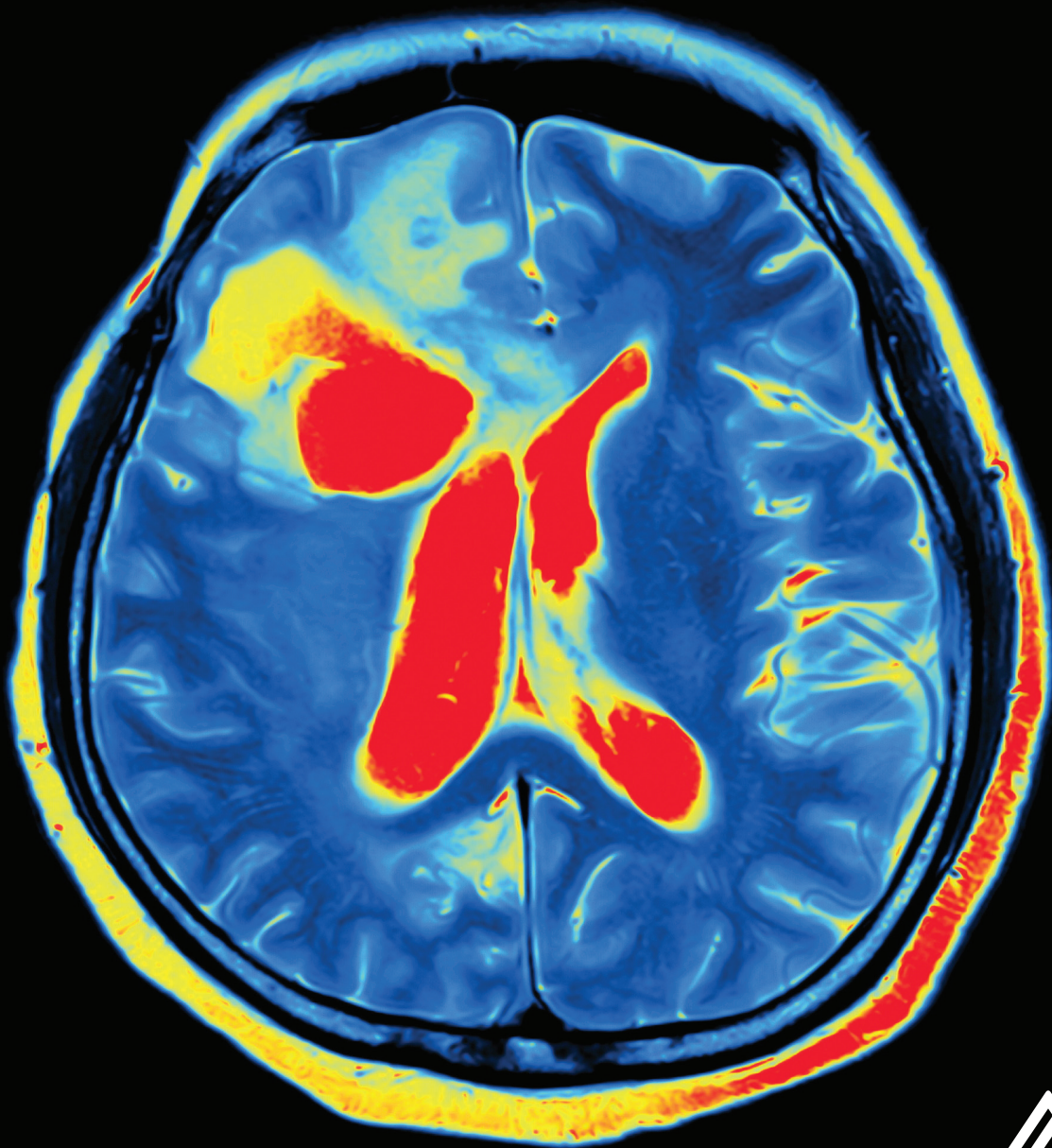


What You Need to Know About

Stroke



**Mount
Sinai
Beth Israel**

What is a Stroke?

A stroke occurs when the blood supply to an artery in the brain becomes blocked or bursts, causing brain cells in that area to die. The problems experienced after a stroke may include the inability to move one side of the body, numbness on one side of the body, walking imbalance, and speech or visual problems. Headache, dizziness, altered memory and thinking, and changes in behavior may also occur.

