

Carotid Surgery

What is carotid surgery?

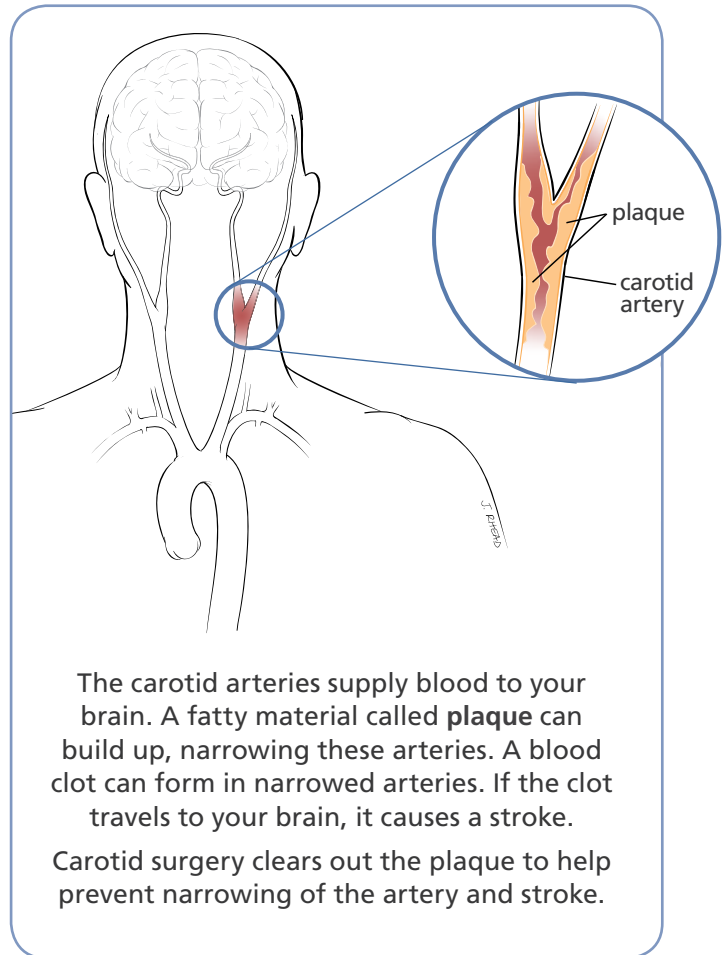
Carotid [kuh-rot-id] surgery, also called **carotid endarterectomy** [en-dahr-tuh-rek-tuh-mee], is a treatment option for carotid artery **stenosis** [sti-NOH-sis]. Stenosis occurs when **plaque** [plak] builds up in and narrows the carotid arteries (the blood vessels in your neck that carry blood to the brain).

Your doctor may recommend carotid surgery if one or both of your carotid arteries are blocked or narrowed. Although sometimes there are no symptoms, signs of plaque buildup can include:

- A TIA (mini-stroke) or stroke, with symptoms such as slurred speech, weakness, blurred vision, and confusion
- An abnormal sound in your artery (a **bruit**) that your doctor hears during a physical exam

Your doctor will do tests to locate the blockage or narrowing and see how bad it is. If you have had a stroke, your doctor will assess whether the surgery will increase your risk of another stroke or help prevent it.

You will meet with your doctor to talk about the risks and benefits (such as those in the table below) of carotid surgery for your unique medical situation. If you have questions, be sure to ask.



