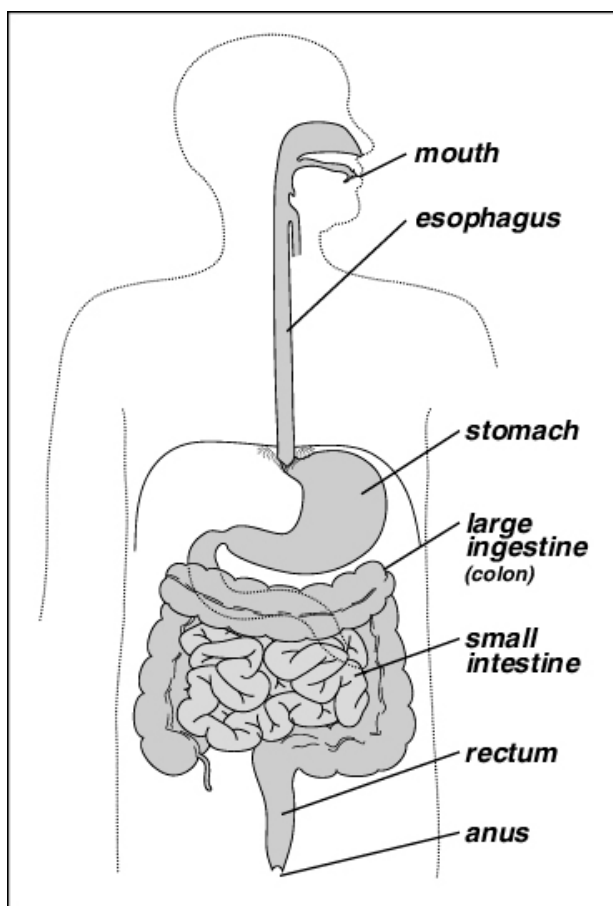


Esophageal Surgery



Your Pre-Esophagectomy Check List

The purpose of this check list is to make sure that you will have a smooth discharge from the hospital after your surgery. For this to occur, these items need to be arranged **before** your surgery.

- Arrange for someone to be at home with you 24/7 for the first week once discharged from the hospital.**
 - This person needs to be able to help you with getting in and out of bed, prepare food, change dressings, and start tube feeding if needed.
- 12 inch wedge, 12 inch bed lifts, or adjustable bed needs to be ordered.**
 - See page 6 (Esophageal Surgery booklet) for information on where to buy these.
- Med Alert bracelet ordered.**
 - See page 7 (Esophageal Surgery booklet) for suggested wording and ordering information.
- Have at least 5 days' worth of an esophageal full liquid diet at home.**
 - See page 8 (Esophageal Surgery booklet) for a list of foods.
- Quit smoking.**
 - See page 9 (Esophageal Surgery Booklet) for resources.
- Complete your pre-operative work up.**
 - See page 9 (Esophageal Surgery Booklet) for more information.
- Complete your bowel prep before surgery.**
 - See page 10 for more information.

The purpose of this booklet is to help you prepare and learn about your esophageal surgery. This contains information you need to know before, during and after your hospital stay. If you have any questions please call the Thoracic Surgery Clinic at **(608) 263-5215**.

Your esophagus

Understanding esophageal surgery is important in planning for your hospital stay and recovery. This picture shows your esophagus and stomach. Your doctor may use the picture to describe what happens with your esophagus and explain what may happen during surgery.

