

## Screening Tests

### What types of tests are done during pregnancy?

A number of tests are suggested for all women during prenatal care. Some of these tests are performed on samples of your blood and urine and cells from your **cervix** and vagina. You also will be tested for infections such as **sexually transmitted diseases (STDs)**. The results of these tests are used to check for potential problems for you and your baby. If found, many problems can be treated during pregnancy.

Some tests are done to see if you or your baby is at risk of certain problems. These are called screening tests. They may be offered based on your age, history, or ethnic background.

Other tests are done to find problems that may occur during your pregnancy. These are called diagnostic tests. They may be offered based on your medical history, family background, ethnic group, or results of other tests.

### What types of blood tests are given during pregnancy?

Blood tests are done to check for the following:

- Blood type and antibody screen—Your blood type can be A, B, AB, or O. It can be Rh positive or Rh negative (see the FAQ [The Rh Factor: How It Can Affect Your Pregnancy](#)).
- Hematocrit and hemoglobin—The levels of these two substances are measured to check for **anemia**.
- Rubella—Your blood will be checked for signs of a past infection with German measles (rubella).
- Hepatitis B virus (see the FAQ [Hepatitis B Virus in Pregnancy](#))
- **Syphilis** (see the FAQ [Gonorrhea, Chlamydia, and Syphilis](#))
- Human immunodeficiency virus (HIV) (see the FAQ [HIV and Pregnancy](#))
- **Glucose**—The level of sugar in your blood is measured to test for **diabetes** (see the FAQ [Diabetes in Pregnancy](#)).
- Cystic fibrosis carrier testing

### Why is my urine tested?

Your urine may be tested at each prenatal visit. This test checks the levels of sugar and protein in your urine. Although the presence of sugar in the urine is normal in pregnancy, high levels could be a sign of diabetes. Protein in the urine may be a sign of a urinary tract infection or kidney disease. In late pregnancy, it can be a sign of **preeclampsia**. If these problems occur, they can be treated.

### What options are available for screening for birth defects?

Screening tests can be performed in the first **trimester**, second trimester, or both trimesters (the results of first- and second-trimester test results are considered together).

Carrier testing also is an option before and during pregnancy. Carrier testing checks whether one parent is a **carrier** or both parents are carriers of certain inherited disorders. Cystic fibrosis carrier testing is available for all pregnant women. Other carrier tests are recommended for people of certain ethnic backgrounds or those who have a strong family history of a genetic disease.

### What tests are included in first-trimester screening for birth defects?

First trimester screening tests for birth defects include blood tests and an ultrasound exam performed between 11 weeks and 14 weeks of pregnancy. These tests assess the risk of **Down syndrome** and **trisomy 18**. This screening can be done as a single combined test or as part of a step-by-step process.

The ultrasound exam, called nuchal translucency screening, is used to measure the skin thickness at the back of the neck of the fetus. An increase in this space may be a sign of Down syndrome, trisomy 18, or other problems. The blood tests measure the level of two substances in the mother's blood called pregnancy-associated plasma protein A and human chorionic gonadotropin. Increased levels of these two proteins may be a sign of Down syndrome.

### What tests are included in second-trimester screening for birth defects?

In the second trimester, a test called "multiple marker screening" is offered to screen for Down syndrome, trisomy 18, and **neural tube defects**. This test measures the level of three or four of the following substances in your blood:

1. Alpha-fetoprotein (AFP) — A substance made by a growing fetus, which is found in **amniotic fluid**, fetal blood, and, in smaller amounts, in the mother's blood.
2. Estriol — A hormone made by the **placenta** and the liver of the fetus.
3. Human chorionic gonadotropin
4. Inhibin-A — A hormone produced by the placenta.

The test using the first three substances is called a triple screen. The test using all four substances is called a quadruple screen (see the FAQ [Screening Tests for Birth Defects](#)).

### If I am at risk of having a baby with a birth defect, what tests may be performed?

If the results of screening show that there is an increased risk of having a baby with a birth defect, the following diagnostic tests may be done:

- Amniocentesis—For this test, a small amount of amniotic fluid and cells are taken from the sac surrounding the fetus and tested. This test is done in the second trimester of pregnancy.
- Chorionic villus sampling (CVS)—For this test, a small sample of cells is taken from the placenta and tested. This test is done in the first trimester of pregnancy.
- Ultrasound—This type of ultrasound exam gives a detailed view of the baby's organs and features.

Both amniocentesis and CVS carry a small risk of fetal loss. Your health care provider can explain these risks to you.

## Glossary

**Amniotic Fluid:** Water in the sac surrounding the fetus in the mother's uterus.

**Anemia:** Abnormally low levels of blood or red blood cells in the bloodstream.

**Carrier:** A person who shows no signs of a particular disorder but could pass the gene on to his or her children.

**Cervix:** The lower, narrow end of the uterus, which protrudes into the vagina.

**Diabetes:** A condition in which the levels of sugar in the blood are too high.

**Down Syndrome:** A genetic disorder in which mental retardation, abnormal features of the face and body, and medical problems such as heart defects occur.

**Glucose:** A sugar that is present in the blood and is the body's main source of fuel.

**Neural Tube Defects (NTDs):** Birth defects that result from incomplete development of the brain, spinal cord, or their coverings.

**Placenta:** Tissue that provides nourishment to and takes waste away from the fetus.

**Preeclampsia:** A condition of pregnancy in which there is high blood pressure and protein in the urine.

**Sexually Transmitted Diseases:** Diseases that are spread by sexual contact.

**Syphilis:** A sexually transmitted disease that is caused by an organism called *Treponema pallidum*; it may cause major health problems or death in its later stages.

**Trimester:** Any of the three 3-month periods into which pregnancy is divided.

**Trisomy 18:** A genetic disorder that causes serious problems with development. Most infants with trisomy 18 die within the first year of life.

**Ultrasound:** A test in which sound waves are used to examine internal structures. During pregnancy, it can be used to examine the fetus.

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