

Importance of Pregnancy ultrasound scans

Which, when and why

By

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😊 Words of motivation 😊

“Caressing her belly, each time pretending to touch her child, she glows instantly calling aloud to herself, “Oh woman! You’re now a mother, a nurturer, bringing life into this world.” She laughs with joy as if each heartbeat of the unborn baby is calling her “Mommy” and congratulating her on the biggest journey of her life perhaps. Though a long nine months of this chapter, each month has its own journey; journey of growth and development of the little person growing in your womb. But there shall be no instances in this voyage, where you might feel you could have done better, because you had planned only the best things for the life inside you. And we want the same to happen.”

The journey from an embryo to a full-grown baby is nine months, and the baby grows and develops gradually through each of these months. The tiny cells join together, forming a body mass that now exhibits physical changes, thereby confirming your pregnancy. We need to closely monitor the baby's development, and the pregnancy ultrasound scan plays a vital role in this. This article is about the most essential pregnancy ultrasound scan, including dating scan, anomaly scan, cardiac scan, and growth scan. Read the article to know its importance, why each pregnancy scan is needed, and the schedule for these scans. When done at different times of conception, these specialized ultrasounds can lend you and [your gynecologist](#) a lot of information about the health and well-being of the baby and the mother.

You may hear the "trimester" word very frequently during your interaction with the gynecologist. So, just to give a little idea about it, the first three months of your pregnancy are the first trimester, the following three as the second trimester. Finally, the last three months of your pregnancy journey are called the third trimester. Your baby grows and develops little by little in each of these trimesters. Therefore, it is vital to monitor the progress of its overall health and growth. The mother's body goes through many changes while the baby develops in her womb. Therefore, scheduling regular [appointments with your doctor](#) and performing the necessary ultrasounds, diets and medications can make your pregnancy safer, easier, and healthier.



There are some ultrasounds scan that needs to be performed during one's period of pregnancy. We shall have a closer look at the most significant and necessary ultrasounds offered in one's pregnancy from the first to third trimesters. Here is a quick summary of the pregnancy ultrasound scan.

Trimester	Week	Scan name	Purpose
1 st	6 to 8	Early pregnancy or dating scan	Confirm the pregnancy, its position, and estimate the baby's age.
	11 to 13	NT / ND scan	Measures Nuchal Translucency, check for nasal bone, examine the spinal column. Uterine artery doppler is also checked.
2 nd	18 to 20	Anomaly or TIFFA scan	Check anatomic structures and find out a defect in the baby and placenta. Most important pregnancy scan.
	24 to 26	Cardiac scan/ Fetal echocardiography	Evaluate structural and functional integrity of fetal heart.
3 rd	28 to 32	Pregnancy welfare and growth scan	Check the progress of the baby's growth and status of liquor (fluid around the baby).
	28 to 32	Obstetric doppler scan (Optional)	Measures the blood flow through the umbilical cord to the different internal organs of the developing baby's body
	36 to 40	Growth scan. Obstetric doppler scan (If needed)	Check baby's growth, position, amount of liquor, and blood flow to the baby.



First trimester ultrasound



Indeed, a happier and more fantastic moment of your life when you are blessed with a tiny wonder growing inside you gradually day by day. The nurturer of this soul, the mother, needs to nourish, love, and take the utmost care of herself and the little life inside her. By 6 to 8 weeks of the pregnancy, the group of tiny cells has collectively bonded to form a small body mass. It exhibits specific physical changes, thereby confirming the pregnancy viability. There are generally two ultrasounds offered during the first 3 months of pregnancy. They are:

Early pregnancy ultrasound scan / 6 to 8 week ultrasound scan / Dating scan

This 6 to 8 week ultrasound scan is used to confirm and determine pregnancy age, hence the name dating scan. This pregnancy scan can detect the baby's heartbeats and any source of internal bleeding or abnormality found in the uterus that might affect the pregnancy. It also confirms the location of pregnancy and checks if it is inside or outside the uterus. Pregnancies outside the uterus are called ectopic pregnancies. Such pregnancies need early diagnosis and immediate [medical attention](#). Twin pregnancy or multiple pregnancies can also be detected at this stage.

