

If only the mother or the father has the Hgb C trait, then there is a 1 in 2 chance for each child to inherit the trait. To have a baby with Hgb SC disease, both the mother and the father must have either Hgb C trait or Hgb S trait, and the child must inherit the trait from both parents. With each pregnancy, a mother and a father who both have a sickle cell trait, have a 1 in 4 chance to have a child who has sickle cell disease, a 1 in 2 chance to have a child who has a trait (either S or C), and a 1 in 4 chance to have a child who does not have a trait.

Testing for the Hgb C trait will give you information about your chance to have a child with Hgb SC disease. Your blood test for the Hgb C trait will also provide information for your family members (brothers, sisters, parents, aunts, uncles) about their chance to have Hgb C trait.

Where can I get more information about hemoglobin C trait?

You can get more information about hemoglobin C trait from your doctor, your baby's doctor or a genetic counselor. There is also additional information on our website: www.wadsworth.org/newborn

We can be contacted at **518-473-7552**, Monday through Friday, 8 am until 4:45 pm. Or via e-mail at

nbsinfo@nyhealth.gov



Newborn Screening Program
NYS Department of Health
Wadsworth Center
David Axelrod Institute
120 New Scotland Avenue
Albany, New York 12208

HEMOGLOBIN C TRAIT

The Family Connection

Information for Parents and Families



A blood test showed that your baby has hemoglobin C trait (Hgb C).

YOUR BABY DOES NOT HAVE SICKLE CELL DISEASE.

What is the Hemoglobin C cell trait?

Red blood cells bring oxygen from the lungs to every part of the body. Oxygen is stored in the red blood cell by hemoglobin. There are several different types of hemoglobin. Normal hemoglobin is called Hgb A and the types that may cause sickling are called Hgb S and Hgb C. A person with the hemoglobin C trait has both Hgb A and Hgb C.

A person with sickle cell disease has no Hgb A. Instead, they only have hemoglobin S or a combination of other hemoglobins, such as Hgb C. A person with Hgb S and Hgb C has a type of sickle cell disease, called Hgb SC disease. In people with sickle cell disease, including Hgb SC disease, the red blood cells have an abnormal shape.



Hemoglobin A only
No disease



Sickle Cell Trait
No disease
Hemoglobin A
and Hemoglobin C



Hemoglobin SC Disease
Hemoglobin S and
Hemoglobin C

Will the hemoglobin C trait affect my baby's health?

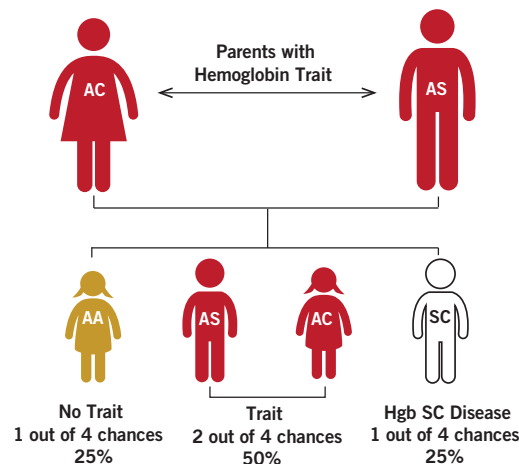
The hemoglobin C trait does not usually cause health problems. Most people with Hgb C trait go through life without knowing they have it.

When was my baby tested for hemoglobin C trait?

As part of the Newborn Screening Program, all babies born in New York State have testing for more than 40 disorders on a small amount of blood taken from their heel shortly after birth. This testing finds babies who have Hgb C trait.

How common is the hemoglobin C trait?

About 1 in 40 African Americans have the Hgb C trait. The Hgb C trait is also common in persons from the Caribbean and parts of Central and South America. The trait is not as common, but can also be found in people of other ethnic groups including Mediterranean, Middle Eastern, and Indian ancestry.



What are the symptoms of hemoglobin SC disease?

Sickle cell disease, including Hgb SC disease is a serious medical condition. People with sickle cell disease usually have chronic pain and problems with their liver and spleen. They also have a shortage of red blood cells, known as anemia, which can cause them to be pale, short of breath and tire easily. There is also a risk for severe infections.

What are the symptoms if a person has only hemoglobin C?

A person with only Hgb C has Hgb C disease, which usually does not cause symptoms; however, they may have mild anemia (shortage of red blood cells).

It is important for a person with Hgb C disease to tell their doctors about their test results.

What does this test result mean for me and my family members?

At least the mother or father of a baby with Hgb C trait also has the trait. It is important that you are both tested and have the option to review your results with your doctor or a genetic counselor.

Hgb C trait is inherited, and there is nothing the mother or father could have done to cause or prevent Hgb C trait in their baby.