



Government of **Western Australia** Department of **Health**

Procedure Specific Information Sheet

OG12 Chorionic Villus Sampling

Expires end of December 2025

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What is chorionic villus sampling?

Chorionic villus sampling (CVS) involves using a needle to remove some tissue from the placenta. The cells in the placenta are similar to your baby's cells.

CVS is performed by an obstetrician (surgeon who specialises in childbirth), usually between 11 and 13 weeks of your pregnancy.

CVS is performed to help find out if your baby has one of the following problems.

- A chromosome disorder such as Down syndrome. The cells from the placenta can be grown in the laboratory and tested to show your baby's chromosome pattern (karyotype).
- A genetic or hereditary disease such as cystic fibrosis or sickle cell anaemia. These are diseases that run in families. Special gene probes can be used to analyse the cells.

CVS does not show if your baby has a neural tube defect such as spina bifida (a problem with your spinal cord).

Your obstetrician has suggested that you have CVS. However, it is your decision to go ahead with the procedure or not.

This document will give you information about the benefits and risks to help you to make an informed decision. If you have any questions that this document does not answer, it is important that you ask your obstetrician or the healthcare team. Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point.

What are the benefits of CVS?

You may have a family history of genetic problems, or a blood test or ultrasound scan may have shown something your doctor is concerned about.

The risk of your baby having Down syndrome increases the older you are (risk: 1 in 1,500 for mothers aged 20 compared with 1 in 30 for mothers aged 45).

CVS is a good way of finding out if there is a problem. However, CVS does not cover all possible problems. About 4 in 100 babies are born with a problem and still have normal chromosome patterns.

If the results show that your baby has a problem, your doctor will give you counselling and discuss the options with you. If the test is normal, the healthcare team will reassure you.

Are there any alternatives to CVS?

An amniocentesis is a procedure that involves using a needle to remove some of the amniotic fluid that surrounds your baby in your uterus (womb).

There is a small decrease in the risk of miscarriage (less than 1 in 100, compared to less than 2 in 100 for CVS) but an amniocentesis can be performed only from 15 weeks.

It is possible to have a detailed scan or a blood test called non-invasive perinatal testing (NIPT). There are fewer possible complications, but these tests can show only if your baby may have an increased risk of having a problem, and you may still want CVS to be as sure as possible. Your healthcare professional can discuss NIPT in more detail with you.

What happens if I decide not to have CVS?

It may not be possible for your obstetrician to be certain if there is a problem with your pregnancy.

If there is a problem, you and your baby may get difficulties during your pregnancy and after your baby is born. This can affect your, and your family's, mental and physical health.

Whatever you decide, the healthcare team will support you fully through this difficult time and carefully plan your antenatal visits.

What does the procedure involve?

Before the procedure

The healthcare team will carry out a number of checks to make sure you have the procedure you came in for. You can help by confirming to your obstetrician and the healthcare team your name and the procedure you are having.

The healthcare team will ask you to sign the consent form once you have read this document and they have answered your questions.

There is no need to stop eating or drinking before the procedure. It will make it easier for your obstetrician to see your baby and your womb if there is some urine in your bladder.

In the treatment room

A midwife will be present with your obstetrician.

You will have an ultrasound scan to check the position of your placenta, the shape of your womb and to confirm how many weeks pregnant you are.

Removing the tissue usually takes less than 10 minutes. There are two ways to perform CVS. Your obstetrician will recommend the best technique for you, depending on where the placenta is and how many weeks you have been pregnant. Your obstetrician will be guided by the ultrasound scan, to make sure they do not make a hole in the amniotic sac (the membrane that lines your womb and contains the fluid that surrounds your baby).

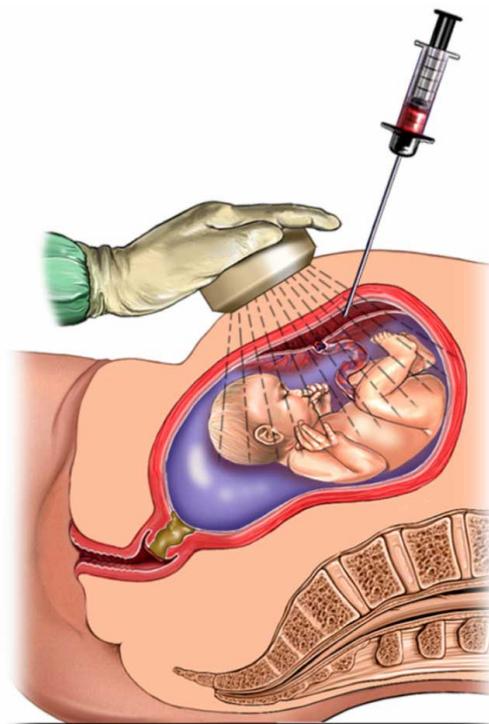
Transabdominal sampling

Your obstetrician will use antiseptic to clean the area where they will insert the needle and will inject local anaesthetic into your skin. This stings for a moment but will make the area numb, allowing your obstetrician to perform the procedure without causing too much discomfort. Your obstetrician will insert a thin, hollow needle into your skin, through your abdominal wall and into the placenta.