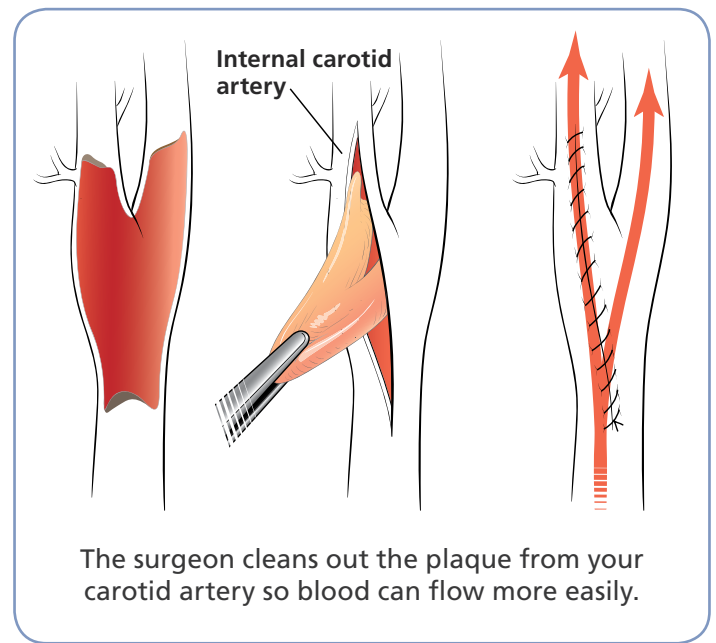
Potential benefits	Risks and potential complications	Alternatives
Carotid surgery removes plaque from the carotid arteries. This can reduce the risk of a future stroke.	Like any surgery, carotid surgery has risks. Yet complications are rare. Risks and potential complications of carotid surgery include: <ul style="list-style-type: none"> • Severe reaction to the anesthesia used during surgery • Bleeding or infection at the surgery site • Blood clots or bleeding in the brain • Stroke, seizures, or brain damage (rare) • Heart attack • Injury to nerves, esophagus, or trachea (windpipe), which can lead to hoarseness or swallowing difficulty • Plaque building up again in the arteries 	Alternatives to carotid surgery may include: <ul style="list-style-type: none"> • Medicine and diet changes to lower cholesterol or prevent clots. • Carotid stenting. During this procedure, a catheter is threaded through a blood vessel to the area with build-up. A stent (tiny wire mesh tube) is put in place to hold the carotid artery open.

How do I prepare for this surgery?

- **Tell your doctor about all of the medicines you take.** This includes prescription medicines, over-the-counter medicines (such as cough syrup or allergy pills), herbal remedies, and vitamin supplements. **Be sure to tell your doctor if you are allergic to any medicines.**
- **Follow your doctor's directions about your medicines.** Prior to surgery, you may need to stop taking some types of blood thinners or any medicine that makes it harder for your blood to clot. You may need to adjust your medicine if you have diabetes. Always check with your doctor before you stop taking any medicines.
- **You will spend 1 to 2 nights in the hospital** after your procedure. Bring items with you (such as a robe, slippers, and a toothbrush) that will make you more comfortable.
- **Follow your doctor's directions about eating and drinking before surgery.** You will likely need to not eat or drink anything after midnight the night before surgery. If you usually take medicine in the morning, ask your doctor or nurse for instructions.
- **Tell your doctor or hospital staff** if you:
 - Have a cold, flu, or other illness the day of the surgery
 - May be pregnant

On the day of your surgery:

- **You'll change into a hospital gown.** If necessary, hair on your neck near the surgery site will be clipped or shaved.
- **Your doctor will check in with you** and mark the site for the surgery.
- **You will have an IV** (intravenous) line placed in your arm or hand to give you medicine.
- **You might have a catheter** (thin tube) placed into an artery in your wrist, elbow, groin, or foot to monitor your blood pressure during the procedure.



What happens during surgery?

The surgery usually takes about 2 to 4 hours. Here's what happens during the surgery:

- **You will get medicine to make you sleep.** You won't feel or remember the surgery. You will also get antibiotics to reduce the risk of infection.
- **Other devices will be attached** to keep track of your heart rate, blood pressure, breathing, and possibly your brain activity.
- **You will lie on a surgical table** with your head turned to the side on a padded support.
- **The surgeon will make an incision (cut) in your neck.**
- **Blood flow to the artery will be stopped temporarily.** A thin tube (**shunt**) may be used to change the route of blood to bypass the blockage. Your other carotid artery will continue to send blood to your brain.
- **The surgeon will open up the blocked artery and clean out the plaque buildup.**
- **The surgeon will close the cleaned artery.** A "patch" graft may also be used.
- **The surgeon will then close the incision in your neck.**

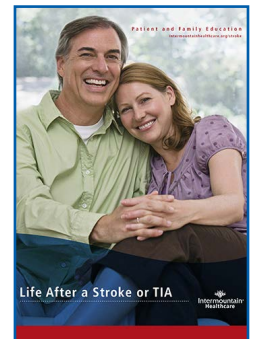
What happens after surgery?

