Calgary
Maternal Fetal
Medicine Centre
EFW Radiology

Patient Information About:

CHORIONIC VILLUS SAMPLING (CVS)

You have been referred to the Calgary Maternal Fetal Medicine Centre for Chorionic Villus Sampling. This sheet is designed for your general information. If you have specific questions, please feel free to ask one of our staff or your physician prior to the procedure.

What is Chorionic Villus Sampling?

Chorionic villus sampling (CVS) is a procedure in which a small sample of tissue (known as "chorionic villi") is removed from the placenta early in a pregnancy. The genetic information (chromosomes) in this tissue is the same as the baby's. Genetic specialists analyze the tissue. It can help them predict early in a pregnancy whether the baby has a chromosome disorder, such as Down syndrome. It is also used to test for certain inherited disorders.

CVS may be performed instead of amniocentesis. Amniocentesis is a procedure in which fluid is sampled from the sac surrounding the baby. The main difference between the 2 procedures is that CVS can be done several weeks earlier than amniocentesis. Neither procedure detects certain birth defects; a detailed ultrasound at 19-20 weeks of pregnancy is recommended for this purpose.

When is it used?

You may consider having CVS because:

- Your screening test such as First Trimester Nuchal Translucency Screen reveals an increased risk for a chromosome abnormality.
- Your family or you have a history of a pregnancy or child with a chromosome problem, such as Down syndrome.
- Your family has a history of mental retardation, inherited disorder or birth defects that CVS can detect.

How do I prepare for Chorionic Villus Sampling?

CVS is performed early in pregnancy, usually 11 to 13 weeks gestation. To be sure CVS is done at the right time, an ultrasound examination is done beforehand to confirm the age of the fetus, the number of fetuses and whether any abnormalities are present. You will also be asked to attend an information session and receive personal counseling at which time the risks, benefits and limitations of the procedure will be further explained to you.

If you choose to proceed with CVS, you should eat and drink normally and carry on with your usual activities on the day of the test. When you arrive for your appointment, please ensure that your bladder is full and DO NOT empty it until you have been instructed to do so by one of our staff.

What happens during the procedure?

CVS is performed either through the cervix (transcervical CVS) or through the abdomen (transabdominal (CVS). In the transcervical procedure, a thin forcep is inserted into the vagina and through the cervix to reach the chorionic villi (the early placenta). Ultrasound is used to help guide the forcep. A small sample of chorionic villus tissue is withdrawn.

In transabdominal CVS, a needle is inserted through the abdomen and uterus and into the chorionic villi. Ultrasound is used to help guide the needle. A small amount of tissue is withdrawn into a syringe. The procedure is similar to amniocentesis.

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What happens after the procedure?

Avoid strenuous activity for 1 to 2 days after the procedure. You may have a small amount of bloody spotting for up to a week, particularly if you had the transcervical procedure.

Call our office or your health care provider if you experience any of the following symptoms.

- You develop a fever.
- You develop severe contractions or worsening pain.
- You have an unusual or bloody drainage from the vagina (more than small amounts of spotting).

Obtaining a final result generally takes between 3 days and up to 3 weeks, depending on testing requested. You will be notified by telephone as soon as the results are available.

What are the benefits of this procedure?

The main advantage of CVS is that it is performed earlier in pregnancy than amniocentesis. Amiocentesis is usually done after the 15th week of pregnancy. With CVS, you can have the results of genetic tests earlier in the pregnancy.

What are the risks associated with this procedure?

There is a slightly increased risk of miscarriage following CVS(less than 1:500). The best current evidence suggests that out of 1000 women undergoing CVS, one or two will miscarry because of the procedure. This compares with 10-20 per thousand who will miscarry spontaneously whether or not they have the procedure (this is the back ground risk of miscarriage at 11-14 weeks).

Other problems that can occur from CVS are bleeding, cramping, leaking of amniotic fluid, and infection. The risk of these is rare, about 1% or less.

If CVS is done earlier than the 10th week of pregnancy, there may be an increased risk that the baby's jaw and limbs may not grow normally. For this reason we do not perform CVS sooner than 10 completed weeks of gestation.

Rarely, it is not possible to get an accurate result from CVS. In these cases, amniocentesis is usually recommended.

The Calgary Maternal Fetal Medicine Centre, established by EFW Radiology in collaboration with Calgary's maternal fetal medicine specialists, is the only centre of its kind in Canada.

The Centre has a focused team of radiology and maternal fetal specialists, who are recognized nationally and internationally for their work in maternal fetal medicine, radiology and obstetrical imaging. They are supported by a highly qualified staff of perinatal nurses and ultrasonographers.

The Centre is a unique hub of medical expertise, research and education in maternal fetal medicine for patients of obstetricians, family doctors and midwives in southern Alberta, south eastern British Columbia and south western Saskatchewan.

Services at the Centre are fully covered by provincial health care insurance plans so all patients can benefit from the concentration of medical experience, specialized practice backgrounds and advanced equipment.