Jack Barber, MD
Interim Commissioner

Virginia Department of Behavioral Health & Developmental Services

Post Office Box 1797
Richmond, Virginia 23218-1797

Office of Integrated Health
Health & Safety Information

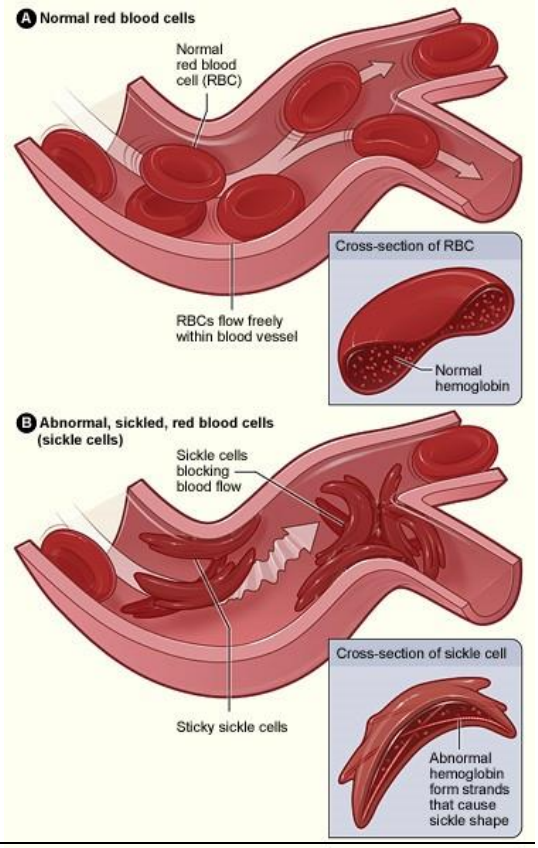
Dr. Dawn M. Adams DNP, ANP-BC, CHC
Director, Office of Integrated Health

Sickle Cell Disease

What is Sickle Cell Disease?

Sickle cell disease, also known as sickle cell anemia, is a group of inherited red blood cell disorders. Healthy red blood cells are round and they move through small blood vessels to carry oxygen to all parts of the body. In someone who has sickle cell anemia, the red blood cells become hard and sticky and look like a C-shaped farm tool called a "sickle". The sickle cells die early, which causes a constant shortage of red blood cells. Normal red blood cells live about 90 to 120 days, but sickle cells last only 10 to 20 days**.** Additionally, when they travel through small blood vessels, they get stuck and block the blood flow. This can cause pain and other serious problems such infection, acute chest pain, and stroke. In healthy red blood cells oxygen and iron are transported throughout the body.

The body is always making new red blood cells to replace the old cells; however, in sickle cell anemia, the body may have trouble keeping up with how fast the cells are being destroyed. Because of this, the number of red blood cells is usually lower than normal; which can cause an individual to have less energy.



https://www.nhlbi.nih.gov/health/health-topics/topics/sca

Signs and Symptoms of Sickle Cell Anemia

Pain is the most common complication of sickle cell anemia and the number one reason that people with sickle cell anemia go to the emergency room or hospital. When sickle cells travel through small blood vessels, they can get stuck and block the blood flow. This causes pain that can start suddenly, be mild to severe, and can last for any length of time. To help prevent some of these complications drink plenty of water, try not to get too hot or too cold, and avoid places or situations that cause exposure to high altitudes such as flying.

Jack Barber, MD
Interim Commissioner

Virginia Department of Behavioral Health & Developmental Services

Post Office Box 1797
Richmond, Virginia 23218-1797

Pain "Episode" or "Crisis"

Pain episodes or crisis can occur without warning when sickle cells block blood flow and decrease oxygen in the blood. Individuals may describe this pain as sharp, intense, stabbing, or throbbing. Pain can strike almost anywhere in the body and in multiple places. But the pain often occurs in the lower back, legs, arms, abdomen (stomach), or the chest.

A pain crisis can be brought on by:

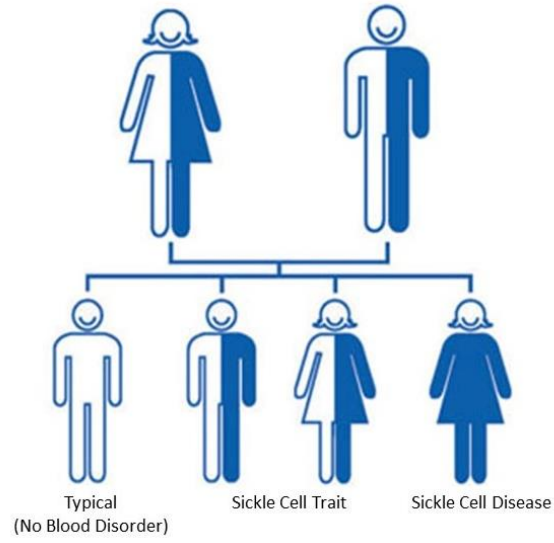
- Illness
- Temperature changes
- Stress
- Dehydration (not drinking enough fluids)
- Being at high altitudes

Pain in an individual with sickle cell anemia should never be ignored and can sometimes result in crisis and even a life threatening emergency!