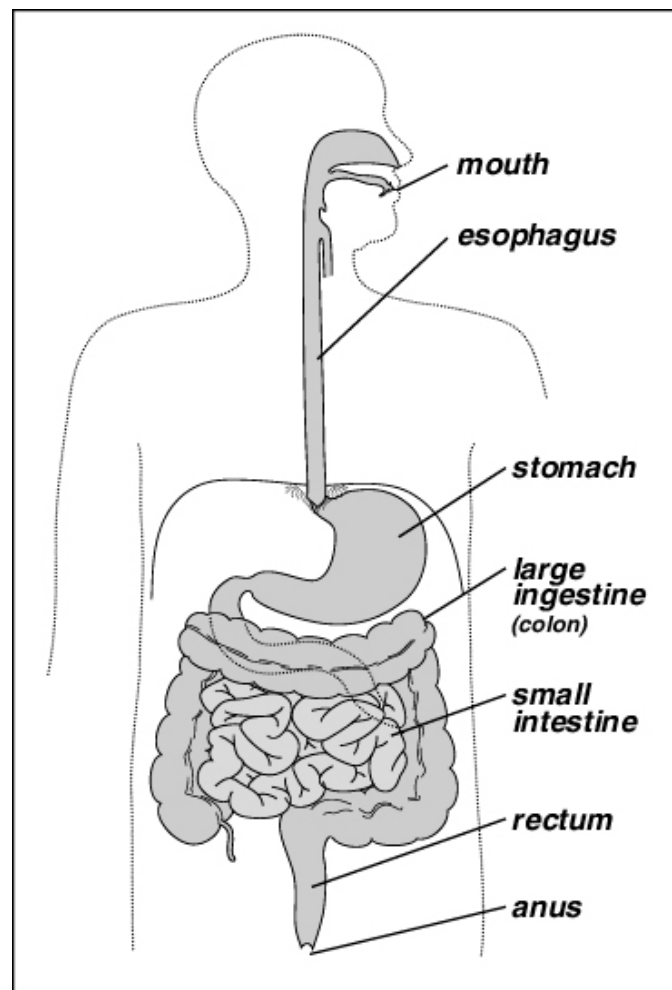


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Esophagogastrectomy

This is a surgery where most of your esophagus and in some cases, part of your stomach is removed. The rest of your stomach is made into a tube to replace the part of the esophagus that is taken out. The tube is then reattached to the upper end of the esophagus so you can still swallow as before.

Why is it done?

It is done as a treatment for esophageal cancer, Barrett's esophagus with high-grade dysplasia (pre-cancerous cells), or for end stage achalasia (failure of the muscles of the esophagus to relax making it hard to swallow).

How is it done?

There are a few ways to do an esophagectomy. You may have an incision in your neck, abdomen, and/or chest. If it can be done in a minimally invasive fashion with a laparoscope (a small camera) you will have five to seven tiny incisions in your chest and/or abdomen. The location and number of incisions depends on 2 main factors. These factors include: the reason for the operation (if it is for cancer, the location of the tumor may decide what kind of incision is needed) and if you have had any chest or abdominal surgeries in the past. Your surgeon will discuss with you how the operation will be done and where the incisions will most likely be made.

How long will I be in the hospital?

You will be in the hospital for about 6 to 12 days. Your entire hospital stay will be on the Cardiothoracic Unit B4/5 (5BWest).

Pages 5-8 contain important information. It is crucial that you read and understand this before your surgery.

Equipment You Will Need After Surgery

Your lifestyle will change as a result of this surgery. After this surgery you will **never** be able to lie flat again due to the change in anatomy that occurs.

You will have to purchase either a 12” wedge, 12” bed lifts or a bed that allows you to elevate the head since this surgery will require that the head of your bed is greater than 30 degrees at all times.

You must do this because the sphincter (muscle) that prevents food from leaving your stomach and going up into your esophagus is removed. You will now have a straight open tube that makes it easy for food to move up into your esophagus and into your lungs. If this occurs it is called aspiration. Aspiration can lead to pneumonia or in severe cases trouble with breathing that may require you to come back to the hospital and need a breathing tube.

Keeping your head raised greater than 30 degrees prevents food from backing up into the esophagus and going into your lungs.

Sleeping with two or three pillows is not acceptable. Pillows only lift your shoulders and head. Your entire upper body must be at an angle.

Most insurance companies will not cover the cost of the wedge. But save your receipt and submit it to your insurance company in case they do.

If you want to get a hospital bed for home, you will need to call your insurance company to see if they will approve the use of it. Not all insurance companies will cover the cost of hospital beds.

Page 6 includes information on where you can purchase wedges or bed lifts for your home.

We also suggest that you order a medical alert bracelet before surgery that states that you cannot lie flat. Information on getting a medical alert bracelet can be found on page 7.

