

SICKLE CELL DISEASE

Sickle Cell Disease is an inherited blood disorder that can cause attacks of pain, damage to vital organs, and risk of serious infections and can lead to early death. Sickle cell disease affects the main protein inside the red blood cells called hemoglobin. The disease occurs when a person inherits one sickle cell gene from each parent or a combination of one sickle cell gene plus one of several other abnormal hemoglobin genes.

- Sickle Cell Disease (SCD) is an inherited blood disorder that occurs more commonly in African Americans.
- 1 in 500 African Americans are born with the disease.
- 1 in 1,400 Latinos are born in the U.S. with SCD each year.
- SCD also affects people of Arabian, Greek, Maltese, Italian, Sardinian, Turkish and Indian ancestry.
- SCD is inherited in the same way physical traits like eye and hair colors are inherited.
- SCD is not contagious.
- The hemoglobin in patients with SCD is damaged and causes red blood cells to stiffen and twist into jagged “sickle” shapes.
- The distorted red blood cells in SCD patients block small blood vessels and can lead to:
 - pain in arms, legs, chest and/or abdomen
 - stroke
 - lung tissue damage (acute chest syndrome)
 - serious infections
 - damage to heart, kidneys and liver
 - anemia
- Young children with SCD are at increased risk for bacterial infections due to spleen damage.
- Both children and adults with SCD are at risk for strokes that can cause lasting disabilities such as learning difficulties and physical impairment.
- Other problems can include vision impairment and blindness, slow growth and delayed puberty, difficulty breathing, chest pain and fever.
- At present there is no cure for SCD.
- About 100 children with sickle cell disease have been cured through a bone marrow transplant, using donated bone marrow from an immunologically matched sibling. This however carries a high risk: About 10 percent of the children who underwent bone marrow transplants for severe sickle cell disease have died.
- Multiple red blood cell (RBC) transfusions of “normal” blood can protect SCD patients from some of the acute and chronic complications of the disease.
- Readily available blood tests will identify people who have either sickle cell trait or a form of the disease.
- There are prenatal tests to determine whether the baby will have sickle cell disease, carry the trait or be unaffected.
- The March of Dimes has been a major supporter of sickle cell disease research.

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