The functions affected depend upon the extent and location of the brain injury.

Call 911



What Is a Transient Ischemic Attack?

A transient ischemic attack (TIA), sometimes called a mini-stroke, occurs when a blood clot blocks an artery in the brain for a short time. The symptoms are the same as those of a stroke but they usually last only a few minutes.

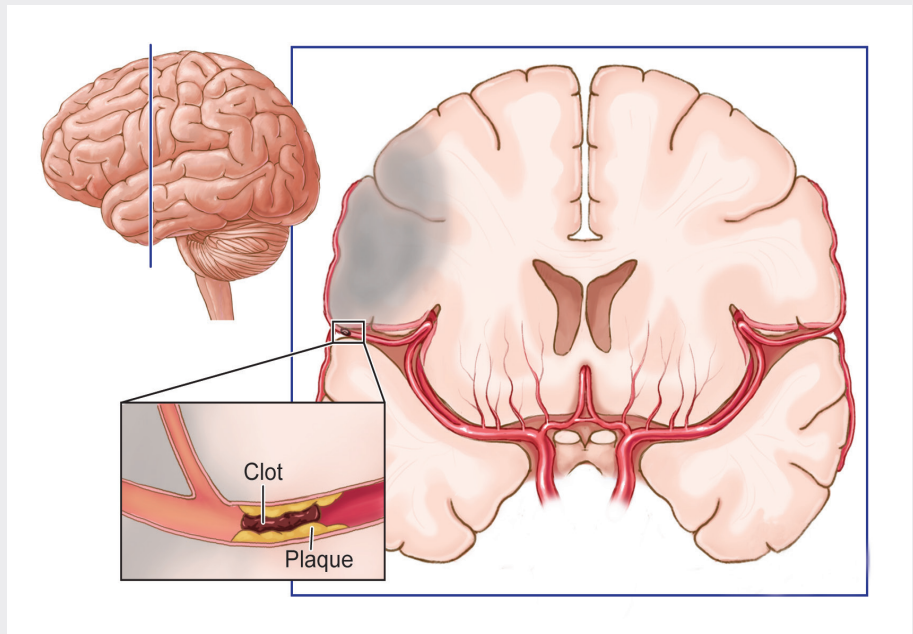
Warning Signs and Symptoms of Stroke and TIA

- Sudden weakness or numbness of the face, arm or leg, usually on one side of the body
- Loss of speech or trouble talking or understanding
- Sudden blurred vision or loss of vision in one or both eyes
- Dizziness, unsteadiness or unexplained falls

Ischemic stroke (lack of blood flow)

Blood vessels can become blocked from a variety of causes:

- Cholesterol buildup in the walls of an artery can lead to clots forming that block the vessel.
- A clot can move from an artery in the neck to an artery in the head and block it.
- A clot can form in the heart and move to an artery in the head and block it.
- Some strokes are related to damage done to the smallest blood vessels in the brain as a result of high blood pressure and diabetes.

