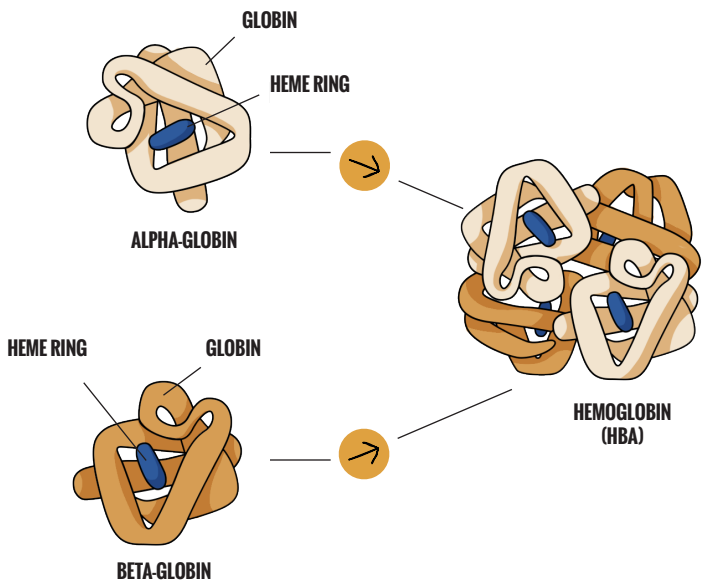
BUILD ON YOUR

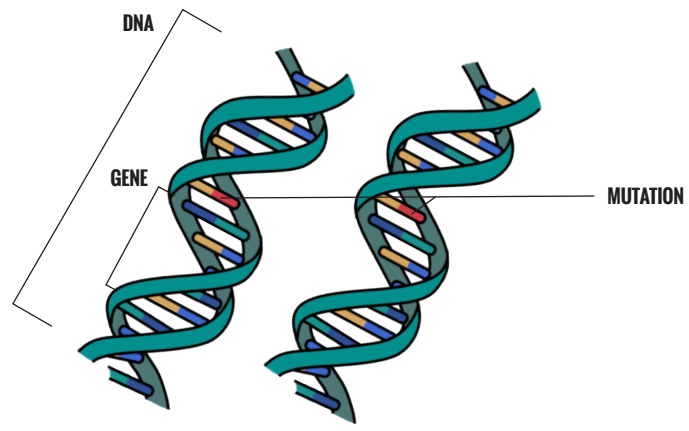
SICKLE CELL KNOWLEDGE

WHAT CAUSES SICKLING?

Sickle cell is a genetic disease caused by a change (mutation) in both copies of the *HBB* gene that you inherit from your parents.

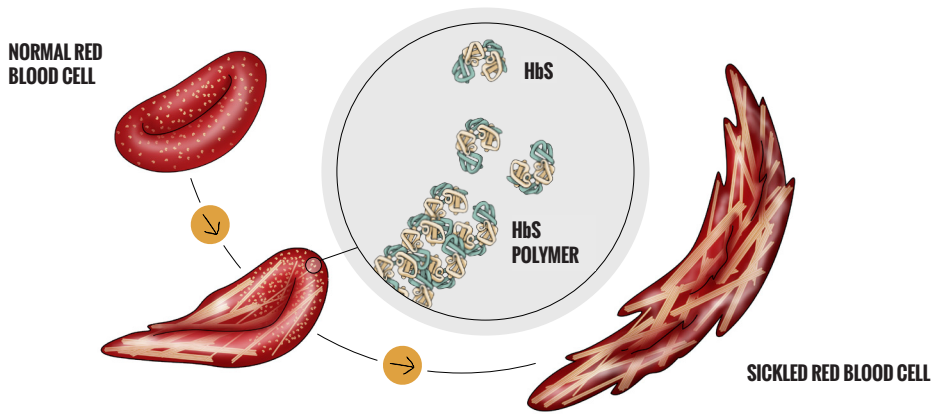


This change in shape causes HbS molecules to stick to one another and form long chains called polymers. These **chains of HbS molecules are what damage and distort red blood cells,** making them fragile, rigid, and sickle shaped.

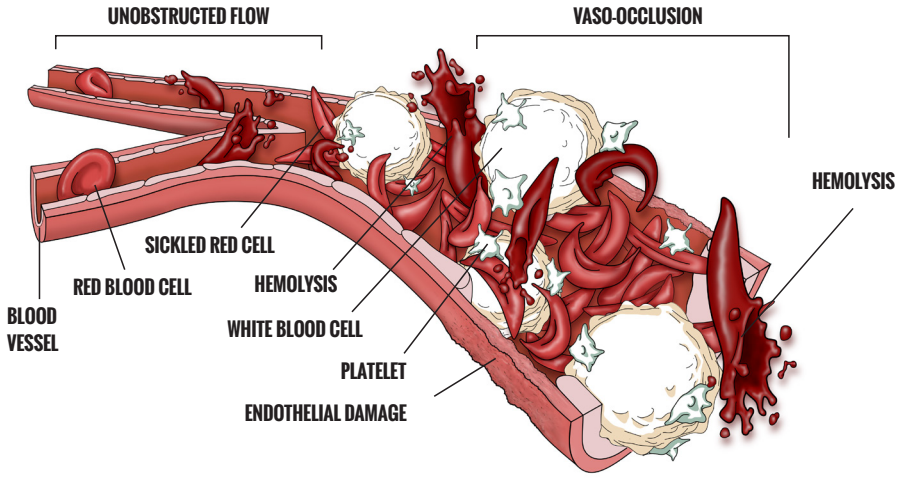


This change causes the body to produce an abnormal form of hemoglobin called sickle hemoglobin (HbS).

Hemoglobin is a molecule inside red blood cells that carries oxygen to your organs. **Unlike healthy adult hemoglobin (HbA), HbS molecules can change their shape** after oxygen is delivered.



HOW DOES THIS AFFECT MY BODY?



Even when you are not in pain, damage from sickled cells continues. This damage can cause chronic complications that may go unnoticed. **These complications can affect any organ in the body,** leading to progressive organ damage and even to organ failure.

Sickled red blood cells can block blood flow, damage blood vessels, and die prematurely (hemolysis), causing anemia, leading to the symptoms and complications of sickle cell.

Pain crises are the most common acute complication of sickle cell, but sickle cell can also cause other unpredictable acute complications. These can lead to irreversible organ damage and possible early death.

Sickle cell requires comprehensive care that goes beyond pain management. Guidelines suggest monitoring all of your organs to determine risk factors and to detect and manage any complications.

Spark a conversation with your doctor to **create a shared set of goals** and a treatment plan that gives your body the care it needs and deserves.

Learn more at SparkSickleCellChange.com

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