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PATIENT INFORMATION

# **Carotid Endarterectomy**

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*Please bring this book to the hospital  
on the day of your surgery.*

THE OTTAWA HOSPITAL

***Disclaimer***

*This is general information developed by The Ottawa Hospital. It is not intended to replace the advice of a qualified healthcare provider. Please consult your healthcare provider who will be able to determine the appropriateness of the information for your specific situation.*

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## Introduction

Welcome to The Ottawa Hospital. You are being admitted for a Carotid Endarterectomy. Your hospital stay is planned for 2 days including the day of surgery.

*This booklet was prepared for you by the Carotid Endarterectomy Pathway team to help you understand:*

- your condition and your surgery
- how you can help yourself
- your care in hospital
- your needs, care and resources after discharge.

Your health-care team has made a plan in advance for certain parts of your care. This plan is shown in the “*Clinical Pathway*” on pages 3 and 4. The clinical pathway describes some of the usual care for people with your condition. This plan will be adapted for your specific needs.

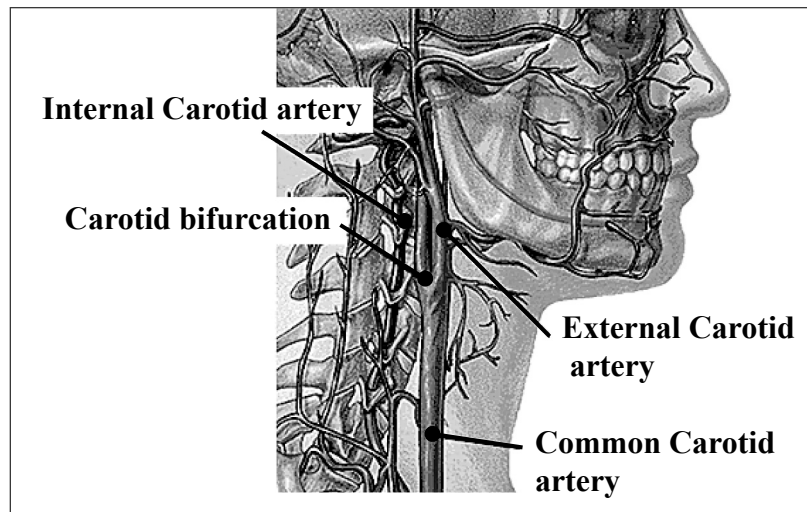
*Please:*

- Read the booklet carefully
- Share it with your family
- Ask questions if there is anything you don’t understand
- Pack the booklet with your belongings and bring it with you when you are admitted to hospital.

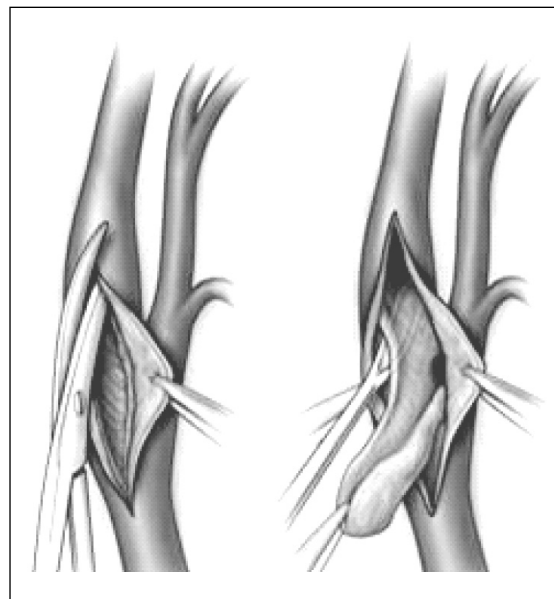


## Your Condition and Your Surgery

The Carotid artery is the main artery that supplies blood to the brain. Midway up the neck, this artery divides into two branches called the internal and external carotid arteries. Deposits of fat called plaques can build up along the artery walls causing a narrowing of the artery and a reduction in blood flow to the brain. Small pieces of plaque called emboli can break off and block a section of artery causing temporary blindness, numbness/tingling/ of the face, arm and/or leg and speech difficulty. These symptoms may be temporary and are called transient ischemic attacks or TIA's.



