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## Carotid artery surgery - open

Carotid artery surgery is a procedure to treat carotid artery disease.

The carotid artery brings needed blood to your brain and face. You have one of these arteries on each side of your neck. Blood flow in this artery can become partly or totally blocked by fatty material called plaque. This can reduce the blood supply to your brain and cause a transient ischemic attack (TIA) or stroke.

Carotid artery surgery is done to restore proper blood flow to the brain. There are two procedures to treat a carotid artery that has plaque buildup in it. This article focuses on a surgery called carotid endarterectomy. The other method is called angioplasty with stent placement.

### Description

During carotid endarterectomy:

- You receive general anesthesia. You are asleep and pain free. Some hospitals use local anesthesia instead. Only the part of your body being worked on is numbed with medicine so that you do not feel pain. You are also given a medicine to help you relax.
- You lie on your back on an operating table with your head turned to one side. The side your blocked carotid artery is on faces up.
- The surgeon makes a cut (incision) on your neck over your carotid artery. A flexible tube (catheter) is put in the artery. Blood flows through the catheter around the blocked area during surgery.
- Your carotid artery is opened. The surgeon removes the plaque inside the artery.
- After the plaque is removed, the artery is closed with stitches or a patch from one of your veins or synthetic material. Blood now flows through the artery to your brain.
- Your heart activity is monitored closely during surgery.

The surgery takes about 2 hours. After the procedure, your surgeon may do a test to confirm that the artery has been opened.

### Why the Procedure is Performed

This procedure is done if your health care provider has found narrowing or a blockage in your carotid artery. Your provider will have done one or more tests to see how much the carotid artery is blocked.

Surgery to remove the buildup in your carotid artery may be done if the artery is narrowed by more than 70%.

If you have had a stroke or temporary brain injury, your provider will consider whether treating your blocked artery with surgery is safe for you.

Other treatment options your provider will discuss with you are:

- No treatment, other than tests to check your carotid artery every year.
- Medicine and diet to lower your cholesterol.
- Blood-thinning medicines to lower your risk for stroke. Some of these medicines are aspirin, clopidogrel (Plavix), dabigatran (Pradaxa), and warfarin (Coumadin).

Carotid angioplasty and stenting is likely to be used when carotid endarterectomy would not be safe.

## Risks

Risks of anesthesia are:

- Allergic reactions to medicines
- Breathing problems

Risks of carotid surgery are:

- Blood clots or bleeding in the brain
- Bleeding requiring re-operation to remove clot
- Brain damage
- Heart attack
- More blockage of the carotid artery over time
- Seizures
- Stroke
- Swelling near your airway (the tube you breathe through)
- Infection

## Before the Procedure

Your provider will do a thorough physical exam and order several medical tests.

Tell your provider what medicines you are taking, even medicines, supplements, or herbs you bought without a prescription.

During the 2 weeks before your surgery:

- A few days before the surgery, you may need to stop taking blood-thinning drugs. These include aspirin, ibuprofen (Advil, Motrin), clopidogrel (Plavix), naproxen (Aleve, Naprosyn), and other drugs like these.
- Ask your surgeon which medicines you should still take on the day of your surgery.
- If you smoke, you need to stop. Ask your provider for help quitting.
- Tell your surgeon about any cold, flu, fever, herpes breakout, or other illness you may have before your surgery.

Follow instructions on when to stop eating and drinking before surgery.

On the day of your surgery:

- Take any medicines your surgeon prescribed with a small sip of water.
- Follow instructions on when to arrive at the hospital. Be sure to arrive on time.

## After the Procedure

You may have a drain in your neck that goes into your incision. It will drain fluid that builds up in the area. It will be removed within a day.

After surgery, your surgeon may want you to stay in the hospital overnight so that nurses can watch you for any signs of bleeding, stroke, or poor blood flow to your brain. You may be able to go home the same day if your operation is done early in the day and you are doing well.

Follow instructions on how to take care of yourself at home.

## Outlook (Prognosis)

Carotid artery surgery may help lower your chance of having a stroke. But you will need to make lifestyle changes to help prevent plaque buildup, blood clots, and other problems in your carotid arteries over time. You may need to change your diet and start an exercise program, if your provider tells you exercise is safe for you. It is also important to stop smoking.

## Alternative Names

Carotid endarterectomy; CAS surgery; Carotid artery stenosis - surgery; Endarterectomy - carotid artery

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