PATIENT INFORMATION

Esophageal Surgery

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

THE OTTAWA HOSPITAL

CP 10 B (REV 08/2016)

Disclaimer

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

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Introduction

You are being admitted to The Ottawa Hospital for Esophageal Surgery. This book will tell you how to prepare for surgery, your hospital stay and care at home after surgery.

Please read and bring this book to the hospital. The Health-Care Team members will refer to this book during your hospital stay.

Health-Care Team

The following members of the health-care team will help you during your hospital stay.

Thoracic Surgeon
The thoracic surgeon and team of surgical residents will discuss your care and answer any questions you might have. The thoracic surgeon will be in charge of your care.

Clinical Manager
The clinical manager provides leadership, direction and supervision to ensure the clinical unit is running effectively and efficiently.

Clinical Care Leader
The clinical care leader assists the manager to ensure the clinical unit is running effectively and efficiently.

Nurse Educator
The nurse educator is responsible for designing, implementing, evaluating and revising academic and continuing education for nurses.

Nurse
The nurse will be responsible for the management of your care; through on-going assessment, and by ensuring that your learning and teaching needs have been met.

Patient Care Assistant

The patient care assistant (PCA) will work with the team to help with your care, for example, by providing baths, getting you out of bed, and assisting you to the toilet.

Physiotherapist

The physiotherapist (PT) will help you regain your functional ability after your surgery **as needed**. This can include improving your lung hygiene, regaining your mobility and building your endurance. You may also work with the physiotherapy or rehab assistant.

Occupational Therapist

The Occupational therapist (OT) will help you to become more independent with the activities of daily living **as needed** and determine if you need special equipment or strategies that will help you when you go home.

Social Work

The Social Worker will meet with you and your family for discharge planning services, counseling, and community information **as needed**.

Dietitian

The dietitian will help you after surgery by reviewing your nutritional needs and teaching you about your J-tube feeds and post esophagectomy diet.

Home Care

The home care nurse will meet you a few days before you leave the hospital to make plans for nursing care at home **as needed**.

6th Floor Observation Unit (Room 6330)

The 6th Floor Observation Unit is a monitoring area located on the Thoracic Unit. The Observation Unit Team includes doctors, nurses, physiotherapists, respiratory therapists, social worker, dietitian and occupational therapists.

6 North-West Thoracic Unit

The Thoracic Unit Team also includes doctors, nurses, physiotherapists, respiratory therapists, social worker, dietitian and occupational therapists.

Things to remember:

- **Your** information is personal and confidential and family cannot be given information over the telephone
- Leave all valuables at home
- There is a visitor's/patient lounge on the 6 North West Unit
- You will be given information about our units upon your arrival

Clinical Pathway – Esophageal Surgery		
	Day of Admission / Surgery Post-Op	**Post-Op Day 1**
Tests	• Blood work • Chest x-ray • Cardiac monitor	• 6 a.m. blood work and chest x-ray
Consults	• Physiotherapy • Respiratory Therapy	• Physiotherapy • Dietitian
Treatments	• Chest tube • Wound dressing • Urinary catheter • Intravenous (IV) • Epidural catheter • Nasogastric (NG) tube • Jejeunosotomy (J) tube • Arterial catheter • Jackson-Pratt (JP) drain • Sequential Compression Device	• Epidural catheter • Wound dressing • Neck dressing if necessary • Urinary catheter • Intravenous (IV) • NG tube • J-tube • Chest tube • JP drain • Sequential Compression Device
Medications	• Patient specific medications • Pain medication – IV or epidural • Oxygen • Bronchodilators	• Patient specific medications • Pain medication – IV or epidural • Oxygen • Bronchodilators • Anticoagulant • Laxative
Activity	• Bedrest • Head of bed 30–45 degrees	• Head of bed up • Up in chair 1–2 hours • Post-op exercises as per patient education booklet • Activity as tolerated • Ambulate 1–2 times per day
Nutrition	• Nothing by mouth	• Nothing by mouth • J-tube feed
Patient and Family Teaching/ Discharge Planning	**Patient Teaching** • Reinforce: – Smoking cessation – Deep breathing and coughing exercises – Foot and ankle exercises – Pain control goals – Positioning – Diet • Discharge to 6th Floor Observation Unit when criteria met	**Patient Teaching** • Patient has **Esophageal Surgery** teaching booklet • Reinforce: – Smoking cessation – Deep breathing and coughing exercises – Foot and ankle exercises – Pain control goals – Positioning **Discharge Planning** • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Esophageal Surgery		
	Post-Op Day 2	**Post-Op Day 3**
Tests	• Blood work and chest x-ray	• Blood work and chest x-ray
Treatments	• Epidural catheter • Wound dressing • Urinary catheter • Neck dressing • Intravenous (IV) • NG tube • J-tube • Chest tube • Weight • JP drain • Sequential Compression Device	• Removal of epidural catheter and urinary catheter if applicable • Remove wound dressing • Neck dressing • Intravenous (IV) • NG tube • J-tube • Chest tube • JP drain
Medications	• Patient specific medications • Pain medication – IV or epidural • Oxygen • Bronchodilators • Anticoagulant • Laxative	• Patient specific medications • Pain medication – IV, epidural or in J-tube • Oxygen as needed • Bronchodilators • Anticoagulant • Laxative
Activity	• Head of bed up • Up in chair 2 hours 2 times per day • Activity as tolerated • Progressive ambulation 2 times per day • Review/revise exercise plan as needed by physiotherapy	• Head of bed up • Up in chair for more than 2 hours, 2 times per day • Activity as tolerated • Progressive ambulation in hall 3 – 5 times per day
Nutrition	• Nothing by mouth • J-tube feed	• Nothing by mouth • J-tube feed
Patient and Family Teaching/ Discharge Planning	**Patient Teaching** • Reinforce: – Smoking cessation – Deep breathing and coughing exercises – Exercise and assistance with ambulation – Pain control goals • Review Discharge Teaching Instructions as per education booklet **Discharge Planning** • Review discharge issues/discharge plan with the patient/family	**Patient Teaching** • Reinforce: – Deep breathing and coughing exercises – Exercise and assistance with ambulation – Pain control goals – Diet: hypaque swallow post-op day 5 • Review Discharge Teaching Instructions as per education booklet **Discharge Planning** • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Esophageal Surgery		
	Post-Op Day 4	**Post-Op Day 5**
Tests	• Blood work and chest x-ray	• Blood work and chest x-ray • Hypaque swallow
Treatments	• Removal of epidural catheter and urinary catheter if applicable • Neck dressing • Intravenous (IV) • NG tube • J-tube • Chest tube • JP drain • Weight	• Neck dressing • Intravenous (IV) • NG tube • J-tube • Chest tube • JP drain
Medications	• Patient specific medications • Pain medication – IV, epidural or in J-tube • Bronchodilators • Anticoagulant • Laxative	• Patient specific medications • Bronchodilators as needed • Anticoagulant
Activity	• Head of bed up • Up in chair for most of the day • Activity as tolerated • Progressive ambulation in hall more than 5 times per day • Review/revise exercise plan as needed by physio	• Head of bed up • Ambulation in hall more than 5 times per day
Nutrition	• Nothing by mouth • J-tube feed	• Nothing by mouth • J-tube feed
Patient and Family Teaching/ Discharge Planning	**Patient Teaching** • Reinforce: – Deep breathing and coughing exercises – Exercise and assistance with ambulation – Pain control goals • Review Discharge Teaching Instructions as per education booklet – J-tube flush • Additional teaching booklets as required • Meet with dietitian – Post esophagectomy diet teaching **Discharge Planning** • Review discharge issues/discharge plan with the patient/family	**Patient Teaching** • Reinforce: – Deep breathing and coughing exercises – Independent ambulation – Pain control goals • Review Discharge Teaching Instructions as per education booklet – J-tube flush • Additional teaching booklets as required • Meet with dietitian – Post esophagectomy diet teaching after passing Hypaque swallow **Discharge Planning** • Review discharge issues/discharge plan with the patient/family

