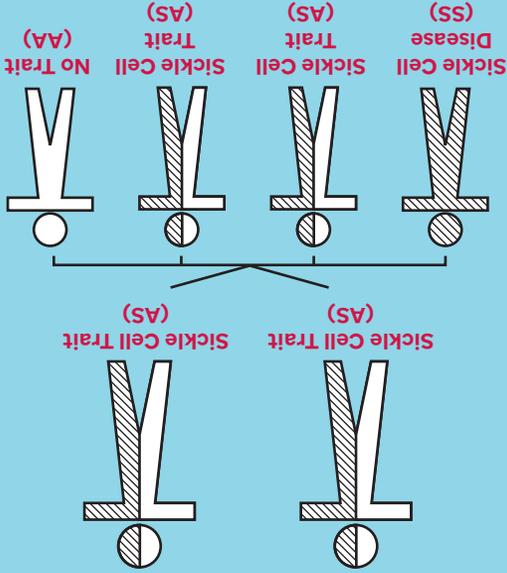


## FACT SHEET

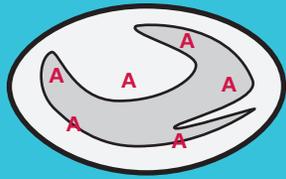
# Sickle Cell Trait



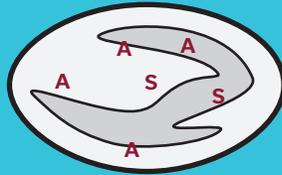
- If both parents have sickle cell trait there is a 25 percent (1 in 4) chance **with each pregnancy** of having a child with sickle cell **disease**. Sickle cell disease is a lifelong illness that can result in serious health problems.
- This document does not provide information on other types of hemoglobin trait such as hemoglobin C or beta thalassemia trait. It is not intended to replace counseling by a trained health care professional or genetic counselor. Questions about personal health concerns or treatment should be discussed with your doctor. For more information, visit our website at [www.stjude.org/sicklecell](http://www.stjude.org/sicklecell).

It is possible for a person of any race or nationality to have sickle cell trait, but it is very common in African-Americans. About one (1) out of every 12 African-Americans has sickle cell trait. It also affects Hispanics, and people whose ancestors came from Africa, Latin America, Asia, India, and the Mediterranean region.

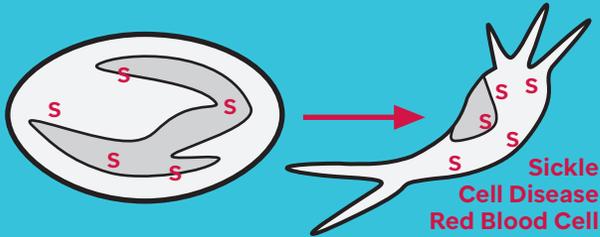
- Sickle cell trait affects the red blood cells.
- All red blood cells contain hemoglobin, which carries oxygen from the lungs to all parts of the body.
- People with sickle cell trait have both normal hemoglobin A and abnormal hemoglobin S in their red blood cells.



Normal  
Red Blood Cell



Sickle Cell Trait  
Red Blood Cell



Sickle  
Cell Disease  
Red Blood Cell

- People who do not have sickle cell trait or any other abnormal hemoglobin have red blood cells that contain only hemoglobin A.
- People with sickle cell trait do not develop sickle cell disease.
- People with sickle cell disease have red blood cells that contain mostly hemoglobin S. Under certain conditions these red blood cells become sickle-shaped (banana-shaped) and block circulation.

## Why is it important to know if I have sickle cell trait?

- Sickle cell trait is inherited from one's parents, like hair or eye color. If one (1) parent has sickle cell trait there is a 50 percent (1 in 2) chance **with each pregnancy** of having a child with sickle cell **trait**.
- Sickle cell trait rarely causes any health problems. But under certain conditions, it may cause health problems in some people<sup>1</sup>, including problems from:
  - Dehydration - a lack of water in the body
  - Low oxygen - caused by very strenuous exercise
  - High altitudes - caused by a lack of oxygen in the thin air

