

Gastroesophageal Reflux Disease (GERD)

Gastroesophageal reflux disease, or GERD, results from the reflux or backwash of stomach contents into the esophagus. The lining of the esophagus is different from that of the stomach and does not tolerate prolonged or frequent contact of corrosive stomach acid or bile juices. Reflux is usually due to relaxation of the lower esophageal sphincter (LES) muscle between the esophagus and the stomach. Normally the sphincter remains constricted, only opening to allow the passage of food and then contracting once again to keep stomach contents from washing back. If the pressure is low in the LES for any reason, reflux can occur. Everyone refluxes from time to time, but if it is chronic, damage to the esophageal lining can occur. Stomach acid can even wash back into the windpipe resulting in asthma or pneumonia. Many patients with reflux also have a hiatus hernia (HH). Normally the LES is beneath the diaphragm. If it slides up through a larger than normal opening in the diaphragm, a hiatus hernia is present. Hiatus hernia is a very common condition and not all patients with HH have reflux. Conversely, not all patients with reflux have a HH, but the two often are present together.

As mentioned, most people experience reflux at one time or another. Symptoms are characterized by substernal burning pain or pressure. Pain may radiate into the neck or left arm and simulate a heart attack. Bitter bile may wash back into the back of the throat with associated burning pain. Symptoms are aggravated by lying flat, particularly too soon after a meal. Nicotine, caffeine, alcohol, fatty food, chocolate and peppermint can weaken the LES and aggravate reflux. Overeating and obesity increase the pressure in the stomach and precipitate reflux. Antacids such as Mylanta and acid reducing agents like Zantac, Pepcid, Prilosec and Prevacid can relieve symptoms. The latter two drugs are called proton pump inhibitors (PPI's) and are particularly effective in relieving reflux symptoms. The long-term effects of using these drugs over an extended period are unknown. Other measures to prevent reflux symptoms include elevating the head of the bed, avoiding meals before bedtime, weight loss and life style and dietary modifications. Over 90% of those with reflux will have satisfactory relief of symptoms with these measures.

Surgery is considered when symptoms become chronic and intractable. Other reasons to consider surgery are asthma due to reflux. Scarring and narrowing of the esophagus can occur from chronic reflux injury resulting in difficulty swallowing. Another condition called Barrett's esophagus can result from chronic reflux injury and may predispose a patient to malignancy. The surgical procedure for reflux is known as a Nissen fundoplication, named after a British surgeon who perfected the procedure. The operation is designed to strengthen the LES by wrapping the top (fundus) around the junction between the esophagus and the stomach and sewing it (plicating – hence the term, fundoplication) to itself to create a donut-like ring around the LES. The procedure usually results in immediate relief of reflux symptoms. Hiatus hernia, if present, is also repaired at the time of surgery by narrowing the opening in the diaphragm. Good results are long lasting in 80-90% of patients.

Before proceeding with surgery, most patients usually undergo several preoperative tests. Esophageal manometry is performed by placing a small catheter into the stomach through the mouth and slowly drawing it back while measuring the pressure in the LES and the rest of the esophagus. This test will often prove that the sphincter is lax and assure that there are not other problems with the esophagus that might actually be aggravated by an operation. 24 hour pH monitoring will document the frequency and duration of reflux episodes if there is any question about the cause of symptoms. A small tube is placed through the nose into the esophagus and worn for 24 hours. The tube is attached to a recorder that measures the acid content in the esophagus while the patient keeps a record of reflux symptoms. Other tests might include endoscopy, to evaluate the lining of the esophagus for chronic irritation or narrowing, and an upper GI series x-ray.

Nissen fundoplication used to be performed through a long incision from the bottom of the breastbone to below the umbilicus (open procedure). Now it is usually performed as a laparoscopic procedure through 4 small incisions under the ribs and one in or near the umbilicus (belly button). The procedure is much less painful than the older procedure, but not painless. It usually takes about 90 minutes. Most patients can take liquids immediately following surgery and a very soft diet the following day. Sometimes there is pain in the neck, chest or back as a result of the gas we put in the abdomen during the laparoscopy. If all goes well, the patient can be discharged home the day following surgery. A dietitian will provide instructions regarding dietary modifications prior to discharge. Usually a mild narcotic pain medicine is all that is needed for pain and the patient can begin to resume normal activities in a week.

As with any operation, there are risks involved. The risk of conversion to an open procedure is 5-10%. This is usually because of difficulties with the anatomy or bleeding encountered during the procedure. The risk of needing a blood transfusion is low and blood is not made available, but rarely a transfusion might be necessary. The spleen is in close proximity to the fundus of the stomach and rarely can be injured during the dissection. Such an injury might necessitate its removal. During any laparoscopy there is a small risk of injury to the intestine, which also might require conversion to an open procedure to repair the injury. Infection in one of the incisions or internally is always a risk during abdominal surgery. Re-operation or readmission to the hospital for a complication can also occur. Long term, 80-90% of patients have relief of reflux symptoms; however, 10-20% of patients have some recurrence of symptoms. Most patients have gas and bloating following surgery that tends to improve with time. The fundoplication may impair belching and vomiting. Occasionally a patient will experience difficulty swallowing in the first weeks following surgery. This also tends to improve with time, but rarely, food may become stuck and require an endoscopy to remove the blockage. Spasms of the esophagus can also occur. These symptoms can cause rather severe chest and back pain but usually respond to medication and resolve with time. The patient should carefully weigh the risks and benefits of surgery before choosing surgery. Unfortunately, we cannot guarantee the results of any operation.

I hope this information has proven useful in learning about surgery for esophageal reflux and making a decision about whether or not to proceed. There is also considerable information available on the Internet. If you have any questions, please feel free to call. If you decide to have the surgery, we will do our very best to assure an excellent result and a speedy recovery.

Dr. Mac

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