

Ultrasound during pregnancy: Information for pregnant women

Modified after Swiss ultrasound society, section Obstetrics and gynecology (SGUMGG)

Diagnostic ultrasound is the only imaging modality to observe the fetus in the womb directly. It has been used for more than 40 years; there are no harmful effects been for the fetus or the pregnant woman.

The cost for routine studies at about 11-14 weeks and at 20-23 weeks is generally covered by the insurance.

The following questions can be answered using ultrasound:

At the end of the first trimester (the first third) of the pregnancy (i.e. at 11-14 weeks):

- Confirmation of fetal viability and proper location in the womb
- Confirmation of correct dating of the pregnancy: This is of great importance e.g. if later during the pregnancy a reduced growth is suspected
- Recognition of multiple gestation
- Detection of many lethal structural anomalies
- Measurement of the so-called „nuchal translucency“, a possible marker for increased risk for a fetal chromosomal anomaly (like Down Syndrome/trisomy 21)

In the second trimester (20-23 weeks):

- Assessment of amniotic fluid volume and fetal growth
- Detection of severe structural anomalies
- Determination of placental lie

If the ultrasound exam does not show anomalies, one may usually assume fetal “normality” with high confidence. However, also in this situation **fetal normality cannot be guaranteed; this is not possible with any method.**

Ultrasound is well suited to diagnose very severe fetal defects (90% detection rate for lethal fetal anomalies). Ultrasound is reasonably well (75% detection rate) at discovering problems that require intensive neonatal therapy. The ability to detect minor anomalies (for example facial or finger anomalies, small holes in the fetal heart) by ultrasound is moderate or small ($\leq 30\%$ detection rate), because some anatomical regions cannot be visualized in all fetuses.

Sometimes variations or small deviations from the norm (so-called “markers”), such as a particular shape of the head, can be detected which do not constitute an anomaly *per se*, but may indicate an increased risk for true anomalies. If additional studies can rule out such anomalies, the markers usually do not have any consequences.

Please note that certain anomalies can develop or evolve only later in gestation and may, therefore, not be detectable at an earlier exam.

A normal result of an ultrasound exam helps to guide the further pregnancy care and is very reassuring for you.

If a fetal problem is suspected or diagnosed, ultrasound can help you and your caregivers to prepare important decisions. For example, you can prepare better for special needs of a newborn; the delivery can be planned in an adequately equipped center. Occasionally, fetal treatment during pregnancy can improve the outcome.

Results obtained by ultrasound studies, however, can occasionally be ambiguous. Such results or the diagnosis of a fetal anomaly can cause serious ethical conflicts. Some women therefore decide against obtaining prenatal diagnoses to avoid such conflicts altogether.

Please let us know before the exam if, for such personal reasons, you do not want certain tests or if you decline to have the entire exam.

If there are any questions we are happy to answer them at any time.

- I would like to have the propose examination of my unborn child.
- I would like to have the propose examination of my unborn child, but with the following restrictions:

- I do not want to have the examination of my unborn child.
- I have the following questions or concerns:

Date

Patient's signature