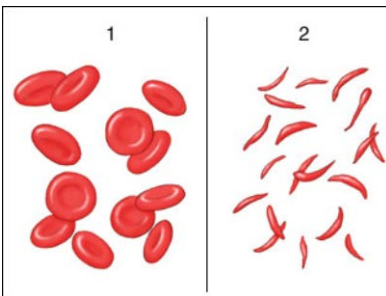


Sickle Cell Trait (or Carrier)

What is Sickle Cell Disease?

Sickle cell disease is a disorder of the red blood cells. The oxygen-carrying substance in red blood cells, called *hemoglobin*, is made up of two genes. In sickle cell disease, these genes are abnormal. This causes the red blood cells to change into a stiff crescent shape when oxygen levels are low, instead of staying round and flexible. These blood cells get stuck in small blood vessels and block oxygen flow through the body. This causes severe health issues, including pain, stroke and organ dysfunction. Sickle cells break down much more quickly than normal red blood cells, so people with sickle cell disease also have anemia.



1. Normal, healthy red blood cells
2. Sickle cells

How do you get Sickle Cell Disease?

Sickle cell disease is inherited, which means it is passed from parent to child. A child that inherits two sickle genes, one from each parent, has sickle cell disease. A child that inherits one sickle gene and one normal gene has sickle cell trait.

Sickle cell disease is a serious condition that requires constant, lifelong medical supervision.

However, people with sickle cell trait are generally healthy and do not have serious health problems.

What is Sickle Cell Trait?

People with sickle cell trait are also called “carriers.” They are healthy and **do not** have sickle cell disease. They do not get the serious health problems people with sickle cell disease may have. Sickle cell trait affects 1 in 8 African-Americans.

People with sickle cell trait are generally healthy and do not need to be followed by a specialized physician. However, there are a few things these individuals should be aware of:

Genetic Implications

If both parents are sickle cell carriers, their children may be born with sickle cell disease.

If your child has sickle cell trait and you and your partner are considering having more children, you should see a genetic counselor to discuss your risk of having a child with sickle cell disease.



Likewise, if your child has sickle cell trait and is considering having children, he/she should see a genetic counselor to determine the risk to their own children.

Exertional heat illness

People with sickle cell trait are at increased risk of experiencing a rare but serious condition called “exertional heat illness.”

Exertional heat illness refers to severe muscle damage and physical collapse that can occur when individuals participate in extreme activities (professional sports, military training) under very severe conditions (very high temperatures or altitudes).

There have been cases of death from exertional heat illness in people with sickle cell trait. People with sickle cell trait should use caution when performing highly strenuous activities in extreme conditions.

Other Medical Complications

People with sickle cell trait are at a slightly higher risk than the average population for a small number of very rare health conditions involving the kidneys, urinary tract and spleen. They should keep their physician informed of any sudden, severe abdominal pain or symptoms involving urination.

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