Transcervical sampling

Your obstetrician will use antiseptic to clean your vagina and cervix. They will place a thin tube through your vagina, across your cervix and into the placenta.

The sample of tissue is usually taken using gentle suction. You may feel some minor cramping or pressure when your obstetrician removes the tissue.



Transabdominal sampling

What complications can happen?

The healthcare team will try to reduce the risk of complications.

Any numbers which relate to risk are from studies of people who have had this procedure. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

Some complications can be serious and can even cause death.

The possible complications of CVS are listed below.

- Miscarriage (risk: less than 1 in 1,000). If you have any bleeding or discharge from your vagina, or pain similar to a period, let your doctor know straight away. Miscarriage is the main complication of CVS and you should discuss this carefully with the healthcare team before you make your decision.
- Discomfort or cramping. This can be safely and easily relieved with paracetamol and usually settles with time.
- Failed culture, if the cells do not grow enough to be tested (risk: 1 in 100).
- Uncertain results of your baby's karyotype (also called confined placental mosaicism),

where the chromosome pattern of the cells of the placenta is different to the chromosome pattern of your baby's cells (risk: less than 2 in 100). In almost every case of an uncertain result, the true result is a normal chromosome pattern. However, your obstetrician may recommend that you have an amniocentesis.

- Infection in your womb (risk: 1 in 1,000). If you have a high temperature, bleeding or an unpleasant-smelling discharge from your vagina, let your doctor know straight away. Sometimes an infection can cause you to have a miscarriage.
- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that might happen. Let your healthcare team know if you have any allergies or if you have reacted to any medication, tests or dressings in the past.
- Premature rupture of your membranes (your waters breaking) (risk: 3 to 7 in 1,000). This is rare but can be serious, depending on how early it happens in your pregnancy. If you think your waters have broken, let your doctor know straight away.
- Vaginal spotting or bleeding (risk: 1 in 3). If this is heavy, let your doctor know straight away.

You should ask your obstetrician if there is anything you do not understand.

How soon will I recover?

Your baby's heartbeat will be monitored for a while using the ultrasound scan and then you will be able to go home.

There is a small risk that your blood may have mixed with your baby's blood. So if your blood is Rhesus negative, you may need an injection of Anti-D to make sure that your immune system does not react with your baby's blood cells.

Rest for the next 2 days.

If you had a transabdominal sampling, you may get a small bruise and some soreness where the needle was inserted in your abdomen. This usually

settles within a few days. It is safe for you to take paracetamol to relieve any discomfort.

Most results of CVS are normal.

If the results show that there is a problem, your obstetrician will discuss the options with you. Your obstetrician and midwife will carefully plan your antenatal visits to give you and your baby the best possible care.

Lifestyle changes

If you smoke, stop smoking now. Smoking while you are pregnant can harm your unborn baby. Smoking once your baby is born will put your child's health at risk throughout their childhood. Stopping smoking will improve your long-term health.

Regular exercise should improve your long-term health. Exercising while you are pregnant will make you feel and look better. Exercise will help prepare your muscles, heart and lungs for labour and the delivery of your baby. It will also help you to cope better with labour and pain. Before you start exercising, ask the healthcare team or your GP for advice.

When will I get the results?

If you are having CVS to check for chromosome disorders, you may be able to have the tissue tested using the FISH or PCR technique. Results will be ready in less than 2 days. However, these techniques show the results for only three common disorders, including Down syndrome.

The full test for chromosome disorders involves growing the cells. It usually takes about 2 weeks to get the results. Sometimes the results can take up to 4 weeks to be ready.

Summary

CVS is usually a safe and effective way to help find out if there is a problem with your pregnancy.

However, complications can happen. You need to know about them to help you make an informed decision about the procedure. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

Acknowledgements

Reviewers

Andrew Woods (MBBS, MRCOG, FRANZCOG)

Jeremy Hawe (MBChB, MRCOG)

Melisa Thomas (MBChB, MRCOG)

Illustrator

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