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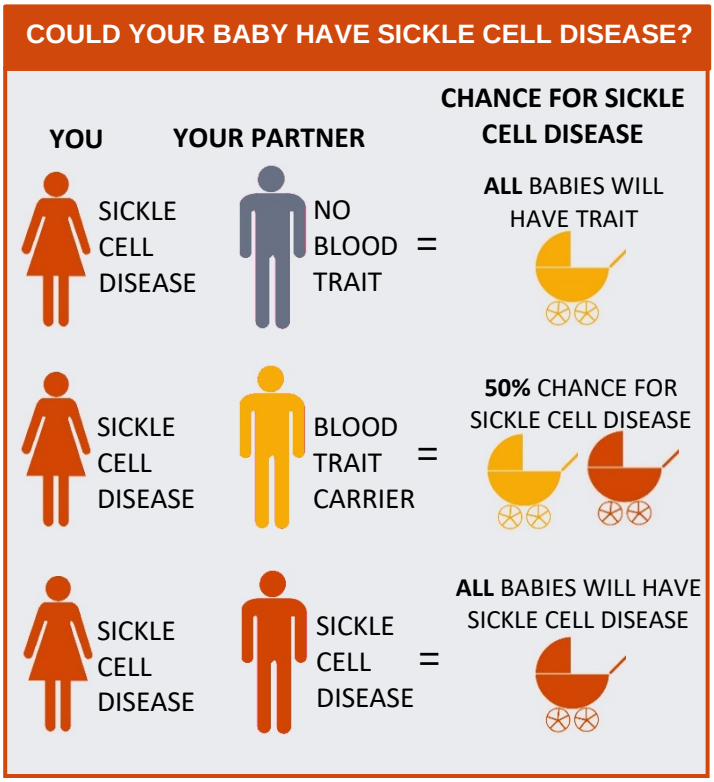
INFORMATION SHEET

Sickle Cell Disease and Pregnancy

Are you pregnant or planning a pregnancy? There are important things to think about if you have sickle cell disease. This handout covers prenatal care issues for women with sickle cell disease. If you're not planning to get pregnant right away, talk to your doctor about options for birth control that are safe for women with sickle cell disease.

Special care is recommended for pregnant women with sickle cell disease.

Women with sickle cell disease can have healthy pregnancies, but there is a higher chance for pregnancy problems, such as high blood pressure and urinary tract infections. Early prenatal care and careful monitoring will help you and your unborn baby. Meeting with a high risk pregnancy expert (maternal fetal medicine doctor) is recommended before you get pregnant or early in pregnancy to make sure your medications are safe for the baby.



Testing is needed to find out if your baby could have sickle cell disease.

Just because you have sickle cell disease does not mean your baby will have it. The chance for sickle cell disease depends on you and your partner. Sickle cell disease happens when both parents pass on a genetic change that causes the disease. Blood tests can tell you whether or not your partner has one of these genetic changes.

Testing for sickle cell disease can be done during pregnancy.

A developing baby can be tested for blood diseases as early as 10 weeks in pregnancy. An early diagnosis can help you prepare for a baby who may need special care. If prenatal testing shows the baby has a serious blood disease, some parents may consider whether or not to continue the pregnancy. It is up to the couple to decide what is right for them. Testing for sickle cell disease can also be done after a baby is born. In California, all babies are routinely tested at birth for certain blood diseases through the Newborn Screening Program.

Early treatment improves health and development.

Testing a baby for sickle cell disease lets treatment start as early as possible. Medications are recommended in the first few months of life to help prevent certain problems. Babies with sickle cell disease do not usually have any signs or symptoms of the disease and could be missed without testing.

Sickle cell disease affects each person differently.

Sickle cell disease is a lifelong condition that can include serious health problems, but it affects each person differently. A parent could have a child with sickle cell disease that is milder or more severe than their own disease. When blood cells become sickle-shaped, they can get stuck in the blood vessels and create blockages. This leads to pain in the blocked area and may damage that part of the body. There is no way to predict when or where this will happen. Bones are often affected, but blockages can happen in any part of the body. Sickled cells also get broken down more quickly by the body leading to anemia and fatigue. A person with sickle cell disease needs regular medical visits to watch for problems related to the condition.

More about sickle cell trait and sickle cell disease

Sickle cell disease is an inherited blood disorder caused by a difference in the way the body makes hemoglobin. Sickle cell disease is most often found in people with African heritage, but can also be found in people with ancestry from many other parts of the world.

Hemoglobin

Hemoglobin is a protein in red blood cells. It gives blood its red color and carries oxygen to the body. Hemoglobin includes a “heme” part (iron) and a “globin” part (protein). Iron comes from the food you eat, and your body makes the globins.

The instructions for making globins are inherited from your parents. Genetic instructions are called genes. Genes are inherited in pairs, with one copy of each gene coming from each parent. One gene, the beta globin gene, tells the body how to make beta globin. Sickle cell disease is caused by a genetic change in the beta globin gene. Sickle cell disease happens when both copies of the beta globin gene are not working in the usual way.

The most common hemoglobin is hemoglobin A. In sickle cell disease, the body makes hemoglobin S instead of hemoglobin A. Although hemoglobin S can carry oxygen to the body, a slight chemical difference makes it more likely to collapse into a sickle (banana-like) shape instead of the usual round (donut-like) shape. This makes the red blood cells more rigid and sticky.

Sickle Cell Trait

A person with sickle cell trait has one normal copy of the beta globin gene and one copy making hemoglobin S. The red blood cells have both hemoglobin S and hemoglobin A. **This does not cause sickle cell disease.** There are usually has no medical problems from sickle cell trait. Very rarely, a person with trait can have blood cells sickle (change shape) when the body does not get enough oxygen, such as during travel to high altitudes or during very strenuous exercise. About 1 in 10 Americans with African heritage has sickle cell trait.

Types of Sickle Cell Disease and Related Blood Diseases

Sickle cell disease usually happens when both copies of the beta globin gene make hemoglobin S, instead of hemoglobin A. This is called hemoglobin SS disease or sickle cell anemia. But other changes in the beta globin gene can make different hemoglobins, such as hemoglobin C, hemoglobin D, hemoglobin E, and beta thalassemia. When one of these other hemoglobin traits combines with hemoglobin S, the result is a different type of sickle cell disease. The less common types of sickle cell disease are hemoglobin SC disease, hemoglobin SD or SE disease, and hemoglobin S-beta thalassemia disease. Some types of sickle cell disease have fewer medical problems than others.

There are also other genetic blood diseases that can affect hemoglobin, such as beta-thalassemia and hemoglobin CC disease. These conditions do not cause sickling but can have medical problems that need treatment.

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