Wedge or Bed Lift Information

Keeping Your Head of Bed Greater Than 30 Degrees

In order to keep your head of bed greater than 30 degrees you must buy either a 12 inch wedge, 12 inch blocks to place under your bed, or purchase a bed that allows you to elevate the head. **It is important that you buy these items before surgery so that you can get used to sleeping with them.** (All prices below are as of October 2013)

Wedges

Walgreen's: (<http://www.walgreens.com>)

- Essential Medical Bed Wedge 12" \$49.99
- Mason Medical 12" \$29.99
- Contour Products folding wedge 12" \$49.99

Wal-Mart

- Drive Medical \$25.19
- DMI foam 12" \$29.10

Medial Home Care (<http://www.medicalhomecareinc.com>)

- 12" Wedge (with cover either white or blue) \$37.00

Medical Supply Depot (<http://www.themedicalsupplydepot.com>)

- Hermell bed wedge 24"x24"x12" \$31.49

Bed lifts

When these are ordered, they will most likely come in a set of 4 or 6. You just need to place the risers at the head of the bed. You will need to order the 12" lifts.

Medical Alert Information

We strongly suggest that you purchase some type of medical ID jewelry. This will help protect you from being placed flat especially if you receive health care treatment outside of UWHC, or if you are found during a medical crisis and can't share your health history. The medical alert information will allow the health care provider to contact UWHC so that your health history can be shared.

Suggested wording

(Info on the front of the bracelet or necklace)

Do not lay flat
HOB >30° all times
UWHC 608-263-6400

(Info on the back of the bracelet or necklace)

Thoracic Surg Resident
Esophagectomy Pt.

Walgreens (www.IdentifyYourself.com/Walgreens)

- Starting at \$29.99
- Bracelets and Necklaces

Monroe Speciality Company

- 1-800 628-0165 <http://monroespecialty.com>
- Cost \$21.95
- Bracelets and Necklaces

American Medical Identifications

- 1-800-363-5985 or www.americanmedical-id.com
- \$21.95 – \$189.95
- Bracelets and necklaces

If you choose to use Medic Alert, please note that they will not engrave our direct phone number on the bracelet. Rather, they will engrave their phone number and charge a yearly fee to maintain info that includes our phone number.

Or consult your local pharmacy

Buying Food For After Surgery

Eating at home after surgery

After surgery you will need to change the way you eat for a while. This page will guide you in shopping for food that you will be allowed to eat once you are home. You will be given more information about your diet when you are in the hospital.

The first 2 weeks you are home after your surgery you will be receiving most of your nutrition through a feeding tube; however, you will also be allowed to eat a “full liquid” diet. You can tell if a food is a full liquid if you can imagine it going through a kitchen strainer.

Examples of full liquid foods

Cream of Wheat Cereal

Carnation Instant Breakfast Drink®

Boost®

Sherbet

Ice cream

Jell-O®

Juices (Not tomato)

Creamed soup strained (Not tomato or broccoli)

Pudding (Not chocolate)

Yogurt

Applesauce

Clear broth (chicken, beef, or vegetable)

About 1 week after you leave the hospital you will be getting a phone call from the Thoracic surgery department to see how you are doing and to see how eating is going for you. Your diet may be changed at that time. Otherwise, about 2 weeks after you leave the hospital you will have a follow-up clinic visit. At that visit we will discuss whether you can advance your diet to “soft solids” and in many cases remove the feeding tube if you are tolerating eating. Until that time you need to stay on the full liquid diet.

Over time you will advance to a “normal diet.” There are no set rules as to when you will be able to return to eating the foods you ate before surgery. Once the doctor states that you may resume your normal diet, you will want to add one new food item each day and see how your body tolerates it before adding another food. It is important to go slow. Meats (steak, etc.) and doughy breads (bagels, etc.) give patients the most trouble. These foods should be reintroduced last and with caution, making sure to chew well.

Many patients after esophagectomy may have some degree of delayed gastric emptying (food sits longer in your stomach) and stricture (narrowing), at the reattachment site. You may notice some nausea, fullness in the chest, food sticking (especially with meats and breads), and pressure in the chest. Make sure to tell your doctor if you have any of these symptoms. A procedure performed with a small scope called a dilation may help get rid of these symptoms. On occasion, more than one dilation may be needed.

Preparing for Surgery

What can I expect before surgery?