When you arrive for your surgery the nurse will apply a cream to the side of your neck that the surgeon is going to operate on. This cream will numb the skin of your neck. The surgeon makes an incision on the neck area. The surgeon clamps the artery above and below the blockage. The brain receives blood from the carotid artery on the other side of the neck and other vessels. Sometimes the surgeon inserts a detour so the blood can circulate around the artery that is being repaired.



An incision is then made directly into the blocked section. Next, the surgeon peels out the plaque deposit. After removing the plaque your artery is stitched up. The clamps are removed to allow the blood to flow in the artery again. The incision in your neck is closed. The procedure is done under local anesthetic and last about 3 hours.

The following pages show the clinical pathway for your condition. There is more detailed information after the clinical pathway.

## Clinical Pathway For Carotid Endarterectomy

	Pre-Admission	Day of Admission	Post-op Day of Surgery (PACU)
<b>Consults</b>	<ul style="list-style-type: none"> <li>Anesthesiologist</li> <li>Home Care if necessary</li> </ul>	<ul style="list-style-type: none"> <li>Home Care if necessary</li> </ul>	<ul style="list-style-type: none"> <li>Home Care if necessary</li> </ul>
<b>Tests</b>	<ul style="list-style-type: none"> <li>Blood tests, chest x-ray or cardiogram if ordered by your surgeon</li> </ul>	<ul style="list-style-type: none"> <li>Blood tests if required</li> </ul>	
<b>Medication</b>		<ul style="list-style-type: none"> <li>Emla cream to operative site</li> <li>Antibiotic</li> </ul>	<ul style="list-style-type: none"> <li>Pain medication as needed</li> </ul>
<b>Assessment / Treatments</b>	<ul style="list-style-type: none"> <li>Blood pressure both arms</li> <li>Neurovital signs</li> </ul>	<ul style="list-style-type: none"> <li>Intravenous</li> </ul>	<ul style="list-style-type: none"> <li>Intravenous</li> <li>Anti-nausea medication</li> <li>Vital signs</li> <li>Neurovital signs</li> <li>Neck girth</li> <li>Dressing</li> <li>Drain</li> <li>Oxygen saturation</li> <li>Ice pack to neck</li> <li>Cardiac monitoring in PACU</li> </ul>
<b>Activity</b>			<ul style="list-style-type: none"> <li>Head of the bed at 30°</li> <li>Deep breathing and coughing</li> <li>Ankle exercises</li> </ul>
<b>Nutrition</b>			<ul style="list-style-type: none"> <li>No eating or drinking for 4 hours after surgery</li> </ul>
<b>Elimination</b>			<ul style="list-style-type: none"> <li>Catheterization if unable to void</li> </ul>
<b>Patient Teaching</b>	<ul style="list-style-type: none"> <li>Pre-op instructions</li> <li>Teaching booklets</li> </ul>	<ul style="list-style-type: none"> <li>Pre-op instructions</li> <li>Events/expectation of the surgical day</li> <li>Post-op exercises</li> </ul>	<ul style="list-style-type: none"> <li>Deep breathing and coughing exercises</li> <li>Ankle exercises</li> </ul>
<b>Discharge Planning</b>	<ul style="list-style-type: none"> <li>Plan to go home the day after your surgery.</li> <li>Arrange for someone to be with you at home after your surgery.</li> </ul>		

