

Chorionic Villus Sampling (CVS) and Amniocentesis at MUMS

Mr Anoop Rehal, Consultant in Obstetrics and Fetal Medicine at University Hospitals Birmingham NHS Foundation Trust – performs Amniocentesis and CVS at MUMS Solihull to diagnose fetal abnormalities.

The procedure is carried out in conjunction with ultrasound to extract a small sample of amniotic fluid that surrounds the unborn baby to test for a genetic condition. The choice to have the test is entirely the decision of the patient following thorough counselling with Mr Anoop Rehal

A **CVS** can be performed from 11 to 14.1 weeks. An **Amniocentesis** can be performed from 15 weeks.

CVS

The test can be done earlier than an amniocentesis at 11-14 weeks of pregnancy and involves passing a thin needle into the placenta through the uterus under ultrasound guidance to remove a small volume of cells from the placenta. As the baby and placenta originate from the same cell, the chromosomes present in the cells of the placenta should be the same as those of the baby. The lab can then analyse to check the baby's chromosomes.

Patients who qualify to have CVS at MUMS:

- Will have been offered CVS if they have a higher than average chance of giving birth to a child with a genetic abnormality
- The Nuchal Screening has indicated invasive testing such as Amnio or CVS is recommended
- NIPT testing has indicated there is a chance of Down's syndrome, Edwards syndrome or Patau's syndrome
- An abnormality is detected in your baby during Ultrasound Scan
- We have evidence of your Blood Group and HIV Status
- Will receive appropriate counselling about the test and result
- Will consent to the test

The risk of miscarriage due to CVS is about 0.5% (1:200) and this is the same as the risk from an amniocentesis. If you were to miscarry due to the test, this would happen within the first 2 weeks of the procedure. In approximately 1% of cases the CVS test will need to be repeated because the results are inconclusive.

CVS is offered between 11-14 weeks as an amniocentesis is not offered before 15 weeks because some studies have shown that when amniocentesis is performed before 15 weeks there is a small risk of the baby developing club feet.

AMNIOCENTESIS

Amniocentesis is a medical procedure that can be performed from 15 weeks or pregnancy. Amniocentesis is used primarily in prenatal diagnosis of chromosomal abnormalities and fetal infection. In this procedure, a small amount of amniotic fluid, which contains fetal tissues, is sampled from the amniotic sac surrounding a developing fetus. The procedure involves passing a thin needle into the amniotic fluid under ultrasound guidance

Patients who qualify to have Amniocentesis at MUMS:

- Will have been offered amniocentesis if they have a higher than average chance of giving birth to a child with a genetic abnormality
- The Nuchal Screening has indicated invasive testing such as Amnio or CVS is recommended
- Where NIPT has indicated there is a chance of Down's syndrome, Edwards syndrome, Patau's syndrome or other chromosome abnormalities
- An abnormality is detected in your baby during Ultrasound Scan
- We have evidence of your Blood Group and HIV Status
- Will receive appropriate counselling about the test and result
- Will consent to the test

The test can also be used to determine the sex of your child but we do not offer Amnio or CVS for this on its own.

The risk of miscarriage due to amniocentesis is about 0.5% (1:200) If you were to miscarry due to the test, this would happen within the first 2 weeks of the procedure.

Some studies have shown that when amniocentesis is performed before 15 weeks there is a small risk of the baby developing club feet. To avoid this risk, we never perform amniocentesis before 15 weeks.

Costs

The Cost of CVS or Amniocentesis is £695.00

Additional costs will apply where there is additional chromosome abnormality laboratory analysis – dependent upon individual cases and the suspected abnormality.

If you have had Nuchal Screening/NIPT or an Ultrasound at MUMS which shows you may require invasive testing such as Amnio or CVS then this will be offered to you. The decision is yours. The choice is yours.

Before the procedure takes place we need to obtain your Blood Group and HIV status evidence in ready for the consultation, counselling and procedure.

RESULTS

The results for Downs Syndrome and other major chromosomal defects are usually available within 3 days. The results for rare defects take 2 weeks. As soon as we get the results we contact you to let you know. In approximately 1% of cases the invasive test will need to be repeated because the results are inconclusive.

AMNIOCENTESIS - What to expect

You will not usually need to do anything special to prepare for amniocentesis. You can eat and drink as normal beforehand. In some cases, you may be advised to avoid going to the toilet for a few hours before the test because it's sometimes easier when your bladder is full.

You can bring a partner, friend or family member for support when you have the test.

You'll have an ultrasound scan before and during amniocentesis.

The ultrasound scan allows the consultant to:

- check the position of the baby
- find the best place to remove some amniotic fluid
- ensure the needle can pass safely through the walls of your tummy (abdomen) and womb

Before the needle is inserted into your abdomen, the area may be numbed with anaesthetic.