Sickle Cell Anemia Diagnosis and Treatment

Sickle cell anemia is diagnosed with a simple blood test. It most often is found at birth during required routine newborn screening tests at the hospital. In addition, it can be diagnosed before birth with prenatal genetic testing. Because children with sickle cell anemia are at an increased risk of infection and other health problems, early diagnosis and treatment are important.

Sickle cell anemia is a disease that gets worse over time. Treatments are available that can prevent complications and lengthen the lives of those who have this condition. These treatment options can be different for each person depending on the symptoms and severity of the disease progression. Blood transfusions are used to treat severe anemia.



https://www.cdc.gov/ncbddd/sicklecell/traits.html

Prevention of Sickle Cell Anemia

Sickle cell anemia is an inherited disease. This means the genes for the disease are passed down biologically from each parent. Sickle cell disease is not contagious; it cannot be shared or spread from contact.

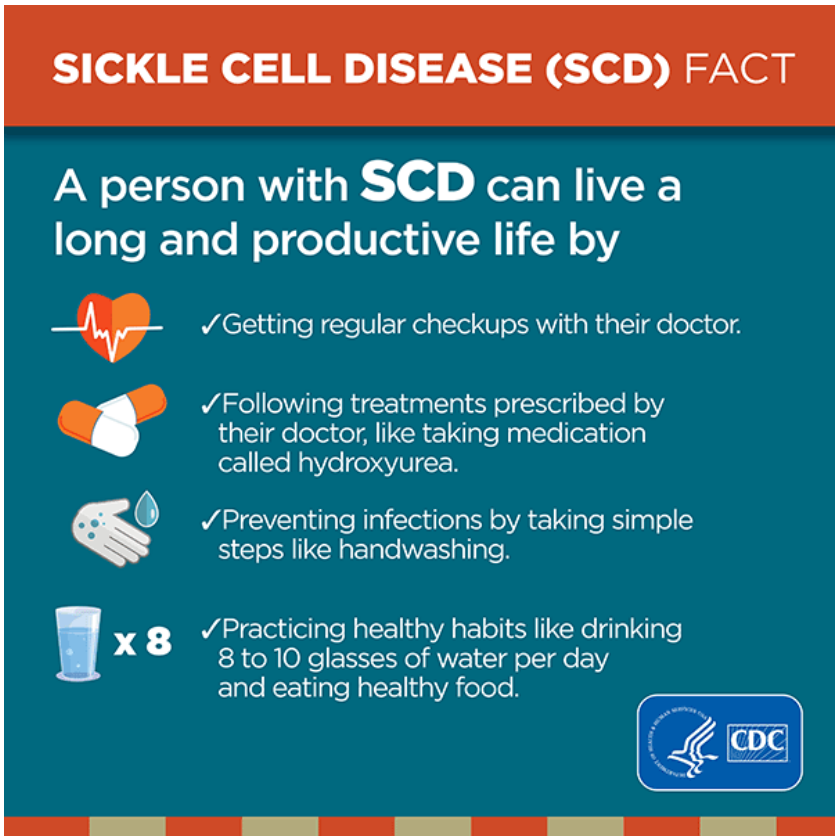
Jack Barber, MD
Interim Commissioner

Virginia Department of Behavioral Health & Developmental Services

Post Office Box 1797
Richmond, Virginia 23218-1797

Recommendations

Sickle cell disease is a life-long illness. The severity of the disease varies from person to person. Each individual with sickle cell anemia should have a home treatment regimen that is best suited to their needs. The providers on the individual's team usually help develop a written, tailored care plan. If possible, the individual with sickle cell anemia should carry this plan with them when they go to the emergency room. Additionally, any pain reported by the individual should not be ignored.



https://www.cdc.gov/ncbddd/sicklecell/buttons.html

Resources

https://www.cdc.gov/ncbddd/sicklecell/traits.html

https://www.nhlbi.nih.gov/health/health-topics/topics/sca