

Esophageal Manometry

An educational handout for patients

What is esophageal manometry?

Esophageal manometry (pressure measurement) is a test of the muscles of the esophagus (tube between the throat and the stomach) to see if they are working normally. It is usually done in an outpatient clinic.

What does it measure?

- **tone** (strength) of the upper and lower esophageal sphincters (valve muscles)
- **relaxation** of the sphincters during swallowing
- **location** of the sphincters
- **strength and coordination** of the esophageal muscles during swallowing

Do I need esophageal manometry?

Esophageal manometry can help find the cause of the following conditions:

- swallowing difficulty (dysphagia)
- unexplained chest discomfort or pain, vomiting, or pneumonia
- gastroesophageal reflux disease (GERD)
- when a patient may need surgery to treat GERD
- when a treatment for a problem of the esophagus has not worked as well as expected, to try to find out why

How do I prepare for esophageal manometry?

Morning test: Do not eat or drink anything after midnight.

Afternoon test: Have only clear liquids for breakfast before 8:00 AM and then don't eat or drink anything else until after the test.

If you have diabetes: Ask your doctor how to take your diabetes medicines when you have this test.

If you are taking medicines: Many medicines can affect the test results. When your test is scheduled, ask which medicines you should stop taking before the test and when you should stop taking them. Medicines you are told are okay to take should be swallowed with a few sips of water at least 2 hours before the test. You are awake for the test. You may drive yourself to and from the test. After the test, you may return to your normal activities.

How is esophageal manometry done?

The test usually takes 30 to 60 minutes. You will be asked to put on a hospital gown over your clothes. A technician or nurse will explain the test, take a brief health history, and answer any questions you might have. A numbing jelly will be placed inside one nostril with a cotton swab. A thin flexible tube will be passed through your nostril, down the back of your throat, and into your esophagus. You will be asked to swallow to help the tube go down. Once the tube is in position, it will be taped to your nose. You will spend most of the test lying on your back or side. You will be asked to swallow a spoonful of water every 30 seconds. You may also be asked to do dry swallows (that is, swallow without liquid or food in your mouth), swallow solid food, or move to a sitting position. The tube is removed at the end of the test.

What are the risks of esophageal manometry?

Esophageal manometry is a safe test. The tube can be uncomfortable and it may make you gag as it goes down your throat. You may have a minor nose bleed. The tube might go into the windpipe instead of the esophagus, which could make you cough or choke. If this happens the tube is quickly pulled back. These side effects are reduced by the use of numbing jelly and the person doing the test, who will try to make you as comfortable as possible.

What are the benefits of esophageal manometry?

- Find out if your swallowing problems, chest pain or heartburn, or other unusual symptoms are due to abnormal muscle function of the esophagus.
- This is the only test that specifically measures how the muscles in the esophagus are working.
- If the muscles of the esophagus do not work normally, food and drink may get stuck in your esophagus. Likewise, a weak sphincter may let stomach contents move back into the esophagus (reflux). Knowledge about these problems will allow the doctor to pick the best treatment for your condition.

What other tests are used to assess esophageal disorders?

Endoscopy

A flexible tube with a camera (endoscope) is passed through the mouth into the esophagus. Endoscopy is usually done with sedation (medicine that makes you sleepy and helps you to relax). Endoscopy can find such problems as narrowing, infection, and inflammation of the esophageal lining. Sometimes, endoscopy is used to place the tube for the esophageal manometry test.

Barium swallow

X-rays are taken while you swallow a barium solution. This test may show if the food passageway has become too narrow to allow food to pass.

Esophageal reflux test

This test will show if acid comes up from the stomach into the esophagus, a process known as reflux. Because reflux may only happen a few times in a day, the device that records the reflux must stay in the esophagus for 24–48 hours. The device to record reflux is either passed through the nose on a thin wire tube or clipped to the wall of the esophagus during an endoscopy.

Esophageal impedance monitoring

This new test can be done with an esophageal manometry test or an esophageal reflux test. It measures the movement of liquids and air in the esophagus.

High-resolution esophageal pressure topography

This new test is an advanced form of the esophageal manometry test. It gives a 3D display of all of the esophageal muscle activity at once.

For a list of doctors in your area who specialize in gastrointestinal motility problems, go to our web site:

[www • motilitysociety • org](http://www.motilitysociety.org)

This patient information brochure was prepared for the American Neurogastroenterology and Motility Society (ANMS). The opinions expressed are primarily those of the authors and not ANMS. ANMS does not guarantee or endorse any product or statement in this brochure. This brochure is intended to provide general information only. This brochure is not intended to replace the knowledge or diagnosis or advice of your health care provider. Written by Benson Massey, MD and reviewed by Satish S. C. Rao, MD, PhD, and Henry P. Parkman, MD on behalf of ANMS.

Copyright © 2013 American Neurogastroenterology and Motility Society. All rights reserved.

American Neurogastroenterology and Motility Society • ph 734-699-1130 • fax 734-699-1136 • e-mail admin@motilitysociety.org