# Preparing for your Transhiatal Esophagectomy

Pre and Post Operative Information

**Department of Thoracic Surgery**

MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

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## What is a transhiatal esophagectomy?

It is the removal of the esophagus, through incisions in your abdomen and your neck. Please feel free to access our Thoracic Surgery Website. Please share this information with your family, and view the video below to help with any questions you may have. If you do not have access to a computer, please let us know so we can help you to get this information.

**Thoracic Surgery Website**

- To learn about Transhiatal Esophagectomy at Michigan Medicine visit: http://www.uofmhealth.org/conditions-treatments/surgery/thoracic
- To view a video on Transhiatal Esophagectomy repair visit: http://careguides.med.umich.edu/thoracic-surgery
  In the Search Box type **Transhiatal Esophagectomy** and select the video from the list.

## Planning for your transhiatal Esophagectomy:

Regardless if you are having this surgery done for cancer, or a benign process, there are a few important steps that need to be taken.

- **Do not** take any nonsteroidal anti-inflammatory medication (e.g., Motrin Ibuprofen, Aleve) or aspirin products for 1 week prior to your surgery date.
- **Do not** take Plavix at least 1 week before your surgery date
- **Do not** smoke cigarettes for at least 4 weeks prior to your operation; you may be tested the day of your operation to make sure you have not been smoking; if you have been smoking, your operation will be cancelled.
- **Do** walk up to 2-3 miles a day prior to surgery to get yourself in the best shape possible.
- **Do** use your incentive spirometer at least 30 times a day (10 slow breaths 3 times a day), and **DO** bring your incentive spirometer with you

the day of your operation. You can leave it in the car or with your family member or friend until after surgery, when your friend/family member can bring it to you.

- **Do** bring your blue blood sheet with you the day of surgery; you will get this sheet at the time you get your pre-operative labs drawn, which will be done within a few weeks prior to your surgery.

**If you are getting chemotherapy and radiation therapy** before your esophagectomy, it is very important to **keep us posted during your treatment**, as well as **follow the instructions below**.

- In addition to the above, you must maintain adequate nutrition and fluid intake. You may find that you are having problems swallowing either because of your disease or due to swelling from treatment. You may require additional nutrition help. If drinking oral nutrition supplements is not working, then a Dobhoff (nasogastric) feeding tube placed from your nose and into the stomach will be used to assist in your nutrition. **We ask that no feeding tubes, like a PEG or J-tube, be placed surgically or with an endoscope as they may interfere with your esophageal operation.**
- Please keep us notified of your condition during your treatment, especially if you are getting chemotherapy and radiation closer to your home (not at U of M).
- **Prior to surgery you will need another CAT scan and barium swallow, among other studies ordered by your surgeon.**
- We can't stress enough, how important it is that you be in the best shape possible for your operation. This means **walking, using your incentive spirometer, and getting adequate nutrition**. It may be necessary to postpone your surgery if you are having any problems with the above issues.

## Preparation for your surgery

### Bowel Prep

You will need to undergo a bowel prep starting 1-3 days prior to your surgery. Your prep will be determined on various issues related to your diagnosis. There are 2 general preps-

**Magnesium Citrate** –this is the most common prep, used for most of our patients that are having a transhiatal esophagectomy. It will start the day before your surgery, where you will begin with a clear liquid diet. This includes broths (vegetable, chicken or beef), juices (grape, apple, or cranberry), Jell-O (without fruit), popsicles, coffee or tea (without milk or cream), Gatorade, and carbonated beverages. Hard candy, gum, and sugar are OK. Avoid alcohol and all solid food. You should take in at **LEAST 10** cups of fluid this day. In addition to the clear liquid diet (that you will remain on the entire day) you will also need to drink 1-**10 ounce bottle of Magnesium Citrate this day.** It is best if you can drink it mid morning, around 10 am-(you can buy this over the counter at your neighborhood pharmacy).

**Golytely©**-is the prep used, if there is a question that your colon may be needed as your esophageal substitute. This is 3 day prep, and requires a prescription for the medication. You will get further written instructions should this prep be what is required for your surgery.

- **Medications**-Which medication you will need to take or stop prior to surgery will be discussed at your pre-operative/history and physical appointment. As noted previously, you will need to hold any blood thinners (examples Coumadin, Plavix). If you need to transition over to a different type of blood thinner, like Lovenox we will let you know when your last dose of this medication will be.