Usually, a transvaginal approach is used to perform this ultrasound during the earlier pregnancy period. It gives a much closer look at the fetus than the abdominal or pelvic ultrasound. Transvaginal ultrasound is performed by inserting a wand or probe inside the vagina, providing clear images of the fetus, cervix, and placenta. This can be done trans-abdominally also.



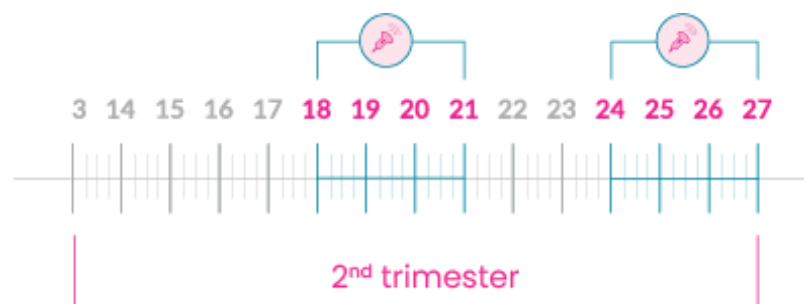
Nuchal Translucency Scan (NT/ND ultrasound pregnancy scan) (11 week to 13 week 6 days ultrasound scan)

"Nuchal" is the adjective for the "nape of the neck", and translucency here refers to the translucent area in that portion. The fluid at the back of your baby's neck is checked by the Nuchal Translucency or NT/ND scan (a prenatal screen pregnancy ultrasound scan), generally done at 11-13 weeks of pregnancy. The baby resembles a miniature individual. The primary assessment of the NT scan looks at the entire spinal column of the fetus, measures the size and thickness of its nuchal translucency, and checks for the presence of nasal bone.

Along with this sonography, a double marker blood test is recommended. This sonography and double marker blood test guides [obstetricians](#) to rule out chromosomally abnormal pregnancies.

In the case of twin pregnancy, an NT scan gives an idea about the type of twin pregnancy, which helps further pregnancy management. Measurement of Uterine artery doppler during this sonography provides a notion about the chance of increased blood pressure and related complications in the mother and growth issues in baby in later pregnancy. The length of the cervix is also measured. Length of cervix less than 25mm is associated with miscarriages or early delivery.

Second trimester ultrasound



The second-trimester pregnancy ultrasound scan assesses the proper growth, health, and development of the fetus, position of the placenta, and rules out any congenital anomalies in the baby. Looking at the baby's structure in a lot more detail than the third month of pregnancy is the ultimate priority of these pregnancy scan and growth scan. It also measures the cervix or the neck of the womb.



Anomaly scan or TIFFA scan (18–20 weeks)

An anomaly scan or TIFFA scan (Targeted Imaging for Fetal Anomalies) is the most essential pregnancy scan carried out in your second trimester. This pregnancy ultrasound scan is also referred to as a 20 week ultrasound scan or Level II ultrasound scan. This scan is usually done between 18 to 20 weeks of pregnancy but can be performed up to 22 weeks of gestational age.

The sonographer checks the baby's structural anatomy, closely observing the internal organs. It gives an idea about any structural defect in the baby from head to toe. The scan can measure the fetus's size and weight.

The anomaly scan or 20 week ultrasound scan can record any kind of congenital deformity like Down Syndrome (50%), Cleft Lip (75%), Anencephaly (98%), Gastroschisis (98%), Edwards' Syndrome (Trisomy 18)(95%), congenital heart disease (50%) in the fetus.

It also looks at the position of the placenta, the umbilical cord, and amniotic fluid around the fetus. Any abnormal placenta positioning might result in miscarriages or heavy bleeding during pregnancy and can cause many complications to the mother and the baby.

