

Sickle Cell Trait

Definition

- Sickle cell trait means you have one of the genes that causes a blood disorder known as sickle cell disease. To have the disease, you must have two of these genes.
- With just one sickle gene, you are a carrier of sickle cell disease. You do not have sickle cell disease.
- People with sickle cell trait are healthy.
- Sickle cell trait is common, occurring in 9% of African-American people.

Health Information

Symptoms

- People with sickle cell trait have healthy normal lives.
- They do not get acute pain episodes or other symptoms of sickle cell disease.
- Sickle cell trait will never turn into sickle cell disease.

Cause

- Sickle cell trait is passed down in families. It is inherited in an autosomal recessive pattern.
- With sickle cell trait, a person inherits one sickle hemoglobin gene and one normal hemoglobin gene.
- For sickle hemoglobin to cause disease, you need two sickle hemoglobin genes, not just one.
- Hemoglobin carries oxygen in your blood. It is normally round. Sickle hemoglobin is crescent-shaped. It cannot carry oxygen normally and can also block tiny blood vessels.
- Most states test babies for the sickle cell gene just after birth with a newborn screening test. You can also have testing done later by your doctor.
- Sickle cell trait occurs in about 9% of the African-American population and 0.2% of the Caucasian population in the United States. About 300 million people in the world have sickle cell trait.

Care Advice

1. Key Points

- People with sickle cell trait are healthy.
- There is no treatment needed for sickle cell trait.
- If you have sickle cell trait, it is important to stay well hydrated when exercising.
- You can pass the sickle gene on to your children.

2. Encourage Physical Activities

- There is no need to restrict your physical activities with sickle cell trait. You can participate normally in sports.
- However, like everyone, it is important to stay well-hydrated when active and in the heat.

3. Very Rare Complications

- Most people with sickle cell trait never have any related symptoms.
- Rarely, extreme changes in the environment can trigger some pain and cramps.
- This can occur deep underwater when scuba diving or climbing high in the mountains. Talk to your doctor if you plan to do these activities.

4. **Seek Advice When Planning to Have Children**

- Having sickle cell trait means you can pass the gene on to your children.
- If your partner also has sickle cell trait, the chance your children will get both sickle genes and have sickle cell disease is 25%.
- When you want to have children, a genetic counselor can help you learn more.

5. **What to Expect**

- People with sickle cell trait have good health.
- Sickle cell trait does not shorten your lifespan.

Call Your Doctor If

- You have further questions or concerns

Pediatric Care Advice

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