Clinical Pathway – Esophageal Surgery			
	Post-Op Day 6	**Post-Op Day 7**	**Post-Op Day 8**
Tests	• Blood work and chest x-ray as required	• Blood work and chest x-ray as required	
Consults	• Home Care		
Treatments	• Neck dressing • Intravenous (IV) • NG tube removed if swallowing test passed • J-tube • Chest tube • JP drain	• Neck dressing • Removal of chest tube • J-tube	• J-tube • Weight • Discontinue IV fluids • Saline lock until discharge
Medications	• Patient specific medications • Bronchodilators as needed • Anticoagulant	• Patient specific medications • Bronchodilators as needed	• Patient specific medications • Bronchodilators as needed
Activity	• Head of bed up • Activity as tolerated • Progressive ambulation	• Head of bed up • Activity as tolerated	• Head of bed up • Independent activity as tolerated
Nutrition	• Clear fluids (no soft drinks) • Discontinue J-tube feeds	• Full fluids	• Post-esophagectomy diet
Patient and Family Teaching/ Discharge Planning	**Patient Teaching** • Review Discharge Teaching Instructions as per education booklet – J-tube flush • Additional teaching booklets as required • Meet with dietitian – Post esophagectomy diet teaching **Discharge Planning** • Review discharge issues/ discharge plan with the patient/family	**Patient Teaching** • Review Discharge Teaching Instructions as per education booklet • Additional teaching booklets as required **Discharge Planning** • Review discharge plan with the patient/family	**Patient Teaching** • Review Discharge Teaching Instructions as per education booklet • Additional teaching booklets as required **Discharge Planning** • Review discharge plan with the patient/family

Clinical Pathway – Esophageal Surgery		
	Post-Op Day 9	**Discharge Day Post-Op Day 10**
Treatments	• J-tube • Saline lock until discharge	• Weight • J-Tube • Removal of dressing and suture over chest tube site if applicable • Removal of saline lock
Medications	• Patient specific medications	• Patient specific medications
Activity	• Head of bed up • Independent activity as tolerated	• Head of bed up • Independent activity as tolerated
Nutrition	• Post-esophagectomy diet	• Post-esophagectomy diet
Patient and Family Teaching/ Discharge Planning	**Patient Teaching** • Review Discharge Teaching Instructions as per education booklet • Additional teaching booklets as required **Discharge Planning** • Review discharge plan with the patient/family • Confirm 10 a.m. discharge • Confirm Esophageal Surgery education booklet • Confirm additional education booklets	**Patient Teaching** • Take Esophageal Surgery education booklet home • Take additional teaching booklets, as required **Discharge Planning** • Prescriptions provided • Follow-up appointments provided • Discharge by 10 a.m.

Preparing For Surgery

Helpful points before coming to hospital

- **Stop Smoking!** Tobacco in any form should be avoided. This includes pipes, cigars, cigarettes, and chewing tobacco. Tobacco smoke has many harmful substances that damage cells. Smoking places you at risk for lung complications after surgery. Cilia (lining of the airway) help expel secretions. Long term exposure to tobacco smoke destroys cilia and, as a result, you may have more difficulty clearing secretions after surgery.

  It is never too late to stop smoking. Smoking cessation programs can help you stop smoking. Ask for help today.

  Heart Health Education Center: 613-761-4753

  – This six month program involves behavioural therapy; addictive disorders therapy; pharmacologic therapy (nicotine patch or gum); and relapse prevention.

  – Covered by the Ontario Health Card or the Régie d'assurance maladie du Québec

  – Offered in English and in French

  The Public Health Information Line at 613-724-4179

  – Multilingual

- Make plans for help in the home (after surgery), before coming into hospital.
- Look at your Clinical Pathway so you and your family know what to expect on a daily basis.

The Pre-Admission Unit Visit

Before you are admitted for surgery you will have an appointment at the Pre-Admission Unit (PAU). Please bring all of your regular medications, including your over the counter medication and herbal remedies to this appointment.

A nurse and a doctor will see you.

The nurse will ask about your medical history and what medications you usually take.

- Ask you questions and tell you about leg exercises, deep breathing and coughing exercises, pain control and skin preparation. It is helpful if you practice deep breathing and coughing exercises before your surgery (see pages 15 to 20).
- Walking at a moderate pace twice a day for 30 to 40 minutes will improve your conditioning before your surgery.