Cardiac scan / Fetal 2D echocardiography

Cardiac pregnancy scan is meant to check the structure and function of a baby's heart. This scan examines how blood flows through your baby's arteries and veins. This sonography is one of the optional sonographies during pregnancy. This pregnancy ultrasound scan is recommended typically in high-risk pregnancies.

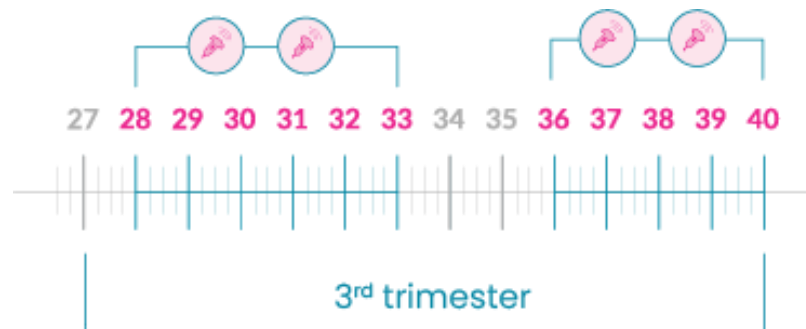
This scan also looks out for abnormalities such as holes in the heart, narrowing of arteries, valves that don't open and close properly. The cardiac scan is necessary for the following conditions:

- You were born with a heart defect.
- You've already had a baby with a heart defect.
- You have diabetes. This means you are at a slightly higher risk of having a baby with a heart defect.



- You take certain drugs that can increase the risk of heart problems, such as some medications for epilepsy.
- Your nuchal translucency (NT) scan shows that your baby has fluid at the back of her neck of 3.5mm or more but appears to have normal chromosomes.

Third trimester ultrasound



😊 Words of motivation 😊

“Everything grows rounder and wider and weirder, and I sit here in the middle of it all and wonder who in the world you will turn out to be.”- Carrie Fisher

YES! By the third trimester your womb has grown ever bigger and surely more and more round and wide. You do caress your belly dreaming to give your baby, the best possible life one can ever achieve. You have waited a long time, even fought with your partner to find the loveliest name for your child and often secretly call out the little person in you with that name. Oh! We promise, you surely are going to be a great mother since you have already been taking care of yours and your baby's health perfectly well by following all the routine checkups, prescribed ultrasounds, healthy diet, and advised lifestyle.

In these last 3 months of conception, the pregnancy ultrasound scan looks at and carefully examines the baby's health, growth, development, and internal organs. These week ultrasound scan checks for any further anomalies in the mother or the developing fetus that can affect the pregnancy. Following are the pregnancy ultrasound scan prescribed in the third trimesters.



Late pregnancy welfare scan or third trimester growth scan

A late pregnancy welfare scan or third trimester growth scan is done during 28 to 32 and 36 to 39 weeks of gestation age. The frequency and number of these pregnancy ultrasound scans can vary depending on the progress of the baby's health, growth, development and spots any further complications.

By the end of 28 weeks of pregnancy, the developing infant's facial features and body structures are likely to be clear and well-formed. Therefore, this week ultrasound scan gives vivid and better images of the fetus. Parents might wish to connect more to their baby at this phase. The growth scan checks if the baby is growing adequately for this stage. It measures the baby's size and weight and takes various body measurements of the baby. This scan also confirms the position of the baby.

In this pregnancy scan, the position of the placenta is studied. The lower end of the placenta should not be lying too close to the cervix. It also examines the proper amount of amniotic fluid around the baby, which is needed to develop normally. Any cause of vaginal or internal bleeding or discomfort and pain in any area is checked, for example, conditions like uterine fibroids in the mother. In the case of twins or triplets, there is a greater chance of developing growth problems, which is checked by the growth scan to ensure all is well.