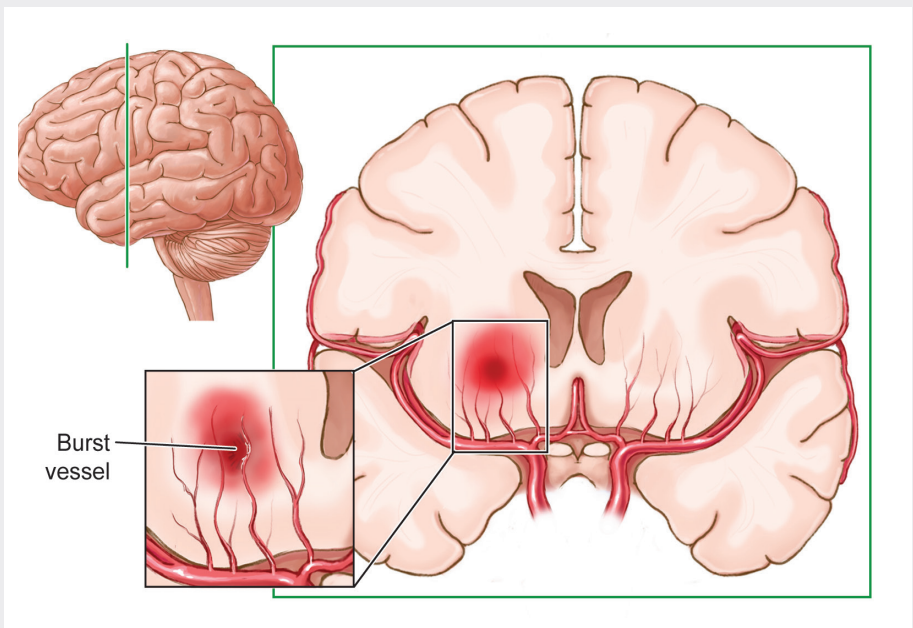


Hemorrhagic (bleeding) stroke

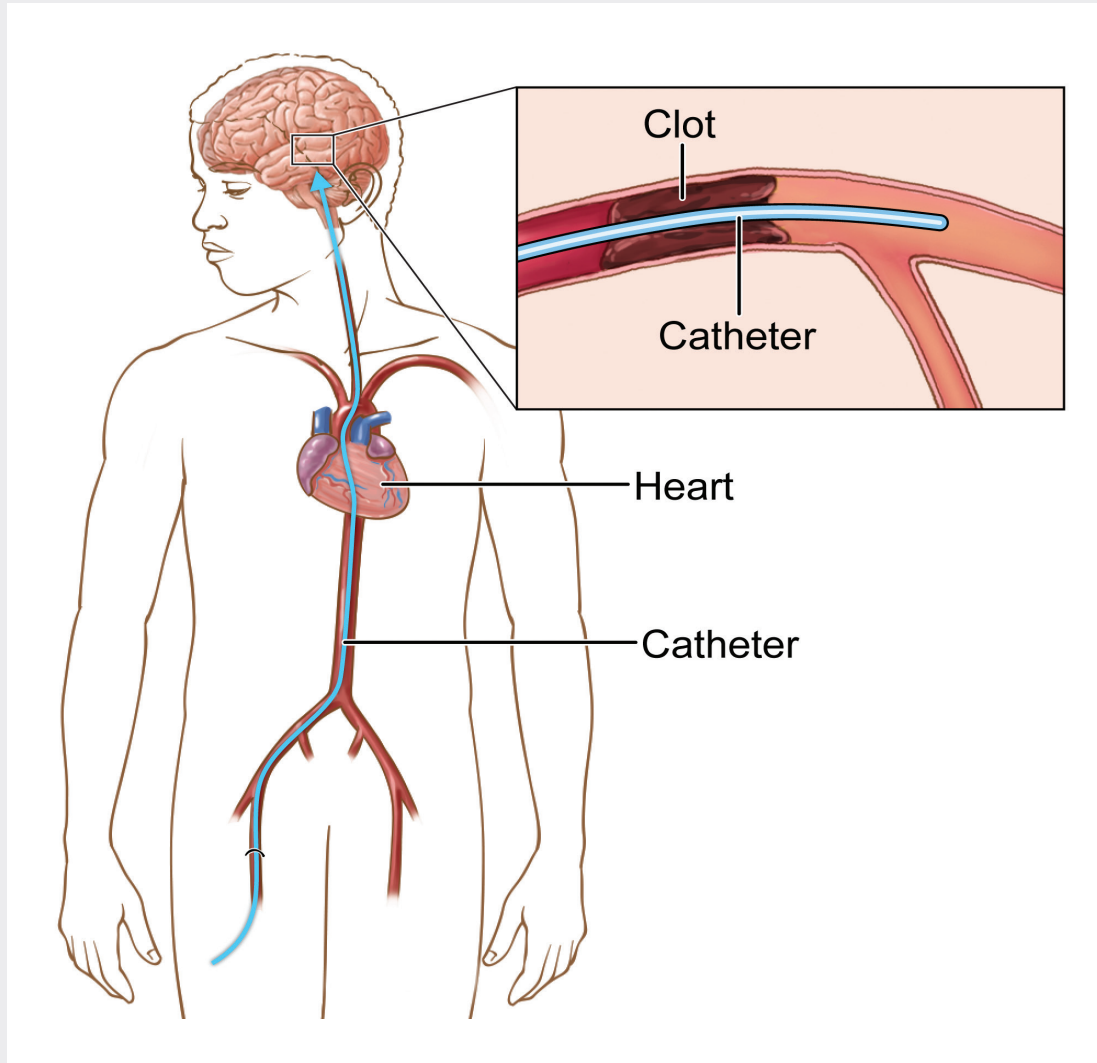
The most common cause of a bleeding stroke is high blood pressure. Less frequent causes include an aneurysm, vascular malformation, or other arterial disease.