Morning of Your Surgery (Pre-Op)

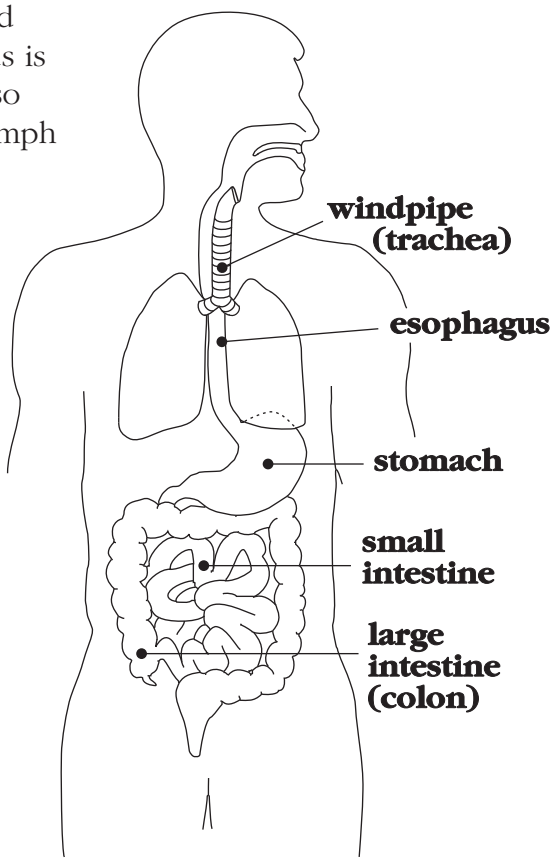
Please follow the pre-op instructions provided by the nurse during your PAU visit.

- 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 the home, cell and work numbers.

Esophageal Surgery

Esophageal Cancer

The esophagus is a hollow tube that carries food and liquid from the throat to the stomach. The esophagus is located in an area called the mediastinum, which also contains the heart, trachea (windpipe), and many lymph nodes. The lungs are separated by the mediastinum.



Cancer of the esophagus is a disease where cancer (malignant) cells are found in the tissues of the esophagus. Cancer may develop at any point along the esophagus. The majority develop in the mid to lower third of the esophagus. The most common sign of cancer of the esophagus is increasing difficulty in swallowing. For some, pain may be felt with swallowing or may be present from behind the breastbone.

Treatment and recovery of esophageal cancer depend on several factors: the type of cancer cells, size, and location in the esophagus, extent of the tumor, individual age, general health and feelings about treatment.

Esophageal cancer can be treated by:

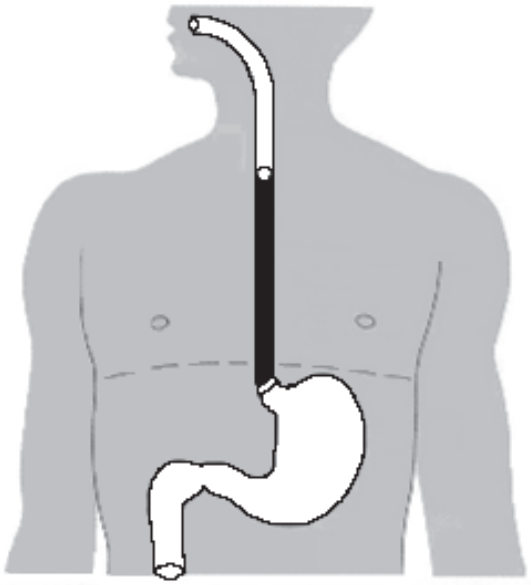
- Surgery (removing the cancer in an operation)
- Radiation therapy (using high-dose x-rays to kill cancer cells)
- Chemotherapy (using drugs to kill cancer cells)

Depending on your needs and the extent of the disease, you may have more than one treatment method. You may be referred to doctors who specialize in different kinds of cancer treatment. Often, these specialists work together as a team to plan and carry out your care.

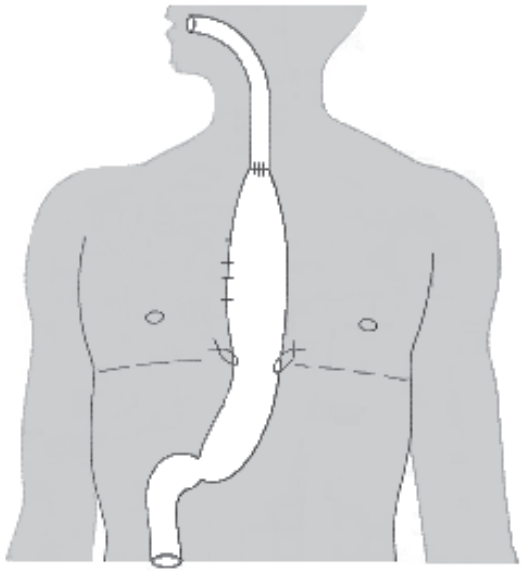
Surgery

Surgery is a common treatment for cancer of the esophagus. The thoracic surgeon may remove all or part of the esophagus and part of the stomach in an operation called an esophagectomy or esophagogastrectomy. During surgery, incisions are made in the chest, abdomen or neck. The chest wall incision will usually extend from mid back around to mid front. The surgeon removes the tumor along with a portion of the esophagus, nearby lymph nodes, and other tissue in the area. Usually, it is possible to connect the stomach to the remaining part of the esophagus. In a few cases, the surgeon forms a new passageway from the throat to the stomach. Tissue is used from another part of the digestive tract (such as the colon or small bowel) to replace the esophagus. During surgery, a feeding tube (jejunostomy or J-tube) is often inserted into the bowel for extra nutritional needs.

The surgery is performed under a general anesthetic; therefore, you will not be awake. The length of the surgery may take up to 8 hours.



Before surgery



After surgery

After Surgery (Post-Op)

Following surgery, you will awaken in the Post-Anaesthetic Care Unit (PACU). You will remain there for four to six hours and then be transferred to the 6th Floor Observation Unit (room 6330). You will be transferred to the 6 North West Thoracic Unit when you no longer require frequent observation and monitoring.

