

What is Chorionic Villus Sampling (CVS)?

Chorionic villus sampling (CVS) is a procedure performed during pregnancy to examine fetal chromosomes. CVS is performed between 10 weeks, 0 days and 12 weeks, 6 days of pregnancy (gestation). During the procedure, a small sample of the chorionic villi (tissue from the placenta) is taken. The cells from the chorionic villi are examined in the lab to test for specific fetal disorders.

Do I Need To Have a CVS?

CVS is offered for:

- a woman who will be 35 years of age or more at the time of delivery.
- a couple with a previous child or other family member with a chromosome abnormality.
- a couple in which one partner has a chromosome rearrangement (for example, a translocation or an inversion).
- a couple at increased risk of having a child with a genetic disease for which testing is available.

Note: CVS is not recommended for families with a history of neural tube defects (for example, spina bifida or anencephaly).

How Do I Schedule My CVS Procedure?

The staff at the Prenatal Diagnosis Center schedules the CVS procedure. CVS is performed at the Prenatal Diagnosis Center, California Pacific Medical Center, 3700 California Street, 4th Floor – Room 4360 (California Campus) and at various outreach clinics in the Bay Area. Speak to the staff at (415) 600-6400 to schedule a CVS procedure in one of the clinics. They will also provide you with directions and parking information so you know exactly where to go for your procedure.

How Do I Prepare for CVS?

- You will be given instructions on how much water to drink prior to your ultrasound test. A full bladder is necessary for the ultrasound procedure.
- Do not take any aspirin or aspirin-containing products five (5) days prior to a CVS procedure, and do not take Heparin 24 hours prior to a CVS procedure.

What Can I Expect During CVS?

First, the ultrasound technician performs an ultrasound examination. The technician checks the date of your pregnancy and locates the position of the placenta. Next, using ultrasound, the doctor collects a sample of the chorionic villi from the placenta. There are two methods of obtaining the sample; each method requires just a few minutes to complete:

1. **Transcervical CVS:** The doctor inserts a thin hollow tube (catheter) through the vagina and the cervix. Using ultrasound, the doctor guides the catheter to the edge of the placenta, and removes a small amount of tissue.
2. **Transabdominal CVS:** The doctor uses ultrasound to guide a needle through the abdomen into the placenta and removes a small amount of tissue. Note: some women experience mild discomfort during this procedure.

What Can I Expect After CVS?

- After the procedure, you should go home to rest for about two (2) hours. Some women experience spotting, bleeding, or cramping.
- You will be given a detailed instruction sheet on what to expect following CVS.
- **You may drive yourself home after a CVS procedure.**
- Generally, women may resume some of their regular activities (such as work in an office setting) 24 hours after the CVS procedure. We advise the following activity limitations after a CVS procedure:
 - No lifting over 15 pounds for 24 hours.
 - No strenuous exercise or strenuous work activity for 72 hours.
 - No air travel for 72 hours.
 - No intercourse for 72 hours after CVS.

Are There Any Risks Associated with CVS?

- **Spotting, cramping, and/or light bleeding (less than a menstrual period) may occur.**
- There is a natural miscarriage rate throughout pregnancy. CVS increases the natural rate of miscarriage, and is thought to have the same risk for miscarriage as amniocentesis.¹ That is, about 1 in every 1,600 women may have a miscarriage as a result of the CVS.²
- Some studies suggest that CVS may be associated with an increased risk for fetal limb abnormalities, such as missing fingers and toes. Most studies seem to show that when CVS is performed at 10 weeks of pregnancy or later, it has little or no increased chance for these types of birth defects.³

Call (415) 600-6400

If You Experience Any of the Following Symptoms

- **Severe cramping.** It is normal to experience some cramping, which usually resolves in a few hours.
- **Contractions or abdominal pain.**
- **Vaginal bleeding that does not stop.** It is normal to have some spotting or light bleeding (less than a menstrual period). The treatment for these symptoms is bed rest.
- **Clear, watery vaginal discharge.**
- **Fever of 100.4 °F or 38 °C.**
- **Any changes with your pregnancy that are of concern.**

¹ Rhoads, G.G. Jackson, L.G., Schlesselman, S.E., et al. (1989). The safety and efficacy of chorionic villus sampling for early prenatal diagnosis of cytogenetic abnormalities, *N. Engl. J. Med.*, 320, 609.

² Eddleman, K.A, Malone, F.D., Sullivan, L., et al. (2006). Pregnancy loss rates after midtrimester amniocentesis, *Obstet. Gynecol.*, 108,1067.

³ Centers for Disease Control and Prevention – National Center for Environmental Health and National Center for Chronic Disease Prevention and Health Promotion (1995-2004). Chorionic Villus Sampling and Amniocentesis: Recommendations for Prenatal Counseling *MMWR* 44(RR-9); 1-12 (Publ. Date 7/21/95). Retrieved November 10, 2004 from www.phppo.cdc.gov/cdcRecommends/showarticle.asp?a_artid=M0038393&TopNum=50&CallPg=Adv#head00100000000000

What Can be Detected by CVS?

- Chromosome problems (for example, Down syndrome).
- When a history of a genetic disease is known in a family prior to CVS, further testing may be needed (for example, DNA or enzyme testing).
- **It is important to note that neural tube defects (for example, spina bifida and anencephaly) cannot be detected by CVS.** We recommend that women who choose CVS have a blood Alpha-Fetoprotein (AFP) test at 15 – 20 weeks of pregnancy to screen for neural tube defects. This test is done through your obstetrician's office.
- Also, a detailed ultrasound at 18 – 20 weeks of pregnancy is recommended, because the ultrasound exam at the time of CVS is limited.
- **No method of prenatal testing can guarantee that a baby will be born without birth defects, genetic disease, or mental retardation.**

When Will I Receive the Results? Are the Results Accurate?

- Results of the chromosome study are usually available in 10 – 12 days. Additional studies may take longer. **Chromosome results are greater than 99% accurate.**
- Occasionally, further ultrasound evaluations or blood tests on both parents may need to be done to clarify the test results.
- There is a 1 – 2% chance of inconclusive results with CVS. Amniocentesis (another prenatal test performed at 16 – 20 weeks of pregnancy) or fetal blood sampling is recommended after this type of CVS result to clarify the risk for a fetal problem.

More Ways to Learn

- Call (415) 600-6400 and ask to speak with a Genetic Counselor at the Prenatal Diagnosis Center.
- Visit www.cpmc.org/learning.

Frequently Asked Questions

Question: What is Chorionic Villus Sampling (CVS)?

Answer: Chorionic villus sampling is a procedure performed during pregnancy to examine fetal chromosomes. CVS is performed between 10 and 13 weeks at our Center.

Question: Can I drive myself home after a CVS procedure?

Answer: Yes, you can drive yourself home after a CVS procedure.

Question: When can I go back to work?

Answer: Please refer to page 2 of this handout on activity limitations following CVS that may apply to your work situation.

Question: When will I receive the results?

Answer: Results of the chromosome study are usually available in 10 –12 days. Additional studies may take longer.

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Note: This information is not meant to replace any information or personal medical advice that you get directly from your doctor(s). If you have any questions about this information, such as the risks or benefits of the treatment listed, please ask your doctor(s).