

# UNDERWRITING: Sickle Cell Anemia

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## What is Sickle Cell Disease?

Sickle Cell disease is an inherited (not contagious) disease of the red blood cells, characterized by episodes of pain, anemia, serious infections, and damage to vital organs. Normal red blood cells are round and flexible and flow easily through the blood vessels. Sickle Cell disease, caused by abnormal hemoglobin, causes the red blood cells to become stiff and sickle shaped. These stiffer cells can become stuck in the blood vessels, cutting off the blood supply to nearby tissues and organs.

## What is Sickle Cell Trait?

A person who inherits the Sickle Cell gene from one parent, and a normal gene from the other parent has Sickle Cell Trait. When both parents have Sickle Cell Trait there is a 25% chance that their children will have Sickle Cell Disease.

## Who is most likely to inherit Sickle Cell Disease?

In the United States, Sickle Cell Disease is found most commonly among African-Americans and Hispanic-Americans. It is also commonly found amongst people of Italian, Sardinian, Maltese, Greek, Sicilian, Spanish, Portuguese, Turkish, Arabian, and Indian extraction.

## What problems occur with Sickle Cell Disease?

The effects vary greatly. Many children and adults are usually healthy, others require frequent hospitalization. Common problems include:

**Infections** – Infants and young children are extremely vulnerable to serious bacterial infection such as meningitis and blood infection. Infections are a major cause of death in children

**Pain Episodes** – Some individuals have only one or two pain episodes per year, others may have 15 or more lasting for hours, or even days or weeks. Pain can occur in any organ or joint where sickle cells pile up and block the flow of blood. Mild pain can usually be treated at home with medication. Severe pain usually requires hospitalization with strong pain killing drugs being given intravenously.

**Acute Chest Syndrome** – Symptoms include difficulty breathing, chest pain and fever. Caused by infection or by blood vessels in the lungs being blocked, this life threatening condition usually requires hospitalization.

**Stroke** – When Sickle Cells block a blood vessel in the brain a stroke can occur. Approximately 10% of children have a stroke, resulting in lasting disabilities and learning problems.

**Hand-Foot Syndrome** – Hands and feet may swell as small blood vessels become blocked. Usually treated with pain medication and fluids.

**Vision Difficulties** – The tiny blood vessels in the eye can easily become blocked by sickle cells leading to vision problems and even blindness.

**Slow Growth** – Anemia in children can cause abnormally slow growth and delayed onset of puberty. They may also be pale, experience shortness of breath, and tire easily.

## Is there a test for Sickle Cell Disease or Trait?

Blood testing can determine the presence of either Sickle Cell Disease or Sickle Cell Trait. Pre-natal testing can also indicate whether or not the child is likely to have Sickle Cell Disease.

## Is there a cure for Sickle Cell Disease?

An extremely small number of children have been cured through stem cell transplants. In addition, researchers are pursuing drug therapies to help prevent red blood cell sickling and to delay the progress of the disease. At present there is no real cure for Sickle Cell Anemia.

## UNDERWRITING PROGNOSIS

Sickle Cell Disease is a global health problem. It is estimated that in the United States 70,000 persons have the disease, with about 1,000 babies being born with Sickle Cell Disease each year.

## Sickle Cell Disease

Life expectancy in the United States is presently in the mid 40's. Morbidity is significant. To be considered for life insurance, stability with no transfusions is required, and no crisis



episodes for at least one year is essential.

CHILDREN UNDER AGE 15  
Usually Decline

OVER AGE 15  
Severe cases  
Usually Decline

Mild to Moderate Cases  
likely – Table 2 to 6

With Complications  
Individual Consideration

After successful bone marrow transplant with at least 5 years recovery more favorable underwriting outcomes are likely.

**Sickle Cell Trait**  
With no evidence of hemoglobin disease  
Usually Standard

## UNDERWRITER:

Defined as someone sitting in an ivory tower 900 miles from here, trained to say, "NO."

## YOUR JOB:

To convince that underwriter, with truthful information, presented in as favorable a light as possible that it is desirable, even possible to say "YES."