A bleeding stroke occurs when a weakened or diseased blood vessel bursts, causing blood to spill into the brain. The accumulating blood puts pressure on the brain cells and damages them.

Patients may require urgent surgery to relieve the pressure on the brain, or special medication to decrease brain swelling.



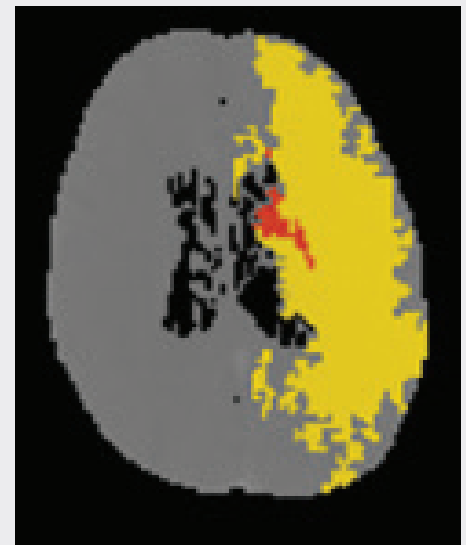
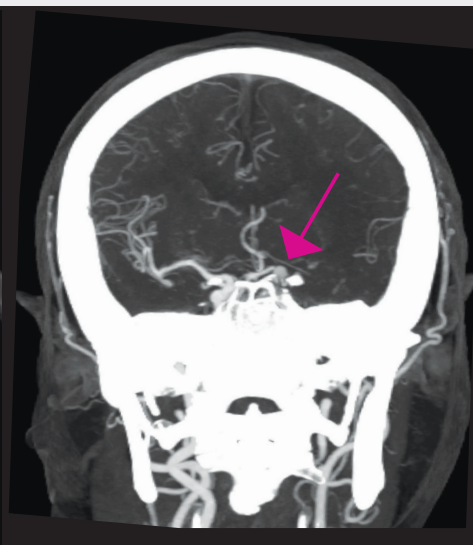
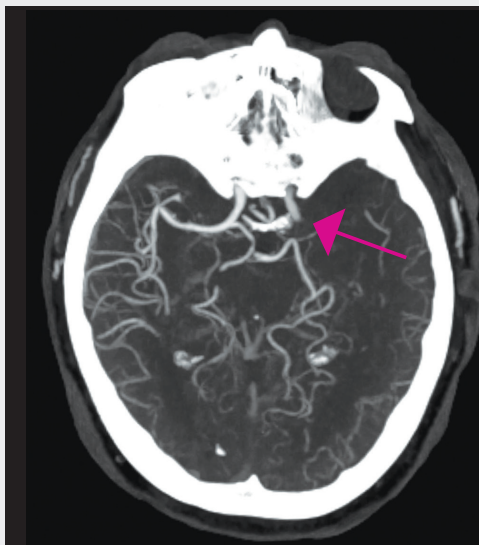
With ischemic stroke, time = brain



Acute treatments for ischemic stroke are available, but time is critical. The earlier the blood flow is restored, the more brain cells we can save and the better the chance for recovery.

Patients who arrive at the hospital within the early hours of symptom onset may be treated with a clot-busting drug given in the vein. The best outcome occurs with the earliest possible treatment.

Special advanced imaging techniques are used to identify who may be a candidate for a procedure to open a blocked artery using a special catheter that is passed to the brain. This may be done in cases where a large artery in the brain is blocked.



Stroke is an Emergency

By knowing the signs and symptoms of stroke, you can take quick action and perhaps save a life – maybe even your own.