Pain Management

The goal is well-controlled pain at rest and with activity. With good pain control at rest, you will be comfortable enough to sleep. With activity, there may be some increase in pain but the pain should not prevent you from deep breathing and coughing and moving about as well as you like.

You will have a pump containing medication to help control your pain. The pump will be connected to your intravenous (IV) or a small tube placed in your lower back (epidural catheter). The anesthesiologist will decide what type of pain medication and the best method for you to receive this medication in order to control your pain. There are two types of medication used:

- **Pain killers (opioids):** This may be given with the IV or the epidural catheter. If you receive pain killers only, you will be given a hand held controller. Press the button on the controller as soon as the pain starts, if you know your pain will worsen when you start walking or doing breathing exercises or a few minutes before your physiotherapy session starts is a great way to prevent the discomfort. Do not permit family or friends to push the handset for you.
- **Freezing (local anesthetic):** This is used only with the epidural catheter. If you receive freezing you will not have a controller. The pump will work by delivering medication continuously through the epidural catheter.

Your pain will be assessed using a scale of 0–10. Zero is no pain and 10 is the worst pain possible. You will be asked to rate your pain level, both while resting and during activity. In addition, you will be asked if the pain prevents you from moving and if you are satisfied with your pain control.

If you have received “freezing”, the nurse will ask you to move your legs and will also test the feeling around your epidural catheter. These assessments will help determine how effective your treatment is and whether changes in the pump or medication are needed.

Inform your nurse if you have any of the following:

- itching skin
- nausea and/or vomiting
- unrelieved pain
- heaviness in your legs

- tingling or numbness
- increased sleepiness

After a few days and when you are able to take pain medication by mouth or through the jejeunosotomy tube, the pump will be removed.

Chest Tube(s)

After chest surgery, extra air and fluid tend to collect in the chest cavity. One or two chest tube(s) will be placed around the lung in the chest (pleural space). The chest tube(s) is/are connected to a drainage system to help drain the fluid and air. Expect to see blood in the tube(s). An x-ray of your chest will be taken daily for the first few days to monitor your progress. The tube(s) is/are usually removed after a week.

You should avoid lying on the chest tube(s) while in bed. Do not pull on the chest tube(s). You will be helped to walk in the hall while the chest tube(s) is/are in place. Tell your nurse if you find it hard to breathe.

Intravenous (IV)

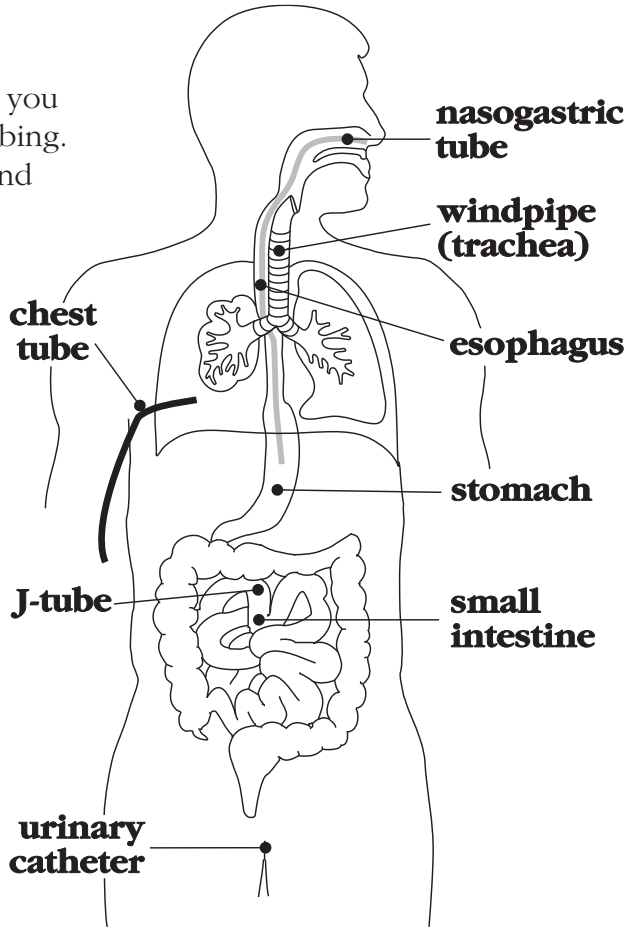
You will have an IV to replace your fluids until you are able to drink well. Do not pull on the IV tubing. When walking, push the IV pole using your hand that does not have the IV.

Urinary Catheter

You will have a urinary catheter (tube) to drain urine out of your bladder. This catheter will be removed after a few days.

Nasogastric Tube (N/G)

You will have a tube inserted in your nose and down into your stomach. This N/G tube drains fluid from your stomach while you are healing and will be connected to wall suction. The tube is usually removed after the barium swallow test shows that there are no leaks in the esophagus.



Jejunostomy Tube (J-tube)

You will have a tube (J-tube) inserted through the abdomen and into your small bowel (jejunum). This J-tube will be used to feed you starting the first day after your surgery and until you are able to eat food by mouth. The dietitian will review your nutritional requirements and determine the nutritionally complete formula for your J-tube feeds. You

will leave the hospital with this tube in place in the event that you require feeds at home. While in hospital, the nurse will flush the tube to keep it clean. You and your family will be taught how to care for this tube when you are home.

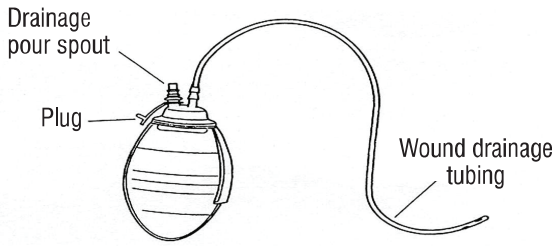
Wound Care

The incision(s) are usually closed with sutures or staples. The dressings on your incision(s) are usually removed after a few days if there is no drainage.

You will have a dressing at your chest tube site that will be changed every three days or as needed.

