Amniocentesis and CVS
(Chorionic Villis Sampling)

A guide for women and whaanau

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Women's Health Division

What are CVS and Amniocentesis?

These tests are carried out during pregnancy most commonly to check your baby for genetic disorders such as Down syndrome. In a small number of cases amniocentesis may also be offered to check for some specific infections.What are CVS and Amniocentesis?

This information will help you to work with your family, midwife and doctor to make the best decision about your care. Please feel free to ask any questions you may have and let us know if there is anything you do not understand or need more information about.

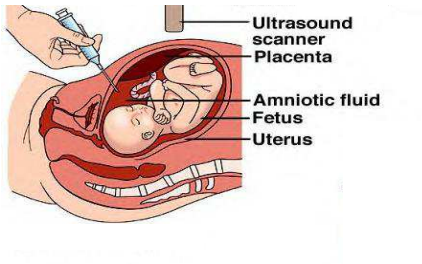
What is CVS (Chorionic Villus Sampling)?

In CVS a small sample of the developing afterbirth/Whenua (placenta) is taken for testing. It is performed between 11 and 13 weeks by passing a needle through your abdomen with the help of an ultrasound (scan).

What is Amniocentesis?

Amniocentesis is a procedure where a small amount of the water (amniotic fluid) surrounding baby in the womb (uterus), is taken out through a needle which is passed through the abdominal wall of the mother.

It is usually done just after 15 weeks of pregnancy.



Sometimes the amount of fluid present at this time is not enough and the procedure may need to be delayed for a week or two.

A scan is usually needed to be sure of your exact dates

Why is it done?

The usual reason for CVS and amniocentesis is to check for any

may not be clear. If the results are abnormal, these will be discussed fully with you.

For the majority of problems there is no treatment or cure. You will need to consider what is best for you and your baby.

Reference

1. RCOG (2011). Chorionic villus sampling and amniocentesis. [Internet] https://www.rcog.org.uk/globalassets/documents/patients/patient-information-leaflets/pregnancy/pi-chorionic-villus-sampling-and-amniocentesis.pdf
2. RANZCOG (2015). Prenatal screening and diagnosis of chromosomal and genetic abnormalities in the fetus in pregnancy. [Internet] http://www.google.co.nz/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CBsQFjAAahUKEwjimK-3iubIAhWDG5QKHe98ANU&url=http%3A%2F%2Fwww.ranzcog.edu.au%2Fdoc%2Fprenatal-screening-chromosomal-abnormalities.html&usg=AFQjCNHwn_ebqwmqFJk3Vsz-MslLGKgM-w&sig2=kV_e8tdRE4gJ18Li50Bo6g&bvm=bv.106130839,d.dGo&cad=rja
3. HealthEd (2013). Antenatal Screening and Testing for Down Syndrome and Other Conditions. [Internet]https://www.healthed.govt.nz/system/files/resource-files/HE2382-DS%20Screening%20WEB.pdf

Because the needle is placed under ultrasound guidance, the risk of it damaging the baby is extremely rare.
Occasionally not enough fluid can be taken in the first attempt and a second attempt is required. This is usually due to the position of your baby. If the second time fails, you will be asked to come on another day.

What should I do after the Test?
Have a quiet day. Mild cramping is not unusual, as is some soreness around the needle site. It is fine to take Paracetamol (Panadol) for a couple of days. The maximum dose is 4grams in 24hours = every 6hours you can take 1gram Paracetamol. If you have any bleeding or fluid loss from the vagina, please contact your LMC/GP.

The final decision to have a CVS or amniocentesis is yours. Only you can weigh up how much you want this information against the slight risk of miscarriage from the procedure of a baby who may be normal

When will I know the results?
Getting the results will usually take about two weeks to be completed and your lead maternity carer/midwife/GP will usually give you the results.

Sometimes the cells fail to grow and a chromosome result is not possible. In this situation we would offer to repeat the test. The result will include the sex of the baby. If you do not want to know the sex, let the person doing the amniocentesis know.