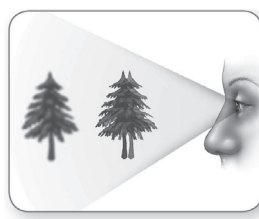
Call 911 At the First Signs of Stroke

B • E F • A • S • T



BALANCE

Loss of balance or dizziness;
difficulty walking



EYES

Double vision or vision loss,
particularly in one eye



FACIAL

Droop
or numbness;
uneven smile



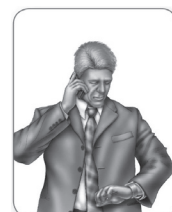
ARM & LEG

Weakness or
numbness, particularly
on one side



SPEECH

Slurred; trouble
speaking or
understanding



TIME TO ALERT

Acute stroke team;
note time of
symptom onset

Note the time when any symptoms first appear.

Do not drive to the hospital or let someone else drive you – **call 911** so that medical personnel can begin lifesaving treatment on the way to the emergency room.

Risk Factors for Stroke

Each patient is different. Your stroke specialist will help you develop an individualized plan that will help to minimize your future risk.

Risk factors that you can control

High blood pressure: High blood pressure is the #1 cause of stroke. Know your blood pressure and have it checked regularly. If your blood pressure is consistently 140/90 or higher, it is too high. You can improve your blood pressure by decreasing salt intake, getting regular exercise, maintaining a healthy diet, or taking medications.

Smoking: Smoking damages blood vessels in addition to increasing your risk of cancer. Talk to your doctor about getting help to quit smoking.

Diabetes: Having diabetes increases your risk of stroke because it can lead to damage of the small blood vessels in the brain and can accelerate atherosclerotic disease.

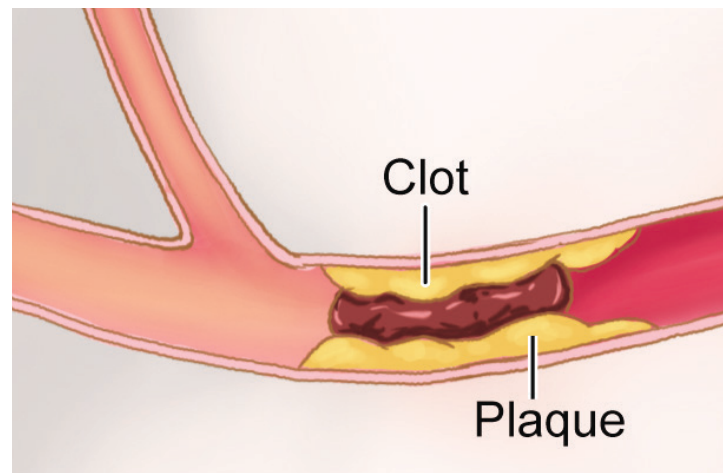
High cholesterol: Diets high in saturated fat, trans fat, and cholesterol can raise blood cholesterol levels. High cholesterol increases the risk of atherosclerotic disease or clogged arteries.

Physical inactivity and obesity: Being inactive, overweight, or both can increase your risk of cardiovascular disease and stroke.

Excessive alcohol intake: Drinking an average of more than one drink per day for women or more than two drinks per day for men can increase your risk of stroke.

Illicit drug use: Intravenous drug use has been linked to stroke. Cocaine, regardless of how it is used, increases your risk of both bleeding and ischemic stroke.

Carotid or other arterial disease: The carotid arteries in your neck supply most of the blood to your brain. A buildup of fatty plaque inside the artery wall (atherosclerosis) increases the chance that a blood clot will form and block the artery. Severe narrowing may need to be treated surgically.



Atrial fibrillation or other heart disease: In atrial fibrillation, the heart's upper chambers quiver. These weak, ineffective contractions cause blood to pool and clot. If a clot breaks off and lodges in an artery leading to the brain, it can cause a stroke. Patients with atrial fibrillation require a strong blood thinner to prevent clots from forming.

Prior TIA: Transient ischemic attacks are "mini-strokes" that produce stroke symptoms of short duration and are a warning sign of future stroke. Recognizing the symptoms and getting treatment can help to reduce the risk of major stroke.

Risk factors that cannot be controlled or changed

Age: Stroke can occur at any age, but the older you are, the greater your risk of stroke.

Family history and race: Your risk is greater if a parent, grandparent, or sibling has had a stroke. People of African and Hispanic descent have a higher risk of stroke than Caucasians. This is partly due to higher rates of high blood pressure and diabetes.

Other, less frequent causes

Arterial dissection: A tear in the artery wall, often associated with minor neck trauma, can lead to clots forming, arterial blockage and stroke. This is one of the leading causes of stroke in young people.