There are a number of tests you will need before surgery, called a work up (including pre-operative history and physical exam, lab work, and other tests). You will need to complete a pre-operative history or physical exam either with the surgeon, your primary care provider, or your cardiologist. You will need to have lab work. All of these must be done within 30 days of surgery. You will also have other tests, such as a breathing test, an echocardiogram and/or a stress test depending on your health history (to look at your heart), and a CT scan of your chest and abdomen, a PET CT, and a brain MRI. You might have an endoscopy as an outpatient a week or two before the surgery (to look down your esophagus).

How do I prepare for surgery?

You can do a few things to get yourself “in shape” ahead of time.

- Start walking. Try to walk at least twenty minutes most days of the week. If you haven't been active, start slowly – 5 or 10 minutes a day – and slowly increase the time. You will be walking at least 4 times a day in the hospital after surgery.
- Eat well-balanced, nutritious meals. If you are not able to eat or are losing weight, call your surgeon right away. Good nutrition will help you heal. Poor nutrition or weight loss will delay healing and may lead to problems such as infection. You may supplement your diet with nutritional drinks such as Ensure[®], Boost[®], or Carnation Instant Breakfast[®] or by adding protein powder to your meal.

- If you smoke, you need to stop now. If you are smoking within 10 days of surgery, we will cancel the operation. Smoking puts you at a much higher risk for getting pneumonia after surgery. If you need help, call the Smoking Cessation Clinic at **(608) 263-0573** or contact your primary care provider for help with quitting.
- If you are coming from out of town, you may wish to stay in Madison. A Housing Accommodation Coordinator, **(608) 263-0315**, can provide you with a list of nearby motels and arrange for your stay at a discount rate.

Bowel Prep

What about a bowel prep?

You will need to complete a bowel prep before having this surgery.

At least 3 days before you are scheduled for surgery you need to stop at your local pharmacy and buy **2 bottles of magnesium citrate - 10 oz. each**

Bowel prep instructions

2 Days before Surgery: drink at least 6-8 glasses of clear liquids. You need to keep drinking so you do not become dehydrated.

- Drink only clear liquids.
 - Water, sparkling water or soda
 - Broth
 - Juice without pulp (apple, grape)
 - Popsicles
 - Gatorade G3 Recover[®] /silver label Bottle only (+ protein)
 - Clear Jell-O[®] (no fruit, etc. in it) NO Jell-O[®] cups
 - Coffee or tea, no creamer
 - Gatorade[®] Crystal Light[®]
- No solid food today and do not drink juice with pulp, dairy products, or alcohol.

_____ **9:00 am**, drink magnesium citrate 1 bottle. It is best to drink it chilled. Magnesium citrate may give you loose stools and some cramping. It could take from 30 minutes – 8 hours to work. You may have frequent bowel movements for several hours after drinking it. Do not take any medicines by mouth while you are drinking the bowel prep because they may not be absorbed.

_____ **10:00 am**, drink a second bottle of magnesium citrate 10 oz. You may have frequent bowel movements for several hours after drinking it.

1 Day before Surgery

- Drink only clear liquids all day (see above). Drink at least 6-8 glasses of clear liquids today. You need to keep drinking so you do not become dehydrated.
- Shower before bed and in the morning before leaving home with Hibiclens®.

Do not eat or drink anything after midnight the night before surgery.

Do not take any oral medicines while you are drinking the bowel prep because they may not be absorbed.

If you get severe stomach pain, feel light-headed or have not been able to have a bowel movement, call the Surgery Clinic **(608) 263-7502**. After hours, ask the paging operator for the Thoracic Surgery Resident on call. You will be asked for your name and phone number. The doctor will call you back.

The Day of Surgery

When you arrive the day of surgery, you will report to the First Day Surgery Unit (D6/3) two hours before your operation. The exact time will be provided to you the day before surgery.

The operation will last about 6 to 8 hours, sometimes longer. Family and friends waiting for you should wait in the Surgery Waiting Area in the C5/2 module just past the D elevator lobby on the 2nd floor. They will be given updates throughout the day.

After surgery, you will be brought to your room on B4/5 (5B West). You may need intensive care (ICU) for one night (you may have a breathing tube), and the next day you may be graded either as an Intermediate Care or General Care patient. You will remain on the same unit B4/5 (5B West) until you are sent home.