This involves having a small injection into your belly and may sting slightly.

But anaesthetic is not usually necessary because research suggests it does not have much effect in most cases.

An antiseptic solution will first be used to clean your tummy (abdomen) to minimise the risk of infection.

A long, thin needle is then inserted through your abdominal wall. It may cause a sharp stinging sensation.

Using the ultrasound image as a guide, the needle is passed into the amniotic sac that surrounds the baby.

A syringe is then used to remove a small sample of the amniotic fluid, which will be sent to a laboratory for analysis.

In around 6 in every 100 women having amniocentesis, there's a problem drawing out enough fluid, so the needle has to be reinserted a second time. This is usually because of where the baby is positioned.

If the second attempt is also unsuccessful, you'll be offered another appointment.

Is amniocentesis painful?

Amniocentesis is not usually painful, but you may feel uncomfortable during the procedure.

Some women describe experiencing a pain similar to period pain or feeling pressure when the needle is taken out.

How long does it take?

Afterwards, you'll be monitored for up to an hour in case the test causes any side effects, such as heavy bleeding.

You can then go home to rest. It's a good idea to arrange for someone to drive you home, as you might not feel up to it yourself.

After the test, rest at home and avoid strenuous activities for at least 24 hours, or as directed by the consultant. Tell MUMS if you have any of the following:

- Any bleeding or leaking of amniotic fluid from the needle puncture site or the vagina.
- Fever or chills.

After an amniocentesis test, you should go home and relax for the rest of the day. Avoid any activity that takes a lot of physical effort, such as exercise or sex. You should feel ready to get back to your regular routine one or two days after the procedure. After amniocentesis, we will continue using ultrasound to monitor your baby's heart rate. You might experience cramping or mild pelvic discomfort after an amniocentesis.

CVS – What to Expect

Chorionic villus sampling (CVS) involves taking a sample of cells from the tissue of the placenta (the chorionic villi).

Preparing for CVS

You will not usually need to do anything special to prepare for CVS. You can eat and drink as normal beforehand.

In some cases, you may be asked to avoid going to the toilet for a few hours before having CVS because it's sometimes easier to do the test when your bladder is full.

We will advise you about this before you attend your appointment.

You can bring a partner, friend or family member for support when you have the test.

How CVS is performed

CVS is carried out under the continuous guidance of an ultrasound scan.

This is to make sure nothing enters the amniotic sac (the protective sac that cushions the baby) or touches the baby.

The test can be carried out using 2 different methods: transabdominal CVS and transcervical CVS.

Transabdominal CVS

Your tummy is cleaned with antiseptic before a local anaesthetic injection is used to numb it. A needle is inserted through your skin into the womb and guided to the placenta using the image on the ultrasound scan.

A syringe is attached to the needle, which is used to take a small sample of cells from the chorionic villi.

After the sample is removed, the needle is removed.

Transcervical CVS

A sample of cells from the chorionic villi is collected through the neck of your womb (the cervix).

A thin tube attached to a syringe, or small forceps, are inserted through your vagina and cervix and guided towards the placenta using the ultrasound scan.

Which method will be used?

The transabdominal method is preferred in most cases because it's often easier to carry out. Transcervical CVS is also more likely to cause vaginal bleeding immediately after the procedure, which occurs in about 1 in 10 women who have this procedure.

But there's no difference in the rate of miscarriages between the 2 methods.

Transcervical CVS may be preferred to transabdominal CVS if it's easier to reach your placenta this way.

Is CVS painful?

CVS is usually described as being uncomfortable, rather than painful.

In most cases, an injection of local anaesthetic will be given before transabdominal CVS to numb the area where the needle is inserted, but you may have a sore tummy afterwards.

Transcervical CVS feels similar to a cervical screening test.

Afterwards, you'll be monitored for up to an hour in case you have any side effects, such as heavy bleeding.

You can then go home to rest.

It's a good idea to arrange for someone to drive you home as you might not feel up to it yourself.

Recovering after CVS

After having CVS, it's normal to have cramps similar to period pain and light vaginal bleeding called spotting for a few hours.

You can take painkillers you can buy in a pharmacy or shop, such as paracetamol (but not ibuprofen or aspirin) if you experience any discomfort.

You may wish to avoid any strenuous activity for the rest of the day.

Contact us where the procedure was carried out for advice as soon as possible if you develop any of the following symptoms afterwards:

- persistent or severe pain
- a high temperature or feeling hot or shivery
- heavy vaginal bleeding
- discharge of clear fluid from your vagina
- contractions

Getting the results

The first results should be available within a few days. This will tell you whether a genetic or chromosomal condition has been discovered.

If rarer conditions are also being tested for, it can take 2 to 3 weeks or more for the results to come back.

You can usually choose whether to get the results over the phone or during a face-to-face meeting