## Where will the transhiatal esophagectomy be performed?

Your surgery will be performed at the cardiovascular center. You will need to park in parking lot P5, and then go to the 4 th floor and check in at the desk of the surgery family waiting room. This is the location that your family will also remain while you are in surgery. Generally, the surgeon will come out and speak with your family, once the surgery is done.

## What can I expect during the procedure?

You will be escorted to the pre-operative area, after you check into the surgery family waiting room. You will remain in the pre-operative area for one and a half hours to two hours prior to surgery. This is where you will meet with the anesthesiologist. Pain control will be discussed at this time, and an epidural catheter will be placed prior to surgery. General anesthesia is used for surgery. The length of the operation will depend on a multiple issues-however; generally surgery will take about 5 hours.

**After surgery,** when you awake from the general anesthesia **you will have a few tubes and catheters** which are described below. All of these are important and will allow us to monitor you while you are in the hospital.

- **Nasogastric Tube (NG Tube)-**
  Is a tube placed in the operating room through your nose and into your stomach to help evacuate fluid. Normally there are coordinated movements of the muscles of your esophagus through to your rectum that keep food/liquids moving forward. After abdominal surgery, the manipulation of your bowels causes this coordinated muscle movement to slow down or even stop (ileus). In addition, everyone produces and swallows up to 1.5 L of saliva a day. Due to these reasons this tube will remain for about 3 days.

The goal is to prevent fluid from backing up in your stomach, causing nausea and vomiting, which can lead to complications in a surgical setting.

- **Feeding Jejunostomy Tube(J-tube)-**

  This tube is placed in the small intestine (jejunum) during surgery. We will start to give nutrition through your J-tube during your hospital stay. If you are eating fine and your incisions are healing well, you will not need nutrition through the J-tube when you go home. We do leave the tube in place until you return for your post-operative check to make sure you are continuing to eat well and that your wounds continue to heal. For the times when we do need to use the tube to provide extra nutrition, we will make arrangements for the supplies and assistance that may be needed. In this case the tube will remain in place until you are taking in adequate oral nutrition.

- **Chest tube**- This is a tube that is used to drain fluids that often form in the chest after an operation. It is also used to remove any air that may be in the chest after surgery.
- **Epidural**-Is a small catheter that is put in the space around your spine. It is used for pain control; we do encourage use of an epidural catheter. The anesthesiologist will discuss pain control with you on the day/morning of your surgery. The epidural catheter is placed just prior to your surgery due to the special positioning needed to put it in. It is then used after surgery to help control your pain. The catheter is small enough that you can still lie on your back after surgery. The catheter delivers pain medication in response to a button you control when you need pain relief.
- **Patient Controlled Analgesia(PCA)-**This is pain medicine that is infused into your IV and you control with a push button. If you are uncomfortable with the idea of an epidural, or the epidural does not work for you, an alternative is a PCA**.**
- **Foley catheter-** This is a tube placed into your bladder during surgery and used to monitor your urine output. It typically remains in place for up to 3

days after surgery. Epidural anesthesia interferes with emptying of the bladder, so the Foley catheter is not removed until the epidural is no longer needed.

(Normally by post-operative day #3, we are able to start using you jejunostomy tube and can inject liquid pain medications into this tube. At this point we remove the epidural catheter as prolonged use of this epidural can be a source of infection. Six hours after the epidural is removed, your Foley catheter would then be removed).

- **Sequential Compression Devices(SCDs)-** These are wraps that are placed around your legs and used to keep the blood from pooling in the calves. If the blood remains there for a period of time without movement, it can cause a blood clot. Other ways to prevent blood clots after surgery include leg exercises such as ankle circles and pointing your toes to the ceiling then to the wall, you should do each of these 10 times every hour you are awake after surgery. Most importantly you must walk in the hallways after surgery (you may need some help getting up and out of bed the first few times).
- **Intravenous Catheter(IV)-** This is catheter placed into your IV to help give fluids into your veins during surgery and after as needed.
- **Heart Monitor-is a small box that is connected to leads that are place (by tape) on your chest. All thoracic surgery patients are placed on a heart monitor.** This is done to watch irregular heartbeats, about 25% of patients after major chest surgery can develop a specific irregular heart rate called-atrial fibrillation. Should post-operative atrial fibrillation occur, it can usually be corrected with medication and resolves within several hours. Regardless of any irregular heartbeats you may or may not have, most thoracic surgery patients will go home on some type of heart medication. This is used to continue to protect your heart following surgery. Most patients are able to come off of it, or go back to their regular medications, after a period of time. We do ask for help in regulating this medication by

your primary care physician, it is a good idea to have some follow up with your primary care physician, 3-4 weeks after your surgery date.

