



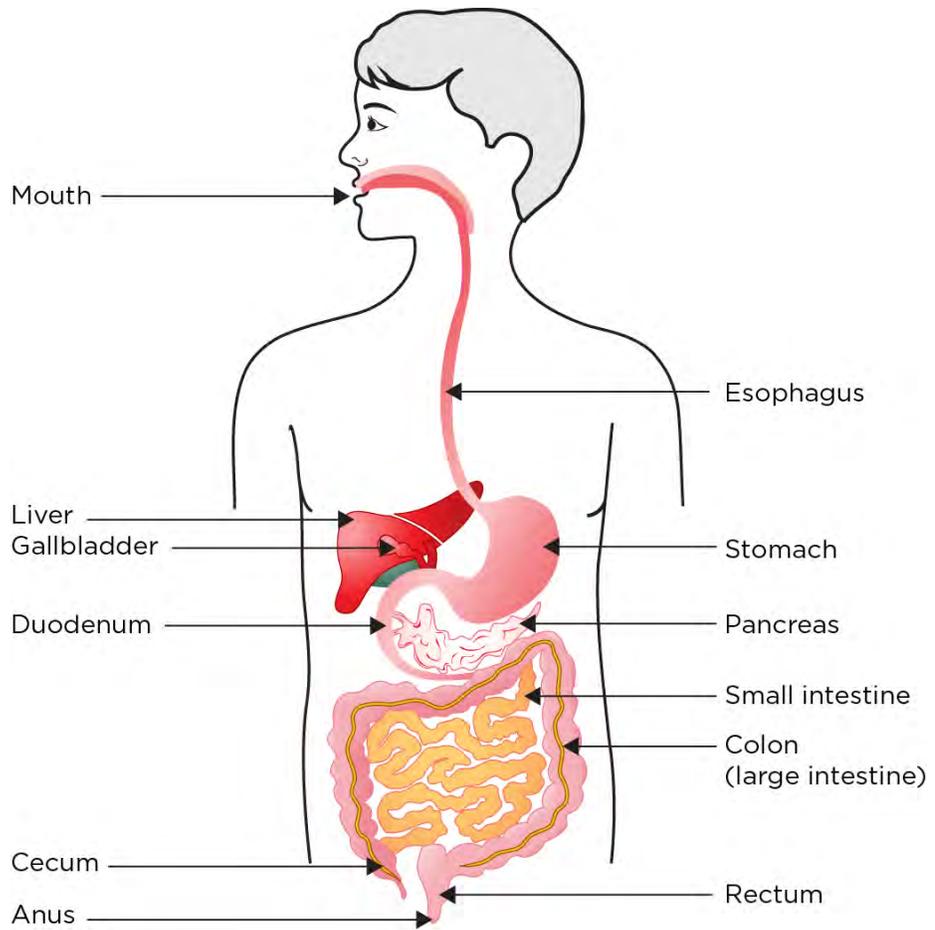
# Esophageal Manometry

Manometry measures the pressure of contractions of the digestive tract.

## What is esophageal manometry?

The esophagus is the tube that carries food from the mouth to the stomach. The walls of this tube are lined with rows of muscles that contract in waves to keep the food going smoothly downward to the stomach. At both the top and bottom of the esophagus, there are sphincter (ring-like) muscles that are important to control the downward flow of food. These muscles also prevent food from going from the stomach back up the esophagus. The two ring-like muscles are called the lower esophageal sphincter and upper esophageal sphincter.

An esophageal manometry (mah-NOM-eh-tree) test measures the strength and coordination of the wave-like contraction of the two sphincters and the other muscles lining the esophagus. We measure this muscle action while your child eats soft food.



Normal digestive tract

### **Why is this test done?**

The test is recommended only if test results will help guide treatment of esophageal motility problems that may present with difficulty swallowing, chest pain, or reflux. Since there are many causes and treatments of these problems, your doctor will choose the test right for your child.

### **Will my child have pain?**

This test requires placement of an esophageal manometry catheter (a thin tube) through the nostril into the stomach. This placement can be very uncomfortable. We partner with you and your child to prevent and relieve pain as completely as possible. You know your child best. We may apply a numbing agent in the nose using a cotton swab if your child is old enough and allows it. You and your primary doctor will need to decide if your child will be able to tolerate the exam. Your child will have to be able to cooperate. In some cases, a medicine can be given to relax your child. But any medicine given cannot make your child sleep nor interfere with normal swallowing, or the test will not be meaningful. Your child will be awake for this test and will need to sit still during the exam. They will drink and eat the foods we supply with the tube in place during the test. Please let us know if your child has any food restrictions or allergies.

If you feel your child is very anxious and needs extra support, please let us know ahead of time – before your scheduled visit. We can request a Child Life specialist be present at the procedure. It is important to talk to the doctor honestly to discuss your child's ability to cooperate. With your help preparing your child and giving them love and support, the test can be done with little difficulty.

### **What happens before the test?**

Some medicines may interfere with the manometry test. Your child may be asked to stop certain medicines up to 72 hours before the manometry test.

### **When can my child last eat or drink?**

Your child must have an empty stomach before the procedure.