Jackson-Pratt Drain (if required for Open Surgery)

The surgeon *may* insert a small drainage tube at the time of surgery. It is used to collect excess discharge that sometimes collects around the area of the anastomosis. It will be in place for a couple of days before being removed by the nurse.



A ***Jackson-Pratt*** removes fluid that would collect at the incision.

Oxygen

Oxygen is an important part of the air we breathe. Sometimes the body may require extra oxygen. During your hospital stay, you may receive extra oxygen. This is given through a mask placed over your nose and mouth or small tubes placed in your nostrils (nasal cannula).

The amount of oxygen in your blood is tested by placing a small clip on your finger. This is called pulse oximetry. This test is used to check that your body is getting the right amount of oxygen. When you no longer need extra oxygen, it will be removed.

Hypaque Swallow Test

This may be done on post-op day 5, 6 or 7. This test is done to ensure that you are healing well from your surgery and that it is safe for you to eat and drink. This test is done in the radiology department where you will drink liquid containing barium that coats your esophagus and stomach. X-rays are then taken.

Deep Breathing and Coughing

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

- Take a deep breath in through your nose. Hold for three seconds. Breathe out through your mouth slowly.
- Repeat this exercise 10 times each hour while you are awake and until your activity level increases.

Coughing exercises help to loosen any secretions that may be in your lungs. These can be done after your first five deep breaths.

To produce an effective cough:

- Support your incision with a small pillow or blanket.
- Take a deep breath and cough.

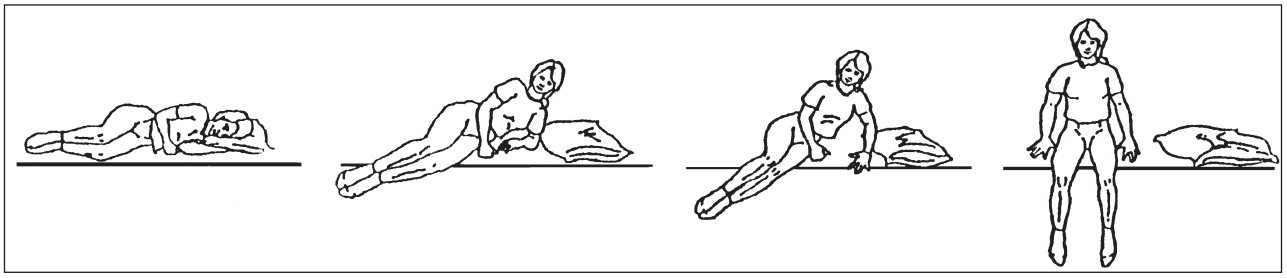
Moving in Bed

While you are in bed, it is important to move. Do not worry about the tubes you have in place, however avoid lying on your incision and chest tube. Move every 2 hours while awake.

- Support your incision with a small blanket or pillow.
- Bend your knees and roll from your non-operative side to your back.

Getting Out of Bed

- Roll onto your side where there is no incision.
- Place your upper hand on the bed below your elbow.
- Raise your upper body off the bed by pushing down on the bed with your upper hand and pushing up with your lower elbow.
- Swing your feet and legs over the edge of the bed and bring your body to a sitting position.
- Practice doing this at home.



Post-Thoracotomy Exercises

Initially, exercises should be done hourly while awake. Repeat exercises five to 10 times or as advised by your physiotherapist. All exercises should be done slowly and continued once at home for at least two weeks.

The goal of these exercises is to help fill your lungs with air and to clear your lungs of secretions.

Verify your posture regularly in front of a mirror. You may tend to lean towards your operated side and that shoulder may drop down and forward. Try to correct yourself as much as possible:

Bad posture

Good posture

Deep Breathing Exercises

1

- Relax your shoulders while sitting with one hand gently on your stomach just below the rib cage.
- Breathe in slowly while trying to inflate your stomach (you should feel it expand). Hold for three seconds and relax. This is diaphragmatic breathing.

2

- Sit with your hand on the surgical side of your rib cage.
- Breathe in deeply while trying to expand your rib cage sideways against your hand.
- Hold for three seconds and breathe out.

3

- Take a **deep** breath in and hold for three seconds.
- Let the air out slowly through your mouth breathing out **as long as you can**.
- This may help to cough up secretions.

4

- Supported cough: put a folded blanket or pillow on your incision.
- While squeezing blanket or pillow over your incision, take a deep breath and try coughing as hard as you possibly can.

5

- Ankle pumping: move ankles up and down regularly to achieve a pumping effect.

Arm and Shoulder Exercises

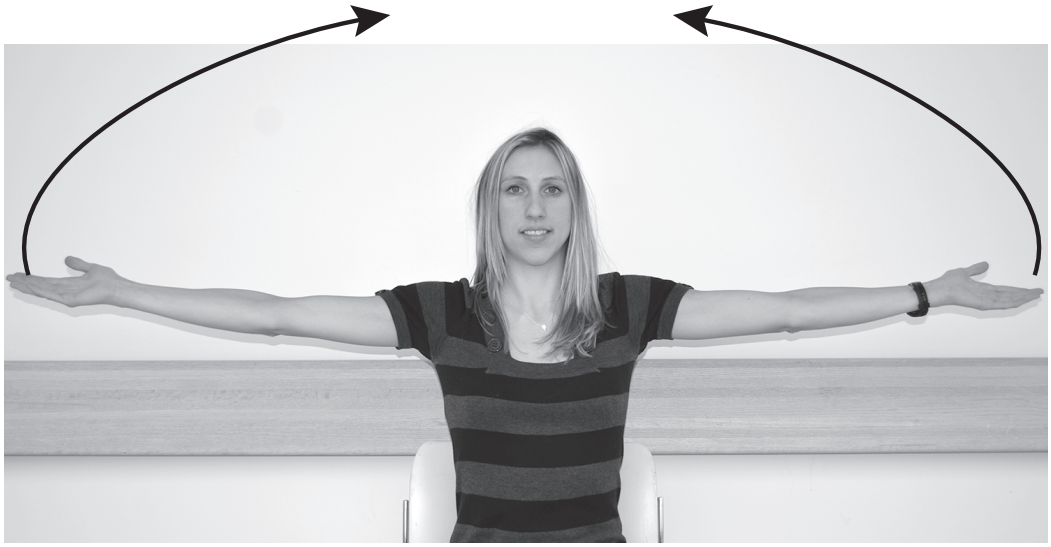
6

- Sitting, lift arms up in front of you (elbows straight) while breathing in.
- Lower arms while breathing out.

