Anatomy scan \(20-week ultrasound\)

What is the anatomy scan?

The anatomy scan is a structured ultrasound examination performed in the second trimester to evaluate fetal anatomy and growth. It is commonly called the 20-week ultrasound because it often takes place near the halfway point of a 40-week pregnancy, though the usual window is approximately 18 to 22 weeks.

Unlike a brief early scan focused on pregnancy location, viability, or dating, the anatomy scan is more comprehensive. It uses real-time ultrasound to assess fetal structures that are large enough by the second trimester to be seen in meaningful detail. The examination is a screening test: it can identify many major structural abnormalities, but it does not provide certainty that every organ is normal.

Clinicians may also use the scan to confirm fetal number, evaluate fetal presentation, estimate gestational age if needed, and document placental position. In some settings, parents may be asked whether they want to know fetal sex if it is visible, although sex determination is not the main medical purpose of the exam.

When it is done and how to prepare

The scan is usually scheduled between 18 and 22 weeks of pregnancy. This timing balances visibility and clinical usefulness: fetal organs are sufficiently developed for assessment, while there is still time to arrange follow-up imaging or specialist consultation if something unexpected is found.

Preparation varies by clinic. Some ultrasound departments may ask you to arrive with a partially full bladder, especially if imaging conditions are difficult or if the cervix and placenta need clearer visualization. Others do not require bladder filling at this stage. It is reasonable to check your appointment instructions beforehand.

The appointment may take around 30 to 60 minutes, depending on fetal position, maternal anatomy, gestational age, equipment, and whether additional views are needed. Sometimes the fetus is facing the spine, curled tightly, or moving frequently, making certain structures difficult to see. If the scan is incomplete, this does not necessarily mean something is wrong; you may simply be invited back for another look.

What clinicians look at during the scan

A standard second-trimester ultrasound includes a systematic review of fetal biometry and anatomy. Exact protocols vary, but the examination commonly includes the following:

Fetal biometry: measurements such as biparietal diameter and head circumference, abdominal circumference, and femur length. These help assess whether growth is consistent with gestational age.
Brain and skull: views of the cerebral ventricles, midline structures, cerebellum, and posterior fossa, along with skull shape and integrity.
Face: assessment may include profile, orbits, lips, and nasal structures when technically possible.
Spine: longitudinal and transverse views are used to assess alignment, overlying skin, and vertebral appearance.
Heart: the scan often includes a four-chamber view and outflow tract views where possible. If a cardiac concern is suspected, fetal echocardiography may be recommended.
Chest, diaphragm, and abdomen: clinicians look at the lungs, stomach bubble,

abdominal wall, cord insertion, bowel appearance, liver region, and diaphragm.
Kidneys and bladder: the kidneys, renal pelvises, and bladder filling may be assessed to screen for urinary tract abnormalities.
Limbs: arms, legs, hands, feet, and long bones are reviewed for presence, symmetry, and expected growth.
Placenta, cord, and amniotic fluid: placental location, amniotic fluid volume, and sometimes cord vessels are documented.

These views are not obtained in a random order. Sonographers use standardized planes and measurements so that findings can be compared with reference ranges and interpreted consistently.

Placenta, amniotic fluid, and cervix

The anatomy scan is not only about the fetus. It also provides information about the pregnancy environment. Placental position is important because a placenta that lies low in the uterus or covers the cervix at mid-pregnancy may require follow-up later in pregnancy. Many low-lying placentas identified around 20 weeks move farther from the cervix as the uterus grows, but your care team will guide follow-up timing.

Amniotic fluid is also assessed, often qualitatively or with measurements when clinically indicated. Too little fluid is called oligohydramnios, and too much is called polyhydramnios. Either finding may prompt additional evaluation, but fluid estimates can vary and must be interpreted in context.

Some services assess cervical length during the scan, particularly if there is a history of preterm birth, cervical surgery, symptoms, or local screening protocols. A shortened cervix may lead to closer monitoring or specialist consultation, but management depends on individual risk factors and local guidelines.

