What Causes Sickle Cell Disease And Sickle Cell Trait?

Sickle cell disease (SCD) is a genetic condition that is present at birth. It is inherited when a child receives two sickle cell genes—one from each parent. A person with SCD can pass the disease on to his or her children.

Sickle cell trait (SCT) is not a disease, but means that a person has inherited the sickle cell gene from one of his or her parents. People with SCT usually do not have any of the symptoms of SCD and live a normal life, but they can pass the sickle cell gene on to their children.

- When both parents have SCT, they have a 25% chance of having a child with SCD with every pregnancy.
- When both parents have SCT, they have a 50% chance of having a child with SCT with every pregnancy.

Does Someone With Sickle Cell Disease Or Sickle Cell Trait Need To See A Genetic Counselor?

The best way to find out if and how SCD runs in someone’s family is for that person to see a genetic counselor. These professionals have experience with genetic blood disorders. They also specialize in prenatal genetic counseling. The genetic counselor will look at the person’s family history and discuss with him or her what is known about SCD in the person’s family. It is best for a person with SCD or SCT to learn all he or she can about SCD before deciding to have children.
What Should Someone With Sickle Cell Trait Or Sickle Cell Disease Do If He Or She Is Planning To Have A Baby?

A woman and her partner should get tested for SCT if they are planning to have a baby.

- Testing is available at most hospitals or medical centers, from SCD community-based organizations, or at local health departments.
- If a woman or her partner has SCT, a genetic counselor can provide additional information and further discuss the risks to their children.

Will Someone With Sickle Cell Trait Or Sickle Cell Disease Have A Baby With Sickle Cell Disease Or Sickle Cell Trait?

During pregnancy, prenatal testing can be done to find out if a baby will have SCD, SCT, or neither one.

- The prenatal tests chorionic villus sampling (CVS) and amniocentesis often are used to find out if the baby will have the disease or carry the trait. These tests usually are conducted after the second month of pregnancy.

Can Women With Sickle Cell Disease Have A Healthy Pregnancy?

Yes, with early prenatal care and careful monitoring throughout the pregnancy, a woman with SCD can have a healthy pregnancy. However, women with SCD are more likely to have problems during pregnancy that can affect their health and that of their unborn baby. Therefore, they should be seen often by their obstetrician, hematologist, or primary care provider.

- During pregnancy, SCD can become more severe and pain episodes can occur more frequently.
- A pregnant woman with SCD is at a higher risk of preterm labor and of having a low birth weight baby.

Can Women With Sickle Cell Trait Have A Healthy Pregnancy?

- Women who have SCT also can have a healthy pregnancy.
- Pregnant women with SCT also should be monitored by their obstetrician or primary care provider for the same health complications as for all pregnant women.

For more information visit: www.cdc.gov/sicklecell

The following resources might also be helpful in understanding genetics:

- Genetics Home Reference: Your Guide to Understanding Genetic Conditions
  U.S. National Library of Medicine, National Institutes of Health

- Frequently Asked Questions About Genetic Testing
  National Human Genome Research Institute, National Institutes of Health
  http://www.genome.gov/19516567

- Talking Glossary of Genetic Terms
  National Human Genome Research Institute, National Institutes of Health
  http://www.genome.gov/10002096

- U.S. Surgeon General’s Family History Initiative
  U.S. Department of Health & Human Services
  http://www.hhs.gov/familyhistory