

# VIABILITY SCAN

This scan is done for confirmation of pregnancy.

Having a scan in the first few weeks of pregnancy can be thrilling. It's wonderful to see the little blob with a heartbeat that will become your baby.

Usually two scans are done during the first trimester. A dating and viability scan, between six and nine weeks and an early morphology scan or NT scan between 11 and 13 weeks.

## Why do I need a dating and viability ultrasound scan?

Although you don't need a scan to confirm a pregnancy, having one in the early weeks will:

- Check if your baby is in the right position inside the uterus.
- Let you hear your baby's heartbeat, which is one of the signs that the pregnancy is viable. The heart usually starts beating at about six weeks.
- Find your accurate due date. If your menstrual cycle is irregular or you don't remember the first day of your last period, an ultrasound scan can tell exactly how far into your pregnancy you are.
- Determine the reason for any spotting or bleeding you may have.
- Show how many babies you are carrying.

But scans can also be quite worrying. Speak to your doctor if there are things you don't understand or if you have any concerns after the scan.

## How is the ultrasound scan done in my first trimester?

There are two ways of doing a first trimester scan:

### Transvaginal scan (TVS)

If your doctor wants you to have a scan earlier than

### At seven weeks

A tiny embryo with a heartbeat can usually be heard.

### At eight weeks

The developing embryo measures about 1cm to 2cm and should now be easier to see on the scan. It will grow very quickly, doubling in size every couple of weeks.

### At 10 weeks

Your baby measures 3cm and the heartbeat can be seen and heard.

In the next few weeks you will be due for an early morphology scan (NT scan).

### At 12 weeks

At 12 your baby measures 5cm to 6cm from crown to rump. Between 11 and 13 weeks, and preferably at 12 weeks, you will probably have a nuchal translucency scan. This scan estimates the risk of Down's syndrome and other chromosomal or structural abnormalities.

The scan is also used to check:

- position of the placenta
- thickness of NT (Nuchal Translucency)
- presence or absence of NB (Nasal Bone) and length of the nasal bone
- stomach and urinary bladder
- any problems with fetal spine and fetal limbs
- any fetal abdominal wall defects
- blood circulation to the mother's uterus

The doctor may also check your cervix at this time.

In the first trimester, your baby is measured from head to bottom. This is called the Crown Rump Length (CRL). The CRL is very accurate in the first trimester, but after 13 weeks your baby can curl up and stretch out, so measuring the length

10 weeks of pregnancy, you will have a transvaginal scan. In these early weeks of pregnancy, your baby is too small and low in your abdomen to be picked up by an abdominal ultrasound scan.

A vaginal scan is done by introducing a probe into your vagina. It can pick up a better image of your baby.

### **Abdominal scan**

After 10 weeks and for the rest of your pregnancy, you will have an abdominal scan. However, if the doctor needs to check your cervix (mouth of uterus and birth canal), a transvaginal scan may be done as it is more accurate.

During an abdominal scan, the doctor will put some (usually very cold) gel on your tummy. She will then move a small hand-held probe or transducer over your skin to get views of your baby.

### **Do I need to prepare myself for my dating and viability scan?**

If you are having a transvaginal scan (TVS), you will need to empty your bladder first. A full bladder can obstruct the view of your baby.

You will need to undress from the waist down so that the probe can be easily inserted into your vagina. The nurse or assisting staff will usually cover your legs with a sheet while the scan is happening.

If you're having an abdominal scan, you will need to have a full bladder, so it's best to drink lots of water before you arrive. You need a full bladder to push your uterus higher up in your abdomen so that the scan will get a better image of your baby. Because you're at the beginning of your pregnancy, your baby is still very small and your uterus is still lying low in your abdomen.

You will need to expose your tummy for an abdominal scan. It's a good idea to wear loose or two-piece clothing such as a *salwar kameez* or top and comfortable pants so you won't need to get

becomes more difficult. The width of the head (biparietal diameter or BPD) then becomes the best way to measure your baby.

