

## Chorionic Villus Sampling (CVS)

CVS is an optional procedure that can be performed between approximately 10-14 weeks of pregnancy at a doctor's office that specializes in doing this procedure. CVS involves removing cells from part of the placenta called the chorionic villi. The placental cells collected contain genetic information that is *usually* identical to that of the baby.

There are two ways to perform CVS - the method chosen depends on where the placenta is located. The transcervical procedure involves inserting a thin straw-like tube through the cervix into the uterus to the edge of the placenta. The transabdominal procedure is done by inserting a thin needle through the mother's abdomen. The procedure usually takes only a few minutes to perform. Many women describe some discomfort, such as a cramping sensation, during the CVS.

After the CVS, most women return to their normal activities within 1-2 days. Preliminary results for common chromosome conditions (including Down syndrome) can generally be reported within 48-72 hours from when the lab receives the tissue.<sup>1</sup> It can take a couple of weeks for the complete test results to return.

### What does CVS test for?

It is important to keep in mind that no prenatal genetic test, not even CVS, can look for all genetic conditions or birth defects. The most common conditions detected by CVS are chromosome conditions, such as Down syndrome (trisomy 21), trisomy 18, trisomy 13, and differences in the number of X or Y chromosomes. The prognosis for these conditions can vary tremendously depending on the condition and even between individuals with the same condition. In some cases, additional genetic testing may be performed that can look for other genetic conditions. There are also specific tests that may be requested if a known genetic condition runs in a family or an abnormal ultrasound finding is seen.

Some doctors are offering prenatal chromosomal microarray (instead of traditional chromosome analysis) with CVS. Prenatal chromosomal microarray will look for the chromosome conditions listed above, but it also looks

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<sup>1</sup> Although preliminary results are thought to be very accurate it is recommended to wait for the final results before making any permanent decisions about the pregnancy.

for others called microdeletions and microduplications. For more detailed information, including the pros and cons of prenatal chromosomal microarray, visit:

<https://www.geneticsupportfoundation.org/genetics-and-you/pregnancy-and-genetics/pregnancy-and-genetics-tests/prenatal-chromosomal-microarray-cma>

## What are the Risks of CVS?

Most women have no complications from having a CVS. However, there is a risk for miscarriage. When a CVS is performed by a doctor who specializes in this procedure and does them on a routine basis, the risk for miscarriage is approximately 1 in 455 or 0.22%.<sup>2</sup> After the CVS, most women return to their normal activities within 1-2 days.

## How certain are CVS results?

CVS is a diagnostic test which means results are considered to be definitive for the conditions tested. In other words, this test can give you “yes” or “no” answers, with some exceptions. In rare instances, lab errors may occur. In a small number of cases the baby’s genetic information will be different than that of the placenta and further testing, such as amniocentesis, may be recommended to clarify uncertain CVS results.

## Making a decision that is right for you...

Making a decision about testing like CVS can be difficult because it is not risk-free. However, a diagnostic procedure such as CVS can provide more definitive information about genetic conditions in your baby and can provide information about more genetic conditions than screening tests, such as blood tests and ultrasounds. Undergoing CVS can also allow for information at an earlier point in pregnancy than amniocentesis. Decisions

about genetic testing in your pregnancy should be based on your own beliefs, values, needs, and personality.



You can find more information and videos about prenatal genetic testing options at: [www.geneticsupportfoundation.org](http://www.geneticsupportfoundation.org) and [www.doh.wa.gov](http://www.doh.wa.gov).

<sup>2</sup> Based on American College of Obstetricians and Gynecologists/Society for Maternal-Fetal Medicine Practice Bulletin 162, Prenatal Diagnostic Testing For Genetic Disorders, May 2016.