

# Chorionic Villus Sampling (CVS)

## What is chorionic villus sampling (CVS)?

Chorionic Villus Sampling (CVS) is a procedure performed between the 10th and 13th week of pregnancy in which a small placental biopsy is obtained. The cells from the placenta are sent to a lab in order to test for chromosomal conditions and/or single gene conditions like sickle cell disease or Noonan syndrome. The procedure can be done through the cervix or abdomen, both with ultrasound guidance.



## Are there risks associated with CVS?

CVS carries risks such as miscarriage, bleeding, and infection. It's important to ask the performing physician for their specific risk assessment.

## When would someone consider CVS?

- If a blood test indicates a positive result for a chromosomal condition.
- If the person is considered to be of advanced maternal age.
- When a couple is known to be carriers of the same condition or if a genetic female is a carrier of an X-linked condition.
- If a birth defect is identified on ultrasound.
- If there is a family history of a specific genetic condition.

\*Note: This list is not exhaustive and there may be other reasons for considering CVS.

## What are the limitations of CVS?

There is the risk for placental mosaicism which is when the baby's chromosome number is not the same as the placenta. While the placenta and baby both start from the same conception cell, they start to grow independently from each other to differentiate into their respective tissue types. As cells grow and divide, they sometimes do not divide chromosomes evenly and can end up with the incorrect number of chromosomes in the cell.

When there are a mix of normal and abnormal cells, it is called mosaicism. This does not happen too often. However, it is one limitation of CVS in which the placenta may have mosaicism, and it is not clear if the baby does as well. Amniocentesis is offered to test the baby's cells directly.

## What are the benefits of CVS?

CVS is performed in the first trimester, so the results usually come back in the first or early second trimester. With a confirmed diagnosis, there is time to prepare and learn about the condition or to consider reproductive options such as adoption and termination.

## How does someone get a CVS?

Talk to your healthcare provider to determine if the procedure is right for you. Usually, a maternal fetal medicine specialist is the doctor that can perform this procedure.

**For more information, speak to a healthcare provider.**

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