



Strokes

What Are Strokes?

A stroke (sometimes called a "brain attack") happens when blood flow to the brain stops, even for a second.

Blood carries oxygen and other important substances to the body's cells and organs, including the brain. In an **ischemic** (pronounced: ih-SKEE-mik) **stroke**, these substances can't get to the brain and brain cells die. This can permanently damage the brain and make a person's body stop working as it should.

In a **hemorrhagic** (pronounced: heh-meh-RA-jik) **stroke**, a blood vessel in the brain breaks, flooding the brain with blood and damaging brain cells.

Who Gets Strokes?

Many of us think that strokes only happen in adults, especially older adults. But kids, teens, and even babies who haven't been born yet can have strokes too.

Strokes in children most often happen within the first month after birth. These are sometimes called **perinatal** (or **neonatal**) **strokes**. Most perinatal (pronounced: pair-ih-NAY-tul) strokes happen during delivery or right after delivery when the baby doesn't get enough oxygen while traveling through the birth canal.

Strokes that affect older kids and teens usually are caused by another condition that stops the flow of blood to the brain or causes bleeding in the brain.

What Causes Strokes?

Finding the cause of a stroke can be hard. Strokes in adults often happen because of high blood pressure, diabetes, or atherosclerosis. The risk factors for stroke in kids and teens are more varied.

Ischemic strokes are the most common type in children. They're usually related to:

- lack of oxygen during birth
- a heart defect the baby is born with
- blood disorders such as sickle cell disease, which destroys blood cells and blocks blood vessels
- injury to an artery (a blood vessel that brings oxygen) in the brain
- dehydration
- genetic disorders like Moyamoya, a rare disease that affects arteries in the brain
- an infection, such as meningitis or chickenpox

Hemorrhagic strokes can be caused by:

- a head injury that causes a broken blood vessel
- arteriovenous malformation, a condition in which the blood vessels in the brain don't connect properly
- an aneurysm (weakness in an artery wall)
- diseases that affect blood clotting, such as hemophilia

What Are the Signs & Symptoms of a Stroke?

Common signs of **stroke in teens**:

- seizures
- headaches, possibly with vomiting
- sudden paralysis or weakness on one side of the body
- language or speech delays or changes, such as slurring
- trouble swallowing
- vision problems, such as blurred or double vision
- tendency to not use one of the arms or hands
- tightness or restricted movement in the arms and legs
- trouble with schoolwork
- memory loss
- sudden mood or behavioral changes

If you have any of these symptoms, see a doctor right away or **call 911**. Someone actively having a stroke can get medicine that might reduce the severity of the stroke and the brain damage it can cause.

How Is a Stroke Diagnosed?

If stroke is suspected, a doctor will probably want the person to have one or more of these tests:

- blood tests
- magnetic resonance imaging (MRI): a safe and painless test that uses magnets, radio waves, and computer technology to produce very good pictures of internal body parts, such as the brain
- magnetic resonance angiography (MRA): an MRI of specific arteries
- magnetic resonance venography (MRV): an MRI of specific veins
- computed tomography scan (CT or CAT scan): a quick and painless test that produces pictures of bones and other body parts using X-rays and a computer
- computed tomography angiography (CTA): an X-ray of specific arteries
- cranial ultrasound: high-frequency sound waves that bounce off organs and create a picture of the brain
- spinal tap

How Are Strokes Treated?

Treatment for a stroke is based on:

- the person's age
- the symptoms
- which area of the brain is affected
- how much brain tissue was damaged
- whether an ongoing condition caused the stroke

Many different treatments are possible. For example:

- Someone who has seizures may need anti-seizure medicines.
- Someone with a heart defect might need blood-thinning medicine.

For most people, treatment also involves:

- physical medicine and rehabilitation, or **physiatry** (pronounced: fiz-ee-A-tree). Physiatrists (pronounced: fiz-ee-A-trists) are doctors who use many different types of therapy to help people recover from a stroke. They work to enhance and restore functional ability and quality of life in people who have medical conditions that affect the brain, spinal cord, nerves, bones, joints, ligaments, muscles, and tendons.

What Problems Can Happen?

Brain damage from a stroke can cause a number of problems, some of which can be lasting, such as:

- cerebral palsy
- cognitive and learning problems
- paralysis or weakness on one side
- communication problems
- vision problems
- psychological problems

Teens who've had a stroke will see doctors who specialize in helping people cope with these problems. These specialists might include:

- occupational therapists
- physical therapists
- speech therapists

A physiatrist might oversee the person's care.

What Else Should I Know?

At this time, no treatment can fix brain cells that have died. But undamaged brain cells can learn to do the jobs of cells that have died, especially in young people.

In many cases after a stroke, kids and teens can learn to use their arms and legs and speak again through brain retraining. This process can take time and hard work. But young people have an edge over adults because their brains are still developing. Most kids and teens who have had strokes can interact normally and be active members of their communities.

Looking Ahead

If you've had a stroke, you aren't facing your rehabilitation and care alone. Doctors and therapists will work with you and support you. Don't hesitate to ask questions about your condition or treatment or to ask for help when you need it.

For input and understanding from others facing the same challenges, visit online support sites for teens who have had strokes, such as:

- National Stroke Association
- American Stroke Association
- Children's Hemiplegia & Stroke Association

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Note: All information on TeensHealth® is for educational purposes only. For specific medical advice, diagnoses, and treatment, consult your doctor.

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