A little bit about B4/5

B4/5 Cardiothoracic Surgery and Heart/Lung Transplant
(608) 263-8720

When your loved one arrives to the unit, we will let you know. It will take 1-2 hours after arrival before they will be ready for visitors.

Communication and privacy are important. Please choose one family member to call and receive updates. The contact person should pass along important updates to others.

To help provide the best care, please avoid calling during patient rounding:

6:30-8:30 AM

6:30-8:30 PM

Thank you for choosing UW Hospital and UW Cardiothoracic Surgery. If you have any questions, please **ask us!** We are here to help.

After Surgery

What to Expect After Surgery – Tubes & Lines

You will have a number of tubes, drains, and equipment after your surgery. Some types of tubes that are used for esophageal surgery include:

Arterial line – This tube is like an IV except that it goes into an artery in your wrist or at the bend of your elbow. It is used to keep track of your blood pressure and for drawing blood samples. **It is often removed the day after surgery.**

Heart monitor – You will have electrode patches with wires attached that check your heart rhythm. Once you no longer need the ICU, the wires will be attached to a small box so you can walk in the halls. **The monitor is often removed on the 4th or 5th day.**

Nasogastric tube – A tube that goes from your nose to your stomach to help prevent you from getting nauseated. **It is often removed the second day after surgery.**

Foley catheter – A tube that drains urine from your bladder and collects in a bag. **It is often taken out the day after surgery.**

Nasal cannula – You will be given oxygen through plastic prongs that go just inside your nose. Most patients need the extra oxygen for a few days.

J-tube – This is your “feeding tube.” You will get a J-tube during your surgery and will be going home with it. This tube ensures that you are getting good nutrition since you will not be eating a lot of food for the first few weeks after surgery. **It is usually removed at your 2 week follow up visit once you are discharged from the hospital, if you are tolerating adequate oral intake.**

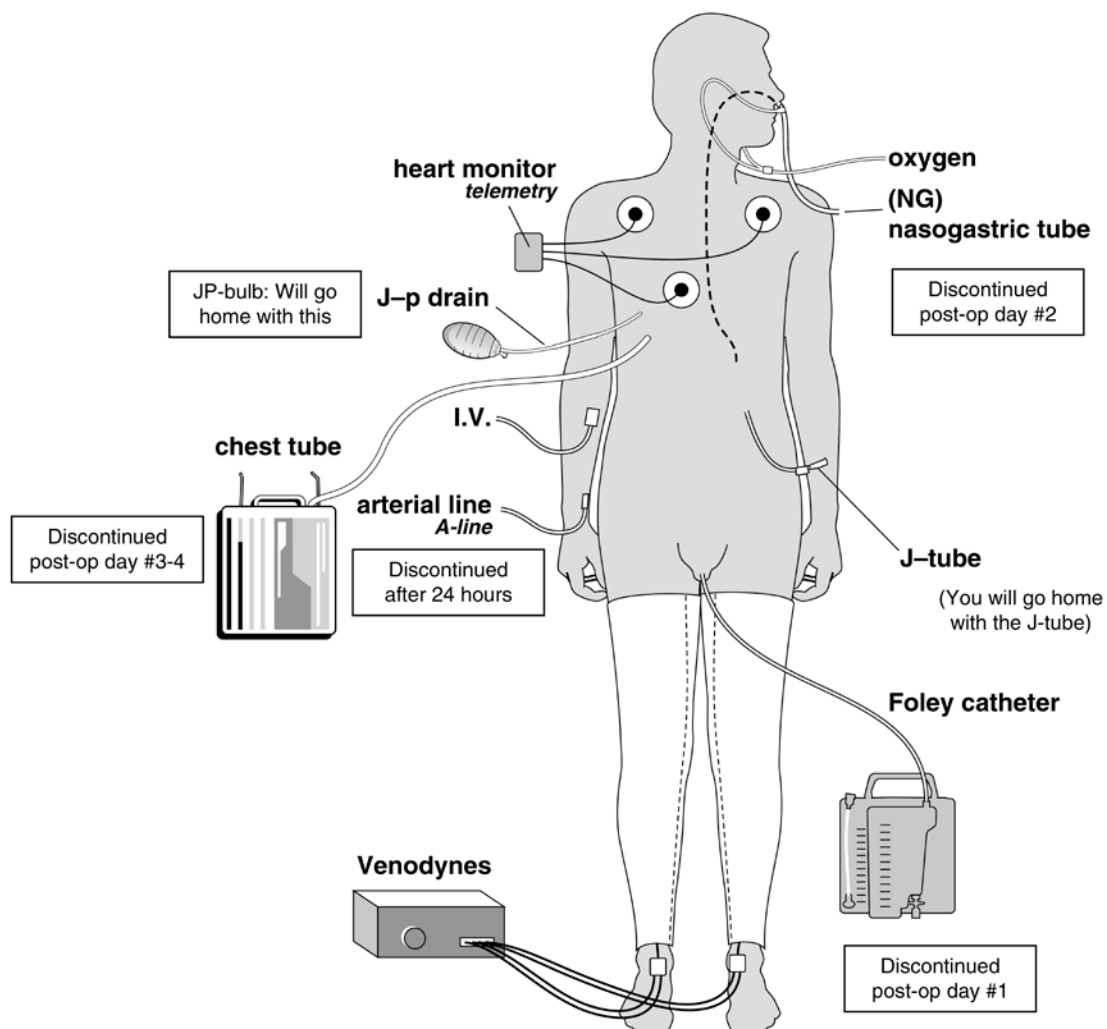
Jackson-Pratt drain – A small rubber drain that comes out near the neck incision (if you have one), or from your chest. A small bulb at the end of the tube collects fluid. You will be sent home with this drain. You will be taught how to care for it while you are in the hospital. **It is usually removed at your 2 week follow up visit once you are discharged from the hospital if output is low.**

