

## Maternal Serum Screening

Maternal serum screening is an optional blood test that can be done during pregnancy. There are many different versions of this testing. You may have heard it called the “Quad Screen”, “Integrated Screen”, “Sequential Screen” or “First Trimester Screen”.

### What does Maternal Serum Screening Test For?

Maternal serum screening provides information about some specific conditions:

- Open neural tube defects including spina bifida and anencephaly
- Down syndrome
- Trisomy 18 and in some cases Trisomy 13

These conditions are all very different from one another. It is not always possible to know before a child is born how much their health will be affected.

In some cases, maternal serum screening results may suggest twins, or indicate a higher chance for abdominal wall defects, or other health concerns or genetic conditions in the baby.

It is important to know that maternal serum screening cannot detect all genetic conditions or birth defects. No test can guarantee the birth of a healthy baby.

### How Does Maternal Serum Screening Work?

This type of testing measures different protein markers in the pregnant woman’s blood and can tell you if there is a higher or lower chance for certain genetic and health conditions in the baby. In some cases, this testing also requires a specific ultrasound measurement of the back of the baby’s neck known as the nuchal translucency. The nuchal translucency ultrasound is typically done around 11-14 weeks of pregnancy. Depending on what screening test you have, the blood test may be done in the first trimester, the second trimester or may require a blood draw in both the first and second trimesters of pregnancy.

### How Accurate is Maternal Serum Screening?

Maternal serum screening never provides a “yes” or “no” answer. It can only tell you if the chance is higher or lower for these conditions to be present in the baby. Maternal serum screening results will show a higher chance in most, but not all, pregnancies where the baby actually has a neural tube defect, Down syndrome or Trisomy 18.

If the maternal serum screening result indicates a higher chance of one of these conditions, then genetic counseling and further testing, such as CVS, amniocentesis or detailed ultrasound is usually offered. Some women will decide to have a diagnostic procedure, such as CVS or amniocentesis so they can know with certainty if the baby has the genetic condition or not.

### What are the Risks Associated with Maternal Serum Screening?

While there is no risk for pregnancy complications such as miscarriage with a blood draw, it is important to think about what these test results may mean for you. Most of the time the test will come back low-risk and many women feel relief based on these results. However, if the test indicates a higher chance of a genetic condition or health concern these results may create worry and uncertainty about what to do next.

### How Do You Decide About Maternal Serum Screening?

Some women find information from maternal serum screening helpful and some women do not. Maternal serum screening has some benefits and drawbacks when compared to cell free DNA screening and other prenatal genetic testing options. Whether or not to undergo maternal serum screening should be a choice, and the decision should reflect your values, personality, beliefs and needs. See our video, *How to Decide About Prenatal Genetic Testing*, as you make decisions regarding your testing options.

### Credits

This video was created by the Washington State Department of Health and Genetic Support Foundation. You can find more information and additional videos about prenatal genetic testing options at: [www.doh.wa.gov](http://www.doh.wa.gov) and [www.geneticsupportfoundation.org](http://www.geneticsupportfoundation.org).

### Disclaimer

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