- **Incentive spirometer (IS) -** This is a breathing exercise device. Along with coughing and walking, it helps to prevent collapse of the lungs and pneumonia.

**We realize that there is pain involved with surgery,** and the pain may interfere with deep breathing and walking. Please let us know if your pain is not well controlled with your epidural, PCA or other pain medicine. There are other medications we can try to make sure you are as comfortable as possible.

## Caring for Yourself after an Esophagectomy

**Pain Management**

- You will be given a prescription for pain medication- **Do Not Take the Medicine on an Empty Stomach**.
- Pain medication can make you constipated. Please eat a high fiber diet, and take in plenty of fluids. If you have problems with your bowels while at home, you can try an over-the-counter laxative (Milk of Magnesia, Ducolax, Fleets enema) to help move your bowels. Please feel free to contact the office if you are having any concerns.
- Gradually you will be able to decrease the amount of medication you require. If you find that you are almost out of pain medication and think you may need a refill, call the office. Be sure to call before you are completely out of pills. Some medication may require a written prescription to be renewed; these medications cannot be telephoned to your local pharmacy.

**Taking care of the Incisions**

- Please wash your incisions with soap and water daily in the shower; no tub baths/swimming pools, hot tubs. **Do not apply creams or ointments directly on the incision until you have seen your doctor for your postoperative appointment.**
- Your feeding tube site also should be washed daily in the shower with warm soap and water. It is not uncommon for there to be a thick, greenish yellow drainage around the feeding tube site. If this happens continue to wash the site with soap and water more than once a day.
- You should seek medical attention if any of your incisions or j-tube site become swollen, red and/or painful
- Your feeding tube will generally be removed at your first post-operative visit, based on your eating, overall wellbeing and potential for additional treatment.

**Activity and Restrictions**

- You will fatigue easily at first, but you will build up strength and energy by being persistent. Walking is an excellent activity for increasing stamina. Begin slowly and increase your activity over time. Walk every day-during inclement weather walk in a shopping mall or inside your home.
- We recommend that you continue to use your spirometer at least four times a day until you are back to your normal activity pattern. The deep breathing improves lung function and helps prevent postoperative complications with lung congestion.
- If you are driving a long distance to your home, we recommend that you get out of the car and walk around every 2-3 hours to help prevent blood clots from forming in your legs.
- You are unable to lift/push/pull anything greater than 20 lbs., for 3 months after surgery

- Generally if you live a distance from Ann Arbor (greater than 5-6 hours), we do ask that you stay within the area for 3 extra days from discharge (so that you are close by for a total of 10 days from when surgery was)-this will be discussed with you prior to your surgery date.

## Post-operative eating and your diet

- The vagus nerve is a nerve that travels along the esophagus and serves your stomach. This nerve senses when you eat and causes a muscle at the end of your stomach (pylorus muscle) to tighten for about two hours after eating, enabling your stomach to hold onto and digest your food, primarily breaking down the fats and sugars in your diet. After some time, this same nerve causes this pylorus muscle to relax and the food that has been broken down into simple fats and sugars gets released into your small bowel for further processing. During an esophgectomy, when your esophagus is removed, this nerve gets removed with your esophagus. We also cut the pylorus muscle to allow for easier passage of food from your stomach (that is now newly relocated into the middle of your chest) into the small bowel. Because of all of these changes, your body will no longer be able to digest fats and sugars in the same manner in which it had before. This can cause patients to sometimes get what is referred to as 'dumping syndrome', abdominal cramping and diarrhea as your small bowel tries to get rid of the food it no longer recognizes.
- Dieticians will meet with you before you get discharged to discuss your meal options and how to monitor for and control these symptoms. You will be given written information about your diet. Your diet may be the hardest part to adjust to after your surgery. We highly recommend keeping a food diary to figure out what may be working for you, and how much you can eat at a time for the first few weeks to a month.