Uterine artery doppler ultrasound (28–32 week ultrasound scan)

A proper blood flow to the uterus, placenta, and the umbilical cord is crucial for a baby to develop normally inside the womb during pregnancy. Hence, checking for any condition that might reduce or block the blood flow to the uterus and the unborn baby is a significant part of one's pregnancy ritual.

A pregnancy ultrasound scan uses sound waves to create pictures of the frameworks inside the body. Still, it is incapable of demonstrating the blood flow. However, a doppler ultrasound scan is one such imaging test, done at 28 to 32 weeks of conception. This uses sound waves to show the movement of blood flowing through the vessels, detecting any conditions that might obstruct the blood flow from the placenta to the fetus. This pregnancy scan test measures the blood flow through the umbilical cord



to the different internal organs of the developing baby's body. This is done to check whether it receives proper oxygen and nutrition through the placenta.

Are all the pregnancy ultrasounds safe?

These pregnancy ultrasound scans are absolutely safe for pregnant women as ultrasound uses sound waves instead of radiation. These pregnancy scans are performed professionally by sonographers, radiographers, or [gynecologist](#). These week ultrasound scans are done at different times during pregnancy and give a lot of detailed information about the health and well-being of the unborn baby and the mother.

Who performs the ultrasounds?

Skilled and trained medical professionals called sonographers, radiographers, or [gynecologists](#) perform these pregnancy ultrasound scans with utmost care and proficiency. With these dating scan and growth scan, they can understand the overall age and health of the baby.

Are all these pregnancy ultrasound scans needed during pregnancy?

All these pregnancy ultrasound scans are not necessarily mandatory but are highly advised. [Your gynecologist](#) may prescribe you any week ultrasound scan, dating scan, or growth scan. In that case, it is best to do it as she is an experienced professional. She will guide you well in making your pregnancy journey easier, smooth, and painless. With proper diagnosis through these ultrasound pregnancy scans, a mitigation plan for future risks can be developed.



Where can one get these pregnancy ultrasound scan done?

The pregnancy ultrasound scan are performed in various hospitals. There are also specialized labs that can perform these pregnancy scan. But it is imperative to talk and discuss it with [your gynecologist](#) to guide you to selecting the correct place for the scan. Your [gynecologist's prescription](#) is mandatory to do any pregnancy ultrasound scan.

Pregnancy ultrasound scan schedule summary

Above are the details about each ultrasound scan required during pregnancy. Below is a quick summary of these scans.

Trimester	Week	Scan name	Purpose
1 st	6 to 8	Early pregnancy or dating scan	Confirm the pregnancy, its position, and estimate the baby's age.
	11 to 13	NT / ND scan	Measures Nuchal Translucency, check for nasal bone, examine the spinal column. Uterine artery doppler is also checked.
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Closing remarks

This article details the most essential pregnancy ultrasound scan, including dating scan, anomaly scan, growth scan, and week ultrasound scan. These pregnancy scan are usually prescribed to a mother during her pregnancy journey. A mother carries her baby for nine months in her womb and therefore is the earliest friend of the child. She is the ultimate nurturer who remembers to take good care of her baby from the moment she knows the presence of her child even before it is born. It is also essential for the mother to nourish herself as she will go through many changes in her body during this unique journey of her life. Therefore, routine [visits to a doctor](#), following proper guidelines, medications, ultrasounds, diet, and lifestyle should be a part of one's prenatal care.

A healthy and normal pregnancy typically requires pregnancy ultrasound scan mentioned in the article. Still, there are cases when more frequent scans are needed. For example, the situation is different in the case of multiple pregnancies, i.e., twins or triplets, pregnancies' with fetal growth restriction, etc. In such situations, more regular ultrasounds can be suggested by [the gynecologist](#). In the case of high-risk or complicated pregnancies, the scans and routines vary. Still, these are the major scans performed for most of pregnant women with standard conditions. If you any further questions on these scans, its schedule and use, feel free to [ask me a question](#).



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