

Pregnancy tests - chorionic villus sampling

Chorionic villus sampling (CVS) is a pregnancy test that checks the baby for genetic or biochemical abnormalities. The placenta is made of the same cells as the baby, so the baby can be tested by taking a small sample of the placenta. The sample is removed using a slender needle inserted through the abdomen. The tissue (chorionic villi) is then examined in a laboratory.

Unlike other pregnancy tests such as ultrasound, CVS isn't a general check of the baby's health but a specific test for particular abnormalities, such as Down syndrome or cystic fibrosis. The risk of miscarriage following CVS is one in 100, so it is important to thoroughly understand the benefits, risks and complications before agreeing to take the test. Generally, CVS is offered between 10 and 19 weeks gestation.

A range of potential patients

The range of patients offered chorionic villus sampling could include women:

- With a family history of an inherited disorder, either on her side of the family or on her partner's side.
- Over 37 years, since the babies of older mothers are at increased risk of abnormalities.
- Who have already had a baby with chromosomal or other abnormalities.
- Whose ultrasound test results showed a possible abnormality.
- Who are particularly anxious about the possibility of abnormalities.

Medical issues to consider

Medical issues to consider may include:

- CVS doesn't check for spina bifida.
- The risk of miscarriage following chorionic villus sampling is around one in 100.
- Genetic counselling can help you decide whether or not you want to take the test. Issues discussed include the benefits, risks and complications of CVS, and information about the particular inherited disorder and associated birth defects.
- If you decide to undergo CVS, your doctor will need to know your blood group and Rh status, so you may require a blood test beforehand.

The procedure

The CVS procedure includes:

- You need to have a moderately full bladder.
- You are dressed in a cotton hospital gown, and asked to lie on an examination table on your back. Sedative drugs such as nitrous oxide are available if you wish.
- Your baby is checked first via ultrasound scan.
- Your abdomen is swabbed with antiseptic solution.
- The site is injected with local anaesthetic.
- A slender needle, guided by ultrasound, is inserted through your abdomen wall until it reaches the edge of the placenta. The needle is nowhere near the amniotic sac or the baby at any stage.
- A finer needle is threaded through the first needle, and a syringe is used to 'vacuum' a small sample of placental tissue. This takes about two minutes or so.
- You may feel a strange dragging or drawing sensation in your pelvis or legs - this is normal, and no cause for alarm.

- It may be necessary to take a second sample.
- Once the sample is taken, the needles are removed.
- The baby is checked using the ultrasound scan.
- You are then free to get dressed.
- Generally, you can expect to be at the clinic for up to 90 minutes.

Immediately after the test

You may be asked to wait half an hour or so before leaving the clinic, just to make sure that both you and your baby are all right. It may be best if someone else drives you home, especially if you were given drugs during the test. The placental sample is sent to a laboratory and cultured. When enough cells have grown, the chromosomes are individually tested to make sure the number, appearance and size are correct. The results are usually sent to your doctor within a few weeks, so make sure you arrange for a follow-up appointment.

Possible complications

Some of the side effects, risks and possible complications of CVS include:

- Light-headedness
- Abdominal discomfort
- Pains that feel similar to menstrual cramps
- Haemorrhage
- Infection
- Ruptured amniotic sac
- Miscarriage, estimated at one in 100
- Increased risk of limb defects if the test was performed at nine weeks' gestation or earlier
- Inaccurate or unclear test results, estimated at one per cent.

Taking care of yourself at home

Be guided by your doctor, but general suggestions include:

- Get plenty of rest for the remainder of the day.
- Avoid hard physical activity, such as lifting heavy objects.
- You should be able to go about your normal business in the next day or so.
- See your doctor immediately if you notice any unusual vaginal discharge, such as bright red blood or watery fluid.

Long term outlook

If CVS shows that your baby has an abnormality, you can undergo counselling if you need help to make a decision. Terminating the pregnancy in the first trimester involves a straightforward dilatation and curette (D&C). The cervix is dilated and the contents of the uterus removed.

Other types of pregnancy tests

Other types of pregnancy tests that check for fetal genetic abnormalities include:

- **Vaginal CVS** - a small needle is pushed through the cervix and into the side of the placenta, guided by ultrasound. Vaginal CVS carries a slightly higher risk of complications than transabdominal CVS.
- **Amniocentesis** - a small amount of amniotic fluid is removed using a slender needle inserted through the abdomen. The needle is guided with the help of ultrasound. The fluid sample contains cells, which are then examined for chromosomal abnormalities. The risk of miscarriage following amniocentesis is around one in 250. Amniocentesis may be offered if your CVS test results were unclear.

Where to get help

- Your doctor

Things to remember

- Chorionic villus sampling (CVS) is a pregnancy test that checks the baby for genetic or biochemical abnormalities.
- A small sample of the placenta is taken using a slender needle inserted through the abdomen, and the sample is then examined in a laboratory.
- The risk of miscarriage following CVS is one in 100.

This page has been produced in consultation with, and approved by:

Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Content on this website is provided for education and information purposes only. Information about a therapy, service, product or treatment does not imply endorsement and is not intended to replace advice from your doctor or other registered health professional. Content has been prepared for Victorian residents and wider Australian audiences, and was accurate at the time of publication. Readers should note that, over time, currency and completeness of the information may change. All users are urged to always seek advice from a registered health care professional for diagnosis and answers to their medical questions.

For the latest updates and more information, visit www.betterhealth.vic.gov.au

Copyright © 1999/2012 State of Victoria. Reproduced from the Better Health Channel (www.betterhealth.vic.gov.au) at no cost with permission of the Victorian Minister for Health. Unauthorised reproduction and other uses comprised in the copyright are prohibited without permission.