7

- Sitting or standing, roll your shoulders in one direction then repeat in the other direction.

8



- Sitting, lift arms up sideways (elbows straight and palms facing the ceiling) as high as possible reaching for the ceiling.
- Breathe in while going up and out while coming down.

Rib Cage Mobility Exercises

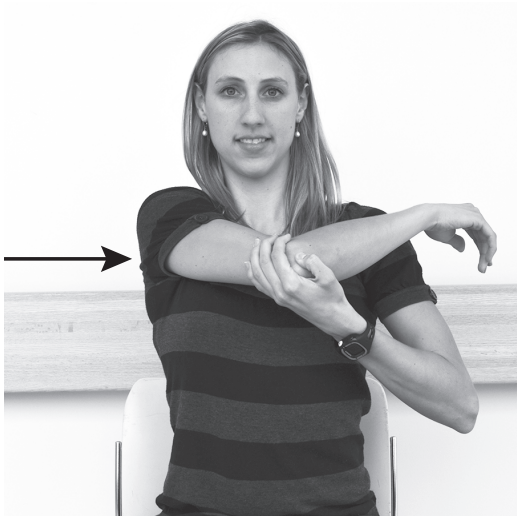
❾

- Sitting or standing, bring one arm up sideways as high as possible while the other arm is reaching towards the floor.
- Try not to lean forwards or backwards for better stretch.
- Hold for five seconds and relax. Repeat with other arm.

⑩

- Sitting with crossed arms on your chest, rotate the upper trunk in one direction.
- During the exercise, keep your trunk straight.
- Hold for five seconds and repeat in other direction.

⑪



- Sitting or standing, with your hand on the side of surgery, reach to touch your opposite shoulder.
- Use your other hand to pull on the elbow in the direction of movement-hold for five seconds and relax.

⑫

- Sitting or standing, lift both arms so that your shoulders and elbows are at 90 degree angles.
- Squeeze your shoulder blades together backwards and hold for five seconds.
- Keeping your elbows at the height of your shoulders, try touching them together forward and hold for five seconds.

Walking

Walking is an important part of your recovery. At first you will need help from your physiotherapist or nurse. Frequent short walks during your hospital stay will help fill your lungs with air and regain your strength. You should continue these walks at home while slowly increasing the distance walked. The goal is to walk 30 minutes twice daily within two to four weeks of being home.

Going Home

- This exercise program should be done slowly and continued at home for at least two weeks.
- Do not lift more than 10 pounds for six weeks.

Discharge Teaching Instructions

When you are discharged from hospital, you may need general help at home. **It is best to make plans before being admitted to hospital for your surgery.** Discuss your discharge plans with your nurse.

Look at your Clinical Pathway as this will give you and your family an idea of what to expect on a daily basis.

Before leaving the hospital, make sure you have:

- Your prescription for your medication.
- Information regarding a follow-up appointment to see your Thoracic Surgeon in about one to two weeks.
- Arranged for someone to pick you up at **10 a.m.** on the day of discharge.

Be sure you understand information related to the following, as well as any additional informatlion not provided in this booklet.

Activity

- Continue with the shoulder/arm exercises, deep breathing exercises, and walking as discussed with your physiotherapist.
- Avoid strenuous exercise including lifting heavy objects, grocery bags, shoveling snow and pushing a lawn mower until after you have seen your doctor on your first follow-up appointment.
- Resume your regular activities gradually over 6 weeks. Discuss any specific concerns with your doctor.

- Do not drive your car until after you have seen your surgeon on your first follow-up appointment, and while taking narcotics to manage your pain.
- Avoid hyperextension of your neck (leaning head back sharply), as this puts extra stress on the internal neck stitches.
- Take frequent rest periods as necessary. Let your body be your guide.

Wound Care

- Observe the incision for increased redness, tenderness, drainage, and open areas. Notify your family doctor and the thoracic surgeon if any of these occur.
- Swelling or bruising may appear around the wound. This may continue for several weeks.
- There may be a dressing at the chest tube site when you go home. You can remove the dressing 48 hours after the tube(s) were taken out. There may also be a stitch at the chest tube site. This can be removed by your family doctor/walk in clinic (48 hours after your chest tube is removed).
- Shower or tub bath as you prefer. Avoid hot tubs, jacuzzis and saunas. Soaking in a tub for long periods may delay healing of your incision. Clean your incision with mild soapy water and pat dry.
- Wear loose clothing while your wound is still tender.
- Continue with exercises to prevent scar tissue and prevent chronic pain.

Medication

- Take your prescribed pain medication as you need to, for example, before going to bed or prior to activities. You should expect pain for a length of time after discharge.
- If you are permitted add fiber to your diet to avoid constipation from the pain medication e.g. bran, whole grains, fruit. A laxative or stool softener may be necessary until your bowels are regular.

J-Tube Care

If you are going home requiring tube feeding, a patient teaching guide will be provided to you. You and your family members will be taught on how to care for your J-tube at home. Home Care services will be arranged for equipment and follow-up.

If you DO NOT require tube feeding at home, the nurse will teach you how to care for your tube. Home Care services will be arranged **only if necessary**.

If the J-tube falls out, go to the nearest Emergency department as soon as possible to avoid closure of the incision.

Post-Esophagectomy Diet Progression: Food lists, J-tube feeding

You will experience several types of diets. Your diet will change based on your rate of recovery and how well you can tolerate food. In general, your diet will be progressed as follows:

1. Clear fluid diet
2. Full fluid diet
3. Post-esophagectomy diet

Depending on the surgeon, you may be going home on a clear fluid diet and progress to full fluid and later to the post-esophagectomy diet on your own at home. Because the amount of liquid you will be taking orally will be limited, you may be going home on feeding (liquid formula) via your J-tube. The j-tube feeding will be delivered using a feeding pump that will run at night (usually from 4 p.m. to 8 a.m.). The dietitian will give you specific information regarding the progression of your diet and your tube feeding regimen.

