

Hemoglobin S



Does this test have other names?

Hgb S test, sickle cell test, Sickledex

What is this test?

This test looks for an abnormal type of hemoglobin in your blood called hemoglobin S.

Hemoglobin is the main part of your red blood cells. It carries oxygen through your blood. If your hemoglobin level is too low, you may not be able to supply the cells in your body with the oxygen they need to survive.

Hemoglobin S (Hgb S) is an abnormal type of hemoglobin that you can inherit from your parents. Hgb S causes red blood cells to become stiff and abnormally shaped. Instead of having a normal round, disk shape, these red blood cells become sickle-shaped, or crescent-shaped. These cells don't live as long as normal red blood cells. Because of their shape, they get stuck inside small blood vessels. These problems cause symptoms of sickle cell disease.

If a person inherits 1 normal hemoglobin gene and 1 Hgb S gene, the person is said to have the sickle cell trait. If the person inherits a Hgb S gene from each parent, the person has sickle cell disease.

Why do I need this test?

You may need this test if you are being screened to see if you carry the Hgb S gene or if you have symptoms of sickle cell disease. Symptoms of sickle cell disease may include:

- Shortness of breath
- Cold, pale skin, especially the hands and feet
- Pain
- Swelling in the hands and feet (hand foot syndrome)
- Headaches or dizziness
- Jaundice, or yellowed skin or eyes

What other tests might I have along with this test?

Your healthcare provider may also order other blood tests to check for anemia. They may also order a test called hemoglobin electrophoresis to help find out the amounts of different hemoglobin types in your blood. This test helps figure out if you have sickle cell trait or sickle cell disease. The test is also part of routine newborn screening.

What do my test results mean?

Test results may vary depending on your age, gender, health history, and other things. Your test results may be different depending on the lab used. They may not mean you have a problem. Ask your healthcare provider what your test results mean for you.

Normal results are negative, meaning no Hgb S was seen and your red blood cells are a normal shape. Positive results mean Hgb S is present and sickle cells were seen. Your healthcare provider will confirm these results with hemoglobin electrophoresis.

A positive result may also mean that you have another blood disease and may need more tests.

How is this test done?

The test is done with a blood sample. A needle is used to draw blood from a vein in your arm or hand.

In small children or infants, blood can be taken by a skin prick from the heel of the foot.

Does this test pose any risks?

Having a blood test with a needle carries some risks. These include bleeding, infection, bruising, and feeling lightheaded. When the needle pricks your arm or hand, you may feel a slight sting or pain. Afterward, the site may be sore.

What might affect my test results?

Certain medicines can affect your results, as can having the test too soon after a blood transfusion.

In children, age can affect results. Children younger than 3 months may need more tests around age 6 months.

How do I get ready for this test?

You don't have to prepare for this test. Make sure to tell your healthcare provider about any health conditions you have and if you have had a blood transfusion in the past. Be sure your healthcare provider knows about all medicines, herbs, vitamins, and supplements you are taking. This includes medicines that don't need a prescription and any illegal drugs you may use.

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