- It is not uncommon for our patients to lose 10-15 lbs. after surgery for several reasons. You will not be able to eat as much now at one sitting, and for a few weeks, food may not taste good, and you may not have an appetite. We encourage patients to eat every 2-3 hours, even if it is a small bit of food and to spice the food up to stimulate your taste buds. You are always welcome to call us to go over what problems you may be having, and we can try to help figure out a different plan, or other choices. It is important to weight yourself twice a week and record this weight in a diary.
- If you notice any problems swallowing, where you need to drink water to "flush the food through", or you have to change what type of food you are eating (to soft type foods), or you notice an increase in phlegm-please call the office, you may need to have a dilation. Dilation is a procedure used to stretch the area -where what is left of your esophagus, and your stomach is connected (anastomosis), this is where there scar tissue could form. A dilation can generally be done in the clinic

## Important Contact Numbers:

Thoracic Surgery Nurses/Clinic Number (734) 936 – 8857

For all medical questions, it is best to call the nurse/clinic first. If there is an urgent issue, call your physician's office number and state the problem.
**Our office hours are Monday thru Friday from 8am-5pm**

After hours or on weekends and holidays call the paging operator at (734) 936 – 6267 and ask for the General Thoracic Surgery Resident on call.

**It does take time recovering from this surgery**; it may take up to 4-6 months to figure out your "new normal" with regards to eating. Please do not hesitate to contact us at the above number or attend one our support group meetings to assist you in this recovery-

## Esophagectomy Support Group

Meets the first Thursday of the month. It is located on the First Floor of the Cancer Center, please park in parking Lot B.

- You can also access the webpage for the support group at the following website: http://www.uofmhealth.org/conditions-treatments/esophagectomy-support-group

- To view a video which contains a group discussion from some of the esophagectomy support group patients visit:
  http://careguides.med.umich.edu/thoracic-surgery
  In the Search Box type **Esophagectomy support group** and select the video from the list.

## Frequently Asked Questions following an Esophagectomy

**How long will I have discomfort?**

The severity of postoperative pain gradually diminishes. By six to eight weeks after surgery, most patients experience only minimal discomfort.

**What about healing of the incisions?**

Complete healing takes time. Sensation (feeling) directly along the incision is often decreased, but will return.

**Why do I feel full after eating so little?**

Although the size of your stomach hasn't changed, the surgery stretches your stomach and places it in a new position. Because of this, your stomach will fill up more quickly. For this reason, we suggest that you eat frequent small meals. Over time, your capacity will increase.

**Why do I sometimes vomit after eating?**

Eating small amounts may fill your stomach and you will feel satisfied. However, because you have not eaten very much, you may try to eat more. By doing this you will overfill your stomach. If you do, some of your food may come back up. Some people experience cramping and diarrhea when they overfill their stomach.

**Will I ever get back to my normal weight?**

People with difficulty swallowing usually lose weight. After surgery, it is not uncommon to lose a few more pounds. With time you will gain back some, but not all of the weight you have lost. You will reach a new set point or 'normal weight.' Following esophagectomy and esophageal replacement with stomach, ⅓ of people lose weight, ⅓ gain weight, and ⅓ stay the same.

**Is fever common?**

A temperature of about 99 degrees is not uncommon after surgery. Patients notice that their temperature tends to be slightly higher in the late afternoon or evening. Doing deep breathing and coughing exercises will help control your temperature. If you have a fever of 101 degrees or above, call this office immediately.

**What can be done to speed recovery?**

Continue your deep breathing and coughing exercises at home, and steadily increase your activity. Snacking throughout the day will help to give you the calories you need to regain your strength.

**What about infection?**

If you are worried about the way your incision is healing, please call the doctor's office. You should report: **fever greater than 101 degrees, redness or increasing tenderness along incision, or excessive drainage from the wound accompanied by fever.** The area around your jejunostomy tube may ooze a thick yellow fluid and may be slightly reddened. This is not abnormal. Keep the area clean with soap and water. If a crust forms, use hydrogen peroxide to soften and remove it.

**When will the jejunostomy tube be removed?**

The jejunostomy is left in place to give you more calories should you require them. It will be removed during your first post-op visit, if you haven't been using the tube and don't need it.

