

Healing After Carotid Endarterectomy



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GENERAL INFORMATION

This handbook is designed to help you understand carotid artery disease and how to care for yourself after surgery. Your nurse will go over what you have read and answer any questions you may have. Share the handbook with your family, keep it with you during your stay and take it with you when you leave the hospital.

WHAT IS CAROTID ENDARTERECTOMY?

Carotid Endarterectomy is an operation that removes plaque formation from the artery in your neck. The arteries are widened to permit blood flow to the brain by making an incision along the skin folds in the neck. A shunt (tube) may be used to supply blood to the brain during surgery. The surgery takes one to two hours under general anesthesia. The scarring is minimal and heals quickly.

WHAT CAUSES BLOCKAGE?

Certain diseases may cause changes in blood flow in the artery. Some of these diseases include: atherosclerosis (hardening of the arteries), high blood pressure, peripheral vascular disease or peripheral arterial disease.

Plaque is a deposit of fat, cholesterol and calcium that restricts blood flow causing the artery to become smaller and in some cases closing the artery completely.



RISKS INVOLVED IN A CAROTID ENDARTERECTOMY

There is some risk with any surgery. Risk factors vary with each person. Risks depends on the carotid artery disease and the type of surgery being performed.

Risks include:

1. Stroke/TIA: The carotid artery is clamped to allow the surgeon to work in the diseased area. This may cause blood flow to the brain during this time to be insufficient, resulting in a stroke. To prevent this from occurring, a shunt (tube) may be used to restore blood flow to the brain during surgery.
2. Heart Attack: Atherosclerosis may cause narrowing of the coronary artery in the heart. If symptoms of heart disease are present, you may be referred to a cardiologist.
3. Other: Minor nerve damage that may cause difficulty in swallowing or tongue coordination, skin numbness, swelling and wound infection.

AFTER SURGERY

During recovery, your nurse will continue to do vascular checks. This consists of checking your extremities for color, temperature, pulse and sensation. You may continue to receive a small amount of oxygen for the first few hours after returning to your room. Report any increases in shortness of breath, chest pain or severe headaches.

The Foley catheter may be inserted during surgery to monitor your urine output. The Foley catheter will remain in place until 6 a.m. the next day. IV fluids are given until you are able to orally take food and liquids.

You will remain in bed the first night of surgery with your head elevated 30 degrees. If you have compression stockings on your legs, it will help increase blood flow and decrease your risk of blood clots.

Medication: Your nurse will give you medication that has been ordered by your doctor. **DO NOT** take any medications from home while in the hospital. If you need these medications your doctor will order them and the nurse will administer them to you.

Activity: The first day after surgery you will be expected to be out of bed, in a chair and walking around the unit with a staff member. It is important that you use your incentive spirometer (triflow) every 1-2 hours while awake. This device will assist in your breathing. You should cough and take deep breaths at least every two hours. These exercises are very important in reducing your risks of getting pneumonia while in the hospital.

Diet: You will be given a clear liquid diet when you return to your room. As you tolerate food and drink, your diet will be advanced to normal.

Bathing: When bathing remember not to submerge your incision in a tub bath. Showers are best until your doctor advises you otherwise. Do not apply any lotions, shaving cream, aftershave lotions, powders, colognes or perfumes on your incision. These items increase your risk of infection.

Smoking: No smoking! Nicotine causes narrowing of the arteries, which decreases blood flow. Smoking also increases your heart rate and blood pressure.

Alcohol: Drink in moderation. **DO NOT** mix alcohol with any medication.