The following guidelines are provided to help you manage symptoms you may experience after an esophagectomy.

To prevent fullness (early satiety):

1. Eat small frequent meals for example, five small meals per day instead of three main meals. A small meal consists of a maximum volume of two cups of foods or less if you feel full.
2. Eat slowly, take small bites and chew your food well.
3. Drink liquids on their own instead of with meals (i.e., 30 minutes before or after the meal).

To prevent reflux:

1. Remain sitting for 45 minutes after eating or drinking.
2. Avoid eating or drinking two hours before going to bed.
3. Do not lie flat when resting or sleeping. Elevate the head of your bed or use pillows or a foam wedge.
4. Eat smaller amounts of food more often throughout the day to avoid over-filling your stomach.
5. Avoid spicy and acidic foods; i.e. black pepper, hot peppers, citrus fruits/juices, tomato based products.
6. Avoid alcohol and smoking.

To control diarrhea:

1. Avoid foods with large amounts of sugar; i.e. ice cream, milk shake etc.
2. Avoid foods that are natural laxatives; i.e. prunes, figs, flax and licorice.

3. Eat slowly, take small bites and chew your food well.
4. Drink liquids on their own instead of with meals; i.e. 30 minutes after meals.
5. If diarrhea becomes severe, call a dietitian or your surgeon.
6. Eat only until you feel full.

To avoid weight loss:

Weigh yourself weekly. If you are losing weight, call the dietitian who followed you during your hospital stay or who is following you in the community to know how to increase your caloric intake.

Food Lists

1. Clear fluid diet:

- Clear juice (apple, grape, white grape, cranberry—no orange or grapefruit juice)
- Clear broth (chicken, beef or vegetable)
- Flavoured gelatine (i.e. Jell-O)
- Weak tea or decaffeinated coffee (no milk or cream)

Carbonated drink and alcohol are not allowed for 8 weeks after surgery.

Note: _____

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2. Full fluid diet:

A full fluid diet contains all the liquids allowed on a clear fluid diet and you can add:

- Smooth yogurts (no seeds, no pieces of fruit, no granola)
- Smooth puddings
- Ice cream or sherbet
- Milk
- Soy milk, almond milk, rice milk
- Cream soups (avoid tomato based soups)
- Liquid nutritional supplements (i.e. Ensure, Boost, Breakfast Essentials)
- Thin cream of wheat or oatmeal (small flakes like the instant oatmeal)

Dairy products may cause diarrhea. You may need to avoid milk and other milk-based product (pudding, yogurt, cream soup) and used lactose-reduced milk and yogurt or soy-based beverages.

Notes: _____

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Post-Esophagectomy Diet

The food included in the following Post-Esophagectomy Diet Guidelines should be soft and moist; therefore, thorough cooking, adding sauces and/or gravies to foods are recommended. **Take small bites and chew well to make a smooth paste or puree.** Avoid eating very hot or very cold food.

Food Group	Food Recommended	Food to Avoid
Breads and Cereals	• Cooked cereal and dry cereal softened with milk. • Pasta; rice, crushed crackers, melba toast in soups; **toast**; plain cookies (Arrowroots, Social Teas, Digestives) dipped in milk, tea, coffee.	• **Fresh or "doughy" untoasted breads**, rolls, bagels, "doughy" pastries, and all those containing coconut, nuts, seeds or dried fruits • Bran cereals, Muslix, granolas
Fruits	• Soft, canned or fresh fruit with stones and skin removed, e.g. bananas, peaches, mangos, nectarines, cantaloupe, honey dew melons. • All fruit juices • Canned fruit, applesauce	• Hard apples, pears, pineapple, rhubarb, dried fruit, grapes, berries, kiwi. • Orange, pineapple, grapefruit juice.
Vegetables	• All **soft** cooked vegetables with seeds and skin removed; (i.e. turnips, carrots, potatoes parsnips). • Peas, broccoli, cauliflower.	• Raw vegetables. **salads, carrot sticks** etc; tough or stringy cooked vegetables (i.e. spinach, brussel sprouts, cabbage, potato skins, bean sprouts, tomatoes, beans, asparagus), French fries, vegetable juices.

Food Group	Food Recommended	Food to Avoid
Meats/Alternatives	• Minced meat (chicken, pork or beef) with gravy, sauce or broth; deboned fish; moist casseroles and stews; scrambled, poached or soft boiled eggs; cheese spread, cheese, cottage cheese, tofu.	• Dry or tough meats, hard-boiled eggs, stringy cheese (e.g. mozzarella). • Steak, pork chop, dry sausage. • Pizza, hot dog, hamburger and other fast food • Fried food • Legumes, e.g. lentils, chick peas, pork and beans
Fats	• All smooth peanut butter, oil margarine, butter, mayonnaise	• Crunchy peanut butter
Soups	• All provided they do not contain foods to avoid	
Desserts	• Pudding, custard, gelatin desserts, yogurt, ice cream, sherbet and fruit whip made with recommended fruit	• Cake, pie or pastry, all desserts with nuts, seeds or dried fruits
Miscellaneous		• Hard candies, hard caramel • Coconut, nuts, seeds, food and candy containing these; popcorn, soft drinks, alcohol drink

Sample Menu (1800 kcal, 80 g protein)

Breakfast
- ½ cup instant oatmeal (add sugar and cream)
- ½ cup of flavored Greek-style yoghurt
- ½ cup low acid juice
- 1 cup of decaf. coffee taken 30 minutes later

Mid-morning snack
- 1 cup of high calorie, high protein drink

Lunch	• ½ cup of cooked ground beef with gravy or ½ cup of canned tuna mixed with mayonnaise • ½ cup soft mashed potatoes (margarine or butter added) • ½ cup soft mashed carrots (margarine or butter added • ½ cup *high protein milk • 1 cup *high protein milk taken 30 min. later
Mid-afternoon snack	• 1 cup of high calorie, high protein drink
Supper	• 1 cup stew or pasta with extra sauce • ½ cup pureed fruit • ½ cup *high protein milk • Tea or decaf. coffee taken 30 min. later

*** High protein milk: 1 cup of skim milk powder mixed in 1 litre of 3.3% M.F. milk**

Snack Suggestions:

- Cheese and fruit
- Commercial oral supplements (i.e. Ensure, Boost, and Breakfast Essentials)
- Crackers with margarine/butter and cheese or peanut butter
- Custards, puddings
- Cream soups
- Yogurt with recommended fruit i.e. bananas, peaches
- Toast with butter or margarine and cheese or peanut butter
- Milk/juice

The clinical dietitian will review the post-esophagectomy progression diet with you approximately one week after your surgery. Questions and concerns will be discussed with you at that time. Do not hesitate to ask the clinical dietitian when he/she is in to see you.

