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Sickle Cell Disease



What is sickle cell disease?

Sickle Cell disease is a hereditary blood disorder that affects the shape of red blood cells. Red blood cells are responsible for the delivery of oxygen to all parts of the body. Normally, they are shaped like doughnuts and are soft and flexible.

Red blood cells in a person who has sickle cell anemia transform into a crescent shape and are rigid, sticky and fragile. These crescent or sickle-shaped cells also clump together causing blockages in blood vessels throughout the body.

People with sickle cell disease often feel weak and tire easily. They also experience serious complications including severe pain from blood vessels, difficulty in fighting infections and, in the worst cases, strokes.

How common is sickle cell disease?

One in 12 African Americans carries the trait for sickle cell disease and one in 652 African Americans have sickle cell anemia.

How can minority blood donors help sickle cell patients?

As a minority blood donor, you may have the unique ability to help sickle cell patients who have unique transfusion needs.

Many African Americans have a higher probability of lacking red blood cell proteins commonly seen in the random donor population. The presence of these proteins, when transfused to a sickle cell patient, can result in alloimmunization, a natural immune response in which antibodies are formed to foreign proteins. Once an antibody is formed, that patient must always receive blood from individuals lacking the specific protein that caused the antibody to be produced.

Because of this, an African American patient with sickle cell anemia is less likely to go through the alloimmunization process when given blood donated from other African Americans. This makes finding compatible red blood cells much easier for this group who will receive life-sustaining blood transfusions for their entire life.