

# Ultrasound in Pregnancy

## Information for consumers

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### What is a pregnancy ultrasound scan?

An ultrasound scan is an easy way to look at the baby inside your uterus. The image can be enlarged to view the uterus (womb), the placenta (afterbirth), the amniotic fluid (the water around the baby) and the anatomy of the baby.

### Preparation and how long will the procedure take?

Some pregnancy scans may require you to have a full bladder for your scan. This allows the lower uterus to be seen properly on the ultrasound images. It is a good idea to wear comfortable clothing that allows easy access to your entire abdomen. Most exams will take between 30-120 minutes depending on the position of the baby and require high levels of concentration from the sonographer. Sometimes the baby is not in a position for particular anatomy to be seen. This is normal and should not cause alarm. When this occurs, you will be asked to return another day for completion of the examination.

### Why do I need a scan in pregnancy?

Scans may be performed at various times in pregnancy with different aims. Ultrasound can provide more information on the anatomy, amniotic fluid, placenta and growth of the baby. The number of these scans will vary depending on your medical history, medical situation and if any concerns are suspected or need monitoring. 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.

### Do I have to have a scan in pregnancy?

No, having the scan is your choice. However, ultrasound is the only technique that allows the possibility to look at the baby. The information is important for good pregnancy care and most doctors and midwives consider the scan a key part of this. It is however important that the purpose of the scan is explained so that you are aware of what the test is about. Ultrasound is not a perfect test and sometimes a repeat scan is suggested to clarify findings. Very occasionally small defects are not detected by the ultrasound and don't become apparent until after birth. Ultrasound examinations are best considered as a way to obtain images and information that will be interpreted at a later stage. That could be straight after your scan or at a later date.

## Ultrasound procedure

**Transabdominal ultrasound:** scanning is performed on the surface of the abdomen. To do so you will be asked to lie down on an examination table or bed. Gel is applied to your abdomen (to provide better contact between your skin and the transducer) and the sonographer moves the transducer (scanner/probe) in various positions. The sonographer uses your full bladder as a 'window' to your uterus. 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.

**Transvaginal ultrasound:** scanning is performed by a slender transducer (scanner/probe) that is inserted into your vagina. In some cases, a transabdominal ultrasound can't produce clear enough pictures and a transvaginal scan is needed. It can also be used to measure the length of your cervix. The cervix is the lower part of the uterus where the uterus connects to the vagina. During pregnancy, it softens and thins, and during labour dilates. It is a 'dynamic' organ, which can shorten and lengthen. Cervical shortening detected at your 20 week scan is associated with preterm labour (labour before baby is due). Early intervention by medication such as progesterone, or cervical suture can help prevent preterm labour. Measuring the cervical length by transvaginal ultrasound is considered safe, does not increase the risk of ruptured membranes, bleeding or harm the baby in any way.

## When is ultrasound offered?

Most women will be advised to have at least two scans during their pregnancy, first and second trimester. Extra ultrasounds beyond this may be recommended for high-risk pregnancies and/or to check the baby's growth and wellbeing.

**First trimester:** Usually between 12 and 13 and a half weeks, also called the nuchal translucency scan. It confirms how many weeks pregnant the woman is and therefore the estimated due date of the baby. This scan can also help determine if there is more than one baby and whether the baby is developing inside the womb rather than outside (ectopic pregnancy).

Women should be offered screening for genetic conditions via the first trimester combined screening or the NIPT pathway. Conversations about which test you should have should be had with your doctor following adequate pre-test counselling



Pregnancy Ultrasound First Trimester. ©Nevit Dilmen. [CC BY-SA 3.0](#)

First Trimester Combined Screening (blood test and ultrasound). This combined screen measures maternal serum levels of free beta-human chorionic gonadotrophin (fb-HCG) and pregnancy-associated plasma protein-A (PAPP-A) by blood test at 9–13+6 weeks gestation along with nuchal translucency (NT) in millimetres by ultrasound at 12–13 and a half weeks gestation. In combination with background risks such as maternal age, weight and gestational age, these measurements produce a risk estimate of the fetus having Down's Syndrome or other Trisomy 18.

NIPT or Harmony test is a blood test performed from 10 weeks that looks at the fetal DNA that circulates within the mother. It is recommended that this is performed in conjunction with an ultrasound at 14 weeks gestation.

**Second trimester:** The 20-week morphology scan is important to check for major (physical) abnormalities in your baby particularly in the head, heart and spine. The majority of babies are completely normal but a small number (2-3%) of pregnancies will have an abnormality. Many in fact, just more than half of all major abnormalities, can be seen at the 20-week ultrasound. Remember, although the ultrasound test is very good at finding these problems, it cannot detect every abnormality. For example, ultrasound tests cannot detect cerebral palsy, autism, or some heart defects. Sometimes the defect is too small, or too difficult, to see on ultrasound or it is caused by something which cannot be seen simply by looking at the baby's organs. The gender of the baby can be commented on at this scan should the parents wish to know. It is important to note that this is not 100% accurate and, in some situations the gender can't be seen due to the baby's position. The cervix is also measured to determine if a transvaginal scan is recommended. The location of your placenta is also determined.



CRL Crown rump length 12 weeks ecografia. ©Dr. Wolfgang Moroder. [CC BY-SA 3.0](https://creativecommons.org/licenses/by-sa/3.0/)

**Third trimester:** These scans are sometimes recommended to women if there are concerns surrounding growth, to check fetal wellbeing or to monitor placental function. Ultrasounds are also used in pregnancies that are progressing normally, but the mother has diabetes, high blood pressure or other risk factors. This can be reassuring to the managing team or indicate babies that might need additional follow up.



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## Who can come to my scan?

During the scan, our priority is with mother and baby. You may bring a partner OR a support person with you. Your partner or support person can not bring a child into the room.

## Contact details:

If you have any concerns about your appointment, please contact the Radiology Department. Ph: **53204270**

If you have any questions regarding your pregnancy care, please contact the Maternity Outpatient Department. Ph: **53204820**

## References

International Society of Ultrasound in Obstetrics and Gynaecology (ISUOG). 2023. Ultrasound in Pregnancy. <https://www.isuog.org/clinical-resources/patient-information-series/patient-information-general-ultrasound-background/ultrasound-in-pregnancy.html>. NPS Medicinewise. 2014. Ultrasound in Pregnancy. [Ultrasound during pregnancy - NPS MedicineWise](https://www.nps.com.au/ultrasound-during-pregnancy). Women's Ultrasound Melbourne. (2023). Ultrasound in Pregnancy. <https://womensultrasound.com.au/services/ultrasound-in-pregnancy/>