

Pregnancy tests - ultrasound

Ultrasound is a scan that uses high frequency sound waves to study internal body structures. The sound waves are emitted from a vibrating crystal in a handheld scanner. The reflected sound waves or 'echoes' are then translated into a grainy, two-dimensional (or sometimes three-dimensional) image on a monitor.

Ultrasound is used during pregnancy to check the baby's development and to help pick up any abnormalities such as Down syndrome. Since the procedure can't produce high quality images, any suspected abnormalities need to be confirmed with other tests. The ultrasound scan isn't 100 per cent accurate, but the advantages of the test are that it's non-invasive, painless and safe for both mother and unborn baby.

Uses of the ultrasound

Ultrasound may be used at various points during pregnancy, including:

- **First trimester** - ultrasound performed within the first three months of pregnancy is used to check that the embryo is developing inside the womb (rather than inside a fallopian tube, for example), confirm the number of embryos, and calculate the gestational age and the baby's due date.
- **Second trimester** - ultrasound performed between weeks 18 and 20 is used to check the development of foetal structures such as the spine, limbs, brain and internal organs. The size and location of the placenta is also checked. The baby's sex can be established, if the parents wish to know.
- **Third trimester** - ultrasound performed after 30 weeks is used to check that the baby is continuing to grow at a normal rate. The location of the placenta is checked to make sure it isn't blocking the cervix.

Medical issues to consider

Ultrasound is a safe, painless and non-invasive procedure. Many parents consider the ultrasound as an opportunity to see their unborn child, and perhaps discover its sex. However, you should remember that the ultrasound is a diagnostic procedure and, in some cases, it may suggest that a fetus has an abnormality. Further tests are usually needed to confirm the diagnosis.

Ultrasound procedure

The procedure depends on the type of ultrasound used, but may include:

- **Transabdominal ultrasound** - sound waves pass very well through water. The sonographer uses your full bladder as a 'porthole' to your uterus, so you will have to drink plenty of water before the test. You lie down on an examination table or bed. Gel is applied to your abdomen (to provide better contact between your skin and the scanner) and the sonographer moves the scanner in various positions. Pictures are sent instantly to a nearby monitor. The sonographer may have to push quite firmly at times in order to see the deeper structures. The scan usually takes about 30 minutes.
- **Vaginal ultrasound** - in some cases, a transabdominal ultrasound can't produce clear enough pictures. There may be too much air in your bowel, for instance, and air is a poor conductor of sound waves. In these cases, a slender scanner is inserted into your vagina. The scan usually takes about 30 minutes.

Immediately after the ultrasound

Once the ultrasound is finished, you are given tissues to wipe away the gel, and you can go to the toilet. The report is sent to your doctor, so you will have to make an appointment to get the result.

Possible complications

There are no known risks, complications or side effects for either the mother or her unborn baby.

Taking care of yourself at home

An ultrasound scan is safe, painless and non-invasive, so there is no need to take any special precautions afterward. You are free to go about your normal business.

Long term outlook

What happens next depends on the results of your ultrasound. Note that a normal result doesn't guarantee that your baby is normal, because some abnormalities cannot be found using this test. If foetal abnormalities were detected, you may need further tests to confirm the diagnosis. These tests, including amniocentesis and chorionic villus sampling, are optional. Discuss the benefits, risks and complications of these tests with your doctor before deciding whether or not to go ahead.

Other types of pregnancy tests

Other types of pregnancy tests you may be offered could include:

- **Amniocentesis** - a small amount of amniotic fluid is taken using a slender needle inserted through the abdomen. The needle is guided with the help of ultrasound. The fluid sample contains cells, which are then examined in a laboratory for chromosomal abnormalities. The risk of miscarriage following amniocentesis is around one in 250.
- **Chorionic villus sampling** - a slender needle is inserted through the abdomen or cervix to take a small sample of placenta. The needle is guided with the help of ultrasound. The chorionic villi are then tested in the laboratory for chromosomal abnormalities. The risk of miscarriage following chorionic villus sampling is one in 100.

Where to get help

- Your doctor

Things to remember

- Ultrasound is used during pregnancy to check the baby's development, the presence of a multiple pregnancy and to help pick up any abnormalities.
- The ultrasound scan isn't 100 per cent accurate, but the advantages of the test are that it's non-invasive, painless and safe for both mother and unborn baby.
- If foetal abnormalities are detected, you may be offered further tests to confirm the diagnosis, such as amniocentesis and chorionic villus sampling.

This page has been produced in consultation with, and approved by:

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