What results can mean

After the scan, results may be described in several ways. A complete and reassuring scan means the requested structures were visualized and no concerning abnormality was identified. This is encouraging, but it is still not a guarantee of a problem-free pregnancy or newborn period.

An incomplete scan means the sonographer could not obtain all required views. Common reasons include fetal position, early gestational age, maternal abdominal wall thickness, uterine fibroids, scarring, or reduced image quality. A repeat scan is often scheduled to complete the examination.

A soft marker is a minor ultrasound finding that may be seen in healthy fetuses but can sometimes be associated with chromosomal differences or other conditions. The significance depends on the specific marker, whether it is isolated, prior screening results such as NIPT or serum screening, maternal age, and other risk factors.

A structural abnormality means a fetal organ or body part appears different from expected. Some findings are mild and may resolve or need only postnatal follow-up; others may require serial imaging, fetal medicine assessment, pediatric surgical planning, genetic evaluation, or delivery at a specialized center. If an abnormality is suspected, it is appropriate to ask for a clear explanation, written information, and time to consider next steps.

Conditions the scan may detect

The 20-week scan can identify some major structural conditions, but detection rates vary by condition, fetal position, equipment, operator experience, gestational age, and maternal factors. According to clinical resources such as the NHS, the scan is designed to screen for selected serious conditions, including some brain, spine, heart, abdominal wall, kidney, limb, and skeletal abnormalities.

Examples of findings that may be suspected include neural tube defects such as spina bifida, anencephaly, some congenital heart defects, cleft lip, diaphragmatic hernia, gastroschisis, exomphalos, renal tract abnormalities, severe limb abnormalities, and some skeletal dysplasias. However, ultrasound cannot detect all heart defects, genetic syndromes, metabolic conditions, hearing or vision problems, neurodevelopmental differences, or conditions that appear later in gestation.

This distinction matters emotionally as well as medically. A reassuring anatomy scan can bring relief, but it should be understood as one piece of prenatal

care rather than a perfect certificate of fetal health.

If follow-up is recommended

Being called back after an anatomy scan can be frightening, especially if you are not told much at first. In many cases, follow-up is needed because views were incomplete, not because an abnormality is suspected. If the concern is more specific, your care team may recommend one or more next steps.

Repeat ultrasound: often used when fetal position prevented adequate views or when a finding needs interval reassessment.
Maternal-fetal medicine consultation: a specialist review may provide higher-resolution imaging and counseling.
Fetal echocardiography: a targeted ultrasound of the fetal heart may be advised if cardiac anatomy is difficult to see, a suspected heart defect is present, or risk factors exist.
Genetic counseling: this can help explain screening results, ultrasound findings, recurrence risks, and testing options.
Diagnostic testing: procedures such as amniocentesis may be discussed when chromosomal or genetic information could clarify the diagnosis. These decisions are personal and should be made with qualified professionals.

It is completely reasonable to ask: What exactly was seen? How certain is the finding? Could this be a normal variant? What tests are optional versus recommended? How soon should we repeat imaging? Who will coordinate care if a specialist is needed?

Emotional experience and communication

The anatomy scan can be joyful, clinical, tense, or all of these at once. Some people arrive excited to see the baby; others feel anxious because of previous loss, infertility, abnormal screening, or earlier pregnancy complications. There is no "right" emotional response.

Many sonographers are limited in what they can say during the examination because images often need formal review by a radiologist, obstetrician, or fetal medicine specialist. Silence during scanning does not automatically mean bad news; it may simply reflect concentration. If you are unsure how results

will be delivered, ask before the scan begins.

If unexpected findings are reported, try not to absorb complex information alone if you can avoid it. Bring a support person if permitted, take notes, ask for diagrams or written summaries, and request clarification in plain language. A careful, compassionate explanation can make a difficult moment more manageable.