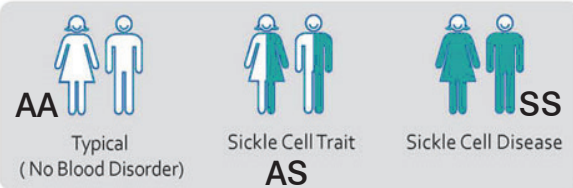
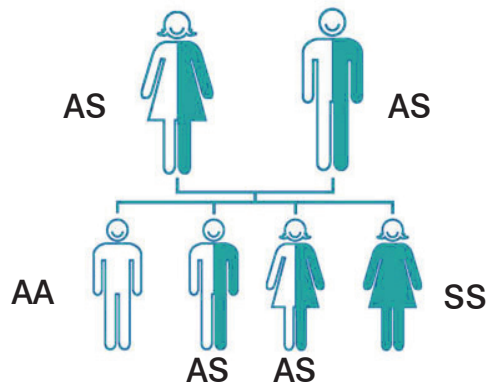


## Why should I know if I am a sickle cell trait (SCT) carrier?



If both parents have SCT, there is a 1 in 4 chance with each pregnancy that they will have a child with sickle cell anemia.



## Don't know your sickle cell trait status? Get screened.



- We encourage people who are unaware of their trait status to ask their health care provider about testing. A simple blood test can be done.
- All infants born in the United States after 2006 are tested for sickle cell trait.
- Talk to your child's doctor about his or her test results.
- Explain to your child what their sickle cell trait status means.



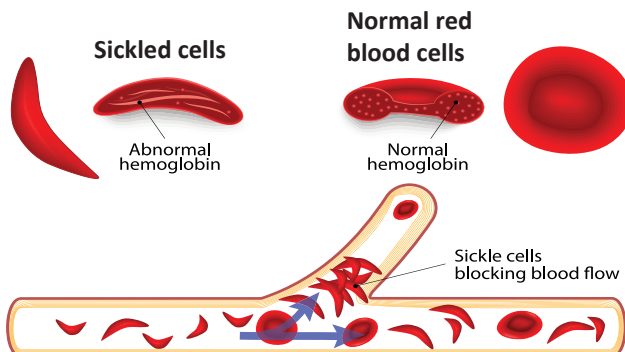
[VDHLiveWell.com/sicklecell](http://VDHLiveWell.com/sicklecell)

# Sickle Cell DISEASE



## Sickle Cell Disease

- Sickle cell disease (SCD) is a term used to describe a group of inherited blood disorders. SCD affects the shape and function of red blood cells.
- SCD is one of the most common genetic disorders in the United States, primarily affecting African-Americans. It is also found in people from South and Central America, the Middle East, Italy, and Greece.
- People who have SCD have inherited two abnormal hemoglobin genes, with at least one being a sickle “S” gene.
- Hemoglobin “S” changes the shape of red blood cells into a sickle shape. Sickle cells are hard and sticky, making it difficult to travel through small blood vessels.
- Sickle cells die early, which leads to a shortage of red blood cells.
- Approximately 75 babies with SCD and other hemoglobin related diseases are identified each year through newborn screening in Virginia.



## Types of SCD

- **Sickle cell anemia (HbSS):** People who have “SS” have inherited two sickle cell genes “S,” one from each parent. “SS” is the most common and often the most severe type of SCD.
- **Hemoglobin S-C Disease (HbSC):** People who have SC have inherited an “S” gene from one parent and an abnormal hemoglobin gene called “C” from the other parent. This is usually a milder form of SCD.
- **Hemoglobin Sickle Beta Thalassemia:** A person who has this type of SCD has inherited an “S” gene from one parent and a beta thalassemia gene from the other parent. There are two types: “0” and “+.” HbS beta 0-thalassemia is usually a more severe form of SCD. HbS beta + -thalassemia tends to be a milder form of SCD.
- Other rare types of SCD include: HbSD, HbSE, and HbSO.

## Treatment

- There is no single best treatment for people with SCD.
- Treatment options can include medications to help with pain, intravenous (IV) antibiotics, and blood transfusions.
- There is no universal cure for SCD, but new treatments and preventive therapies, such as hydroxyurea, have improved the life expectancy and quality of life for people with the disorder.
- Bone marrow and stem cell transplants have successfully cured some patients with SCD.

## Sickle Cell Trait

People who inherit an abnormal sickle cell gene, “S,” from one parent and a normal gene, “A,” from the other parent have what is called sickle cell trait (SCT). People who have SCT usually will not have symptoms of sickle cell disease (SCD), nor will it ever turn into SCD. In extreme and rare cases, these conditions could be harmful for people with SCT:

- Flying in an unpressurized aircraft
- Exercising extremely hard
- Dehydration
- Visiting a city that is above sea level (e.g., Denver, CO)