



American  
Stroke  
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let's talk about  
**STROKE**

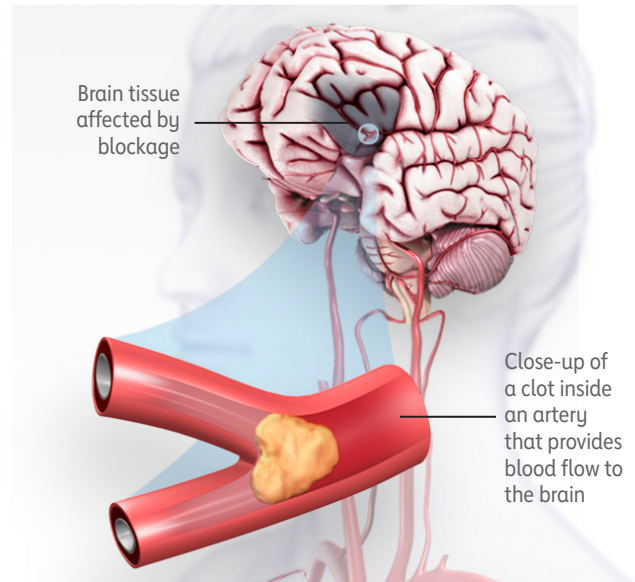


**Treatment**

let's talk about

# Ischemic Stroke

The majority of strokes (87%) occur when blood vessels to the brain become narrowed or clogged with fatty deposits called plaque. This cuts off blood flow to brain cells. A stroke caused by lack of blood reaching part of the brain is called an ischemic stroke. High blood pressure is a leading risk factor for ischemic stroke.



An ischemic stroke occurs when a clot or a mass blocks a blood vessel, cutting off blood flow to a part of the brain.

## Are all ischemic strokes the same?

There are two main types of ischemic stroke.

- **Cerebral thrombosis** is caused by a blood clot (thrombus) in an artery going to the brain. The clot blocks blood flow to part of the brain. Blood clots usually form in arteries damaged by plaque.
- **Cerebral embolism** is caused by a wandering clot (embolus) that's formed elsewhere (usually in the heart or neck arteries). Clots are carried in the bloodstream and block a blood vessel in or leading to the brain. A main cause of embolism is an irregular heartbeat called atrial fibrillation.

## How are ischemic strokes diagnosed?

When someone has shown symptoms of a stroke or a TIA (transient ischemic attack), a doctor will gather information and make a diagnosis. They will review the events that have occurred and will:

- Ask when the symptoms of stroke started.
- Get a medical history from you or a family member.
- Do a physical and neurological examination.
- Have certain lab (blood) tests done.
- Get a CT (computed tomography) or MRI (magnetic resonance imaging) scan of the brain.
- Study the results of other diagnostic tests that might be needed.

## How are ischemic strokes treated?

**Acute treatment** is the immediate treatment given by the health care team when a stroke happens. The goal of acute treatment is to keep the amount of brain injury as small as possible. This is done by restoring blood flow to the part of the brain where the blockage was quickly.

There is a clot-busting drug called alteplase (IV r-tPA) used to treat ischemic stroke. It can reduce disability from stroke by breaking up a blood clot that is stopping the blood flow to the brain. To be eligible to receive alteplase, a doctor must diagnose your stroke as an ischemic stroke and treat you within **3 to 4.5 hours** of onset of stroke symptoms. Medication may also be used to treat brain swelling that sometimes occurs after a stroke.

For people with larger blood clots, alteplase may not dissolve them completely. In this case, a procedure, called **mechanical thrombectomy**, may be considered. In eligible patients with large clots in an artery, the procedure should be done as soon as possible within up to 24 hours of stroke symptom onset. Patients eligible for alteplase should receive it prior to undergoing mechanical thrombectomy.

To remove the clot, doctors thread a catheter (thin tube) with a stent through an artery in the groin up to the blocked artery in the brain. The stent opens and grabs the clot. The doctors then remove the stent with the trapped clot. If necessary, other devices may also be used. Patients must meet certain criteria to be eligible for this procedure.

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### What other treatments may I receive?

When someone has a stroke, they are at risk of another. Once the medical team identifies what caused the stroke, they may prescribe treatments or procedures to reduce the risk of a second stroke, such as:

- **Medications** such as aspirin and clopidogrel (antiplatelets) and anticoagulants interfere with the blood's ability to clot. This can play an important role in preventing a stroke.
- **Carotid endarterectomy** is a procedure in which blood vessel blockage (blood clot or fatty plaque) is surgically removed from the carotid artery in the neck. This reopens the artery and the blood flow to the brain. This is only done in people who have a large blockage.
- Doctors sometimes use **angioplasty** and **stents** to treat and reduce fatty buildup clogging a blood vessel. The fatty plaques may make it easier for clots to form.

Sometimes a stroke is the first sign a person has of other health conditions, such as high blood pressure, diabetes, atrial fibrillation (a heart rhythm disorder) or other vascular disease. If any of these are diagnosed, the health care team will prescribe appropriate treatment.



Aspirin can play an important role in preventing stroke because it helps keep blood from clotting.

### HOW CAN I LEARN MORE?

- 1 Call 1-888-4-STROKE (1-888-478-7653) or visit [stroke.org](https://stroke.org) to learn more about stroke or find local support groups
- 2 Sign up for **Stroke Connection**, a free digital magazine for stroke survivors and caregivers, at [strokeconnection.org](https://strokeconnection.org).
- 3 Connect with others who have also had an experience with stroke by joining our Support Network at [stroke.org/supportnetwork](https://stroke.org/supportnetwork).

### Do you have questions for your doctor or nurse?

Take a few minutes to write down your questions for the next time you see your health care provider.

For example:

**What can I do to help prevent another stroke?**

**What medications may I be given?**

### MY QUESTIONS:

We have many other fact sheets to help you make healthier choices, manage your condition or care for a loved one. Visit [stroke.org/letstalkaboutstroke](https://stroke.org/letstalkaboutstroke) to learn more.