

## Neuroradiology

This pamphlet's purpose is to provide basic information to help you understand the endovascular treatment of cerebral aneurysms.

The physicians and physician assistants in the Division of Diagnostic and Interventional Neuroradiology at the University of Rochester Medical Center / Strong Memorial Hospital will answer any questions you may have before they perform your procedure.

If you do have any questions or concerns, please ask during your pre-procedure interview or call us ahead of time at 585-275-1839.

### Radiologists:

- ◆ P-L Westesson, MD, PhD, DDS,  
Director, Diagnostic & Interventional  
Neuroradiology
- ◆ Jeevak Almast, MD,  
Attending Neuroradiologist
- ◆ John Deveikis, MD,  
Attending Neuroradiologist
- ◆ Sven Ekholm, MD, PhD,  
Attending Neuroradiologist
- ◆ Henry Wang, MD, PhD,  
Attending Neuroradiologist

### Physician Assistants:

- ◆ Stephen D'Ambrosio, MPAS, RPAC,  
Physician Assistant
- ◆ Iris Young, RPA-C, Physician Assistant

## Where Can I Get More Information?

### ASITN: American Society of Interventional & Therapeutic Neurology

10201 Lee Highway  
Suite 500  
Fairfax, VA 22030  
<http://www.asitn.org>  
Tel.: 703-691-2272  
Fax: 703-691-1855

### Brain Aneurysm Foundation

12 Clarendon Street  
Boston, MA 02116  
<http://www.bafound.org>  
Tel.: 617-723-3870  
Fax: 617-723-8672

### American Stroke Association: A Division of the American Heart Association

7272 Greenville Avenue  
Dallas, TX 75231-4596  
<http://www.strokeassociation.org>  
Tel.: 1-888-4STROKE (478-7653)  
Fax: 214-706-5231

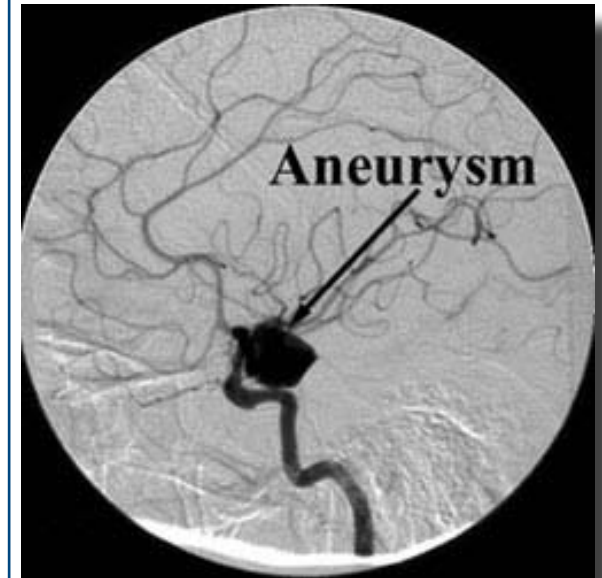
### American Association of Neurological Surgeons

5550 Meadowbrook Drive  
Rolling Meadows, IL 14209-1194  
<http://www.aans.org>  
Tel.: 847-378-0500/888-566-AANS (2267)  
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## NEURORADIOLOGY

University Imaging at Strong Memorial Hospital  
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## Endovascular Treatment of Cerebral Aneurysms



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# Frequently Asked Questions Regarding an Aneurysm

## Q. What is a cerebral aneurysm?

A. An aneurysm is an abnormal, outward swelling (bubbling) of the wall of an artery due to a weakness in the wall at that particular site. A cerebral aneurysm involves an artery of the brain. It can either rupture (bleed) resulting in death or stroke, or it can compress surrounding brain tissue or cranial nerves which can result in progressive neurological deficits. Brain aneurysms are usually acquired with age. The most significant risk factors are cigarette smoking and having a close relative who had an aneurysm. They affect more females over males (3:2), and 20% of patients have multiple (two or more) aneurysms. The average age at presentation is usually 40-60 years old.

## Q. What are the symptoms?

A. Most cerebral aneurysms do not show symptoms until they either become very large or rupture. Small, unchanging aneurysms generally will not produce symptoms.

A large aneurysm that is steadily growing may press on tissues and nerves. Symptoms may include pain above and behind the eye, numbness, weakness, or paralysis on one side of the face, dilated pupils, and vision changes. Should an aneurysm rupture, the bleeding over the brain is called a subarachnoid hemorrhage and is life threatening. An individual may experience a sudden and extremely severe headache, double vision, nausea, vomiting, stiff neck, and/or loss of consciousness.

Patients usually describe the headache as “the worse headache of my life” and it is generally different in severity and intensity from other headaches patients may experience. “Sentinel” or warning headaches may result from an aneurysm that leaks for days to weeks prior to

rupture. Only a minority of patients have a sentinel headache prior to aneurysm rupture. Other signs that a cerebral aneurysm has burst include nausea and vomiting associated with a severe headache, a drooping eyelid, sensitivity to light, and change in mental status or level of awareness. Some individual may have seizures. Individuals may lose consciousness briefly or go into prolonged coma. People experiencing this “worst headache,” especially when it is combined with any other symptoms, should seek immediate medical attention.

## Q. How is an aneurysm treated?

A. Traditionally, surgical treatment is performed by a neurosurgeon who opens the skull, a procedure called a craniotomy, and places a clip across the aneurysm. This is usually considered permanent. More recently, endovascular treatment has been developed as a less invasive option which avoids the craniotomy. The choice of treatment is determined by many factors, including the size, shape, location of the aneurysm, and the condition of the patient. Some patients may require both treatments.

## Q. What is endovascular treatment?

A. Endovascular treatment involves inserting a catheter into a large artery, usually above the leg, that is threaded through the vessels to the site of the aneurysm. Detachable platinum coils are then dispensed through the catheter and placed carefully inside the aneurysm. The number of coils used depends on the size of the aneurysm.

The goal of “coiling” is to pack the aneurysm tightly to close off blood flow into the aneurysm thereby preventing its rupture. Occasionally, it is necessary to add more coils at a later time to complete treatment.

Certain aneurysms may require the placement of a stent to keep the coils inside the aneurysm. A difficult aneurysm may require occlusion of the vessel from which it arises. Additional new methods of aneurysm treatment are in development.

Hospitalization time varies from patient to patient. A one or two-day hospitalization may be possible for certain patients who have not had a hemorrhage. Patients who have had a recent brain hemorrhage from a ruptured aneurysm may expect to be hospitalized at least 10-14 days minimum. A follow-up angiogram, MR scan or CT scan may be performed to evaluate the position of the coils.

Patients may be placed on a blood thinner, such as aspirin, after the procedure which may be continued after discharge.