### **Can my first scan show if I'm having twins?**

It is possible to see twins (or more) from about six weeks, though one baby may be missed at this early stage.

Sometimes a heartbeat is seen in one sac but not the other. Rescanning in a week or two may reveal a second heartbeat, or the scan may show that one sac is growing and the other is still empty.

It is fairly common for twins to be conceived but for only one to grow and develop. This is known as the vanishing twin phenomenon. Scans can also tell if twins share a placenta or have one each.

### **What if the scan shows that something is wrong?**

Sometimes when you have a scan, the findings are inconclusive and you may be asked to go back for a second scan. Waiting for this can be worrying but remember that most pregnancies are successful and you will probably find all is well when you go back for a second scan.

It is possible though that when you have another scan, your doctor still cannot detect a heartbeat. If you have been having pain or bleeding, you may be partly prepared but it will still be a very distressing time for you.

If you have not experienced any bleeding, the news may be totally unexpected. You may even still feel pregnant because there are still pregnancy hormones in your system. It may be difficult for you to accept that you've had a miscarriage.

### **How will my ultrasound doctor be sure**

fully undressed.

## When will I have my dating and viability scan?

Experts recommend having your first scan when you are six weeks pregnant. TVS is the most preferred scan at this stage.

At six weeks, the scan is done to:

- check if the embryonic sac is intra-uterine (embedded inside the womb)
- see the number of fetus
- see the heart beat
- give an accurate expected due date

Your next scan is likely to be the nuchal translucency scan between 11 and 13 weeks. This will usually be an abdominal scan.

It is possible that you might miss your first scan if you do not meet your doctor as soon as you find out you pregnant, or if you only discover that you are expecting a bit late. In most cases this is not a problem.

An early scan is particularly important however, if:

- You had irregular periods. Irregular periods make it difficult to be sure about your expected due date. A scan will give you an accurate expected due date.
- Your doctor suspects an ectopic pregnancy. A suspected ectopic pregnancy is the only good reason to have a scan before six weeks.
- Your doctor wants to verify your baby's heartbeat.
- You have had a previous miscarriage.

Your doctor might ask you to have multiple scans in your first trimester if:

- you are spotting or bleeding
- you have a multiple pregnancy
- you are over 35 years of age and have

## that something is wrong?

Because scans can be inconclusive and not all pregnancies are exactly the same, there are very strict guidelines for scans in early pregnancy. Your doctor will be following these guidelines, so she will be absolutely sure of her findings.

If there is any doubt whatsoever, the scan should be repeated in a week or two. If there is still no change, the doctor may diagnose a blighted ovum or missed miscarriage.

If a blighted ovum or missed miscarriage has been diagnosed, you will have the choice of letting nature take its course or having a minor operation. Leaving things to nature means that you will miscarry and the fetus and uterus lining will come out in the form of a period.

The other alternative will involve coming into hospital to empty the uterus under a light general anaesthetic. This procedure is called an evacuation of retained products of conception (ERPC) or dilatation and curettage (D&C). It is a minor operation and you will be discharged from hospital on the same day.

You do not have to decide immediately what to do. You will need some time to think about this. Your doctor will give you the necessary advice to take things forward.

**PLEASE PRINT THIS PAGE AND WRITE DOWN IF YOU HAVE POINTS TO ASK DOCTOR**

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conceived for the first time

- your pregnancy is complicated by a medical disorder such as appendicitis, an ovarian cyst, or a fibroid in the uterus

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### **What can be seen on an early scan?**

#### **At five weeks (three weeks after conception)**

The ultrasound doctor may see a small gestation (pregnancy) sac that looks like a black hole because it is filled with fluid. She will be able to identify where the sac has implanted in your uterus to rule out an ectopic pregnancy.

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She may not see anything else yet, so will probably ask you to come back for another scan in one or two weeks.

#### **At six weeks (four weeks after conception)**

The yolk sac may be seen as a small white circle in the gestation sac. The yolk sac is attached to the embryo and contains nutrients to feed it while it is developing.

The crown to rump (head to bottom) length of embryo is measured to calculate your due date.