**What medications should be taken?**

At the time of discharge, discuss with the doctor any medications you may have been on prior to surgery which have not been resumed. You will also be given a prescription for pain medication. In addition, patients who have thoracic

surgery are often discharged with Metoprolol. It is prescribed to prevent any heart irregularities which occasionally occur after surgery. If this medication has been prescribed, you will be asked to make sure you have a follow up appointment with your primary care physician, and or cardiologist, as often this mediation only needs to be taken for a short time. This medication may need to be discontinued or changed back over to your regular heart medication, if you were taking any heart medication prior to surgery-once again this should be determined by your cardiologist or locally physician.

**When is it safe to drive a car?**

You may drive when you are no longer taking narcotic pain medication.

**When will I see the doctor?**

Your first postoperative check-up will be scheduled about 3-4 weeks after your discharge. After that based on your diagnosis, and healing you will be referred back to your referring physician and or primary care physician. .

**When can I go back to work?**

If your job requires heavy lifting, you will need to be off work for two-three months from the date of surgery. However, if your jobs is less strenuous, you may be able to go back to work in about six to eight weeks. This can be discussed with the doctor at your office visit.

**What about weakness and fatigue?**

You have had a major operation and fatigue is to be expected. Young or old, it takes time to recover from surgery of this kind. Although you may think that your weakness is a result of your surgery, it's also largely due to muscles being out of condition. It is estimated that a college student loses 15 percent of his muscle strength after one week of bed rest. Therefore, it is not surprising that a patient who has been hospitalized and had undergone chest surgery feels weak

or tires easily in the first few weeks at home. To regain strength you must exercise daily. Do not allow yourself to be inactive.

**What can I eat after having an Esophagectomy?**
For the first week or two, **mushy soft** foods are the easiest to swallow.

Mushy soft foods are foods like: moist casseroles, soup, stew, cooked eggs, brick cheese, cottage cheese, moist pasta dishes, fish, custard, pudding, ice cream, milk, and hot cereal, cold cereal that has softened in milk, coffee, and tea.

Avoid dry foods for the first week or two because they can be more difficult to swallow. Dry foods are foods like: all breads, bagels, toast, crackers, and meat that are not cut up and in a sauce.

When swallowing becomes smoother you can try adding these foods back into your diet.

**Why do I need to eat so many small meals?**
It is common to lose your appetite for a short period of time after an esophagectomy. Frequent small meals can help to improve your appetite. Once your appetite improves, the taste of food gets better and you will enjoy eating again. Try to eat something every two hours that you are awake.

The space in your chest cannot hold as much food as your abdomen did; generally you can hold 1-1 1/2 cups of food at a time. This is why **6 small meals** are needed each day to get the same calories that 3 meals gave you before surgery.

**Can I drink pop?**

All carbonated beverages release gas when swallowed. To get rid of this gas you simply burp. After an esophagectomy it is very difficult to burp. This can lead to gas pains in your chest that need to move downhill eventually. You may think that you are having a heart attack. It is best to avoid **all carbonated beverages** for at least two months or longer.

**Will I see a dietitian before I am discharged?**

Yes, a dietitian will stop by and provide you with a **Mushy Soft Diet** booklet and explain this diet when you are getting close to being discharged from the hospital.

**What is Dumping Syndrome?**

Dumping Syndrome can occur in anyone who has had surgery on the top part of their GI track. The stomach temporarily empties everything all at one time into the small intestines. The small intestines cannot tolerate the food in this form and can present with symptoms of: cramping, nausea, vomiting, sweating, or dizziness. These symptoms come on very quickly either during a meal or shortly after eating a meal. If this occurs more than once in the same day and you have not overfilled the stomach you may be experiencing Dumping Syndrome.

A diet for control of Dumping Syndrome will be stapled to the back of the **Mushy Soft Diet** booklet you receive. Use this diet only if you have symptoms of dumping. Following this diet early will not prevent you from getting Dumping Syndrome, but would restrict your calories for no reason.

The foods that are most difficult to tolerate with Dumping Syndrome are foods high in sugar and sometimes dairy products. These need to be avoided if Dumping Syndrome is present.

**What if I have diet questions when I get home?**

Call your dietitian, Connie Cole, RD at 734-936-5923. She has a voicemail and will call you back as soon as possible.



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