

CHORIONIC VILLUS SAMPLING

NORTHWESTERN
ONTARIO REGIONAL
GENETICS
PROGRAM



WHAT IS CHORIONIC VILLUS SAMPLING?

Chorionic villus sampling (CVS) is a prenatal diagnostic test that is done to obtain a few cells from the developing placenta (the chorion). This test is usually performed at 11 to 13 weeks of pregnancy. As this procedure is not performed in Northwestern Ontario, you would have to be referred to a larger centre.

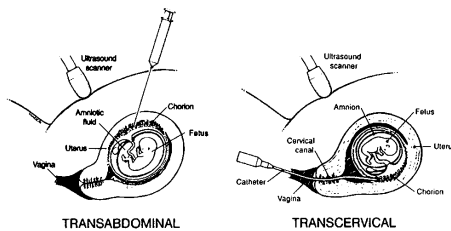
WHAT CAN CVS TELL ME?

The cells from the placenta will provide information about the chromosomes of the developing fetus (baby). Occasionally the cells will be used to test for a specific gene or chemical (metabolic) change.

HOW IS CVS DONE?

The doctor will use ultrasound to locate the position of the developing placenta and the fetus. The sample is obtained either by passing a small catheter through the vagina and cervix into the uterus, or by inserting a fine needle through the abdominal wall into this area.

Often the placental location determines which method of CVS is more appropriate. There are certain other obstetrical considerations, which may make one method preferable, including uterine anatomy and vaginal infections.



Chorionic Villus Sampling Procedure

WHAT ARE THE RISKS OF CVS?

CVS increases the risk of miscarriage by about 1 in 100, or 1%. The natural risk of miscarriage at 9-11 weeks of pregnancy is about 4%, increasing the overall risk of miscarriage to about 5%.

There have been a few reports in the literature suggesting an association between CVS and certain types of limb abnormalities in the fetus. In 1992 The World Health Organization reported no significant difference in the incidence of limb abnormalities in women having CVS compared with the incidence in the general population when the CVS is performed by experienced physicians at 10 weeks or later.

Approximately 15% of patients having CVS have some spotting or bleeding following the procedure. This usually does not last more than a couple of days.

Infection following the procedure is extremely rare. However, if fever, cramps or bleeding occur, an obstetrician or family physician should be contacted.

WHAT ARE THE LIMITATIONS OF CVS?

CVS cannot detect many birth defects, including serious malformations such as congenital heart defect, cleft lip and palate, and many others.

CVS cannot detect open neural tube defects (spina bifida or anencephaly). Measurement of a protein called alpha-fetoprotein in the mother's blood can be helpful in identifying whether or not the pregnancy is at increased risk of this abnormality. This blood test should be done at about 16 weeks of pregnancy and can be arranged by the woman's obstetrician or health care provider.

The cells taken at CVS come from the developing placenta and originate from the same fertilized egg as the fetus. The chromosome findings in the chorionic villi are usually the same as in the fetus, however occasionally, abnormal cells may be found in the placenta, which are not found in the fetus.

Chorion has a maternal component and cells from the mother may contaminate the sample. The chance

of this happening is small.

At times the results of the testing may be difficult to interpret for a variety of reasons. In some cases, chromosomal variation may be found in the fetus. Variations in chromosome shape are common in the general population and are usually not associated with abnormalities, however it is important to make sure that the finding reflects an inherited variation derived from one of the parents and not a new change in the genetic material. If a chromosome variation is found, blood samples may be requested from the parents in order to compare the parent's chromosomes with those of the fetus.

Some patients have an amniocentesis following CVS. This added procedure may be done because it was not possible to obtain an adequate CVS sample or because of difficulty interpreting the CVS results, as mentioned above.

WHEN WILL THE RESULTS BE AVAILABLE?

Results are usually ready within 3-4 weeks. Your health care provider will contact you with the results.

WHAT IF MY TEST RESULTS SHOW THAT THERE IS A PROBLEM?

Any abnormality in the results will be discussed with you. The options available to you include continuing with the pregnancy or you may choose to end the pregnancy. Decisions relating to those results will be entirely your own.

It is important to be aware that every pregnant couple in the general population has a 2-3% risk of having a baby with a birth defect. While normal results of prenatal testing are reassuring, they do not guarantee the birth of a healthy baby.

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