

## If your child has anemia



If your child develops these symptoms very quickly, or in combination with stomach pain or fever, notify your doctor right away. You may need to take your child to be seen to measure the red blood cell count.

Please notify your sickle cell nurses if your child has Parvovirus B-19 infection or requires a blood transfusion for a lower than normal red blood cell count.

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## Anemia in Sickle Cell Disease



# Anemia

The part of the blood that is affected by sickle cell disease is the red blood cell. Red blood cells work in the body to carry oxygen from the lungs to all the different parts of the body. Most of the time, red blood cells are small, round and can easily slide through even the smallest blood vessels.

Normal red blood cells live about 120 days. However, in patients with sickle cell disease, the red blood cells are not very healthy. The often last a much shorter length of time; usually only about 30 days. People with certain types sickle cell disease usually have less red blood cells than people without sickle cell disease. This is also called anemia. This is measured by a blood test.

Patients with anemia have less red blood cells to carry oxygen to the rest of the body. This causes them to become tired more quickly than other people. The most severe forms of sickle cell disease (Hemoglobin SS Disease or Hemoglobin S Beta Zero Thalassemia) will usually have the most severe anemia. Patients with the mildest form of sickle cell disease

(Hemoglobin S Beta Plus Thalassemia) will usually not be very anemic at all.

## Causes of Anemia

Your child may become more anemic (have a lower red blood count than normal) when they are sick, or have any sort of fever or infection. One of the causes of anemia in children with sickle cell disease is Parvovirus B-19. Parvovirus is a common viral illness in children under 19 years of age. Usually the illness is not very severe. However, it can cause many problems in children with sickle cell disease. It infects and kills baby red blood cells by stopping red blood cell production for a short period of time. In sickle cell patients, this causes a very quick drop in the level of red blood cells in the body.

## Signs and Symptoms of Anemia

If your child develops anemia, the outward signs may include:

- More tired than usual
- Paleness of the skin
- Loss of appetite
- Yellow eyes or skin (jaundice)
- Dark urine

Jaundice occurs due to the rapid destruction of red blood cells. When red blood cells are broken down very quickly, the body cannot get rid of the by-products fast enough and they are stored in certain areas of the body. This often shows up as a yellow

color in the whites of the eyes, or jaundice, and very dark urine.

## Treatment Options

Most of the time, anemia in sickle cell disease does not require treatment. Some believe that folic acid, taken by mouth every day, may increase red blood cell production. This is one option that may be offered to your child.

Blood transfusion is often recommended if the red blood cell count gets very low, very quickly. This is usually the case with Parvovirus B-19 infection and splenic sequestration crisis.

Otherwise, you should encourage your child to eat a healthy diet with plenty to drink. He or she may take a multivitamin, but do not need one with iron. Since sickle cell patients have a much faster breakdown of red blood cells, iron is released into the blood stream and stored in different parts of the body. Children with sickle cell disease usually have more than enough iron to make new red blood cells and do not need to get more iron into their diet.