

# Stroke types



## Intracerebral Hemorrhage

In intracerebral hemorrhage occurs when a blood vessel in the brain leaks or bursts. As a result, that area of the brain becomes damaged from a lack of blood and oxygen and from a pooling of leaked blood that presses on brain tissue. This is also called a bleeding (*hemorrhagic*) stroke.

**A stroke is a medical emergency.** It must be treated right away. Early and prompt treatment will increase the chances of better recovery. Delay may lead to permanent damage and loss of brain function.

### What are the causes?

This condition is often caused by very high blood pressure. It may also be caused by:

- Head injury (*trauma*).
- A bulging of a weak section in a blood vessel (*aneurysm*).
- Thin and hardened blood vessels. This occurs when plaque builds on the walls of an artery.
- An abnormal formation of a blood vessel (*arteriovenous malformation*). This condition results in an abnormal tangle of thin-walled blood vessels.
- A tumor in the brain.
- Protein buildup on the artery walls of the brain (*amyloid angiopathy*).

Sometimes the cause of this condition is not known.

### What increases the risk?

You are more likely to develop this condition if:

- You have high blood pressure (*hypertension*).
- You are an older adult.
- You abuse alcohol or drugs.
- You take blood-thinning medicines (*anticoagulants*).

### What are the signs or symptoms?

Symptoms of this condition include:

- Sudden onset of these problems:
  - Weakness or numbness of the face, arm, or leg, especially on one side of the body.
  - Nausea and vomiting.
  - Trouble speaking (*aphasia*) or understanding speech.
  - Trouble seeing in one or both eyes.
  - Difficulty walking or difficulty moving arms or legs.
  - Loss of balance or coordination.
  - Confusion.
  - Dizziness.
- Seizures.
- Hypertension.

### How is this diagnosed?

This condition may be diagnosed based on your medical history and physical exam.

You may also have other tests, including:

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- CT scan or MRI to view the brain.
- Computed tomography angiography (CTA) or a magnetic resonance angiogram (MRA) to view vessels in the brain.

## How is this treated?

The goals of treating this condition are to stop the bleeding, control pressure in the brain, and relieve symptoms. Treatment may include:

- Medicines to treat symptoms, such as hypertension, pain, and nausea and vomiting.
- Other medicines, blood products, or vitamin K to control the bleeding.
- A tube (*shunt*) in the brain to relieve pressure.
- Assisted breathing (*ventilation*).
- Surgery to stop bleeding, remove a blood clot or tumor, and reduce pressure. Surgeries may include:
  - Craniotomy, to remove a part of the skull in order to reduce pressure in the brain.
  - Stereotactic aspiration, to remove blood from the brain using a needle or syringe.

## Follow these instructions at home:

### Medicines

- Take over-the-counter and prescription medicines only as told by your health care provider.
- **Do not** take medicines such as aspirin and ibuprofen unless your health care provider tells you to take them. These medicines can thin your blood and increase the risk of bleeding.

## Eating and drinking

- Eat healthy foods as directed by your health care provider. You may be asked to:
  - Eat a diet that is low in salt (*sodium*), saturated fat, *trans* fat, and cholesterol to manage your blood pressure.
- Seek the help of specialists if your ability to swallow safely has been affected. A dietitian, speech and language specialists, and an occupational therapist can teach you how to get the nutrition you need.
- Limit alcohol intake to no more than 1 drink a day for nonpregnant women and 2 drinks a day for men. One drink equals 12 oz of beer, 5 oz of wine, or 1½ oz of hard liquor.

## Lifestyle

- **Do not** use any products that contain nicotine or tobacco, such as cigarettes and e-cigarettes. If you need help quitting, ask your health care provider.
- Follow your health care provider's instructions about preventing falls. Your health care provider may:
  - Arrange for specialists to evaluate your home.
  - Recommend that you install grab bars in the bedroom and bathroom.
  - Arrange for special equipment to be used at home, such as a raised toilet and a seat for the shower.
- Use a walker or a cane at all times if directed by your health care provider.

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- Do physical activities as told by your health care provider. Ask your health care provider what activities are safe for you.

## General instructions

- Manage any other health conditions you may have, including high blood pressure, diabetes, and excess body weight.
- Keep all follow-up visits as told by your health care provider. This is important. Visits include referrals for physical and occupational therapy, rehabilitation, and lab tests.

## Summary

- An intracerebral hemorrhage occurs when a blood vessel in the brain leaks or bursts.
- This condition is often caused by very high blood pressure.
- Early and prompt treatment will increase the chances of better recovery. Delay may lead to permanent damage and loss of brain function.
- The goals of treatment are to stop the bleeding, control pressure in the brain, and relieve symptoms.

This information is not intended to replace advice given to you by your health care provider. Make sure you discuss any questions you have with your health care provider.

### Get help right away if you have:

- ▲ A sudden, severe headache with no known cause
- ▲ Nausea or vomiting occurring with another symptom
- ▲ Sudden weakness or numbness of your face, arm or leg, especially on one side of your body
- ▲ Sudden trouble walking or difficulty moving your arms or legs
- ▲ Sudden confusion