



Routine Tests During Pregnancy

- Why are tests done during pregnancy?
- What tests are done early in pregnancy?
- What is a CBC and what can the results show?
- What is blood typing and what can the results show?
- What is a urinalysis and what can the results show?
- What is a urine culture test and what can the results show?
- What is rubella and what do test results for this disease show?
- What are hepatitis B and hepatitis C and what do test results for these infections show?
- Which STI tests are done in pregnant women?
- Why are all pregnant women tested for HIV?
- Which pregnant women should be tested for TB?
- Is there screening for Zika virus?
- What tests are done later in pregnancy?
- When will I be tested for Rh antibodies?
- What is a glucose screening test and what can the results show?
- What is GBS and why are pregnant women tested for it?
- What happens if my screening test result for GBS is positive?
- What is the difference between screening tests and diagnostic tests for birth defects?
- What is the first step in screening for birth defects?
- What is carrier screening?
- What are other types of screening tests for birth defects that can be done during pregnancy?
- What are the types of diagnostic tests for birth defects that can be done during pregnancy?
- Can I choose whether or not to have testing for birth defects?
- Glossary

Why are tests done during pregnancy?

A number of lab tests are suggested for all women as part of routine **prenatal care**. These tests can help find conditions that can increase the risk of complications for you and your **fetus**.

What tests are done early in pregnancy?

The following lab tests are done early in pregnancy:

- Complete blood count (CBC)
- Blood type

- Urinalysis
- Urine culture
- Rubella
- Hepatitis B and hepatitis C
- **Sexually transmitted infections (STIs)**
- **Human immunodeficiency virus (HIV)**
- **Tuberculosis (TB)**

What is a CBC and what can the results show?

A CBC counts the numbers of different types of **cells** that make up your blood. The number of red blood cells can show whether you have a certain type of **anemia**. The number of white blood cells shows how many disease-fighting cells are in your blood, and the number of platelets can reveal whether you have a problem with blood clotting.

What is blood typing and what can the results show?

Results from a blood type test can show if you have the **Rh factor**. The Rh factor is a protein that can be present on the surface of red blood cells. Most people have the Rh factor—they are Rh positive. Others do not have the Rh factor—they are Rh negative. If your fetus is Rh positive and you are Rh negative, your body can make **antibodies** against the Rh factor. In a future pregnancy, these antibodies can damage the fetus's red blood cells.

What is a urinalysis and what can the results show?

Your urine may be tested for red blood cells (to see if you have urinary tract disease), white blood cells (to see if you have a urinary tract infection), and **glucose** (high levels may be a sign of **diabetes mellitus**). The amount of protein also is measured. The protein level early in pregnancy can be compared with levels later in pregnancy. High protein levels in the urine may be a sign of **preeclampsia**, a serious complication that usually occurs later in pregnancy or after the baby is born.

What is a urine culture test and what can the results show?

A urine culture tests your urine for **bacteria**, which can be a sign of a urinary tract infection.

What is rubella and what do test results for this disease show?

Rubella (sometimes called German measles) can cause birth defects if a woman is infected during pregnancy. Your blood is tested to check whether you have had a past infection with rubella or if you have been vaccinated against this disease. If you have not had rubella previously or if you have not been vaccinated, you should avoid anyone who has the disease while you are pregnant because it is highly contagious. If you have not had the vaccine, you should get it after the baby is born, even if you are breastfeeding. You should not be vaccinated against rubella during pregnancy.

What are hepatitis B and hepatitis C and what do test results for these infections show?

Hepatitis B and hepatitis C viruses infect the liver. Pregnant women who are infected with hepatitis B or hepatitis C virus can pass the virus to their fetuses. All pregnant women are tested for hepatitis B virus infection. If you have risk factors, you also may be tested for the hepatitis C virus.

Which STI tests are done in pregnant women?

All pregnant women are tested for **syphilis** and **chlamydia** early in pregnancy. Syphilis and chlamydia can cause complications for you and your fetus. If you have either of these STIs, you will be treated during pregnancy and tested again to see if the treatment has worked. If you have risk factors for **gonorrhea** (you are aged 25 years or younger or you live in an area where gonorrhea is common), you also will be tested for this STI.

