

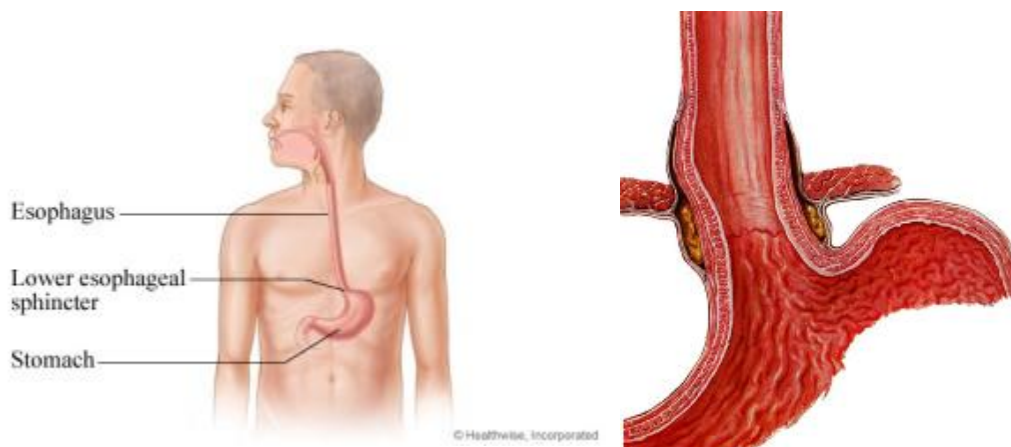


Esophageal Manometry

WHAT IS ESOPHAGEAL MANOMETRY?

Esophageal manometry (also called esophageal motility) is a procedure to measure the strength and function of your esophagus and provides information about how the muscles in your throat and esophagus work as food and liquids pass from the mouth to the stomach. Esophageal manometry is performed for the following reasons:

- To evaluate the cause of reflux (regurgitation) of stomach acid and other contents back up into the esophagus (gastroesophageal reflux disease or GERD).
- To determine what the cause is of difficulty with swallowing food.
- To determine the cause of non-cardiac chest pain.



Esophagus

Lower Esophageal Schincter

WHAT CAN BE LEARNED FROM THE ESOPHAGEAL MANOMETRY TEST?

- The most common use for esophageal manometry is to evaluate the lower esophageal sphincter in patients who have gastroesophageal reflux disease (GERD).
- Manometry often can identify weakness in the lower esophageal sphincter that allows stomach acid and contents to back up into the esophagus.
- Manometry can diagnose several esophageal conditions that result in food sticking after it is swallowed. For example, achalasia is a condition in which the muscle of the lower esophageal sphincter does not relax with each swallow. As a result, food is trapped within the esophagus. Manometry reveals an absence of the waves and the contraction of the muscle everywhere in the esophagus at the same time.
- Abnormal function of the body of the esophagus may result in food getting stuck. In patients with scleroderma the waves of muscular contractions fail to occur. With esophageal spasm the entire esophageal muscle may contract at one time.

THE PROCEDURE

- The procedure takes about 45 minutes from start to finish.
- The nurse will verify that you had nothing by mouth in the last 6 hours prior to the test.
- Your nostril and throat is numbed with a topical anesthetic while you are sitting upright.
- A thin flexible tube about one-eighth inch in diameter (approximately the size of pencil) is then passed through the nostril, down the back of the throat into the esophagus and the stomach, while the patient swallows water. The tube has holes in it that sense pressure along the esophagus. It will be positioned in different areas of your esophagus.
- With the tube inside the esophagus, you will lie down on your left side.
- The nurse will give you small sips of water during the test to record the progression of the swallow.
- The contractions of the esophageal muscle will be measured at rest and during swallows.
- Pressure recordings are made and the tubing is slowly withdrawn.
- The results of the manometry test are displayed as a graph with a wave pattern that can be interpreted to determine if the esophagus is functioning normally.
- Since your throat was numbed, you have to wait one hour after completion of the test before you can eat or drink anything. This is to protect you from burning your throat or choking.
- You may drive yourself home before and after the test since no sedation is involved.

HOW IT FEELS

When the tube goes through your nose or mouth into your esophagus, you may feel like coughing or gagging. The test may be easier if you try to take slow, deep breaths. You may not like the taste of the lubricant on the tube.

If you have a test that involves adding acid to your stomach, you may have heartburn pain and other symptoms of acid reflux.

After the test is over, your throat may feel sore. However, this should improve within a day or so.

RESULTS

Esophagus tests measure muscle pressure and movement, coordination, and strength of the tube that connects the throat to the stomach (esophagus). It also tests how well the ring of muscles (sphincters) at the top and bottom of the esophagus work.

Normal results would show:

- The pressure of the muscle contractions that move food down the esophagus is normal.
- The muscle contractions follow a normal pattern down the esophagus.
- Normal pressure of the lower esophageal sphincter (LES) is about 15 millimeters of mercury (mm Hg). The pressure is less than 10 mm Hg when the LES relaxes to let food pass into the stomach.

Abnormal results would show:

- Muscle spasms are present in the esophagus.
- Contractions along the esophagus are weak.
- The LES pressure is less than 10 mm Hg.
- The LES pressure is high and fails to relax after swallowing.

SIDE-EFFECTS OF THE PROCEDURE

- The procedure is not really painful because the nostril and throat is anesthetized, but it may feel slightly uncomfortable.
- Once the tube is in place, patients talk and breathe normally.
- The side effects of esophageal manometry are minor and include mild sore throat, rare nose bleed and, very uncommon sinus problems due to irritation and blockage of the ducts leading from the sinuses and into the nose.
- You may experience some temporary discomfort in your throat. Over the counter throat lozenges may give some relief.
- Occasionally, during insertion, the tube may enter the larynx (voice box) and cause choking. When this happens, the problem usually is recognized immediately, and the tube is rapidly removed.
- Special care is used when passing the tube in patients who are unable to easily swallow on command because without a swallow to relax the upper esophageal sphincter the tube often doesn't enter the esophagus but instead enters the larynx.

CHECK IN INFORMATION:

- Check in at the Out Patient Registration desk prior to coming to the West Wing to register
- Bring a current ID and insurance card to the Registration desk.

PREPARATION FOR PROCEDURE:

- 3 days prior to the test, discontinue Reglan /Metoclopramide.
- 2 days prior discontinue Calcium Channel Blockers (*Procardia, Norvasc, Adalat, Cardizem, Vasacor, Calan, Verapamil, Nifedipine, Diltiazem, Amlodipine*) If impossible to stop these medications, please contact us!
- 2 days prior to test discontinue Beta Blockers (*Atenolol, Coreg, Inderal, Lopressor, Metopropol, Propanolol, Tenormin, Toprol*) If impossible to stop these medications, please contact us, or your physician.
- *Do not* eat or drink for at least 6 hours prior to the test.
- Medications that are not essential should not be taken until after the test is completed. These medications include:
 - Pain medicine such as Demerol, Codeine, Morphine, Percodan
 - Sedatives or tranquilizers such as Valium, Librax, Elavil, Thorazine
 - Antispasmodics such as Bentyl, Donnatal, Levsin, Robinul
 - Promotility agents, i.e. Reglan (metoclopramide), Zelnorm (tegaserod), Erythromycin, Domperidone.
- You will receive a local anesthetic to your nose and throat to numb the area.
- You *may* drive yourself home before and after the test since no sedation is involved.
- The test will take about 1.5 hours
- Bring the completed Questionnaire with you.
- Please read all the instructions and directions prior to appointment.
- Allow ample time and bring single dollar bills for parking!
- If you have any questions, please call 619 543-6834.