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Sickle Cell Disease (SCD)

What is Sickle Cell Trait?

Get Screened for Sickle Cell Trait

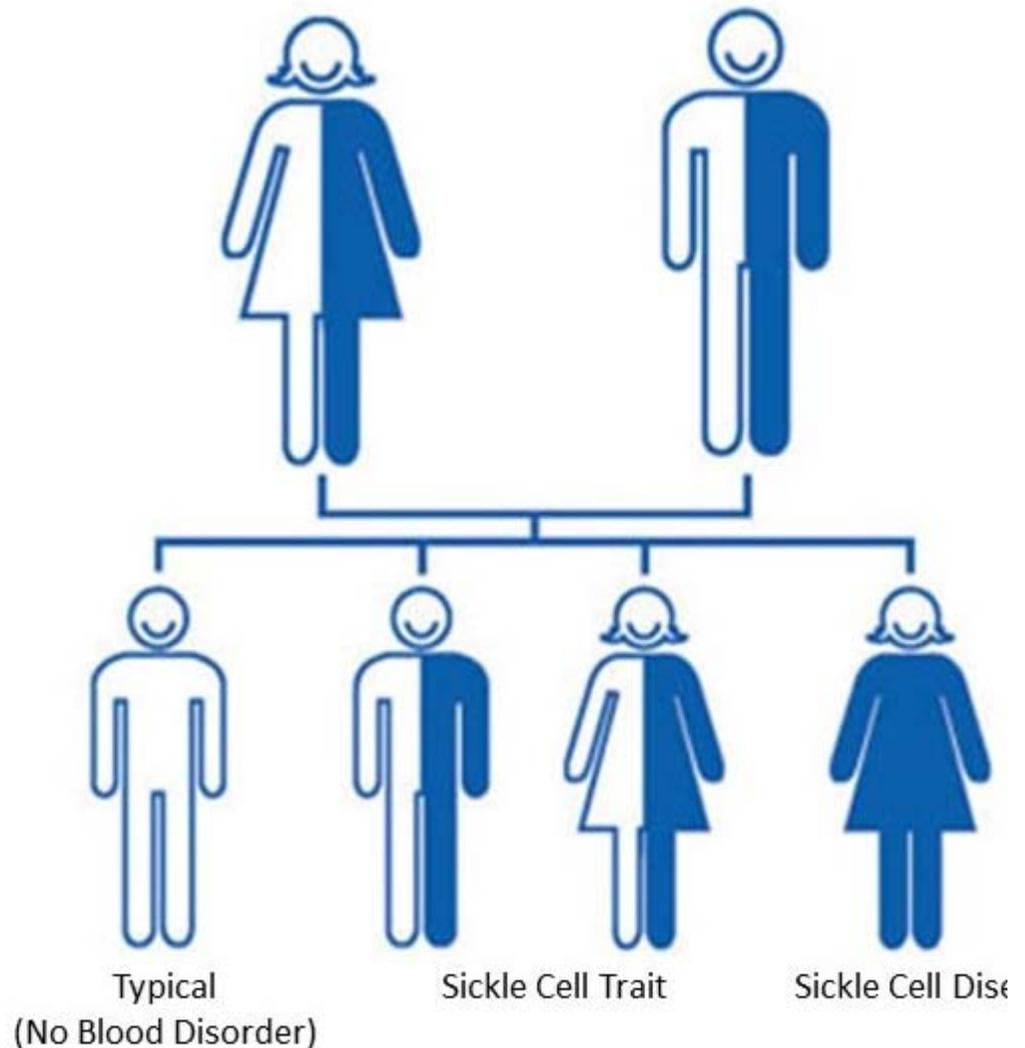


Did you know there's more than one way to inherit sickle cell trait? [Learn how it](#)

People who inherit one sickle cell gene and one normal gene have *sickle cell trait* (SCT). People with SCT do not have any of the symptoms of sickle cell disease (SCD), but they can pass the trait on to their children.

How Sickle Cell Trait is Inherited

- If both parents have SCT, there is a 50% (or 1 in 2) chance that any child of theirs also inherits the sickle cell gene from one of the parents. Such children will not have symptoms of SCD or SCT on to their children.
- If both parents have SCT, there is a 25% (or 1 in 4) chance that any child of theirs will have SCD or SCT. There is also a 25% (or 1 in 4) chance that the child will not have SCD or SCT.



Diagnosis

SCT is diagnosed with a simple blood test. People at risk of having SCT can talk with a doctor about this test.

Complications

Most people with SCT do not have any symptoms of SCD, although—in rare cases—people have complications of SCD, such as *pain crises*.

In their extreme form, and in rare cases, the following conditions could be harmful for people with SCT:

- Increased pressure in the atmosphere (which can be experienced, for example, while scuba diving).
- Low oxygen levels in the air (which can be experienced, for example, when mountain climbing, or training for an athletic competition).
- Dehydration (for example, when one has too little water in the body).
- High altitudes (which can be experienced, for example, when flying, mountain climbing, or training for an athletic competition).

More research is needed to find out why some people with SCT have complications and how to prevent them.

SCT and Athletes

Some people with SCT have been shown to be more likely than those without SCT to experience heat stroke and muscle breakdown when doing intense exercise, such as competitive sports or military training under unfavorable temperatures (very high or low) or conditions.

Studies have shown that the chance of this problem can be reduced by avoiding dehydration and getting too hot during training.

People with SCT who participate in competitive or team sports (i.e. student athletes) should be careful when doing training or conditioning activities. To prevent illness it is important to:

- Set your own pace and build your intensity slowly.
- Rest often in between repetitive sets and drills.
- Drink plenty of water before, during and after training and conditioning activities.
- Keep the body temperature cool when exercising in hot and humid temperatures by going to an air conditioned area during breaks or rest periods.
- Immediately seek medical care when feeling ill.

Recommendations on Screening of Student Athletes for SCT

Recommendations of the Advisory Committee on Heritable Disorders in Newborns and C Secretary, U.S. Department of Health and Human Services on Screening of Student Athlet