Why are all pregnant women tested for HIV?

If a pregnant woman is infected with HIV, there is a chance she can pass the virus to her fetus. HIV attacks cells of the body's immune system and causes **acquired immunodeficiency syndrome (AIDS)**. If you are pregnant and infected with HIV, you can be given medication and take other steps that can greatly reduce the risk of passing HIV during pregnancy, labor, or delivery.

Which pregnant women should be tested for TB?

Women at high risk of TB (for example, women who are infected with HIV or who live in close contact with someone who has TB) should be tested for this infection.

Is there screening for Zika virus?

Your health care professional will ask you questions about travel to areas with Zika. Your answers will help determine if you need testing for Zika virus.

What tests are done later in pregnancy?

The following tests are done later in pregnancy:

- A repeat CBC
- Rh antibody test
- Glucose screening test
- Group B streptococci (GBS)

When will I be tested for Rh antibodies?

If you are Rh negative, your blood will be tested for Rh antibodies between 28 weeks and 29 weeks of pregnancy. If you do not have Rh antibodies, you will receive **Rh immunoglobulin**. This shot prevents you from making antibodies during the rest of your pregnancy. If you have Rh antibodies, you may need special care.

What is a glucose screening test and what can the results show?

This screening test measures the level of glucose (sugar) in your blood. A high glucose level may be a sign of **gestational diabetes**. This test usually is done between 24 weeks and 28 weeks of pregnancy. If you have risk factors for diabetes or had gestational diabetes in a previous pregnancy, screening may be done in the first **trimester** of pregnancy.

What is GBS and why are pregnant women tested for it?

GBS is a type of bacteria that lives in the vagina and rectum. Many women carry GBS and do not have any symptoms. GBS can be passed to a fetus during birth. Most babies who get GBS from their mothers do not have any problems. A few, however, become sick. This illness can cause serious health problems and even death in newborn babies. GBS usually can be detected with a routine screening test that is given between 35 weeks and 37 weeks of pregnancy. For this test, a swab is used to take samples from the vagina and rectum.

What happens if my screening test result for GBS is positive?

If the test result for GBS is positive, **antibiotics** can be given during labor to help prevent the baby from becoming infected.

What is the difference between screening tests and diagnostic tests for birth defects?

Screening tests are done during pregnancy to assess the risk that the fetus has certain common birth defects. A screening test cannot tell whether the fetus actually has a birth defect. There is no risk to the fetus with having screening tests.

Diagnostic tests actually can detect many, but not all, birth defects caused by defects in a **gene** or **chromosomes** (see FAQ094 Genetic Disorders). Diagnostic testing may be done instead of screening if a couple has a family history of a birth defect, belongs to a certain ethnic group, or if the couple already has a child with a birth defect. Diagnostic tests also are available as a first choice for all pregnant women, including those who do not have risk factors. Some diagnostic tests carry risks, including a small risk of pregnancy loss.

What is the first step in screening for birth defects?

Screening for birth defects begins by assessing your risk factors. Early in your pregnancy, your health care professional may give you a list of questions to find out whether you have risk factors, such as a personal or family history of birth defects, belonging to certain ethnic groups, maternal age of 35 years or older, or having preexisting diabetes. In some situations, you may want to visit a **genetic counselor** for more detailed information about your risks.

What is carrier screening?

Carrier screening can show if you or your partner carry a gene for a certain disorder, such as **cystic fibrosis**. Carrier screening can be done before or during pregnancy. Carrier screening often is recommended if you or your partner have a genetic disorder, have a child with a genetic disorder, have a family history of a genetic disorder, or belong to an ethnic group that has an increased risk of specific disorders. Also, cystic fibrosis carrier screening is offered to all women of reproductive age because it is one of the most common inherited disorders.

What are other types of screening tests for birth defects that can be done during pregnancy?

Screening tests include an **ultrasound exam** in combination with blood tests that measure the levels of certain substances in the mother's blood.