## Clinical Pathway For Carotid Endarterectomy

	Post-op Day of Surgery In-patient	Post-op Day 1 (Discharge Day)
<b>Consults</b>	<ul style="list-style-type: none"> <li>• Home Care if necessary</li> </ul>	
<b>Tests</b>		
<b>Medication</b>	<ul style="list-style-type: none"> <li>• Patient's own medication</li> <li>• Pain medication as needed</li> </ul>	<ul style="list-style-type: none"> <li>• Patient's own medication</li> <li>• Pain medication</li> </ul>
<b>Assessment / Treatments</b>	<ul style="list-style-type: none"> <li>• Vital signs</li> <li>• Neuro-vital signs</li> <li>• Neck girth</li> </ul>	<ul style="list-style-type: none"> <li>• Vital signs</li> <li>• Neuro-vital signs</li> <li>• Neck girth</li> <li>• Dressing over drain site is removed and left open to air.</li> <li>• Dressing over incision is removed and replaced with Mepore dressing that will remain in place for 48 hours</li> </ul>
<b>Activity</b>	<ul style="list-style-type: none"> <li>• Up with assistance</li> <li>• Activity as tolerated</li> </ul>	<ul style="list-style-type: none"> <li>• Activity as tolerated</li> </ul>
<b>Nutrition</b>	<ul style="list-style-type: none"> <li>• Full fluids</li> <li>• Low cholesterol diet</li> </ul>	<ul style="list-style-type: none"> <li>• Low cholesterol diet as tolerated</li> </ul>
<b>Elimination</b>		
<b>Patient Teaching</b>	<ul style="list-style-type: none"> <li>• Deep breathing/coughing/ankle exercises</li> <li>• Activity</li> <li>• Pain management</li> <li>• Medications</li> <li>• Care of incision and drain site</li> </ul>	<ul style="list-style-type: none"> <li>• Review post-op instructions with nurse</li> <li>• Activity</li> <li>• Medication/prescription</li> <li>• Wound Care</li> <li>• Diet</li> <li>• Follow-up visit with doctor</li> <li>• PVD risk factors</li> <li>• When to contact MD</li> <li>• Emergency contact</li> </ul>
<b>Discharge Planning</b>	<ul style="list-style-type: none"> <li>• Assess need for Home Care</li> <li>• Confirm plan to be picked up by from hospital by 10 a.m.</li> </ul>	<ul style="list-style-type: none"> <li>• Discharge</li> </ul>



## Preparing for Surgery

Before having surgery it is good to prepare yourself. **Smoking cessation programs are available to assist you to stop smoking.** Contact the University of Ottawa Heart Institute: Prevention and Rehabilitation Centre Heart Check Smoking Cessation Program at 613-761-4753 or [www.ottawaheart.ca](http://www.ottawaheart.ca) or ask the PAU nurse for information.

*Also, practice the following exercises:*

- Foot and ankle exercises
- Deep breathing exercises

## The Day of Surgery – Before the Surgery (Pre-op)

Please follow the pre-op instructions provided by the nurse during your PAU visit.

*Please note the following instructions:*

- If you have been told to take some of your usual medications (such as your blood pressure pills or heart pills) on the morning of surgery, you may take them with a sip of water.
- Bring in your personal care items such as a toothbrush, comb, and shampoo.
- Bring telephone numbers of your spouse/relative who will be helping you, so they can be contacted if needed. Include both the home, cell and work numbers.

## Your Care in Hospital – After Surgery

After your surgery you will awaken in the Post Anesthetic Care Unit (PACU) where you will stay until your condition is stable. You may be expected to spend the night in PACU if your surgeon thinks it is necessary. This is because you require closer observation, monitoring

and nursing care than is provided on a regular unit. When you are stable you will be transferred to your room.

**Visitors are not permitted in PACU.**

### **Assessments**

The nurse will check you often to ensure that you are comfortable and progressing well. Your temperature, heart rate, blood pressure, neck dressing and neck swelling are checked often.

### **Intravenous**

You will have an intravenous (IV) to replace your fluids until you are able to drink and eat well. Do not pull on the IV tubing. When you are walking, use your hand that does not have the I.V. to push the pole.

### **Oxygen**

Extra oxygen is sometimes given through a mask placed over your nose and mouth or by small tubes placed into your nostrils. A small clip on your finger measures the amount of oxygen in your blood. This is called pulse oximeter. The measurement is used to determine if you are getting the sufficient oxygen. The nurses will increase, or decrease the amount of oxygen based on their assessment. The oxygen will be discontinued when appropriate.

### **Pain Management After Surgery**

Your comfort is our concern. It is important that you have effective pain relief. Pain is personal. The amount of pain you feel may not be the same as others feel, even for those who have had the same surgery. Our goal is to help you be comfortable enough to participate in the healing process. Your pain should be controlled enough that you can rest comfortably and that pain does not prevent you from deep breathing, coughing, turning, getting out of bed and walking.