Chest tube – A tube placed in your chest to help re-expand your lung after surgery and drain fluid or air that gathers there. It connects to a drainage container that makes a bubbling sound. **The chest tube is often discontinued on the 3rd or 4th day after surgery.**

Intravenous tube (IV) – A tube that goes into a vein so that medicines and fluids can be given to you. You will have a larger IV (central line) that will be placed in the neck. **This larger neck IV will typically be removed on the 2nd or 3rd day after surgery.**

Venodynes – These are soft wraps around your legs that prevent blood clots and decrease swelling. They cycle on (tighten) and off (loosen) to help increase blood flow through your leg veins. **They are removed once you are walking 3-4 times a day in the hallway.**

Below is a picture showing the lines and tubes you will have after surgery.



Pain Medicine and Activity

Will I have pain after surgery?

Yes, you will have pain in the incision area and general soreness after surgery. We will make every effort to help you feel as comfortable as we can. After surgery you will be given a patient controlled analgesia pump (PCA). A PCA pump is a pump that gives pain medicine into your veins. You will be able to control the amount of pain medicine by pressing a button.

After a few days we will transition you to a liquid pain medicine that you can get through your feeding tube. Once you are allowed to eat, you can take the liquid medicine by mouth. It is very important that your pain is managed well so that you can cough, do your deep breathing exercises, and walk. Please let us know when your pain **first** begins. Waiting until your pain becomes severe limits how well the medicine works.

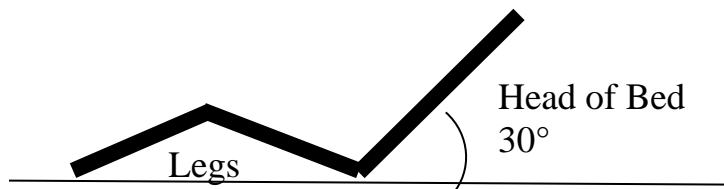
How about activity after surgery?

It is best to be active soon after surgery. Being active will help prevent pneumonia and blood clots and help you get your strength back quicker.

The night of surgery you will be helped to sit in a chair. The next day you will begin walking in the halls with the help of a nurse. You will need to walk at least 4 times each day. You should be able to walk a little farther each day.

You must **never** lie flat; your upper body will need to be at 30° or higher at all times. Your hospital bed will be locked so it cannot go lower than 30°. While in bed your legs will also be raised so that you cannot slide down in the bed.

