



# Women's Health Specialists

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## Ultrasound

An ultrasound is a diagnostic technique that produces an image on a screen by passing high frequency soundwaves into the body. The reflected waves are detected and analyzed to establish the picture of internal organs or a fetus in the uterus. Ultrasound can be used to examine most parts of the body except those surrounded by bone (the brain) or those that contain gas (lungs or intestines).

Ultrasound is used frequently in obstetrics and gynecological diagnostic situations. These include distinguishing between cystic and solid masses (tumors) in the uterus, fallopian tubes and ovaries. It can also help detect breast masses.

Ultrasound may also be used to confirm pregnancy and evaluate fetal viability, position, gestational age, and growth rate. It can be done as early as 5-6 weeks and frequently again at 18-20 weeks. In some cases, a scan at around 12-16 weeks is done to measure the nuchal skin fold thickness for the purpose of evaluating the risk for Down syndrome. It may also be used to determine the position of the placenta, rule out a suspected ectopic pregnancy, to guide amniocentesis by determining placental location and fetal placement.

Ultrasound is also used to evaluate fetal anatomy for a wide variety of birth defects (when performed by specially trained and experienced ultrasound operators). It is also used to evaluate fetal well-being with an examination called a biophysical profile (BPP). A BPP assesses fetal breathing movement, heart rate, limb movement, trunk attitude and movement and amount of amniotic fluid.

The ultrasound procedure is usually done in the doctor's office. No anesthetic is required unless it is associated with other testing, such as amniocentesis.

In early pregnancy testing, a woman is usually advised to drink several glasses of fluid and not to empty the bladder for a few hours prior to the test. A full bladder helps improve the view of the uterus when the ultrasound is done through the abdomen. A gel is applied on the skin to achieve good contact. A transducer (an instrument that converts an electrical current into sound waves) is passed back and forth over the skin and the images appear on a video screen. In some cases, the transducer (covered with a sheath or covering) may be placed inside the vagina to allow certain enhanced details to be seen. The vaginal procedure allows better visualization of the pelvis. In this case, a full bladder is not necessary.

It has been over 35 years since ultrasound was first used on pregnant women. There is some concern about long-term effects of this type of testing, but no risks have been determined as yet. However, absolute safety remains unproven. The results of the procedure will be explained to you by the doctor and if they are abnormal further diagnostic tests may be indicated.