



American Stroke Association®
A division of the American Heart Association.

Together to End Stroke®



International Alliance
for Pediatric Stroke
iapediatricstroke.org

The American Stroke Association, Sickle Cell Disease Association and International Alliance for Pediatric Stroke – collaborating to prevent stroke in infants and children.

SICKLE CELL DISEASE RAISES A CHILD'S STROKE RISK.

CLOSE EVALUATION AND TREATMENT MAY HELP PREVENT STROKE.

KEY FACTS



Sickle cell disease (SCD) is a blood disorder in which misshapen or "sickled" red blood cells can clog blood vessels and **cause complications such as stroke and blood vessel damage (including to the brain).**



All babies in the U.S. are screened for sickle cell disease, which affects 1 in 2,400 children, and **1 in 400 Black** children.



Stroke risk increases over 100-fold in children with SCD compared to children without sickle cell disease.



The most severe form of the disease, called sickle cell anemia, occurs when a person inherits **two abnormal copies** of the hemoglobin-Beta gene. Sickle cell trait describes the presence of one abnormal and one normal copy of the gene. Sickle cell trait doesn't cause symptoms, but people with this condition are "carriers" — meaning they're at risk of having children with sickle cell disease.



In 1998, an estimated 11% of patients with sickle cell anemia had a stroke before age 20 with physical signs, such as weakness in an arm or leg, sometimes referred to as an "overt stroke." Today, the **Sickle Stroke Screen** or transcranial doppler ultrasound (TCD), and use of stroke prevention therapies in high-risk patients (usually chronic red blood cell transfusions), can **significantly reduce stroke risk.**



The common stroke in children with sickle cell disease is "**silent strokes**," or "silent" injury to the brain. This may occur in **up to 39% of children** by age 18. Silent strokes do not have any outward physical signs such as arm or leg weakness but can be seen on an MRI of the brain. Silent strokes may cause problems in thinking, learning, and decision-making and are a risk factor for future strokes.



There are two main types of strokes: Ischemic (caused by a blockage in blood flow) and hemorrhagic (bleeding in or around the brain). **Ischemic strokes are more common** in children and hemorrhagic stroke are more common in adults with SCD. But, both types of strokes may occur at any age.

Learn more at stroke.org.