

Carotid Artery Disease and Stroke

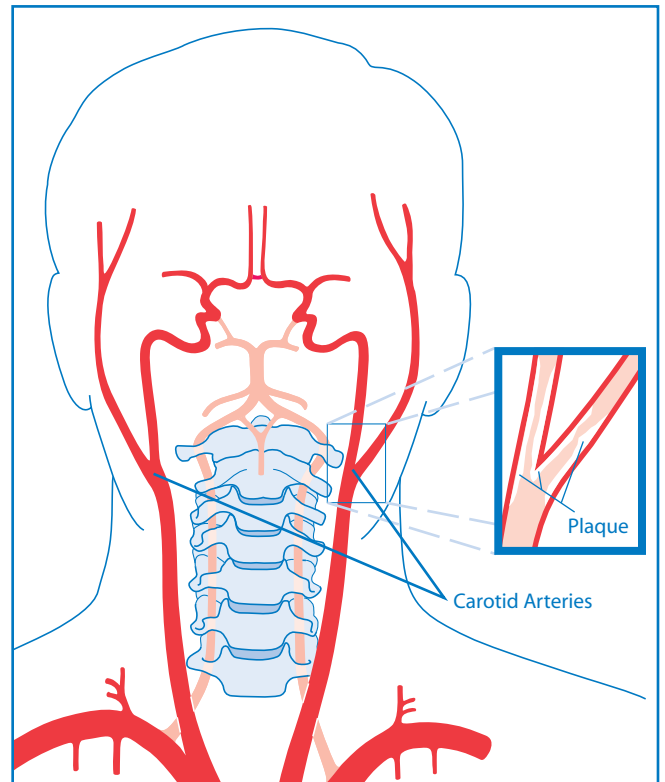


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According to the American Heart Association's 2007 Heart Disease and Stroke Statistics, each year about 700,000 people suffer a new or recurrent stroke in the United States. Over 150,000 people die, making stroke the third leading cause of death. About 5.7 million U.S. stroke survivors are alive today, many of them with permanent stroke-related disabilities. Women account for about 6 in 10 stroke deaths.

What is Carotid Artery Disease?

The carotid arteries are the two large blood vessels on either side of the neck. They are the main source of blood to the head. Carotid artery disease occurs when one or both arteries become narrowed or blocked by a buildup of plaque. Plaque is made up of scar tissue, blood cells in the artery wall, cholesterol, and other fatty substances. This plaque buildup results in hardening of the arteries, otherwise known as atherosclerosis. Atherosclerosis can slow or stop blood flow to the brain. As a result, the brain may not receive enough oxygen, sugar, and other nutrients carried by the blood and needed for brain-cell activities. Carotid artery disease is the source of most of the material that may lead to these blockages.



What is a Stroke?

A stroke is a medical emergency. Strokes happen when blood flow to your brain stops. Within minutes, brain cells begin to die. There are two kinds of stroke. The more common kind, called ischemic stroke, is caused by a blood clot that blocks or plugs a blood vessel in the brain. The other kind, called hemorrhagic stroke, is caused by a blood vessel that breaks and bleeds into the brain. "Mini-strokes" or transient ischemic attacks (TIAs), occur when the blood supply to the brain is briefly interrupted. Blockage of the carotid arteries is a major cause of stroke or "mini-strokes".

Risk Factors for developing a carotid artery disease or stroke:

- family history
- atrial fibrillation or other heart disease
- diabetes
- tobacco use
- a history of TIAs ("mini-strokes")
- sickle cell anemia
- overweight and obesity
- some illegal drugs
- carotid or other artery disease
- high blood pressure
- high blood cholesterol
- over 55 years of age
- a high red blood cell count
- physical inactivity
- excessive alcohol intake

What are some of the symptoms of strokes or mini-strokes?

- Numbness or weakness of the face, arm or leg (especially on one side of the body)
- Confusion, trouble speaking or understanding speech
- Trouble seeing in one or both eyes
- Trouble walking, dizziness, loss of balance or coordination
- Severe headache with no known cause

How is carotid artery disease diagnosed?

One method of identifying carotid artery disease is the carotid duplex, or carotid ultrasound. This imaging technique uses sound waves to show vessels, the size of the blockage, and the amount of blood flowing through the artery. The carotid artery in the neck is visualized and evaluated for possible blockage that may potentially lead to a stroke in the future.

What can I do if I have carotid artery disease?

Once carotid artery disease has been diagnosed, the goal is to reduce the risk of stroke. To prevent the disease from getting worse and, if necessary, restore adequate blood flow through the carotid artery, your physician will decide what is medically appropriate in your situation.

If the plaque buildup does not significantly interfere with blood flow to the brain, interventional treatment may not be required. You may be prescribed steps to prevent blood clots and additional plaque buildup. These may include:

- Prescribing anti-clotting medication
- Treating high blood pressure
- Treating elevated cholesterol
- Recommending a program of regular exercise
- Treating underlying diabetes
- Urging you to stop smoking

Even with these steps, the disease should be monitored regularly. If a significant blockage occurs or you suffer a mini-stroke, also known as a transient ischemic attack (TIA), interventional treatment may be necessary. Treatment options include a surgery called carotid endarterectomy or stenting, a less invasive technique. An endarterectomy is a surgical procedure in which the artery is opened and plaque removed. Carotid stenting involves placing a wire mesh tube in the artery to hold it open and is performed under a local anesthetic.