

# Chorionic Villus Sampling (CVS)



**PERINATAL ASSOCIATES**  
OF NEW MEXICO, LTD

## *About Chorionic Villus Sampling*

### **Chorionic Villus Sampling (CVS)**

#### **What is Chorionic Villus Sampling?**

Chorionic villus sampling (CVS) is a prenatal test that detects chromosomal abnormalities such as Down syndrome. This is done by looking microscopically at cells taken from tiny finger-like projections on the placenta called the chorionic villi. Its main advantage over amniocentesis is that you can have it done earlier, generally between 11 and 14 weeks of pregnancy. (For an amniocentesis you have to wait until you are 15 to 18 weeks pregnant.)





## **What kind of problems does the test detect?**

CVS is better than 99% accurate at detecting hundreds of genetic disorders and chromosomal abnormalities, but it is not used to look for every one of those in every woman. It is used to check for certain disorders, such as Down syndrome, in everyone who is tested. It is also used to look for other problems such as Tay-Sachs disease, cystic fibrosis, or sickle cell anemia, only if your baby is thought to be at risk for them. This test cannot detect neural tube defects such as spina bifida. A blood test is recommended at 16-18 weeks gestation after a CVS for this purpose called single marker AFP.



## Is This Test Appropriate for Me?

Any patient who is at risk for having a child with a severe inherited disease, which may be diagnosed by currently available cytogenetic or molecular genetic technology is a potential candidate for prenatal diagnosis, either in the first trimester (CVS) or in the second trimester (amniocentesis).

The most common reasons for an increased risk of genetic problems in the fetus include:

1. Maternal age of 35 years or older at the pregnancy due date.
2. First Trimester Screen result with increased risk for chromosome problems.
3. A prior child with a chromosome abnormality (e.g., Down syndrome).
4. A parent who carries a chromosome rearrangement.



5. Parents who are carriers of a single gene disorder (e.g., Tay-Sachs disease, or cystic fibrosis) which can be diagnosed prenatally.
6. The mother is a carrier of an X-linked disease like fragile X syndrome.

There are many reasons to want to learn about your child's condition. Even if you know that you would never terminate a pregnancy for any reason, knowing in advance that your baby will have special needs allows you to prepare for the challenges you might face.

You will want to weigh the small risk that the procedure will cause you to miscarry. According to the Centers for Disease Control and Prevention (CDC), the risk of miscarriage from CVS is approximately one in 100. This risk (1 percent) is only slightly higher than that of amniocentesis (0.5 percent), and that is mostly because there is always a higher risk of miscarrying in the first trimester than in the second.

There has also been some concern that CVS is associated with limb defects in babies, such as missing fingers or toes, but this was primarily in tests done on women before their tenth week of pregnancy. Studies have found no increased risk for this problem in women who have CVS at 11 weeks or later. These are all things you should discuss with your partner, your practitioner, and a genetic counselor.

## **Can I Meet with a Genetic Counselor Before Deciding Whether to Have the CVS Testing Done?**

We will schedule you to meet with a genetic counselor to discuss the risks and benefits of various methods of prenatal testing before you have the test done, if at all possible. The counselor will take down your family history and ask questions about your pregnancy.

Your answers will enable the counselor to give you a sense of your risk for a problem and determine whether you need to be screened for a particular genetic disease. Then you can decide whether you want to go ahead with the CVS.





## **What is the CVS Procedure Like?**

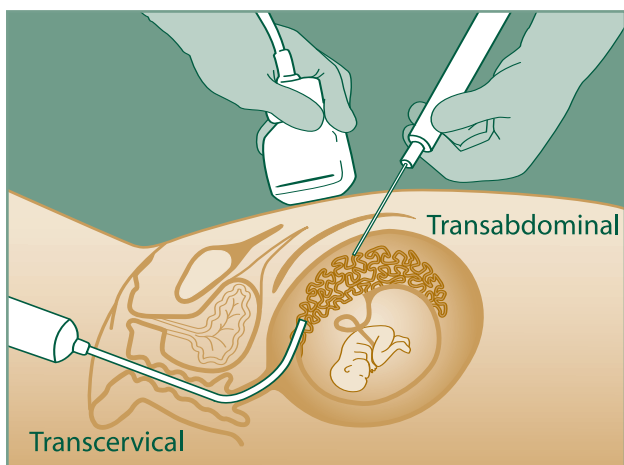
Before having your CVS, you will have an ultrasound to confirm how far along you are and to make sure it is possible to get a good sample for the test.