CAROTID ENDARTERECTOMY GUIDELINES

	DAY BEFORE SURGERY	DAY OF SURGERY	DAY AFTER SURGERY
TESTS	Blood work, chest X-ray, other tests as needed	Blood work as needed	Blood work within normal limits for patient
TREATMENTS	Physical assessment, prepare neck for surgery, shave and/or cleanse with special soap	Vital signs taken, nurse will check incision for drainage and swelling. Nurse will check strength in arms, legs, ability to smile, frown and short-term memory. Incentive spirometer issued	Incision healing, no complications (bleeding, infection) noted and normal strength in arms & arms and legs returned
LINES & TUBES	Heart monitor, pulse oximetry	Heart monitor, pulse oximetry, IV, Jackson Pratt drain, Foley catheter in bladder	All monitors removed
MEDICATIONS	Medication as ordered by doctor	Pain medication, antibiotic, IV fluids	Patient is educated on when to use pain medications
NUTRITION	Nothing to eat or drink after midnight the night before or morning of surgery	Begin drinking clear liquids, report any problems swallowing. Diet may be advanced to solid food if no nausea and vomiting	Patient tolerating regular diet and understands any dietary changes that may need to be made
ACTIVITY	Unrestricted	Bed rest with head of bed elevated to 30 degrees	Out of bed to chair early first day after surgery and then walking in hall with staff prior to being discharged. Patient will be advised when to return to normal activity level
BLADDER & BOWEL	Empty bladder before surgery	Urine output measured from Foley catheter by staff	Urinary catheter removed early first day after surgery Patient must urinate prior to discharge
EDUCATION	Review education booklet and address any questions or concerns	Review pain control scale with patient	Diet, medication and discharge materials given to patient. Any changes in diet, medications or activities of daily living addressed
RETURNING HOME	Discharge needs discussed	Include family or significant other in teaching	Patient and family state understanding of discharge instructions and know when to notify doctor of changes

GOING HOME

This is a checklist that will help you care for yourself at home. It is important that you and your family complete the following checklist before leaving the hospital.

- Review medication information with your nurse
- Know what problems to report to your doctor and who to call for problems and concerns
- How to care for your wounds
- Any diet changes

THE HEALING PROCESS

Soreness after surgery is normal. It is also normal to feel tired for a few days. Anesthesia will have this effect. Eating well after surgery is important. A balanced diet will help you heal. Remember you do not heal when you hurt, so if you need your pain medication be sure to take it as prescribed. With pain medications sometimes comes constipation. If needed, take a stool softener or eat more fruits such as prunes or apples. Use whole wheat bread instead of white bread. Try bran muffins and cereals with fiber like All Bran. Drink about eight cups of water a day unless your doctor has limited your fluids. Try walking for exercise, this will help with movement of your bowels.

CARING FOR YOURSELF AT HOME

- Check your incision everyday.
- You may take showers, do not take tub baths until your incision is fully healed. Until then, wash it with warm water and soap, then pat dry.
- Do not apply anything to you incision. Steri-strips may become loose and may fall off before your follow-up appointment, this is normal.
- Report any signs of infection to your doctor, things to look for are excessive drainage, redness, warmth and swelling.
- Take your pain medication as ordered.
- Call your doctor if you experience excessive pain.

GENERAL ACTIVITIES AT HOME

Your doctor will talk to you about your activity level. Stay away from activities that require a lot of effort the first few weeks after surgery.

Things you CAN do at home

Cooking, washing dishes, making the bed, washing clothes, riding in a car and climbing stairs, but only a few at a time and only a few times a day. Take rest breaks as needed, remember you are healing.

Things you CANNOT do at home

Vacuuming, sweeping, heavy cleaning, lifting weights, no other lifting that involves more than 10 pounds, working in the yard (raking, digging, pruning, etc.), washing the car, or driving.

FOLLOW-UP CARE

- Before going home you will be given a follow-up appointment with your surgeon. The appointment will be at least one week after discharge. If you have problems prior to your appointment, you may call a member of your surgery team.
- A unit nurse will contact you a few days after surgery before your follow-up appointment to see how you are progressing.
- Problems you should report to your doctor are:
 - temperature greater than 101.5°
 - redness, tenderness or oozing from incisions
 - pain (not controlled with pain medications)
 - nausea and vomiting
 - bowel or bladder problems
 - shortness of breath
 - severe headaches not relieved with pain medication
 - numbness or confusion

MODIFYING YOUR LIFESTYLE

Modifying your lifestyle to decrease your risks of atherosclerosis occurring again will prolong and improve your quality of life, while decreasing your chances of having surgery again.

- Recommended lifestyle changes include:
 - Control hypertension and diabetes
 - Stop smoking
 - Exercise regularly
 - Reduce stress in your life
 - Modify your diet

Call 911 if you have any of the following symptoms of a stroke:

- Sudden, severe headaches with no apparent cause
- Sudden, blurred or double vision, or loss of vision
- New onset weakness, numbness or tingling of the face, arm or leg on one side of the body
- Slurred speech, loss of speech or difficulty understanding speech
- Unexplained dizziness, unsteadiness or sudden falling

