



## Sickle Beta Plus Thalassemia (HbS $\beta$ +thal)

### What is newborn screening?

Newborn screening is a blood test to check for conditions that do not usually show symptoms at birth. About 24 hours after delivery,



a nurse takes a few drops of blood from your baby's heel for newborn screening for around 70 disorders. With newborn screening, many conditions can be found


and treated early, before symptoms start to show.

### What does my baby's newborn screen show?

The newborn screen shows that your baby might have a sickle cell disorder called Sickle Beta Plus Thalassemia (HbS  $\beta$ +thal). Sometimes other names are also used for this disorder, such as sickle beta thalassemia or sickle cell-beta thalassemia. Your baby will need to follow up with a hematologist (a doctor who specializes in blood disorders) by 4 months of age for further testing.

### What is sickle beta plus thalassemia?

Sickle beta plus thalassemia (HbS  $\beta$ +thal) is a mild form of sickle cell disease. Many babies with HbS  $\beta$ +thal are born healthy and do not show symptoms until later in childhood. Some problems can include low red blood cell count, pain, and risk of infection.

People with sickle beta plus thalassemia have some changes to their red blood cells and hemoglobin. Hemoglobin (Hgb) is the part of the red blood cell that carries oxygen. The sickle part of the name is talking about the shape of the hemoglobin. People with sickle beta plus thalassemia have some normal hemoglobin (gives red blood cells their round smooth shape), and some hemoglobin with a different shape called sickle hemoglobin (causes the red blood cells to look more curved, like a crescent moon ). The beta plus thalassemia part of the name is talking about the size and number of red blood cells. With beta plus thalassemia, people tend to have less red blood cells and red blood cells that will be smaller than usual.

#### KEY POINTS:

- There is a possibility your baby could have sickle beta plus thalassemia. More testing is needed to know for sure.
- Your baby should be seen by a specialist called a hematologist by 4 months of age.
- Sickle beta plus thalassemia is a mild form of sickle cell anemia.
- Notify your child's doctor as soon as possible if your baby has a fever.

Connecticut Department of Public Health

Connecticut Newborn Screening Program • 860.920.6628

Connecticut Newborn Diagnosis and Treatment Network • 860.837.7870

Adapted, with permission, from the Minnesota Department of Public Health

## What causes sickle beta plus thalassemia?

Sickle cell disorders are inherited. This means they are passed from parent to child through genes. A gene is part of your body's cells that stores instructions for the way our body grows and works. One parent carries sickle trait, which causes no health problems for him or her. The other carries the trait for beta plus thalassemia, which sometimes causes a low blood count, but usually no symptoms. When these traits come together in the same person, the result is sickle beta plus thalassemia.



## What happens next?

Your baby should be seen by a hematologist before they are 4 months old. Your child's pediatrician can help to make the referral to a hematologist. The hematologist will talk with you about the best plan for your baby. This might include a test called hemoglobin electrophoresis. This test involves taking a small amount of blood from your baby and sending to the laboratory. In some cases, the test will show that the baby does not have sickle beta plus thalassemia.

While waiting to learn a final diagnosis for your child, you should tell your child's doctor (pediatrician) if your baby has a fever. It is important to let the doctor know as soon as possible about fevers greater than 101F in children with sickle cell disease.

## What if I still have questions?

We understand that this can be an overwhelming and emotional time. Many families have questions and concerns. The Connecticut Newborn Diagnosis and Treatment Network (the Network) is available to put you in touch with the best resource. To reach the Network, you can call 860-837-7870, Monday-Friday, 8:30am-4:30pm. We also recommend the website [www.babysfirsttest.org](http://www.babysfirsttest.org) as an accurate and informative resource. You can search for information on sickle beta plus thalassemia by using their term for it: S, Beta-Thalassemia.

**This fact sheet was written for information purposes only.  
It should not replace medical advice, diagnosis or treatment.**