

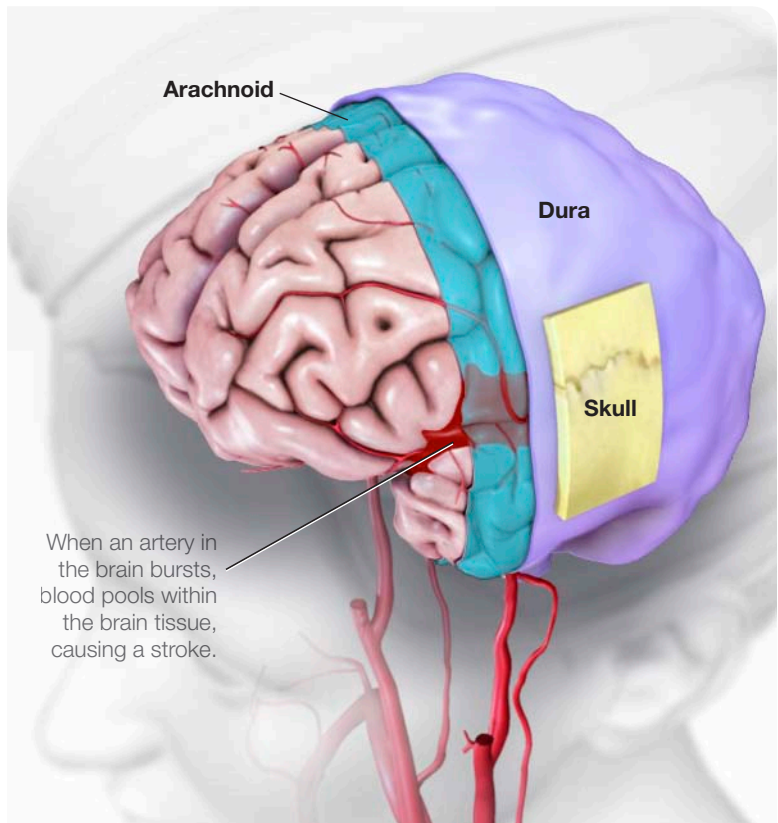


let's talk about

# Hemorrhagic Stroke

About 13 percent of strokes happen when a blood vessel ruptures in or near the brain. This is called a hemorrhagic stroke as shown at right.

When a hemorrhagic stroke happens, blood collects in the brain tissue. This is toxic for the brain tissue causing the cells in that area to weaken and die.



A type of hemorrhagic stroke, known as a subarachnoid hemorrhage, can occur when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures, flooding the space between the skull and the brain with blood.

## Are all hemorrhagic strokes the same?

There are two kinds of hemorrhagic stroke. In both, a blood vessel ruptures, disrupting blood flow to part of the brain.

**Intracerebral hemorrhages** (most common type of hemorrhagic stroke):

- Occur when a blood vessel bleeds or ruptures into the tissue deep within the brain.
- Are most often caused by chronically high blood pressure or aging blood vessels.
- Are sometimes caused by an arteriovenous malformation (AVM). An AVM is a cluster of abnormally formed blood vessels. Any one of these vessels can rupture, also causing bleeding into the brain.

## Subarachnoid hemorrhages:

- Occur when an aneurysm (a blood-filled pouch that balloons out from an artery) on or near the surface of the brain ruptures and bleeds into the space between the brain and the skull.
- Are often caused by high blood pressure.

In addition to high blood pressure, factors that increase the risk of hemorrhagic strokes include:

- cigarette smoking
- use of oral contraceptives (particularly those with high estrogen content)
- excessive alcohol intake
- use of illegal drugs

(continued)



### How are hemorrhagic 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. He or she will review the events that have occurred and will:

- get a medical history
- do a physical and neurological examination
- have certain laboratory (blood) tests done
- get a CT or MRI scan
- study the results of other diagnostic tests that might be needed

Diagnostic tests examine how the brain looks, works and gets its blood supply. They can outline the injured brain area. Diagnostic tests fall into three categories.

- Imaging tests give a picture of the brain similar to X-rays.
- Electrical tests record the electrical impulses of the brain.
- Blood flow tests show any problem that may cause changes in blood flow to the brain.

### How are hemorrhagic strokes treated?

Because hemorrhages may be life-threatening, hospital care is required. Medication is used to control high blood pressure. Other medicine may be given to reduce the brain swelling that follows a stroke.

Surgery may be needed depending on the cause of the hemorrhage. Surgery is often recommended to either place a metal clip at the base of an aneurysm or to remove the abnormal vessels that make up an AVM.

Some procedures are less invasive and use of a catheter that goes in through a major artery in the leg or arm. The catheter is guided to the aneurysm or AVM where it places a device, such as a coil, to prevent rupture.

### HOW CAN I LEARN MORE?

- 1** Talk to your doctor, nurse or other healthcare professionals. Ask about other stroke topics.
- 2** Call **1-888-4-STROKE** (1-888-478-7653) or visit us at **StrokeAssociation.org** to learn more about stroke.
- 3** Call the American Stroke Association's "Warmline" at **1-888-4-STROKE** (1-888-478-7653), and:
  - Sign up for *Stroke Connection*, a free magazine for stroke survivors and caregivers.
  - Talk to other stroke survivors and caregivers and find local support groups.

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

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

For example:

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

**How can I control high blood pressure?**

### My Questions:

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

**Knowledge is power, so Learn and Live!**