- No food after 7 p.m. the night before the procedure.
- Clear liquids after 7 p.m. the night before the procedure (water, Gatorade, transparent juices you can see through, sodas, Jell-O, popsicles)
- Nothing at all to eat or drink 4 hours before the procedure. This should be done even if your child is not receiving any sedation for the test.

### **How long does the procedure take?**

The procedure takes 60 to 90 minutes. You will need to arrive early for check-in and to get ready for the procedure. Your entire appointment at the Surgery Center will last about 2 to 3 hours. Please be aware that no siblings or other children can come to the procedure room.

### **How do I prepare my child for the test?**

- Explain the test ahead of time in way that is appropriate to the age and temperament of your child. Describe the test in simple, honest language. If you feel relaxed, reassuring and casual about the procedure, your child will feel more secure, too.
- Tell your child that a thin, soft tube will be placed down their nose to their stomach, but that the tube is small so it will just slip down like a piece of spaghetti. Be honest that this will feel strange and it will be uncomfortable since our natural urge is to sneeze, cough and gag if something gets in our nose. Slippery gel is placed on the tube and some numbing cream is put in the nose to make it easier. Their job is to try to relax and to eat the soft foods we supply when directed.
- Tell your child that the tube does not cause any harm. It will feel weird, like getting water up the nose while swimming, but they will be able to breath fine. Once the tube is down to the stomach, it is not so annoying.
- Assure your child that one parent will stay with them for the test.
- Bring a favorite toy or blanket and an iPhone or iPad with video games to the procedure.
- Let your child know that the test is important for their health. You and the doctor are doing the test to keep them well and help them solve their eating problem. The doctors and nurses do this test often with other children so they are very experienced.

### **Where do we go for the test?**

This procedure is done in the Surgery Center at Children's main hospital. To get to this area, park in the Ocean parking garage and check in at the main registration desk on level 6. You should plan to be at the hospital for about 3 hours.

After checking in, a nurse will take your child into an exam room to change into a hospital gown. They can keep their underwear and pants on. The nurse will take your child's temperature, heart rate, and blood pressure, then show you and your child to the GI procedure area. The rooms here are comfortable and child-friendly.

### Talking with the anesthesia doctor

Most of the time, this procedure is done with no anesthesia to get the most accurate results. If any medicine is to be given to relax your child, the anesthesiologist or the GI motility doctor will speak with you about your child's health history and examine your child before giving any medicine.

### What happens during the procedure?

You can stay with your child during the test to be comforting and supportive. Your child may cry or be tense during placement of the catheter. It is a natural instinct to resist anything going down the nose and throat. We will do all we can to help make your child relax and help the tube go down easily. Remember, the catheter is flexible and will not cause harm or damage since it is smaller than the GI tract.

### Getting the motility catheter computer reading

- Once the catheter is placed, your child can relax. The free end of the catheter will be attached to the manometry computer that measures the pressures and coordination of muscles. Your child will be asked to sit quietly for a while to measure resting pressures. Then, your child will be asked to take some sips of water and eat soft foods to see changes in the muscles with swallowing.
- The esophageal manometry test takes about 60 to 90 minutes. The computer screen display is very colorful and the doctor can see the throat contracting as your child is swallowing. When the study is complete, the tube is easily removed – it just slips out. Then, you will be able to go home.

### What happens after the test?

Your child can return to a normal diet, play and activities right away. If there is any soreness of the back of the nose, it will go away in a few hours.

### When can I expect the results?

The information recorded in the manometry computer is reviewed in detail. This takes about 2 weeks. The results will be discussed at your child's next clinic appointment. The manometry results will also be shared with your primary care doctor and/or primary pediatric gastroenterologist. If you have not heard back from us in two weeks, give GI clinic a call or call your referring care provider.

### Contact us:

- Call the GI clinic if you have more questions about the procedure: 206-987-2521
- If your child is sick on the day of the procedure, call 206-987-2045.
- To schedule this procedure call the GI procedure scheduler at 206-987-2521, option 2.

### Free Interpreter Services

- In the hospital, ask your child's nurse.
- From outside the hospital, call the toll-free Family Interpreting Line 1-866-583-1527. Tell the interpreter the name or extension you need.

### What are the risks and possible complications?

There are some risks with any such procedure, although the chances of these happening are very rare. Risks are:

- Tearing or popping a hole in the esophagus. This can happen when the esophagus is extremely diseased and thin. Tears usually require surgery to repair the hole.
- Infection. This is rare unless your child has a heart problem or problems with the immune system. In these cases, antibiotics are usually given.
- Incorrect placement of the catheter. The catheter may enter the trachea (the breathing tube) instead of the esophagus. The catheter will then be removed and re-inserted. The proper placement is confirmed with a chest X-ray.
- Aspiration (where the stomach contents are inhaled into the lungs). This can happen if your child has difficulties with chewing and swallowing, or previous history of similar events or aspiration pneumonias. In these cases, a chest X-ray is done and antibiotics may be given.
- The child is not able to hold still for the test. This test requires cooperation from the child. If it is too hard for your child to cooperate, the manometry test may not work and therefore will be canceled.