



Sickle cell trait (AS)

“I have sickle cell trait (AS). That means I have a mixture of normal hemoglobin (Type A) and sickle hemoglobin (Type S) in my red blood cells.

My doctor told me that if I have children with a man who also has sickle cell trait, our children could have sickle cell trait. They could even be born with sickle cell disease. I appreciated my doctor giving me the straight news.”

Sickle cell trait is not a type of sickle cell disease. People with sickle cell trait are generally healthy. People with sickle cell trait will not go on to develop sickle cell disease. Read this handout to find out what you should know about sickle cell trait.

People with sickle cell trait (AS) have a mixture of Type A and Type S hemoglobin

Hemoglobin is found in red blood cells. It brings oxygen from the lungs to other parts of the body. There are different types of hemoglobin.

Type A hemoglobin is **normal**.

- It keeps red blood cells soft and round. These cells can pass easily through tiny tubes (vessels) that carry blood around the body.

Type S hemoglobin is **abnormal**.

- Type S causes red blood cells to be hard, pointed, and sticky. These cells are shaped like the farm tool called a “sickle.” They have a hard time passing through tiny blood vessels and may get stuck.

A person with sickle cell trait (AS) has more of the normal type A hemoglobin. This keeps the person’s blood cells soft, round and normal.



Sickle cell trait is passed down through the genes

Genes are like a set of instructions for how the body is made and how it works. If you have sickle cell trait (AS), you got genes for hemoglobin A from one parent and genes for hemoglobin S from the other.

Sickle cell trait can be passed on to your children

Before having children, it is a good idea for both partners to get a simple blood test to see if they have sickle cell or other trait conditions. Once you get your test results, meet with an expert to learn your chance of having a baby with sickle cell disease. This is called genetic counseling.

Know when to get medical help right away

You likely have enough hemoglobin A in your red blood cells to stay healthy. Very rarely, though, people with sickle cell trait may have:

- Blood in their urine (pee) from time to time
- Pain or discomfort at high altitudes. This can include being up in the mountains or riding in an unpressurized airplane.
- Problems exercising a lot in hot weather if they don't drink enough water

It is urgent that you see a doctor right away if you develop any of these health problems.

How can I learn more about sickle cell trait?

- Contact the SCDA (Sickle Cell Disease Association of America) at 800- 421-8453. Or, go to our website: www.sicklecelldisease.org

