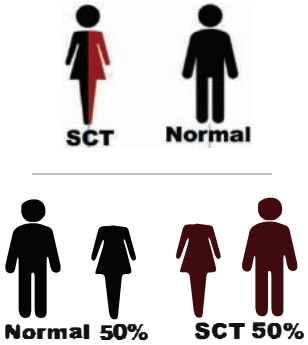
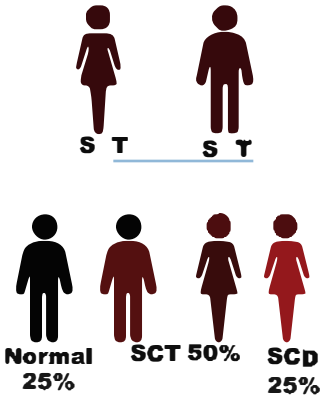
COMMON INHERITANCE PATTERN FOR SICKLE CELL TRAIT – SCT



If one parent has SCT, there is a 50% chance in each pregnancy of having a baby with the trait

COMMON INHERITANCE PATTERN FOR Sickle Cell Disease - SCD



If both parents have SCT, there is a 25% chance in each pregnancy of having a baby with sickle cell disease.

It takes both parents to give a child sickle cell disease.

HOW CAN I LEARN MORE ABOUT DEVELOPMENTS IN RESEARCH AND TREATMENT?

You can contact The Sickle Cell Disease Association of Illinois (SCDAI) or our National office The Sickle Cell Disease Association of America (SCDAA), Inc. who keeps patients and the public informed about the purpose and implications of promising development in sickle cell disease treatment and research. We also have other educational materials about sickle cell disease.

For more information

Contact the:

Sickle Cell Disease Association of Illinois (SCDAI)
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SCDAI
Sickle Cell Disease Association of Illinois

Sickle Cell Disease and Sickle Cell Tralt

Your Questions Answered

WHAT ARE THE "SICKLE CELL CONDITIONS"?

They are sickle cell trait and the various types of sickle cell disease.

WHAT IS SICKLE CELL TRAIT?

Each of us is born with DNA that is passed down to us from both our mother and our father. Genes are made up of this DNA and are responsible for how we look and how our bodies function. Genes are inherited in pairs – one from mom and one from dad. If you have sickle cell trait, you have only inherited one sickle gene from one of your parents. You do not have a disease and there are usually no health problems associated with sickle cell trait. Over 2.5 million Americans, mostly African-American, have sickle cell trait, and if both parents have sickle cell trait (SCT), they can have children with sickle cell disease (SCD).

HOW WOULD I KNOW IF I HAVE SICKLE CELL TRAIT?

A simple blood test will detect sickle cell trait. Newborn screening programs enable physicians to detect the trait or disease in infants and to recommend that other family members be tested for the gene as well.

WHERE CAN I GET A SICKLE CELL TRAIT TEST?

Your physician can give you the test (hemoglobin electrophoresis). You can also call the Sickle Cell Disease Association of Illinois (SCDAI) office, **773-526-5016,** for assistance.

DOES SICKLE CELL TRAIT CAUSE HEALTH PROBLEMS?

Most people with SCT do not have any health problems caused by sickle cell trait, however, there are a few, rare health problems that may potentially be related to SCT. For example, if people with SCT have pain when traveling to or exercising at high altitudes, they should tell their healthcare provider. People with SCT and eye trauma should seek out medical attention and inform their physician about their trait status. People with SCT should always stay well hydrated and use a gradual conditioning regimen for exercise to avoid overexertion. People with SCT should inform their doctor if they notice blood in their urine because of a slight increased risk of a rare form of cancer of the kidney.

WHAT IS SICKLE CELL DISEASE?

Sickle cell disease (SCD) is an inherited condition that can cause many health problems. SCD cannot be acquired or "caught" from someone else. You have to be born with it. When two individuals with sickle cell trait (SCT) have a baby, there is a 25% chance with every pregnancy that their baby will be born with SCD. Note: SCT cannot turn into sickle cell disease.

It is really important to know that there are other types of SCD like hemoglobin SC disease, sickle beta-plus thalassemia, and sickle beta-zero thalassemia. These other types of SCD can occur when someone with SCT has a child with someone with another type of hemoglobin trait (eg. C trait, beta thalassemia trait). You could have one of these traits and not know it. **Note: It is very important for both partners to be tested for all possible hemoglobin traits, not just sickle cell trait. It is possible for someone who does not have SCT to have a baby with a form of SCD.**

Normal Red Blood Cell | **Sickle Red Blood Cell** | **Farmer's Sickle**

HOW MANY PEOPLE HAVE SICKLE CELL DISEASE?

More than 100,000 Americans, mostly African American and Latino, have sickle cell disease. About 2,000 American babies are born with sickle cell disease every year.

SCD is a global health problem. It occurs in Africa, in countries surrounding the Mediterranean Sea, several Middle East countries, Canada, the Caribbean islands, many South American countries, Europe and India.

About 300,000 babies are born each year across the globe with SCD.

SCDAI
Sickle Cell Disease Association of Illinois

WHAT HEALTH PROBLEMS ARE ASSOCIATED WITH SICKLE CELL DISEASE?

Health problems occur when red blood cells, which are normally round and soft, become sickle shaped and stiff. Sickle cells are fragile and break down faster than the body can replace them, causing anemia (low blood).

Sickle cells can damage and plug blood vessels. The periodic blockage of blood vessels causes unpredictable attacks of severe pain and other problems, organ damage, strokes and decreased resistance to infections.

There are medications as well as the possibility of regular blood transfusions that can reduce these complications. In the past, very young children with sickle cell disease were at risk of sudden death from overwhelming infections. But vaccinations, oral penicillin, and prompt medical attention for any fever have greatly improved this.

CAN SICKLE CELL DISEASE BE CURED?

SCD can be cured with bone marrow (stem cell) transplantation. Ideally, this is performed prior to the development of severe complications and organ damage. The most well-studied approach has been among those with a full sibling who is a perfect bone marrow match but other options do exist. Talk to your healthcare provider about the risks involved.