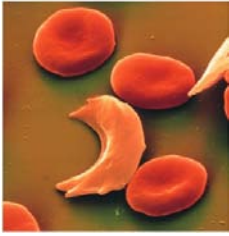


## Sickle Cell Trait And Sickle Cell Anemia

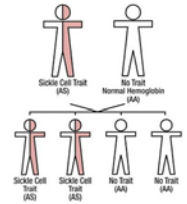


Sickle cell trait occurs when a person inherits a normal hemoglobin gene (hemoglobin A) and one abnormal hemoglobin gene (hemoglobin S) from their parents. Sickle cell trait (AS) affects the red blood cells and is passed on from parent to child like eye color and hair color. Sickle cell trait can NOT turn into sickle cell disease.

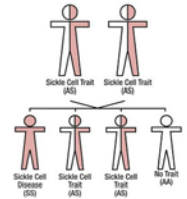
Sickle cell trait rarely causes health problems. In extreme conditions such as severe dehydration (lack of water in the body) and low oxygen (from very strenuous exercise) or very high altitudes there may be complications. Sometimes people with trait have blood in their urine. If this happens talk to your doctor about it. In very rare cases people with trait develop serious kidney problems.

Sickle cell anemia (SS) is different. It happens if a person inherits two hemoglobin S genes. People with sickle cell disease have red blood cells that contain mostly hemoglobin S. Under certain conditions these red blood cells become sickle-shaped (banana shaped) and block circulation.

If one parent has sickle cell trait there is a 50% chance with each pregnancy of having a child with sickle cell trait.



If both parents have sickle cell trait there is a 25% chance with each pregnancy of having a child with sickle cell disease.



Please be aware there are other types of sickle cell disease such as Sickle Beta Thalassemia and Sickle C Disease that are not covered in this pamphlet. It is not intended that this pamphlet replace counseling by a health care professional or a genetic counselor.

The sickle gene runs in families. It is found in people from many cultures including those with ancestors from Africa, Italy, Greece, Turkey, Arabia, India, South and Central America and the Caribbean Islands. The most important thing to remember is if you carry the sickle gene you CAN have a baby with Sickle Cell Disease in the future. Testing of your partner will determine the risk to future pregnancies.

For more information:

<http://medschool.ucdenver.edu/sicklecell>

Colorado Sickle Cell  
Treatment & Research Center  
Newborn Screening Follow-up Program  
13121 East 17<sup>th</sup> Ave., C-222, Aurora, CO 80045

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