



Sickle Cell Disease



Overview

This disease is a disorder of the blood. With it, the shape of red blood cells becomes distorted. They can clump together and get stuck within small blood vessels. Sickle cell disease can cause problems throughout the body.

Causes

This disease is inherited. It is caused by a genetic mutation that affects hemoglobin. This is a molecule in red blood cells. It helps deliver oxygen throughout the body. In a person who has sickle cell disease, abnormal hemoglobin molecules cause the red blood cells to become stiff and to bend into a crescent (or sickle) shape.

Symptoms and Complications

Symptoms of sickle cell disease often begin in early childhood. Symptoms may include anemia, frequent infections and episodes of pain in the body. Sickle cell disease can cause a wide range of complications. It can cause swelling in the hands or feet, and a yellowing of the eyes and skin. It can cause high blood pressure in the lungs and organ failure. Symptoms and complications vary from patient to patient.

Treatment

Sickle cell disease is treated with medications and blood transfusions. It can also be treated with a bone marrow transplant, which may cure some patients. Scientists are working to develop gene therapy treatments that could also provide a cure.

