

## Angioplasty and stent placement - carotid artery

### Definition

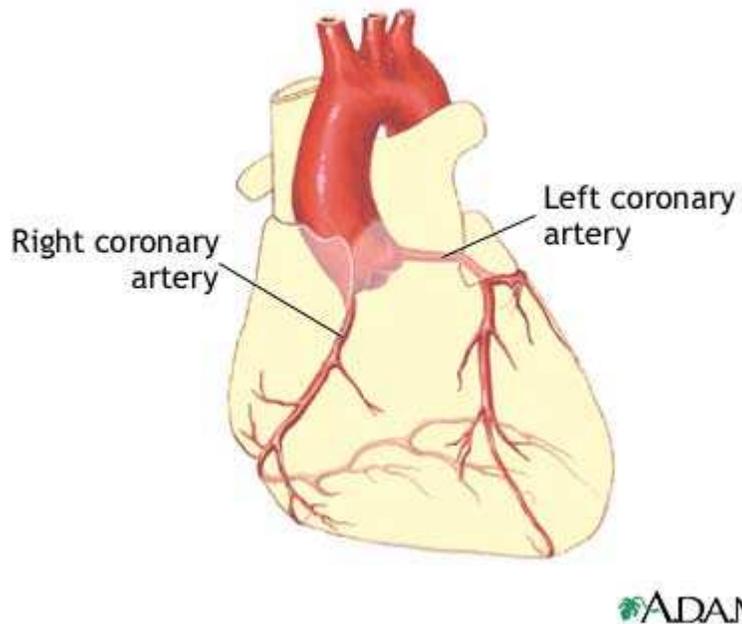
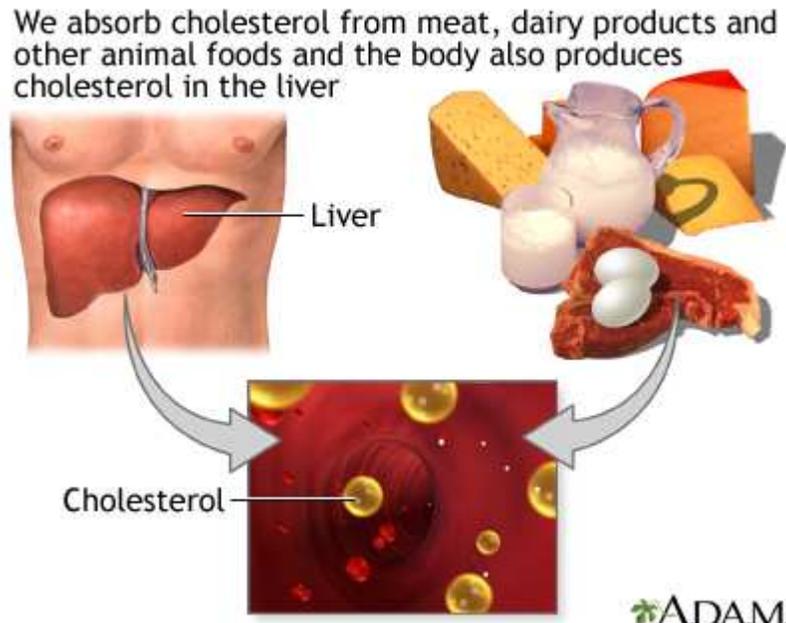
You have an artery on each side of your neck called the carotid artery. This artery brings needed blood to your brain and face.

The blood flow in this artery can become partly or totally blocked by fatty material called plaque. A partial blockage is called carotid artery stenosis (narrowing). A blockage in your carotid artery can reduce the blood supply to your brain. A stroke can occur if your brain does not get enough blood.

There are two invasive ways to treat a carotid artery that is narrowed or blocked. One is surgery called endarterectomy. The other is a procedure called carotid angioplasty with stent placement.

Carotid angioplasty and stenting (CAS) is done through a much smaller incision, by pushing instruments into your arteries:

- Your surgeon will make a surgical cut in your groin after using some numbing medicine. You will also be given medicine to relax you.
- Your surgeon will insert a catheter (a flexible tube) through the cut into an artery. The doctor will carefully guide the catheter up to your neck to the blockage in your carotid artery.
- Your surgeon will use live x-ray pictures to see your artery. This kind of x-ray is called fluoroscopy.
- Next your surgeon will pass a guide wire through the catheter to the blockage. Another catheter with a very small balloon on the end will be pushed over the guide wire and into the blockage. Then the balloon will be blown up. The balloon presses against the inside wall of your artery. This opens the artery and restores proper blood flow to your brain.
- A stent (a wire mesh tube) may also be placed in the blocked area. The stent is inserted at the same time as the balloon catheter. It expands when the balloon is blown up. The stent is left in place to help keep the artery open. The surgeon then removes the balloon.



### Alternative Names

Carotid angioplasty and stenting; CAS; Angioplasty - carotid artery

## Description

Narrowing or blockage of your carotid arteries increases the risk that you may have a stroke. Carotid angioplasty and stenting is one of several treatments for this blockage.

There are several ways your doctor may know you have narrowing or blockage in your carotid artery. Two common ones are:

- You may have had symptoms of a stroke or a transient ischemic attack (TIA, also called a mini-stroke). Some of these symptoms are weakness, blurred vision, confusion, or slurred speech.
- You may not have any symptoms, but your doctor may find a problem during a physical exam. Your doctor may hear something called a bruit when using a stethoscope to listen to your blood flow. A bruit is an abnormal, wind-like sound in your artery.

Your doctor will need to do one or more tests to see how blocked one or both of your carotid arteries are.

Treatment options that do not involve surgery, which your doctor will discuss with you are:

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

Surgery or angioplasty to remove the buildup in your carotid artery may be done if the carotid artery is narrowed by more than 70%, or if the narrowing is between 50% and 70% and your doctor feels that you are at high risk of having a stroke.

Carotid surgery (endarterectomy) is a safe surgery and is often the first invasive choice to treat carotid artery narrowing.

If you have had a stroke, your doctor will consider whether treating your blocked artery with surgery is safe for you. Your doctor will compare your risk of having another stroke if you do not have surgery with the risk of having serious problems from the surgery itself.

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

## Risks

The risks for any anesthesia are:

- Allergic reactions to medicines
- Breathing problems

The risks for any surgery are:

- Bleeding
- Infection

Risks of carotid surgery are:

- Allergic reaction to dye (only with carotid artery angioplasty)
- Blood clots or bleeding in the brain at the site of surgery
- Brain damage
- Heart attack
- More blockage of the carotid artery over time
- Seizures (this is rare)
- Stroke (this is rare)



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