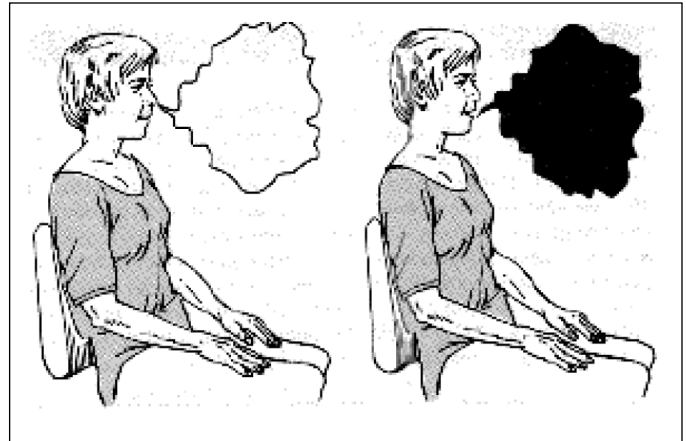
Both drug and non-drug treatments can be successful in helping prevent and control pain. The most common pain control treatments for after surgery are described in the Pain Management After Surgery booklet. You, your doctors and your nurses will decide which ones are right for you to manage your pain. Please read the booklet before your surgery. Bring it to the hospital on the day of your surgery.

## Preparing For Discharge

### Post Operative Exercises

#### **Deep Breathing and Coughing**

After surgery we tend to take smaller breaths. This can be because of pain, anesthesia given during our surgery, or not moving around as much after surgery. Doing deep breathing and coughing exercises post-operatively will help keep your lungs healthy by getting rid of extra secretions.



Deep breathing exercises work best when you are sitting up in a chair or on the side of the bed. Follow these instructions:

- Take a deep breath in through your nose. Hold for five (5) seconds.
- Breath out through your mouth.
- Repeat this exercise ten (10) times each hour while you are awake and until your activity level increases.

*Coughing exercises* help to loosen any secretion that may be in your lungs and should be done after your first five (5) deep breaths. To produce an effective cough:

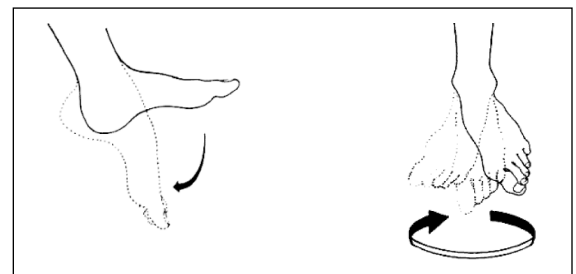
- Take a deep breath and cough.

#### **Ankle Exercises**

Ankle exercises help the blood circulate in your legs while you are less mobile. Do these ten (10) times each hour, while you are awake and until your activity level increases.

*With your legs flat on the bed:*

- Point your toes towards the ceiling.
- Point your toes towards the foot of the bed.
- Move your ankles in a circle clockwise and counter-clockwise.



## **Incision**

You will have a dressing over the incision on your neck. This dressing should be kept on for 48 hours. Keep your dressing dry. If you have steri-strips over your incisions keep these dry. These will fall off eventually.

## **Diet**

After your surgery you will progress from drinking just fluids to your regular diet.

# **Discharge Planning**

When you are discharged from hospital, you may need some help at home. It would be best to arrange for this before being admitted to the hospital. Arrange for someone to pick you up at 10 a.m. on the day of discharge. If you think you will have problems at home, discuss them with your nurse or social worker. You will receive a follow-up doctor appointment and a prescription for medication.

*Be sure you understand about your:*

- Medications
- Exercise program
- Diet
- Any restrictions regarding your surgery
- When to call the doctor for symptoms
- Follow up appointments
- Preventing falls at home

Arrange for someone to pick you up by 10 a.m. on the day of discharge.

## After Discharge

### **Activity**

After you go home, your physician may recommend that you avoid driving and limit physical activities for several weeks. You can usually begin normal activities again several weeks after the operation.

### **Follow-Up Appointment**

Expect to return to see your surgeon in 4 to 8 weeks. If you are unable to keep your appointment, please telephone in advance.

*Call your surgeon immediately if you notice any of the following:*

- Sudden and severe headache
- Signs and symptoms of a stroke:
  - Dizziness
  - Blurred vision
  - Numbness or tingling of one side of the face or side of the body
  - Slurred speech
- Increased temperature (temperature greater than 38.5°C/101°F)
- Discharge/bleeding from your incision
- Separation of the incision
- Swelling in your neck

**If unable to reach your surgeon, please go to the nearest Emergency Department.**

## Contact Information

Vascular Outpatient Clinic – 613-798-5555, ext. 12479.

We hope this booklet has helped in providing you with important information regarding your Carotid Endarterectomy.

— *Surgical Program, The Ottawa Hospital*