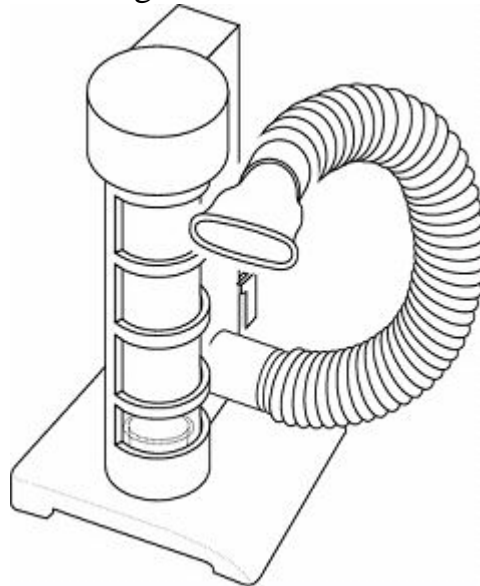
While in bed, your bed will be in this position.



You will need to keep your lungs healthy while in the hospital so it is important to exercise them. You will be given a piece of equipment called an incentive spirometer. It is very important that you use your incentive spirometer 10 times every hour you are awake.

How to Use Your Incentive Spirometer

1. Hold the unit upright, breathe out as usual and place your lips tightly around the mouthpiece.
2. **Take a deep breath.** Inhale enough air to **slowly** raise the Flow Rate Guide between the arrows.
3. **Hold the deep breath.** Continue to inhale, keeping guide as high as you can for as long as you can, or as directed by your nurse or respiratory therapist.
4. **Breathe out and relax.** Remove the mouthpiece and breathe out as usual. After each long, deep breath, take a moment to rest, relax, and breathe normally. Repeat this exercise 10 times an hour while you are awake, every day you are in the hospital or as directed by your nurse.
5. Cough after using your breathing tool ten times.



Eating after Surgery

Will I be able to swallow?

The muscles you use to swallow will still be there after the operation. You will need to swallow very carefully at first when you start to drink and eat. Sometimes, the liquids or food will go down “the wrong pipe” and cause you to cough. To avoid coughing or choking when you eat, follow these steps.

- Sit up straight in a chair
- Take a sip of liquid (or bite of food; chew well)
- Tuck your chin down toward your chest
- Turn your head to the right
- Swallow

What about my diet?

You will need good nutrition after surgery. To ensure that you are getting good nutrition you will get a J-tube (feeding tube) during your surgery. While in the hospital and when you go home, you will be fed through your feeding tube for 18 hours of the day (3pm -9am). It is very important that you take good care of your feeding tube. You will be instructed by the nurse on how to flush your J-tube before and after starting tube feeds, giving liquid medicines, and every 4 hours when not getting the tube feeds to prevent it from getting clogged.

Around post-op day 3 you will be getting a swallow study done in the hospital to check to make sure your “new esophagus” looks good. Once the swallow study is complete and your doctor has had time to look at the results, they may start you on a clear liquid diet. You will only be allowed to drink 1-2 ounces of clear liquids every hour on that day. Your nurse will provide you with small plastic cups so that you can measure out that amount.

It is **very** important that you do not drink too much the first few days to weeks after surgery. Your esophagus needs time to heal. If you drink too much it can cause the surgical site to come apart slightly and allow food and other materials to escape your esophagus and enter your chest space. This can cause infections and may mean that you will need to stay in the hospital longer.

Depending on how you progress, the amount and type of foods you can eat will change. You will start with 1-2 ounces of clear liquids every hour. (You do not have to force yourself to drink every hour; this is what you can have). The next day you will usually be allowed to drink 3-4 ounces of clear liquids every hour. After that if the clear liquids are going well, you will be able to drink 3-4 ounces of full liquids, such as cream soups, yogurt, pudding, applesauce and ice cream. This is what you will be going home on at least until your 1 week follow up phone call. This may not seem like a lot of food but remember that during this whole time you will be getting tube feeds to provide you with adequate nutrition.

A Clinical Nutritionist will come and see you before you are discharged and go over information about what you can eat when you go home. You will receive another *Health Facts for you* #368 (Diet after Esophageal Surgery), with more information.

Going Home

Incision Care – Pain Control - Activity

Taking care of your incisions

Shower or wash your incisions daily with mild soap and water. You may have small tape strips (steri-strips) on the incisions. It's OK if they fall off. When you return for your first clinic visit, any steri-strips or stitches that remain will be removed.

