

What is a stroke?

Stroke is an injury to a part of the brain. It causes a pattern of symptoms that arises when something obstructs blood flow to parts of the brain depriving cells of the oxygen necessary to stay alive.

If blood supply to the brain is interrupted for as little as four minutes, brain cells begin to die. They are not replaced. Stroke is a medical emergency.ⁱ

Warning Signs of Stroke

- **Weakness** - Sudden weakness, numbness, or tingling in the face, arm or leg
- **Trouble Speaking** - Sudden temporary loss of speech or trouble understanding speech
- **Vision Problems** - Sudden loss of vision, particularly in one eye, or double vision
- **Headache** - Sudden, severe and unusual headache
- **Dizziness** - Sudden loss of balance, especially with any of the above signs



If you or someone you know is showing any of these symptoms CALL 9-1-1 or your local emergency number immediatelyⁱⁱ

Types of Stroke

There are two main types of stroke:

1. **Ischemic** strokes:
 - are caused by **blood clots** that block and cut off blood flow in the brain
 - represent **80%** of strokes
 - the buildup of plaque (**atherosclerosis**) on inner walls of blood vessels (arteries) often contribute to the formation of blood clots
 - these strokes may be thrombotic (clot in the brain) or embolic (clot travels to the brain)
2. **Hemorrhagic** strokes:
 - are caused by uncontrolled **bleeding** in the brain
 - represent **20%** of strokes
 - occurs when there is a tear in a brain artery and blood rushes into the brain, damaging surrounding tissue
 - **high blood pressure** is a risk factor for a hemorrhagic stroke

What is a TIA?

A **Transient Ischemic Attack (TIA)** is often compared to a 'mini-stroke'. It is a short-term or temporary disruption of blood flow to the brain. They can last 30 seconds to 10 minutes.

Often, a TIAs does not cause permanent brain damage, but it is important to seek immediate medical attention. A TIA is an important **warning sign** that you might be at risk for a stroke.



The warning signs of s TIA are similar to warning signs of stroke, however, the symptoms may only last a few minutes or hours.ⁱⁱⁱ

How is stroke treated?

- **tPA (tissue plasminogen activator)** – a clot-busting drug that can stop a stroke by breaking up the clot. It can only be used in ischemic (blood clot) strokes and must be given within three hours of the onset of symptoms. It is up to the attending emergency doctors to determine if it can be used.
- **Surgery** – some cases require surgery to repair damage or prevent a secondary stroke from occurring.
- **Non-surgical procedures** – some hospitals may offer catheter-based procedures to remove plaque build-up in arteries and treat aneurysms (weak spots) in blood vessel walls.

Common treatments used to prevent **secondary strokes** are antithrombotic medications (blood thinners), which prevent the formation of further blood clots in stroke patients.

ⁱ The Heart and Stroke Foundation website, www.heartandstroke.on.ca, 2008

ⁱⁱ Let's Talk about Stroke: An information guide for survivors and families, The Heart and Stroke Foundation, 2005

ⁱⁱⁱ A Patients Guide to Canadian Best Practice Recommendations for Stroke Care, Canadian Stroke Strategy, 2009