

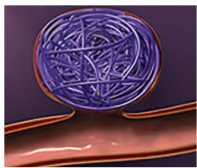
## What to expect during your endovascular procedure

### PROCEDURE:

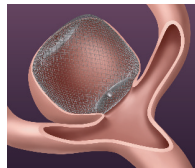
The procedure is performed in an angiography suite by a team of physicians, nurses, and technologists. The neurointerventionalist is the primary physician in this procedure. While you are under general anesthesia, a small incision is made over the artery in the groin area. A needle is used to puncture it. A sheath (hollow, thin tube) is placed into the artery providing constant access for the procedure.

A catheter is then threaded through the sheath into the arteries leading to the aneurysm. This process is done under x-ray visualization. Once the catheter is in position, the embolization device is deployed to treat your aneurysm.

Devices used in this procedure may include:



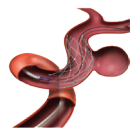
Coiling



Intrasaccular Device



Balloon Assisted Coiling



Stent Assistance



Flow Diverter

### RECOVERY:

Patients are monitored overnight and typically discharged the next day. Some patients may experience a headache following the procedure. It is important to limit activity for 1 week to allow the puncture site to close.

### FOLLOW-UP:

Follow-up imaging of your aneurysm is recommended periodically to evaluate the aneurysm. Some aneurysms can recur despite treatment.

### Notes:

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[allinahealth.org/neurointerventional](http://allinahealth.org/neurointerventional)

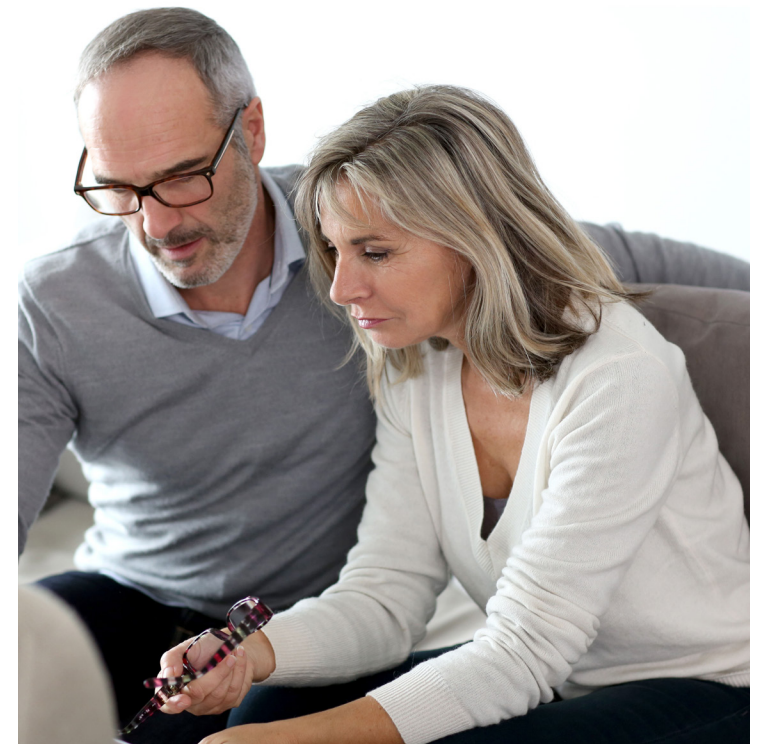


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## Brain aneurysms and treatment

Neurointerventional  
Surgery Program

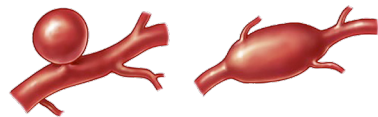
Patient guide



## What is a brain aneurysm?

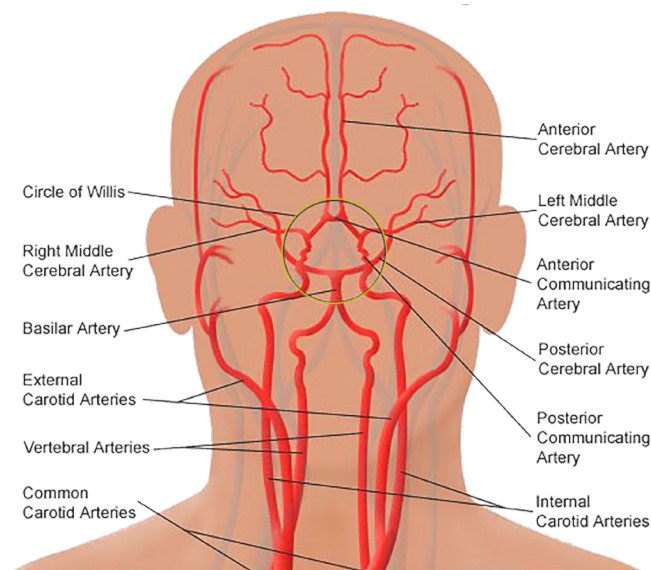
A brain aneurysm is a weak spot in the wall of a brain artery that looks like a bubble or balloon. Mostly commonly, brain aneurysms occur sporadically due to wear and tear, but sometimes they run in families. It is estimated that **2-3%** of the population have an unruptured brain aneurysm.

Brain aneurysm rupture depends on a number of risk factors. Ruptured brain aneurysms cause bleeding in the brain and are fatal in up to 50% of cases.



Ruptured Aneurysm

## Where is my aneurysm?



## What is the risk of brain aneurysm rupture?

The following are risk factors for aneurysm development and rupture:

- Aneurysm location, size, appearance
- Smoking
- High blood pressure
- Family history
- Age and health

The estimated risk of rupture for your aneurysm is \_\_\_\_\_ % over the next 5 years according to your aneurysm PHASES score.

## Symptoms of brain aneurysm rupture

Brain aneurysms do not often cause symptoms unless they rupture. Symptoms of a ruptured brain aneurysm include:

- Sudden severe headache, often described as "worst headache of my life," very different from past headaches
- Nausea and vomiting
- Loss of consciousness
- Seizure
- Neck pain
- Sensitivity to light



*If you have these symptoms, seek care immediately.*

## How is a brain aneurysm treated?

The goal of brain aneurysm treatment is to secure the aneurysm so that it does not bleed (or rebleed). Generally speaking, there are two ways to do this:

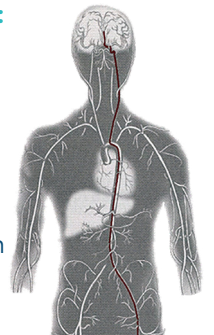
### SURGICAL CLIPPING:

This is open brain surgery. During this procedure, a clip is placed across the base of the aneurysm to separate it from the rest of the artery.



### ENDOVASCULAR TREATMENT:

This is a minimally invasive procedure in which an aneurysm is secured entirely from inside the blood vessels, also known as embolization. During this procedure, a very small catheter is used to deliver an embolization device to block blood flow into the aneurysm.



## What to expect prior to your endovascular procedure

You will undergo a thorough pre-admission process. This includes a history and physical given by your primary care provider.

Additional blood tests and other diagnostic tests may also be completed depending on your medical history.

You may be asked to start additional medications for this procedure.