Your sonographer applies a small amount of water-soluble gel to the skin of the belly. The gel doesn't harm the skin or stain clothes, but it may feel cold. This gel helps transmit sound waves more efficiently.

Next, the sonographer places a transducer on the skin of the abdomen. The transducer sends sound waves into your body, which reflect off internal structures, including your baby. The sound waves that reflect back create pictures on a screen. Your sonographer uses these images to take important measurements such as your baby's head circumference and length. You may see them making lines on the screen or clicking a button to "freeze" certain angles.

There's virtually no discomfort during a prenatal ultrasound. You may feel mild discomfort if you must pee. The ultrasound test takes about 30-60 minutes to complete depending on the study.

If you have a transvaginal ultrasound, the process is only different in that the transducer is placed inside the vagina and not on the belly.

What should I expect after a pregnancy ultrasound?

If you had an abdominal ultrasound, your sonographer wipes the gel off your belly. They may print off some ultrasound pictures for you to take home with you.

In most cases, your sonographer won't discuss the results of the test with you. A Maternal-Fetal Medicine physician will look at the images, then discuss the findings with you immediately after the ultrasound is completed, or if everything is normal, may instruct the sonographer to let you know the findings are normal.

What are the risks of fetal ultrasound?

Studies have shown that ultrasounds are safe during pregnancy. There are no harmful side effects to you or your baby.

Results and Follow-up

What results do you get on a pregnancy ultrasound?

Your ultrasound results will be normal or abnormal. A normal result means your pregnancy care provider didn't find any problems and that your baby is growing and developing normally. An abnormal result means your provider noticed something irregular. If they do, your provider will order additional ultrasounds or diagnostic tests to determine if something is wrong.

Occasionally, the ultrasound is incomplete if there's difficulty seeing all the structures needed for that ultrasound. Your baby's position or movement sometimes makes it difficult to see everything your provider needs to see. If this is the case, you'll need a repeat ultrasound, and they'll try again.

There are limitations to ultrasounds, and multiple abnormalities may not be found until after birth.

What are the reasons you need more ultrasound during pregnancy?

There are several reasons your pregnancy care provider may order additional ultrasounds during your pregnancy. Some of these include:

- Problems with the ovaries, uterus, cervix or other pelvic organs.
- Your baby is measuring small for their gestational age or your provider suspects IUGR (intrauterine growth restriction).
- Problems with the placenta like placenta previa or placental abruption.
- You're pregnant with twins or triplets.
- Your baby is breech.
- You have too much or too little amniotic fluid.
- You have a condition like diabetes or hypertension.

Normal results on pregnancy ultrasounds can vary. Generally, a normal result means your baby appears healthy and there were no issues that were found.

When does a pregnancy ultrasound determine sex?

Your baby's sex isn't visible on an ultrasound until about 18 to 20 weeks. Be sure to tell the sonographer or your pregnancy care provider whether you want to know the sex of your baby before your ultrasound.