Let's Talk About ...

Stroke in children

A **stroke** occurs when a part of the brain does not get enough blood, nutrients, or oxygen. If the blood supply stops completely, that part of the brain can quickly stop working. Most strokes happen on one side of the brain. This means that only one side of the body or face stops working properly.

What are the signs of a stroke?

Signs of a stroke may include:

- One side of the face or mouth drooping
- Arm or leg weakness or floppiness
- Sudden stumbling or falling to one side
- Slurred speech
- Excessive drooling
- Trouble swallowing

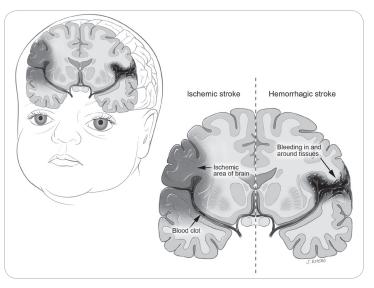
A stroke can be hard to recognize, but noticing the signs early and calling for help can greatly improve your child's outcome. If you are concerned about your child, call 911 immediately.

What causes a stroke?

- An ischemic [is-KEE-mick] stroke happens when something pinches an artery (tiny blood vessel) from the outside or a clot (like a scab) blocks blood from going to part of the brain. A clot sometimes forms somewhere else in the body (like the heart), and a piece of it can travel to the brain and get stuck there.
- A hemorrhagic [hem-oh-RAH-jik] stroke happens when blood vessels in the brain break or tear. Blood leaks out around the brain and does not get to the part of the brain that needed it. A hemorrhagic stroke may be caused by:
 - Abnormal blood vessels, called arteriovenous
 [ar-TEE-ree-oh-VEE-nus] malformation, or AVM

- An aneurysm [AN-yor-iz-um], or artery that bulges
- High blood pressure (this is rare)

The illustration below shows the difference between an ischemic and hemorrhagic stroke.



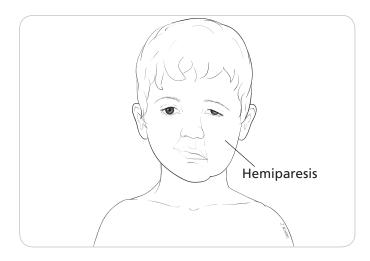
How is a stroke diagnosed?

Experts such as pediatric neurologists [new-RAHL-ohjists], or brain doctors, may do imaging tests like a CT (computed tomography) scan or MRI (magnetic resonance imaging) to take pictures of your child's brain and look at any changes. Your child may also need an angiogram [AN-jee-oh-gram], a test that looks at blood vessels in the brain, neck, heart, or legs.

How are strokes treated?

Most often, a child with a stroke needs to stay in the hospital's intensive care unit (ICU) for about 24 to 48 hours to prevent more injury and help them recover. Sometimes your child may stay in the ICU for many days, depending on what caused the stroke.

Once your child starts to get better, they can move to a regular hospital room. Your child may have more tests so the doctors can figure out what caused the stroke.



How will the stroke affect my child?

The effects of a stroke are different for every child and can range from mild to severe. They may be temporary or permanent and depend on the stroke's location, how quickly your child received treatment, and whether there were any other problems. Common effects of a stroke may include:

- Hemiparesis [hem-ih-pah-REE-sis], or weakness in half of the body
- Hemiplegia [hem-ih-PLEE-ja], or loss of movement (paralysis) on one side of the body
- **One-sided neglect**, or when the brain ignores or forgets about one side of the body
- Dysphasia [diss-FAY-zee-uh], or trouble swallowing
- Aphasia [uh-FAY-zee-uh], or trouble speaking or understanding speech
- Slurred or slow speech
- Problems thinking and remembering
- Trouble controlling eye movements
- Problems with depth perception (judging how close things are to them) or blurred vision
- Changes in self-control, self-awareness, and responses in social situations
- Trouble controlling emotions

The effects of a stroke are greatest in the first days and weeks after the stroke occurs. Most children will improve with time. In fact, your child may improve for many months and even years after the stroke.

How can I help my child recover?

Physical, occupational, and speech therapy can help your child regain some of the abilities they lost after their stroke. Your child can have some therapy in the hospital and then continue with outpatient or home therapy. Ask your child's healthcare provider to connect you with therapists who can help your child, and look for resources in your community as well.

Can strokes be prevented?

We don't know a lot about strokes in children, and many people don't know that children can have strokes. The common causes of strokes in adults (smoking, high blood pressure, lack of exercise, and high cholesterol) do not usually apply to children. Sometimes the doctor doesn't know what caused the stroke.

What if I have more questions?

If you have more questions, call the Primary Children's Hospital pediatric neurology clinic at 801.213.3599. You can also call a rehabilitation doctor about longer-lasting effects of a stroke at 801.882.5888.

Where can I learn more?

To learn more about strokes in children, visit the Children's Hemiplegia and Stroke Association (CHASA) website, <u>chasa.org</u>. You can also visit the American Stroke Association website (<u>strokeassociation.org</u>) and search for "strokes in children."

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Intermountain Primary Children's Hospital The Child First and Always*

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