

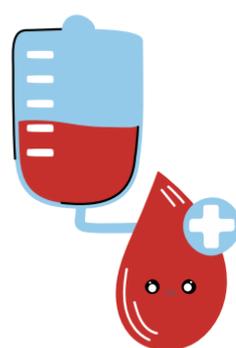
Prevention: Transfusion Therapy

What is a red blood cell transfusion?

Red blood cell transfusions are used commonly in both children and adults with sickle cell disease to treat and prevent complications. This type of transfusion provides red blood cells from a blood donor with normal hemoglobin to a patient with SCD to help reduce the number of sickled red blood cells in the blood stream. **Transfusions can be life saving and protect organs from damage caused by sickled red blood cells.**

How do red blood cell transfusions work?

Normal red blood cells are collected when a person without sickle cell disease or trait donates blood. The red cells can be separated from the other parts of the blood and given to patients through an IV, central line, or port. **The normal red blood cells may then help deliver oxygen to the patient's body and unblock blood vessels.**



When might my child need a blood transfusion?

Blood transfusions may be used to help treat or prevent certain complications of sickle cell disease including:

- Splenic Sequestration (see "**Complications: Splenic Sequestration**")
- Acute Chest Syndrome (see "**Complications: Acute Chest Syndrome**")
- Stroke (see "**Complications: Stroke**")

People with sickle cell disease often receive a blood transfusion before any surgical procedure to help reduce complications after surgery. **Blood transfusions may be used acutely (as needed or occasionally) or chronically (regularly).** Acute blood transfusions are often used to treat Acute Chest Syndrome. Chronic transfusions are regular or ongoing (typically every 3 to 5 weeks) and are often used to prevent stroke.

Are there different types of red blood cell transfusions?

There are two types of red blood cell transfusions: **simple transfusions and exchange transfusions.**

- **Simple transfusions:** donated red blood cells are given without removing any blood from the person receiving the transfusion.
- **Exchange transfusions:** donated red blood cells are given during or after blood has been removed from the person receiving the transfusion. Exchange transfusions help increase the amount of normal red blood cells that are given while making sure the blood volume doesn't get too high.

What are the risks of transfusions?

All hospitals and blood banks have processes in place to lower the risks involved with transfusions. The risks include:

- Alloimmunization (caused by the body's immune system)
- Iron overload
- Transfusion reactions
- Infection



Donated blood and red blood cells are tested carefully before they are given to patients to help prevent infections and complications.

Children and adults with sickle cell disease who receive transfusion therapy should be monitored for hepatitis and iron overload. **If your child develops a fever, rash, itching, chills, or pain soon after receiving a transfusion, call the sickle cell nurse or doctor right away:**

312-227-4813 (M-F 9am to 5pm)

312-227-4000 (After hours, ask for hematologist on call)

The Comprehensive Sickle Cell Program

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