Clotting disorders: May be acquired or genetic.

Other hematological conditions: Sickle cell disease and other disorders.

Congenital heart defects: Persistent ostium secundum (patent foramen ovale or PFO), and atrial septal aneurysm.

Other cardiac conditions: Tumors, cardiomyopathy, and heart valve disease.

Migraine-related stroke: People with a history of migraine with aura have a higher risk of stroke, especially if they smoke or are on estrogen-based hormonal birth control. Controlling high blood pressure, cholesterol, and diabetes is also important for these patients.

Infections: HIV, varicella (chickenpox), tuberculous meningitis, syphilis, sepsis, and endocarditis (infection of the lining of the heart chambers and valves).

Inflammatory conditions: Primary CNS angiitis, systemic vasculitis such as lupus, etc.

Genetic disorders: CADASIL, Fabry disease, etc.

Drugs: Illicit drugs, stimulants, and hormonal birth control medication.

Stroke in Young People

Young people may suffer from high blood pressure, diabetes, high cholesterol, and obesity and should be screened for these conditions. Smoking, excessive alcohol intake and illicit drug use are also associated risks.

Other, less common causes of stroke should be considered in patients who lack these typical risk factors.



As many as
10% of all strokes
occur in people under
the age of 45

What is Needed After Stroke



What you may experience after stroke

Fatigue: Feeling tired is common after stroke. Your brain is healing and your healthy cells are working hard to compensate for lost cells. During the first few weeks, you may need to take naps to boost your stamina. Rest assured, however, it will get better!

Headache: Both bleeding and ischemic stroke may cause intermittent headaches.

Burning or tingling: If your stroke involves an alteration in sensation, you may experience nerve-related discomfort. Medications can help.

Muscle spasms: Stretching and therapy help, but medications and Botox injections may be needed.

Depressed mood: Patients adjusting to the changes caused by stroke commonly experience depression. Be sure to let your doctor know how you are feeling.





Joint pain: Joints that are stressed due to weakness may need special attention and therapy.

Rehabilitation Specialty	Goal of Therapy
Occupational Therapy	Relearn safe ways of performing your daily activities. Therapy focuses on the use of arms, hands, and fingers.
Physical Therapy	Relearn coordination and balance. Therapy focuses on leg strength and mobility.
Speech/Swallow Therapy	Relearn the ability to speak, communicate, and/or swallow.
Psychological Therapy	Get help adjusting to and coping with the changes caused by your stroke.
Nutritional Counseling	Create a plan for maintaining a healthy diet that fits your life.



After You Leave the Hospital

Treatment for your stroke may include regular medical care, medication, and rehabilitation.

My type of stroke	<input type="radio"/> Ischemic (lack of blood flow) <input type="radio"/> Bleeding	
My stroke is due to	<input type="radio"/> Small vessel disease <input type="radio"/> Large artery disease <input type="radio"/> Heart source of clot <input type="radio"/> Other: _____	
What I need to change	<input type="radio"/> Maintain a healthy diet <input type="radio"/> Control my blood pressure <input type="radio"/> Control my diabetes <input type="radio"/> Lower my cholesterol <input type="radio"/> Stop smoking <input type="radio"/> Increase my physical activity <input type="radio"/> Lose weight <input type="radio"/> Limit my alcohol intake <input type="radio"/> Stop illicit drug use	
What I need to help my recovery	<input type="radio"/> Physical Therapy <input type="radio"/> Occupational Therapy <input type="radio"/> Speech/Swallow Therapy	
Follow-up with my stroke specialist	Dr. _____ Phone: _____ How soon: _____	



RESOURCES

American Stroke Association

call (888) 478-7653
visit strokeassociation.org
email strokeassociation@heart.org

National Stroke Association

call (800) 787-6537
visit stroke.org

National Aphasia Association

call (800) 922-4622
visit aphasia.org
email naa@aphasia.org

**American Academy of Physical
Medicine and Rehabilitation**

call (847) 737-6000
visit aapmr.org
email info@aapmr.org

**National Institute of
Neurological Disorders and
Stroke**

call (800) 352-9424
visit ninds.nih.gov

Brain Attack Coalition

call (301) 496-5751
visit brainattackcoalition.org

Brain Aneurysm Foundation

call (888) 272-4602
visit bafound.org
email office@bafound.org



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