

Understanding a Brain Bleed

What is a Brain Bleed?

A brain bleed (subarachnoid hemorrhage) is a type of stroke. Strokes are referred to as “brain attacks.” It happens when blood leaks into the space between the brain and the middle membrane that covers it. (This is called the subarachnoid space.)

A problem with a brain artery or vein causes more than 60 percent of all brain bleeds. The two most common types of stroke are:

- **aneurysm.** When an artery or blood vessel becomes weak and bulges, it can break and cause bleeding.
- **arterial venous malformation.** When small abnormal blood vessels dilate (open wide) blood shifts from arteries to veins. If pressure grows within these abnormal vessels, bleeding can result.

What are the Symptoms?

The most common symptoms of a brain bleed are:

- severe headache (“the worst headache of your life”)
- sleepiness
- changes in speech
- weakness in one side of the body.

How is a Brain Bleed Found?

To confirm the bleeding and attempt to find its source, the doctor may order:

- **CT or CAT scan (computerized axial tomography).** This test uses X-ray and a computer for an in-depth, cross-sectional look at the brain.
- **cerebral angiography.** This is a special X-ray of the blood vessels using contrast.
- **MRI scan (magnetic resonance imaging).** This test uses a magnetic field to get a 3-D view of your brain. This scan can give information about the tissues and blood flow within your brain.

You will receive information about what will happen during the tests, and what to expect after the tests.

How is a Brain Bleed Treated?

- You are admitted to the Intensive Care Unit. Your family may be with you.
- Your health care team will work to avoid and treat the effects of the brain bleed:
 - high blood pressure
 - headache
 - nausea (upset stomach)
 - vomiting (throwing up)
 - changes in behavior and alertness.

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- Your health care team will create a treatment plan. Options may include:
 - Medicines to control blood pressure, reduce anxiety or treat seizures.
 - Coiling to fill the abnormal blood vessels with platinum coils that block the blood from leaking and close the aneurysm. A neuroradiologist performs this procedure.
 - Brain surgery (craniotomy) to reach the source of the bleeding. A neurosurgeon makes an opening in the skull and a clip is placed on the aneurysm to prevent it from bleeding again.
- Your nurse will give your family visiting guidelines. Visiting may be very restricted. This will depend on how severe your brain bleeding was and your current condition.
- You will need to be in a quiet environment. This may include keeping the room lights low and the television and radio off. Restrictions may change several times during each day.

What are the Possible Complications (Problems)?

The most common problems after a brain bleed are:

- **Hydrocephalus.** Extra cerebral spinal fluid builds up in the ventricles of the brain. This fluid moves around the brain and spinal cord at a steady rate.

In hydrocephalus, the fluid is blocked and collects in the ventricles, causing swelling and pressure.
 - To decrease the swelling and pressure, a neurosurgeon may place a drain through the skull and into the ventricle. This drain (called a ventriculostomy) allows the extra cerebral spinal fluid to drain into a collection bag at the bedside.

This drain is short-term. If the fluid and pressure continue to be a problem, the neurosurgeon may place a long-term (permanent) tube.

- **Vasospasm.** The blood vessels inside the brain narrow. This causes decreased blood flow to a region of the brain. This can cause changes such as:
 - inability to move one side of your body
 - difficulty with speech or communication
 - changes in alertness (level of consciousness).

A vasospasm may last up to two weeks or longer. Your health care team will explain how to treat the vasospasm.
- **Rebleeding.** There is a risk that bleeding can happen again. Your health care team will work to prevent more bleeding:
 - high blood pressure
 - headache
 - nausea (upset stomach)
 - vomiting (throwing up).

This is a stressful time for you and your family. Resources available to you include social workers, spiritual care providers, nursing staff, pharmacists, and doctors. They will be able to help you with any questions you may have.