

One of the first exams your doctor will order after a positive pregnancy test is an ultrasound. An ultrasound exam will confirm the presence of an intrauterine pregnancy, determine gestational age and determine fetal cardiac activity. In other words, the exam will check if your baby is in your uterus, find out how long you have been pregnant, and check the baby's heartbeat, which begins beating at 21 days after conception.

What Is Ultrasound?

Ultrasound is another name for sonogram. It is a method of seeing the internal parts of your body, or your baby within your uterus, using sound waves. Ultrasound is like ordinary sound except it has a higher pitch than your ear can hear. Ultrasound is sent into your body and the sound waves that bounce back are converted into images or sounds, like your baby's heartbeat, and are shown on a monitor.

Why Do Women Have an Ultrasound?

The most common reason for having an ultrasound examination is to help your doctor find out your baby's due date and to make sure your baby is growing as it should. It may also be used to determine the placement of the placenta; your baby's position, movement, breathing, and heart rate; the amount of amniotic fluid in the uterus; and if you are carrying more than one baby. Ultrasound may also be used to detect some birth defects.

How Is an Ultrasound Performed?

There are two main methods of performing a pelvic ultrasound: abdominal and *vaginal*. Abdominal ultrasound is performed by an examiner who applies a clear water-based gel to the *skin* to help the transducer (scanner) make good contact with your body. The transducer is pressed firmly against your skin and is swept over your lower abdomen. Vaginal ultrasound involves the insertion of the transducer into the vagina. A protective cover is placed over the transducer, or *wand*, which is then lubricated with a small amount of gel. It is then inserted into the vagina by the examiner or you may be asked to insert it as you would a tampon. In most cases you will be examined by a specially trained person called a sonographer. Whether your ultrasound is performed by a doctor or a sonographer, the pictures will be reviewed and read by a doctor.

How Do I Prepare?

In most cases, no special preparation is needed for the examination other than to drink some water before the exam. Abdominal screenings are usually done with you lying flat on a table. Your clothing will be pulled up or down to expose your lower abdomen. Abdominal screening usually requires a full *bladder*, which provides a clear area through which your pelvic bones can be seen. A vaginal scan does *not* require any preparation except those that are similar to a routine pelvic examination. You will disrobe from the waist down and your legs will be placed in stirrups or your buttocks elevated with a cushion. For this type of screening you will be asked to empty your bladder. It is a good idea to wear *loose*, comfortable clothes.

Will I Have an Abdominal or Vaginal Ultrasound Exam (or Both)?

The decision as to which type of scan is necessary will be made by the examiner. Therefore it makes sense to arrive for the ultrasound exam with your bladder relatively full. The abdominal scan offers a wide view of the entire pelvis, which gives the examiner the ability to see things in relation to each other. The vaginal approach offers improved visualization because the transducer is closer to the area being examined, especially to see the

heartbeat in early pregnancy. Both methods offer advantages so the examiner will determine which approach is best for you.

How Long Will It Take?

The length of time will vary depending on how easily the necessary information is obtained. Most exams take about 30 minutes.

Will It Hurt?

There is no pain from an abdominal ultrasound examination. If you have been asked to fill your bladder, this may cause some discomfort. In early pregnancy it may be necessary to put a special transducer in your vagina, so the very small baby can be seen. You will be asked to empty your bladder before this type of exam is done. It will not hurt, but you may feel some pressure. It does not hurt the baby. A vaginal sonogram in most cases is more comfortable than a manual examination.

Can I See My Baby Move?

Your baby's heart begins beating 21 days after conception. Depending on your baby's age, you will see the baby's heartbeat and movement of its body, arms, and legs. The baby can be seen moving months before you can feel its movement.

Will I Learn the Sex of My Baby?

Sometimes it is possible to see the sex of the baby, depending on the age of the baby and whether it is lying in a favorable position. If not, the baby's sex cannot be determined.

Does A Normal Ultrasound Exam Guarantee a Normal Baby?

No. The ability to detect abnormalities depends on many things. For instance, the size and position of your baby may not allow certain abnormalities to be seen. Some types of abnormalities cannot be seen because they are too small or not visible by ultrasound.

Will I Need More Than One Ultrasound Examination?

In many cases you may have only one examination, but your doctor may order additional scans for a variety of reasons during your pregnancy.

Is an Ultrasound Safe?

Ultrasound does not use ionizing radiation (like used in x-rays). There are no known harmful effects associated with the medical use of ultrasound. The American Institute of Ultrasound in Medicine, an association of physicians, sonographers, scientists, and engineers, has a Bioeffects Committee that meets regularly to consider safety issues and evaluate reports dealing with the bio-effects and safety of ultrasound. They have adopted the following statement:

“There are no known *harmful* effects associated with the medical use of sonography. Widespread clinical use of diagnostic ultrasound for many years has not revealed any harmful effects. Studies in humans have revealed no direct link between the use of diagnostic ultrasound and any adverse outcome. Although the possibility exists that biological effects may be identified in the future, current information indicates that the benefits to patients far outweigh the risks, if any.”— About Your Exam, American Institute of Ultrasound in Medicine, December 2002