Summary

- CVS is an optional procedure, typically offered when a pregnancy is at higher risk for certain conditions.
- CVS is one of several methods used to obtain placental tissue for early prenatal diagnostic testing.
- CVS is only available at certain perinatal facilities and may not be appropriate for all women or all pregnancies.
- CVS is generally performed between 11-13 weeks after the woman's last menstrual period.
- Laboratory tests such as Chromosome Analysis and FISH testing are often performed on chorionic villus samples. These are diagnostic tests which can detect Down syndrome, Trisomy 18, and other chromosome differences.
- No test can identify all birth defects or genetic conditions, or ease all concerns.
- The probability that a CVS procedure will lead to serious complications such as miscarriage is suggested to be approximately 1 in 100 (1%). However, naturally occurring miscarriages are common at this early stage of pregnancy (approximately 3 out of 100 or 3%).
Chorionic Villus Sampling (CVS) is one of several methods used for early genetic diagnostic testing using chorionic villi removed from the placenta.

CVS is generally performed approximately 11-13 weeks from the woman’s last menstrual cycle. Chromosome studies are usually complete within two weeks, and single gene tests may be completed in a few days to a few weeks. CVS is only available at certain perinatal facilities.

Chorionic villi are small clusters of cells from the early placenta of a developing fetus. Since the cells of the chorion have the same genetic makeup as the fetus, a sample of the villi may be used to study the fetal chromosomes, genes, and biochemical makeup.

An ultrasound exam is required prior to the CVS appointment to document the baby is living and to establish gestational age. This determines the best time for scheduling the procedure. The doctor may also require information regarding the maternal blood type including Rh and the results of a cervical culture for infection prior to the procedure.

CVS may be inappropriate in a small group of women such as those with abnormal pap smear results or uterine fibroids. In pregnancies with complications including heavy first trimester bleeding, Rh sensitization, or twins, an alternative form of prenatal diagnosis should be considered. In addition, CVS will not give information about certain birth defects such as spina bifida since it does not measure alpha-fetoprotein.

It is important to have a full bladder for the ultrasound examination and for the procedure itself. One of two approaches may be taken by the doctor. In the transcervical method, the woman's legs are drawn up and a speculum is used to open the vagina as if a pap smear were being performed. The vagina and cervix are thoroughly cleansed with an antiseptic. Under ultrasound guidance a thin plastic tube is passed through the vagina and cervix into the uterus and with light suction a few microscopic villi can be pulled into the tube for analysis. In the transaddominal method, the woman’s abdomen is cleansed with an antiseptic. Using sterile technique and ultrasound guidance, a small sample of chorionic villi is removed by inserting a needle through the wall of the uterus to the placenta. Neither of these procedures requires anesthesia.

On occasion, the doctor may not be able to obtain enough chorionic villi, or the results may not be conclusive. The doctor and/or counselor may discuss repeating the CVS or scheduling an amniocentesis.

Strenuous activity should be avoided for 48 hours and it is wise to refrain from sexual intercourse for one week. Mild spotting and cramping is not uncommon for up to two weeks following CVS. A sanitary pad rather than a tampon should be used. Significant bleeding, flu-like symptoms, fever, abdominal tenderness, or leakage of fluid should be reported to the physician immediately as these may be signs of an infection or early miscarriage.

Studies suggest that women who have CVS have a risk of approximately 1 in 100 (1%) of serious complications as a result of the procedure. However, naturally occurring miscarriages are common at this early stage of pregnancy (approximately 3 out of 100 or 3% will be lost). This makes it extremely difficult to determine if a pregnancy loss is the result of the procedure.

Some centers have reported a greater number of children born with limb defects to women who have had CVS than to those who have not. This issue is not completely resolved at this time.

Rhogam is administered to Rh negative women within 72 hours of the procedure.

Follow-up ultrasound scanning is recommended at 16-20 weeks gestation in conjunction with the maternal blood screening for alpha-fetoprotein to detect birth defects such as spina bifida.

If you have questions about this test, the advantages and limitations, risk for complications, or test results, please ask your healthcare provider or a genetics counselor.