When to Call the Doctor or go to the Emergency Department

Call your doctor if you have any of the following:

- Chills or fever (temperature greater than 38.5°C)
- Increased pain, redness, swelling or drainage or open areas in the incision.
- Persistent cough
- Difficulty breathing
- Blood in sputum
- Increased trouble swallowing or increased nausea and vomiting.

- Trouble flushing the J-tube
- Discharge from around the J-tube
- Swelling in your leg(s)

Go immediately to Emergency at the General Campus if the J-tube falls out.

Follow-Up

You will see your Thoracic Surgeon in two to three weeks after you leave the hospital. Your appointment will be at the Ages Cancer Assessment Clinic located at the General Campus, 7th floor, Room 7410 ***or*** the 6th Floor Clinic located at the General Campus, 6th floor, Room 6310.

You will need to have a chest x-ray before your appointment. Please go to Module X on the 2nd floor 45 minutes before your appointment. The requisition for your chest x-ray will be there. During this visit, your thoracic surgeon will listen to your lungs, check your incision, review your chest x-ray and review your pathology. Discuss any specific concerns you may have at this time with your surgeon.

If you wish to contact your thoracic surgeon for any post-operative issues or to reschedule your appointment, etc. Please call **613-737-8845** for assistance.

The Thoracic Surgeons:

- Dr. S. Gilbert
- Dr. D.E. Maziak
- Dr. A.J.E. Seely
- Dr. F.M. Shamji
- Dr. R.S. Sundaresan
- Dr. P. J. Villeneuve

Resources

The diagnosis and treatment of esophageal cancer may have a major impact on you and the people close to you. The disease may affect your physical, emotional, social, spiritual and practical needs. As a result, you may experience many issues. There are many resources available within the hospital, community and internet to help you and your family.

The Ottawa Hospital Learning Services

Do you need help finding more information about your disease?
Please email Learning Services at learningservices@toh.on.ca.

Publications

- *Coping With Cancer Magazine*
  Published bi-monthly phone: 615-790-2400
  E-mail: Copingmag@aol.com
- *What You Really Need to Know About Cancer: A Comprehensive Guide for Patients and Their Families*. R. Buckman, Key Porter, 1995.
- *Everybody's Guide to Cancer Therapy: How Cancer is Diagnosed, Treated, and Managed Day to Day*. M. Dollinger, E.H. Rosenbaum, G. Cable. Sommerville House, 1995.
- *Living with Lung Cancer: A Guide for patients and their Families*, 4th Edition. Available in the consumer Health Library or Trial Publishing Co., P.O. Box 13355, Gainsville, Florida 32604

Telephone

- **Canadian Cancer Society** 1-888-939-3333

General informaltion on health

- **www.canadian-health-network.ca**
  The Canadian Health Network (CHN) is a national, bilingual Internet-based health informatlion service. Health Canada, its founding Partner, provides funding for CHN.
- **www.nlm.nih.gov**
  U.S. National Library of Medicine. Select "Medline Plus" to find information for patients on cancer and other health topics. You can search the Medline database (PUBMED) for free from this site.

General information on cancer

The web sites in this section are from national, government, non-profit and professional organizations and contain general information on cancer treatment, prevention, support etc. and links to other sites. If you are looking for informaltion on rare cancers, you may wish to check these sites.

National organizations:

- **www.cancer.ca**
  Canadian Cancer Society – includes information about prevention, treatment, support in the community. Many booklets are available in PDF format.
- **cancer.org** – American Cancer Society

Government and non-profit organizations

- **cancercare.on.ca**
  Cancer Care Ontario is the agency of the Government of Ontario that oversees provision of cancer care in the province. Practice guidelines, drug information and links to the other Cancer Centres in Ontario are found here.
- **www.cancer.gov**
  U.S. National Cancer Institute's site. Treatment and supportive care information for patients and health professionals. Clinical trials information is available here.
- **www.cancercare.org**
  Cancercare. Offers treatment informatlion, spoortive care and many free publications. U.S.
- **www.cancerindex.org**
  Guide to Internet Resources for Cancer. Extensive resources for cancer information from around the world. A good source for information on rare types of cancer. U.K.
- **www.hc-sc.gc.ca**
  Health Canada's Web site. Has information on many health-related topics, as well as cancer. Also has information on nutrition.
- **www.oncolink.org**
  Oncolink, from the University of Pennsylvania Cancer Centre, is an excellent source of treatment, clinical trial, support information and cancer news. U.S.

Professional organizations:

- **www.asco.org**
  American Society of Clinical Oncology. ASCO is the professional organization which represents cancer physicians.
- **www.astro.org**
  American Society for Therapeutic Radiology and Oncology. Includes patient information on radiation therapy and related links.

Cancer Web Resources

- Canadian Cancer Encyclopedia: **www.thecanadianencyclopedia.com/en/article/cancer/**
- CancerNet (U.S. National Cancer Institute): **www.cancer.net**
- Wellspring (cancer support group): **www.wellspring.ca**
- The Ottawa Hospital – Thoracic surgery web site: ***www.ottawahospital.on.ca***
  Click on: Health Professionals, Surgery, Thoracic Surgery, Patient Information

We hope this book has helped to guide and support you at this time. The information comes from team members and patients like yourself. Your suggestions are important.

The Division of Thoracic Surgery asks for your support in attaining Excellence in Patient Care, Research and Education. The Division of Thoracic Surgery has research accounts. Please consider a donation. All donations are tax receiptable. Your gift is greatly appreciated.

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