- You will be taken to an intensive care unit where healthcare providers will check on your blood pressure, breathing, wound, and how alert you are.
- You may have a temporary tube that drains fluid or blood from the incision.
- You will likely stay in the hospital for 1 or 2 days.

What should I do after I go home?

- **Follow your doctor's advice to manage pain.** Your neck may be sore, and it may be hard to swallow. Your doctor will prescribe medicine for pain. Eating softer foods can help.
- **Take all medicines as directed by your doctor.** This may include an **antiplatelet** [an-tahy-PLEYT-lit] medicine (that helps prevent blood clots).
- **Limit swelling and pain.** For the first week, For the first week, keep your head propped up on pillows when you are lying down to limit swelling.

- **Don't drive** until your doctor says it's okay.
- **Limit strenuous activity** for a few weeks. Don't lift heavy objects, and don't do any strenuous exercise until your doctor says it's okay. You can go back to work and normal activities when your doctor says it's okay.
- **Watch for symptoms.** Pay attention to certain changes in how you feel, especially neck swelling or a headache on the side where the procedure was done. Let your doctor know if you notice any of the symptoms listed below.
- **If you've had a stroke,** you'll have additional treatment such as medicines or stroke rehab. Ask your doctor or nurse for a copy of Intermountain's guide titled *Life after Stroke or TIA* to learn more.



When should I call the doctor?

Call your doctor right away if you have:

- Signs of infection near your incision, including a fever over 101°F, redness, swelling, discharge, or pain that gets worse
- Coughing, difficulty breathing, or shortness of breath
- Chest pain or discomfort

Doctor's Name: _____

Phone: _____

Call 911 if you have:

- Memory loss, dizziness, or difficulty speaking
- Weakness or difficulty moving
- Vision problems
- A headache on the side where the procedure was done
- Any other headache that is sudden or severe
- Swallowing difficulty that gets worse

How can I help lower my risk of stroke?

Even if the plaque has been cleaned out of your carotid arteries, it can build up again. To reduce your risk of a future stroke, follow these guidelines:

- **If you use tobacco, stop now.** Ask for a copy of Intermountain's handout *Quitting Tobacco: Your Journey to Freedom*.
- **Monitor and manage your blood pressure.** A healthy diet and prescription medicines can help control your blood pressure.
- **Lower your cholesterol.** Your doctor may prescribe medicine to control your cholesterol. A healthy diet and regular physical activity can help too.
- **If you have diabetes, keep it under control.** Diabetes (high blood glucose) can damage your arteries and increase your risk for stroke. Follow your doctor's directions about diet, activity, and medicine, and get a regular A1c blood test.



- **Take off extra weight.** Eat a healthy diet, be active every day, and ask your doctor about Intermountain's *Weigh to Health* program.
- **Limit alcohol.** A good rule is no more than 2 drinks a day for men and no more than 1 drink a day for women.
- **Follow a healthy diet.** These recommendations will help you lower your cholesterol, manage blood sugar, and control blood pressure:
 - Eat lots of fruit and vegetables for healthy fiber and nutrients.
 - Eat more whole grains for fiber and complex carbs.
 - Choose unsaturated fats and oils.
 - Choose healthy proteins (like fish, beans, soy, and nuts) that protect your heart and blood vessels over time.
 - Limit sodium (salt) to lower your blood pressure and protect your arteries.
 - Limit sugar and sweets to maintain healthy blood glucose.



Questions for my doctor: _____

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