Call your doctor if you notice any signs of infection

- Swelling
- Drainage
- Tenderness
- Fever over 100.5° F taken two times, 4 hours apart
- Increased redness around the incisions.

Pain control

You will most likely have some pain after you leave the hospital, mainly as you start to become more active at home. You will be prescribed liquid pain medicine that you can drink. Pain medicine can cause constipation so you may need to take a stool softener. Be sure to use the pain medicine as needed. You will not get addicted to it. You can also use liquid acetaminophen (Tylenol®) or liquid ibuprofen (Motrin®) for pain.

Activity

You need to walk every day. You will most likely feel tired quickly and may need an afternoon rest for the first week or two. You can begin doing your normal activities with these restrictions:

- **Never lie flat**; you need to sleep with your upper body at a 30° angle.
- No driving for 2-4 weeks or while you are taking pain medicine. Ask your doctor when you can start driving again.
- No lifting over 10 pounds (a gallon of milk) for 4 weeks.
- At your first clinic visit, ask your doctor about when you can return to work or do other activities that you have enjoyed.

Medicines – Sexual Activity - Mood

Medicines

Before you leave the hospital, you will be taught about the medicines you are to take at home. If they are new, you will have prescriptions for them. The pharmacist will tell you how you are supposed to take your medicine before you are discharged.

Sexual activity

As you feel better, it is common to resume having sex. At first you may not feel like being close because you may feel that you don't have the energy. Or you may worry about the incision. These are very normal feelings. Just remember, use good common sense. When you feel ready, move slowly from hugging and holding to other sexual activities. Regaining this part of your life is an important part of recovery.

Mood

It is common to have some changes in your feelings or mood for a number of weeks after your surgery. You may feel uncertain, scared and maybe even be depressed. Your energy level and appetite may vary at times.

Plan to do things within your limits that you enjoyed doing before surgery and that helped you to feel good about yourself. Share activities with your family and friends and talk about your feelings. Keep in mind that people do much better when they feel as though they have support. When you feel able, call people and have them stop by for short visits. Take the time to read or enjoy your favorite hobbies. And above all, make the most of the support you have available to you.

Contact Information and Resources

If you have any questions or problems please call:

Surgery Clinic: Mon-Fri 8:00am – 4:30 pm, **(608) 263-7502**

Dr. Maloney, Dr. Macke and Dr. McCarthy can be reached at **608-263-6551**.

If you live out of the area, please call **1-800-323-8942**.

After hours, nights, weekends and holidays, the clinic phone number above will be answered by the paging operator. Ask for the thoracic surgery resident on call. Leave your name, and phone number with area code. The doctor will call you back.

“If you are a patient receiving care at UnityPoint – Meriter, Swedish American or a health system outside of UW Health, please use the phone numbers provided in your discharge instructions for any questions or concerns.”

Resources

Cancer Information Service (CIS)

1-800-422-6237

The Cancer Information Service, a program of the National Cancer Institute, includes a telephone service for cancer patients and their families and friends, the public, and health care professionals. The staff can answer questions and can send booklets about cancer. They also may know about local resources and services. One toll-free number, **1-800-422-6237**, connects callers all over the country to the office that serves their area.

American Cancer Society (ACS)

1599 Clifton Road, N.E.

Atlanta, GA 30329

1-800-227-2345

The American Cancer Society is a voluntary organization with a national office (at the above address) and local units all over the country. It supports research, conducts educational programs, and offers many services to patients and their families. To obtain information about services and activities in local areas, call the Society's toll-free number, **1-800-227-2345**, or the number listed under "American Cancer Society" in the white pages of the telephone book.

Your health care team may have given you this information as part of your care. If so, please use it and call if you have any questions. If this information was not given to you as part of your care, please check with your doctor. This is not medical advice. This is not to be used for diagnosis or treatment of any medical condition. Because each person's health needs are different, you should talk with your doctor or others on your health care team when using this information. If you have an emergency, please call 911. Copyright © 5/2016 University of Wisconsin Hospitals and Clinics Authority. All rights reserved. Produced by the Department of Nursing. HF#4281