

## Achalasia

This condition occurs 1:100,000 as is not hereditary. It is characterized by progressive difficulty swallowing. Chest pain with swallowing or at night can sometimes also occur. The diagnosis can be suspected by upper endoscopy, contrast swallow x-rays, but the diagnosis is confirmed by esophageal manometry. This will show no normal motility and non-relaxation of the lower esophageal sphincter. The operation is to completely cut through all muscular layers of the lower esophagus down through the proximal stomach to relieve the muscular obstruction. Once this is done, a partial stomach wrap is created to help reduce reflux and to keep the cut edges of the muscle apart. The gold standard operation for achalasia is the surgical myotomy but in certain cases other options can be considered including Botox injection, endoscopic balloon dilation, and endoscopic myotomy. These options are typically reserved for patients who have multiple medical conditions that might make general anesthesia risky or for patients with extensive abdominal scarring from other surgery. Without treatment, this condition can progress to make the esophagus so dysfunctional and dilated that it could require removal.

## Surgery

Laparoscopic Heller myotomy and partial fundoplication is performed in a minimally invasive manner but does require a one-night hospital stay. This is primarily so that if nausea occurs, it can be managed quickly with IV medication to prevent progression to vomiting or retching. Robotic assistance is not needed to perform this surgery and provides no advantage over traditional laparoscopic surgery. The morning after your surgery a contrast swallow x-ray may be performed to make sure there is no evidence of leak before diet is advanced. This is usually routinely done. You will have four 5mm incisions just below the ribs and a single 10mm incision just above and to the left of your umbilicus. Surgery can take anywhere from 1 to 3 hours depending on how scarred the esophagus is and patient characteristics. The most dangerous risk of surgery is a hole or leak in the esophagus. This can be life threatening and might require multiple major operations and lengthy recovery to heal. Fortunately, this risk is less than 1%. Other risks include but are not limited to bleeding, infection, open conversion, recurrent achalasia, injury to surrounding abdominal structures are all also rare. Patients should continue to have endoscopic surveillance as patients with achalasia may have a slight increased risk of developing esophageal cancer.

## What to expect the day of surgery

You will choose your surgery date with me. The exact time of your surgery is not specifically known but we will estimate this for you. This is controlled by the hospital and is also determined by the length of preceding cases on that day. I take as much time and attention as is needed for each patient, just as I will for your operation. Please be patient as the hospital will often ask you to arrive well before your actual surgery time. There can sometimes be extended waiting so bring a book or iPad. I will meet with you again before surgery to answer any questions that may have developed. After your surgery I will meet with, or call, your family member.

## What to expect after surgery

**Medication.** The first 2-3 days after surgery are the toughest and it is expected that you may need pain medication. Prescriptions for pain and nausea medication may be sent into the pharmacy you requested during registration, or they may be provided to you in paper form to take with you. You may want to make sure this is a pharmacy that is open 24 hours as you may be discharged from the surgery center in the evening. Alternate Motrin/ibuprofen and Tylenol every 4-6 hours around the clock for the first 48 hours. This will help reduce narcotic use which may cause nausea and constipation. According to CDC, the likelihood of chronic opioid use increases with use after day 3 and with subsequent refills. Do not combine narcotic medication with alcohol or benzodiazepines. If you have chronic pain management by your primary care or pain clinic, you should notify them of upcoming surgery and may need to arrange post-operative pain management with them. It is normal to still be sore/uncomfortable during the next 1-2 weeks, but improvement should be noted. If you have pain management concerns, please call during office hours. Narcotic medication cannot be addressed after hours. You will most likely not need antacid medication after surgery. Other home medication may be resumed after discharge although I recommend avoiding non-critical medication such as vitamin supplements. Do NOT break pills in half such that they have sharp edges. I will indicate on your discharge papers when to restart blood thinning medication such as Coumadin, Xarelto, Pradaxa, Plavix, Brilinta, Effient, Eliquis, or aspirin. Typically, this is 2 days after surgery. If there is significant bruising or you are unsure, call before restarting those medication.

**Activity.** It is most important to stay active after surgery. The more you walk, the quicker you will recover. The stairs are fine but go slow. Avoid heavy lifting, straining, bending, stooping, squatting. It is difficult to get up from a lying or sitting position at first so try to have some help if you can. You will need to avoid heavy lifting and abdominal straining for 6 weeks.

**Wound care.** You will have glue over the small incision and no external sutures or staples. You may shower and wash with mild anti-bacterial soap the day after surgery. Avoid submersion under water for one week. It can be normal for the area around the incisions to become red or bruised from surgical trauma. In some cases of skin sensitivity, you may also develop an itchy rash from the prep used to sterilize the skin during surgery or from the surgical glue. It is fine to use topical steroid or Benadryl creams. If this does not improve, please notify me.

**Diet.** There are **strict** restrictions after this surgery. After surgery you will still not be allowed anything by mouth until the next morning. If you are not experiencing nausea, you will be given a liquid diet after your contrast swallow exam. You will need to stay on a liquid/puréed diet after discharge until your post-operative follow up appointment with me. It is important that you maintain nourishment during this time and supplements such as Boost, Ensure, or Premier shakes are encouraged. You may have shakes, smoothies, applesauce. You may not have anything that requires chewing or anything that is so thick it stays on an upside-down spoon such as mashed potatoes or peanut butter. It is imperative diet restrictions be carefully followed.

You will have swelling and narrowing from the surgery that takes time to resolve. If you try to eat food too early and it gets stuck, this is a risk factor for procedure failure. At your 2 week follow up appointment, your diet may be advanced to soft foods such as pasta, rice, fish. It is important that you take small bites, chew carefully, and make sure each swallow reaches your stomach before taking another. Do not get distracted and go slowly. It is normal to feel full easily at first and taking smaller, more frequent meals is recommended. Your diet may be advanced as you feel comfortable and as symptoms permit at 4 weeks from surgery. Foods that should be added in last are dry chicken breast, raw vegetables, grisly steaks, and bread. Avoid anything with bones or sharp edges.

**Symptoms.** After a few days you may notice small knots under the incisions. This is a normal part of the healing process and will resolve with time. It is also normal you to experience discomfort in the upper back/neck/shoulders after this operation. This is referred pain from hiatal hernia repair and gas pressure on the diaphragm. This will typically resolve or at least improve by 2-3 days. Heating pad can be helpful.

**When to call.** Surgery can be stressful so please call if you just forget something, are uncomfortable or unsure. It can be normal to have low grade fevers after surgery and this is usually related to decreased activity after surgery. Please be sure to walk and practice deep breathing to keep your lungs exercised. Persistent fevers over 101 should be reported. Call for nausea that is not well controlled with medication and causing potential issues with dehydration. Pain will not be completely resolved with medication but should be tolerable enough that you can move.

**Follow up.** You will have a follow up appointment approximately 2 weeks after surgery. This is scheduled at the same time you schedule your surgery. If you are not sure, please call to confirm this appointment. At this appointment, I will ask about your diet and any trouble swallowing. If you are doing well, your diet can be advanced at that time. Additional appointments are not usually necessary but can certainly be arranged if needed.

**Return to work.** I do recommend taking a full week off from work. If you have non physically strenuous job you may return to work as you feel comfortable. If there is no light duty and you have a physically strenuous job, you may need to be off for 4-6 weeks. You may return to driving when no longer taking pain medication, when you can look over your shoulder without discomfort, and when your reaction time is normal. This is variable, but typically is 2-3 days