Sometimes it is done when you come in for your CVS and other times it may be done in advance.

The goal of the procedure is to obtain a tiny tissue sample of your placenta, which will be sent to a lab for analysis. Depending on where your placenta is attached to your uterus, the doctor either performs a transcervical or transabdominal CVS, withdrawing the sample of chorionic villi cells through either your cervix or your abdomen. The doctor does this with a catheter (a thin tube) or needle and is assisted with a sonographer who uses a vaginal or abdominal ultrasound to determine the position of the placenta and better guide the needle or catheter during the procedure.

## The CVS Procedure

For a transcervical CVS, which is more common, the doctor cleans your vagina and cervix with an antiseptic, to prevent any bacteria from being carried by the catheter into the uterus, where it could cause infection. The doctor then places the catheter through the cervix, using gentle suction to get a sample from the placenta. For a transcervical or transabdominal CVS, the doctor inserts a needle through your skin and uterine wall to extract the sample. When the test is done, the doctor will check your baby's heartbeat with ultrasound.





The procedure might hurt a little, but it is over relatively quickly. It takes no longer than a half hour from start to finish and the extraction itself takes only a few minutes. Women who have had a transcervical CVS say it feels similar to a pap smear, which may not hurt at all or may feel like a cramp or pinch. Those who undergo a transabdominal CVS may experience some discomfort in the abdominal area similar to an amniocentesis.

Please note: If your blood type is Rh-negative, you will need a shot of Rh immunoglobulin after the CVS because it is possible that your baby's blood mixed with your blood during the procedure.

## **What Happens After the CVS?**

Prenatal tests can be pretty draining and CVS is no exception. You will need to take it easy immediately afterward, so arrange for someone to drive you home. Rest for the remainder of the day and abstain from strenuous physical activity, sex, and exercise for the next two to three days. You may have some cramping and light bleeding, which is normal, but report it to your doctor or provider anyway. If you notice fluid leaking from your vagina or have a fever, call your provider immediately.

The laboratory will isolate the tissue cells (which have the same genetic makeup as the baby's cells) and allow them to reproduce for a week or two. Then they will test the cells for chromosomal abnormalities. (You can also find out your baby's gender if you want to!) You should have the results in seven to fourteen working days.





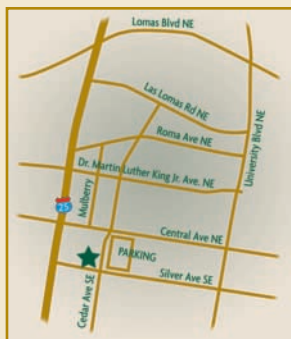
## **How do I Decide Whether to Have a CVS or Wait for an Amniocentesis?**

CVS may be a better choice if you are at risk for having a baby with a chromosomal problem and you want to know your baby's condition during your first trimester, either so you can terminate the pregnancy early if necessary or just to cut down the worrying time. If you wait for the amniocentesis at 15-16 weeks, then 17 weeks is the soonest you would have the results.

Amniocentesis may be a better choice if you decide you want to wait for the results of a multiple marker screening (usually done between 15 and 20 weeks) before undergoing a more invasive test. CVS can only be done until the 13th week.



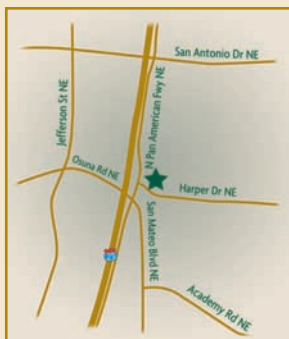
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