What are the types of diagnostic tests for birth defects that can be done during pregnancy?

Diagnostic tests for birth defects include **amniocentesis**, **chorionic villus sampling**, and a targeted ultrasound exam.

Can I choose whether or not to have testing for birth defects?

Whether you want to be tested is a personal choice. Knowing beforehand allows the option of deciding not to continue the pregnancy. If you choose to continue the pregnancy, it can give you time to prepare for having a child with a particular disorder and to organize the medical care that your child may need. Your health care professional or a genetic counselor can discuss the options with you and help you decide.

Glossary

Acquired Immunodeficiency Syndrome (AIDS): A group of signs and symptoms, usually of severe infections, occurring in a person whose immune system has been damaged by infection with human immunodeficiency virus (HIV).

Amniocentesis: A procedure in which a needle is used to withdraw and test a small amount of amniotic fluid and cells from the sac surrounding the fetus.

Anemia: Abnormally low levels of blood or red blood cells in the bloodstream. Most cases are caused by iron deficiency or lack of iron.

Antibiotics: Drugs that treat certain types of infections.

Antibodies: Proteins in the blood produced in reaction to foreign substances, such as bacteria and viruses, that cause infection.

Bacteria: One-celled organisms that can cause infections in the human body.

Carrier Screening: A test done on a person with no signs or symptoms to find out whether he or she carries a gene for a genetic disorder.

Cells: The smallest units of a structure in the body; the building blocks for all parts of the body.

Chlamydia: A sexually transmitted infection caused by bacteria that can lead to pelvic inflammatory disease and infertility.

Chorionic Villus Sampling: A procedure in which a small sample of cells is taken from the placenta and tested.

Chromosomes: Structures that are located inside each cell in the body and contain the genes that determine a person's physical makeup.

Cystic Fibrosis: An inherited disorder that causes problems in digestion and breathing.

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

Fetus: The developing organism in the uterus from the ninth week of pregnancy until the end of pregnancy.

Gene: A segment of DNA that contains instructions for the development of a person's physical traits and control of the processes in the body. Genes are the basic units of heredity and can be passed down from parent to offspring.

Genetic Counselor: A health care professional with special training in genetics and counseling who can provide expert advice about genetic disorders and prenatal testing.

Gestational Diabetes: Diabetes that arises during pregnancy.

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

Gonorrhea: A sexually transmitted infection that may lead to pelvic inflammatory disease, infertility, and arthritis.

Human Immunodeficiency Virus (HIV): A virus that attacks certain cells of the body's immune system and causes acquired immunodeficiency syndrome (AIDS).

Preeclampsia: A disorder that can occur during pregnancy or after childbirth in which there is high blood pressure and other signs of organ injury, such as an abnormal amount of protein in the urine, a low number of platelets, abnormal kidney or liver function, pain over the upper abdomen, fluid in the lungs, or a severe headache or changes in vision.

Prenatal Care: A program of care for a pregnant woman before the birth of her baby.

Rh Factor: A protein that can be present on the surface of red blood cells.

Rh Immunoglobulin: A substance given to prevent an Rh-negative person's antibody response to Rh-positive blood cells.

Sexually Transmitted Infections (STIs): Infections that are spread by sexual contact, including chlamydia, gonorrhea, human papillomavirus infection, herpes, syphilis, and infection with human immunodeficiency virus (HIV, the cause of acquired immunodeficiency syndrome [AIDS]).

Syphilis: A sexually transmitted infection 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.

Tuberculosis (TB): A disease caused by bacteria that usually affects the lungs but also can affect other organs in the body. If not treated, it can be fatal.

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

If you have further questions, contact your obstetrician–gynecologist.

FAQ133: Designed as an aid to patients, this document sets forth current information and opinions related to women's health. The information does not dictate an exclusive course of treatment or procedure to be followed and should not be construed as excluding other acceptable methods of practice. Variations, taking into account the needs of the individual patient, resources, and limitations unique to the institution or type of practice, may be appropriate.

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