

### **Introduction**

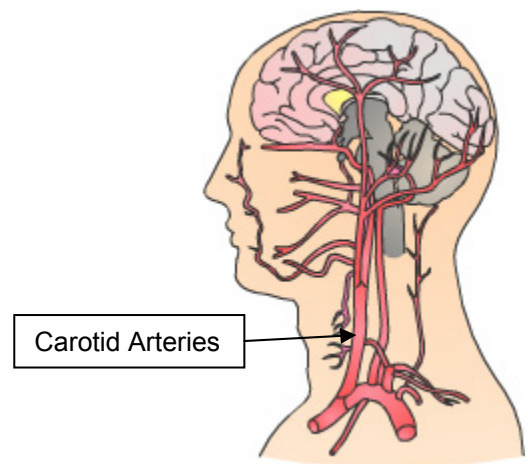
Clogged arteries in the neck may lead to strokes. Recent national studies have shown the benefit of cleaning the arteries in the neck to prevent strokes.

Doctors may recommend surgery for people suffering from clogged carotid arteries. If your doctor recommends surgery for you, the decision whether or not to have surgery is also yours.

This reference summary will help you better understand the benefits and risks of this surgery.

### **Anatomy**

Two main blood vessels in the front of the neck provide blood to the brain. These blood vessels are called carotid arteries. The carotid arteries deliver blood to the arteries in the brain.



### **Symptoms and Their Causes**

Strokes occur when the brain does not receive enough blood. A sudden drop in the amount of blood getting to the brain may cause a “little stroke,” also known as Transient Ischemic Attack or TIA.

Symptoms of a little stroke, or TIA, may include numbness, weakness, and difficulties with speech or vision. The symptoms of a little stroke, or TIA, last for only a short time.

Strokes occur when there is a loss of blood to the brain. The resulting brain damage can cause a loss of speech or loss of coordination. This may require hospitalization.



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Large strokes can also result in death. Around one third of the people who have had a little stroke, or TIA, go on to suffer a more serious stroke.

If an artery is clogged, blood cannot get to the brain. Normal arteries are wide open and have smooth walls. Such arteries are common in children and young adults. The arteries can get clogged with plaque, which consists of cholesterol, debris, and other materials. As the plaque layer thickens, enough blood cannot get to the brain. This condition is called hardening of the arteries.

A small piece of plaque may break loose from the artery wall and float up to the brain. This piece may flow into and block a smaller artery in the brain, causing a stroke.

### **Preventive Measures**

A healthy, low fat diet may reduce plaque build-up. Avoiding smoking can also help reduce the chance of a stroke. Certain medications may also be appropriate.

If your arteries are significantly blocked, your doctor may recommend surgery to remove the plaque and reduce the chance of a stroke.



Studies are currently being conducted to see whether opening the artery in the neck using a balloon and then a stent is helpful in patients. This procedure, called angioplasty and stenting, is similar to angioplasty done for heart arteries and is usually done through long catheters threaded in the arteries. This type of procedure does not involve a neck incision.

### **Surgical Treatment**

The operation is done through an incision in the neck. The artery is opened by an incision.

The flow of blood may need to be rerouted temporarily during the surgery.

The plaque is taken off the walls of the artery. At the end, the artery is stitched and the incision is closed. Sometimes the artery needs to be patched up with either a piece of vein taken from your leg or with synthetic material.

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Your doctor will tell you how long you are likely to stay in the hospital. This depends on several factors, such as your age and medical condition.

Depending on how well you do, you may go home after spending two or three nights at the hospital.

## **Risks and Complications**

This operation is very safe. There are, however, several possible risks and complications that are unlikely but possible.

You need to know about them just in case they happen. By being informed you may be able to help your doctor detect complications early.

The risks and complications include those related to anesthesia and those related to any type of surgery.

Risks related to anesthesia include, but are not limited to, heart attacks, strokes, pneumonia and blood clots in the legs. If the blood clots get dislodged, they may cause respiratory failure. Any of these complications could lead to death. These risks will be discussed with you in detail by your anesthesiologist.

Some of the risks are seen in any type of surgery; again these are very rare. They include:

- Infection, deep or at the skin level.
- Bleeding, either during or after the operation. This may necessitate another operation and could potentially be fatal.
- A skin scar.

Other risks and complications are related specifically to this surgery. These, again, are very rare. However, it is important to know about them. The following organs in the neck are close to the surgical area and may be damaged:

- The feeding tube (esophagus), resulting in possible swallowing problems.
- The nerve that goes to the face, the mouth, and the tongue muscles.
- The breathing tube (trachea and vocal cords) resulting in possible breathing problems, and hoarseness.

There is even a rare chance of stroke with paralysis. There is also the possibility of the artery clogging again in the future.

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## After the Surgery

Your doctor may recommend a healthy low fat, low-salt diet. Not smoking and moderate exercise are helpful in reducing the recurrence of clogged arteries.

Your doctor will tell you how long it will take before your neck is completely healed and when you can go back to work. This depends on your age, type of work and medical condition as well as other factors.

## Summary

Cleaning plaque from the arteries of the neck can reduce the chance of strokes. This operation is safe with good results. However, as you have learned, complications may happen. Knowing about them will help you detect them early if they happen.



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