



The Lebanese Society of Obstetrics and Gynecology

Women's health promotion series

Ultrasound Examination

Ultrasound creates pictures of the internal organs of the body from sound waves. It is used to help find possible problems or to check a medical condition. During pregnancy, it can be used to examine the **fetus** (the baby that is growing in the woman's uterus).

This pamphlet will explain:

- What ultrasound is and how it works
- When women might have an ultrasound
- Types of ultrasound

About Ultrasound

Ultrasound is energy, there is no radiation involved, only sound waves. The sound waves are directed into a specific area of the body through a **transducer** (the transducer is a device that emits sound waves).

The sound waves hit tissues, body fluids, and bones. Waves then bounce back, like echoes, and are converted into pictures of the internal organs and of the fetus if the woman is pregnant.

The images appear on a screen similar to a television. Dark areas show liquid, like **amniotic fluid** (liquid in the sac surrounding the fetus in the mother's uterus). Gray or light areas show denser material, like tissue or bone.

Uses of Ultrasound

Many people think of an ultrasound exam as an exam that is done during pregnancy. This often is true, but there are many other health conditions that can be monitored using ultrasound.

Obstetrics

Ultrasound is used in obstetrics to examine the growing fetus inside the mother's uterus. An ultrasound can provide important information about the fetus's health and well-being, including:

- Age of the fetus
- Rate of growth of the fetus
- Placement of the **placenta** (Tissue that provides nourishment to and takes away waste from the fetus.)
- Fetal position, movement, breathing, and heart rate
- Amount of amniotic fluid in the uterus
- Number of fetuses
- Some birth defects

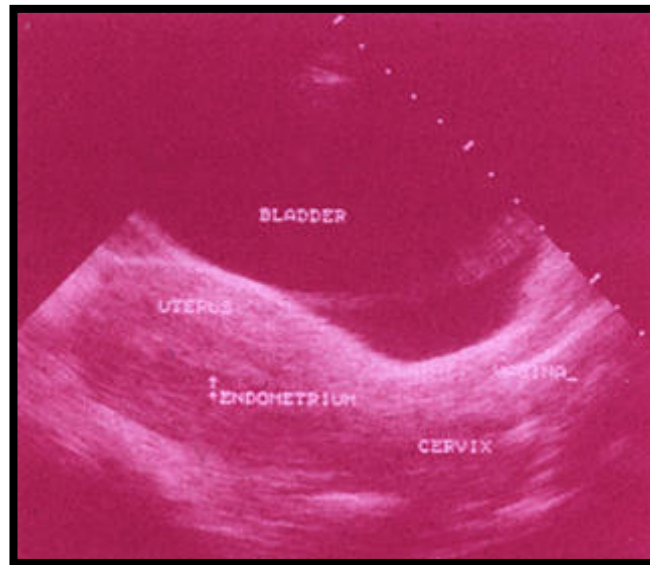


If you have a high-risk pregnancy, if your doctor suspects a problem, or if your pregnancy continues after your due date, your doctor may want to use ultrasound to check on the well-being of your baby. Other uses of ultrasound during pregnancy include a fetal cardiogram. This is a detailed ultrasound exam that may be done if heart problems are suspected in the fetus.

Gynecology

Ultrasound is used in gynecology to examine the pelvic organs. An ultrasound exam can help:

- Identify a pelvic mass
- Find causes of pelvic pain
- Find causes of abnormal bleeding or other menstrual problems
- Find the position of an *intrauterine device (IUD)* (small device that is inserted inside the uterus to prevent pregnancy.)
- Diagnose and treat infertility



Types of Ultrasound

There are many different types of ultrasound exams. The type of ultrasound you have will depend on what types of images the doctor needs and why the exam is being done. The transducer may be placed on the abdomen (transabdominal) or in the vagina (transvaginal). Other types of ultrasound include:

- *Doppler ultrasound*: This test is performed the same way as transabdominal ultrasound. For this exam, higher-intensity sound waves are used to study the movement of blood. It also can be used to listen to the baby's heartbeat.
- *Sonohysterography*: For sonohysterography, you first will have a transvaginal ultrasound exam. A catheter (a small tube) then will be inserted through the *cervix* (the lower end of the uterus, which protrudes into the vagina). A saline solution (salt water) will be injected through the catheter. The saline solution fills the uterus so abnormal findings can be seen inside the uterus. It also acts as a contrast material, which makes it easier to see anything abnormal.

- *Three- and four-dimensional (3D and 4D) ultrasound:* These are types of transabdominal ultrasound. A 3D ultrasound exam takes thousands of images at once. These are stored and shaded to make a 3D image, which looks more lifelike. A 4D image is similar to a 3D image, but it also shows movement.

The Exam

An ultrasound exam may be done in a doctor's office or a hospital. It may be performed by a doctor or a specially trained technician.

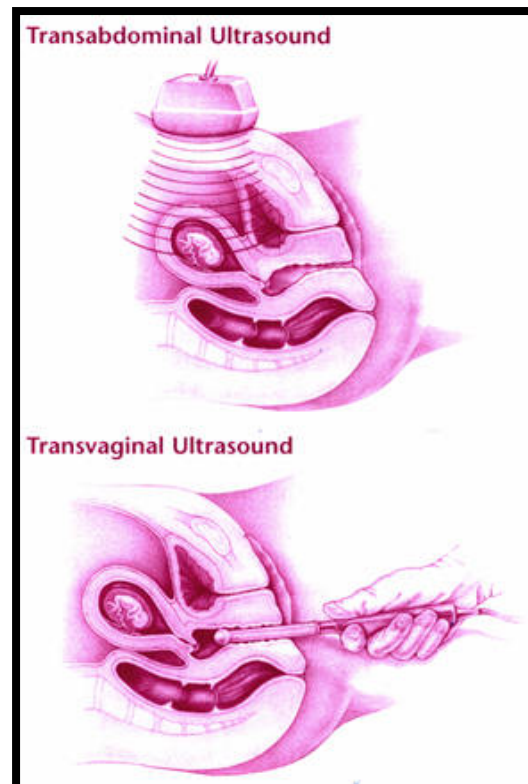
Transabdominal Ultrasound

If you are having a transabdominal ultrasound, you may need to drink up to six glasses of water during the 2 hours before your exam. This will make your bladder full, which will make the uterus or the fetus easier to see.

For this exam, you will lie on a table with your abdomen exposed from the lower part of the ribs to the hips. Mineral oil or a gel is applied to the surface of the abdomen. The transducer then is moved along the abdomen.

Transvaginal Ultrasound

For a transvaginal ultrasound, you will be asked to change into a hospital gown or undress from the waist down. You do not need to fill your bladder before the test. You will lie on your back like when in a pelvic exam. The transducer for this exam is covered with latex, like a condom, and lubricated before it is inserted into the vagina. This type of ultrasound can give a closer look at the pelvic organs and fetus.



After The Exam

After the test, your doctor will look at the images and discuss the results with you. He or she may consult with another doctor.

Finally...

Ultrasound is used to look for problems that may occur or to check on the progress of your pregnancy. It can be a useful tool, especially when used with other tests and exams. Your doctor will explain the reason for your ultrasound and tell you how to prepare for the exam.

With the compliments of the Lebanese Society of Obstetrics and Gynecology

(Women's health promotion)