Occasionally, the Specialist will organize a 'rapid test" or a "FISH test". This test uses a special form of processing to look at the genes in the sample. Results are usually ready within 2 working days.

How reliable are the tests?
For most women the test result is a clear answer to whether the baby has normal chromosomes or not (any disease). In a few cases, the test result

chromosome problems in the baby. Chromosomes contain genetic information held in every cell in the body. Cells shed from the skin of the baby are found in the fluid inside the womb. By growing these cells the chromosome make up of your baby can be identified.

The most common problem (or "abnormality") is Down Syndrome (Trisomy 21), but there are other abnormalities.

	CVS	**Amniocentesis**
What does it involve?	Taking a small sample of placenta under ultrasound guidance	Taking a small sample of amniotic fluid that surrounds the baby in the uterus under ultrasound guidance
When is the procedure usually performed?	Between 10 and 14 weeks of pregnancy	After 15 weeks of pregnancy
What is the risk of miscarriage?	About 1 in 500 women will miscarry following the procedure	About 1 in a 1000 women (0.1%) will miscarry following the procedure

Sometimes the amniocentesis will find an abnormality which was not expected; all abnormal results will be explained in detail by the doctor who has performed the procedure.

Who should have the Test?

There are various screening tests you will have had which have given you an increased 'risk' of a chromosomal abnormality. 'Risk' means that there is a 'chance' and it is usually written as a ratio, like 1 : 456. That means for every 456 babies born, one will have the abnormality.

Because this is an indication of 'risk' only, there is every chance your CVS or amniocentesis will have a normal result. You maybe offered the test if your screening result is high risk usually 1:300 or higher OR if there is something wrong noted with the baby on an ultrasound scan. Screening tests for checking chromosomes are offered to all pregnant mothers.

Which screening tests you have had done will have depended on:

- How far through your pregnancy you were when you booked
- Any previous history
- Any history of abnormalities in the family

A single test is not as accurate and a 'combined risk testing' (multiple different tests) is recommended.

- In the first trimester (first three month of your pregnancy) a special blood test called MSS 1 is done between at 9-13 weeks and 6 days (at time of booking) and the results are combined with an ultrasound scan between 11 and 13 weeks and 6 days which looks at Nuchal Translucency (NT). This is a fold at the back of the baby's neck. A computer programme, especially designed, will calculate your individual 'risk'. This is called the 'combined first trimester screening test'
- At 14 - 20 weeks (at time of booking) – we can no longer perform the NT scan so we can perform a more detailed blood test and again you will be given a 'risk' calculated by a computer programme
- A detailed scan at 18-20 weeks can show some abnormalities clearly but not others

Approximately 1 in 50 babies will have some kind of congenital (present at birth) problem, many of which are minor or easily treated. The CVS or amniocentesis will not detect these if they are not chromosomal e.g.

talipes (club foot).

Is any preparation required?

No special preparation is needed. We do need to know your blood type and if you have a negative blood group you will require an "Anti-D" injection after the procedure to prevent you building up antibodies against your baby's blood cells. Please bring your maternity booklet with you.

Your partner or another support person is welcome and we recommend you have someone to drive home afterward in case you feel uncomfortable.

How is it done?

A scan is done to check baby and choose a site to put the needle in. The skin is cleaned and a thin sterile needle is put through into the fluid around baby and 14-20mls is removed into a syringe. If you are having a CVS, the skin on your tummy will be made numb by injecting local anesthetic. Some women find the procedure relatively painless, while others find it quite uncomfortable. We do not use local anaesthetic (to numb the skin) for an amniocentesis as it should not be more painful than a blood test.

Can the amniocentesis or CVS be done for twin pregnancies?

This is usually carried out by doctors who are experts in ultrasound scanning. The doctor may need to insert the needle twice. The risk of miscarriage is slightly higher with twins and if this occurs may lead to the loss of both babies.

What are the risks?

Recent international meta analysis (large studies collecting information from multiple studies is combined) suggests that the risk is much lower for miscarriage then 1 in 1000 women for amniocentesis and 1 in a 500 for CVS.