

## Chorionic Villus Sampling

### What is it?

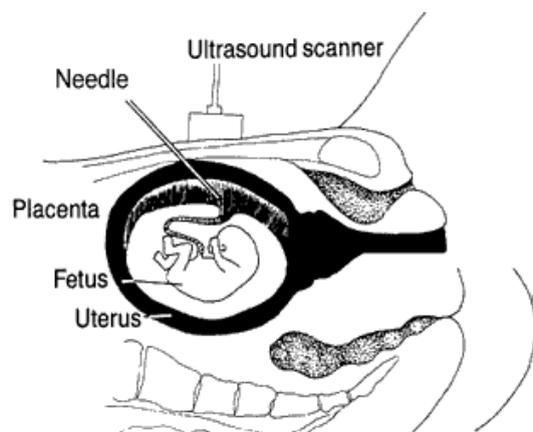
Chorionic Villus Sampling (CVS) is the taking of small pieces of placental tissue (a biopsy). The placenta contains the same genetic information as your baby, so a CVS enables us to check the chromosomes (the structures which hold all the baby's genes). This means we can take tiny pieces of placenta and look to check the baby's chromosomes for abnormalities, such as Down syndrome.

### How and when is it performed?

CVS can be performed from 10 weeks of pregnancy but it is most commonly carried out from 11 weeks onwards. It is offered as an alternative to amniocentesis as it can provide earlier diagnosis of a problem with the baby. It is not usually offered after 15 weeks because amniocentesis can usually be performed from that gestation and is thought to be slightly safer.

The doctor will scan you initially to see the position of the placenta in the womb. Sometimes the scan shows that it is not possible to reach the placenta safely, if this is the case you will be offered an appointment after a week to look again. Occasionally it is safer to wait for an amniocentesis after 15 weeks.

The CVS is performed by passing a fine needle through your abdomen and into the placenta. After the initial ultrasound scan your abdomen will be cleaned with antiseptic solution to make sure it is as sterile as possible. The doctor will be scanning you all the time he is carrying out the test. Local anaesthetic is put into the skin and once numb (a few seconds only) the needle is passed into the placenta. An even finer needle is passed through the first needle and tiny fragments of placenta are withdrawn by syringe. Using an inner needle allows us to take a few samples and check we have enough tissue. The whole procedure takes only a few minutes to perform and most women describe it as an uncomfortable rather than a painful experience. As the placenta is rapidly growing at this stage in the pregnancy, it quickly repairs itself and replaces the very small fragments that have been taken.



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## CVS

### Is there any special preparation?

There is no special preparation for a CVS. On most occasions you do not have to have a full bladder but it can sometimes help if it is not completely empty. If you are Rhesus negative you will need an injection of anti-D immunoglobulin following the procedure. If your Rhesus status and blood group are not known you may need to have a blood test at the time of the CVS.

### Are there any risks?

Unfortunately the test does carry some risks. There is a small risk of miscarriage associated with CVS of about 1 in every 200 women tested. Other risks include failure in performing the procedure, failure of the tissue to grow and so not being able to be analysed and a possibility that it will give a result that is difficult to interpret. However, these risks are small and occur in less than 1 in 100 tests. There is a very small risk of about 1 in 1000 that CVS will cause a serious infection.

### After the test?

Following the test you should rest for the remainder of the day if you wish to, although there is no evidence that rest reduces the risk of miscarriage. It is normal to experience some cramping or spotting of blood from the vagina for a few hours afterwards. If you experience moderate or severe pain, or vaginal bleeding, you can contact the Fetal Medicine Team in work hours on Tel. 01603 286802, or, if you have been referred to us from elsewhere, contact your local hospital's Antenatal Screening Team if you prefer. Out of hours, you can either wait until the next working day but if the bleeding is heavy or the pain severe or you feel feverish, you should contact your GP or the Accident and Emergency Department. These symptoms do not necessarily mean you are going to miscarry but you would need to be checked.

### How long will the results take?

Three types of laboratory tests can be used to look at chromosomes – PCR (polymerase chain reaction), micro-array and karyotype.

**PCR** - checks for the most common chromosomal abnormalities. These are Down syndrome (trisomy 21, three number 21 chromosomes), Edwards syndrome (trisomy 18, three number 18 chromosomes) and Patau syndrome (trisomy 13, three number 13 chromosomes). It does not check all the chromosomes, only the most common abnormalities.

The PCR results usually take approximately 4 working days.

**Array tests** – if required you will be given a separate information sheet with more details about these tests.

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Array test results take approximately 3 weeks

**Karyotype** – a karyotype involves looking at all the chromosomes to see if there is the correct number and if there are any extra or missing pieces. Array tests have now taken over as the test of choice as they give more information than a karyotype. Just occasionally it may be indicated to perform a karyotype but this will be fully discussed with you by the Consultant at the time.

Karyotype results take 2-3 weeks.

Not all gene or chromosome changes have clinical implications for a baby. If a change is found you will be offered further appointments with a specialist to discuss what the result might mean.

Most women undergoing CVS are doing so because their screening test has put them at increased chance of having a baby with Down, Edwards or Patau syndromes. In this situation a PCR result will be offered as this will provide a quick answer for those particular syndromes. Array tests will be performed only when there is an increased risk of other chromosome problems not checked by PCR, either because of family history or an abnormality seen on the baby's scan. Karyotypes will only be offered under individual circumstances.

## Are the results accurate?

CVS will reliably tell you if your baby has Down, Edwards or Patau syndromes or some other major chromosome abnormality, it cannot detect all genetic problems. These other genetic problems are, however, very uncommon.

Occasionally PCR, array or full karyotype do not give a clear result. This is rare but if it occurs, it will be discussed with you and you may be offered an amniocentesis. It is also possible, on a rare occasion, that a woman who has had a previous normal PCR result from an increased chance of Down, Edwards or Patau syndromes, may at a later stage find they are offered an amniocentesis to perform array tests where an abnormality is seen on ultrasound scan. This may show an abnormality not detected by PCR.

## How will I get the results?

The doctor will arrange with you how you would like to receive the results. If there is an abnormality you will be contacted and given an appointment, usually the next day, to discuss what the result means, what options are open to you and to answer any questions you will have.

## Post Procedure Information:

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

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Please contact the fetal medicine midwives on (01603) 286802 Monday- Friday 08.30-16.30 or attend your local A&E department out of hour for advice as soon as possible if you develop any of the following symptoms after the procedure:

- Persistent or severe pain.
- A high temperature.
- Chills or shivering.
- Discharge or clear fluid from the vagina.
- Contractions (when your abdomen tightens then relaxes).
- Vaginal bleeding (more than spotting).

### Any further questions?

The decision whether to have a CVS or not, may be clear-cut for some but not for others. Please don't feel rushed into making the decision.

You can find further information re CVS from the following:

Antenatal & Newborn Screening/ Fetal Medicine Midwives – 01603 286802

NHS website - <https://www.nhs.uk/conditions/chorionic-villus-sampling-cvs/>

Antenatal Results and Choices (ARC) - <https://www.arc-uk.org/>

