

Patient Information about Antroduodenal Manometry or Small Bowel Manometry

Antroduodenal or small bowel manometry provides information regarding the muscle activity of the stomach and small bowel during fasting, after a meal and during sleep. These are tests performed on patients with symptoms suggesting that the gastrointestinal tract (GI tract) is not functioning normally. These tests are generally performed at motility centers in patients whose diagnosis is unclear or who have not improved in response to treatments of their condition.

Preparation for the Small Bowel Motility Test:

- Do not eat or drink after midnight the night before the test.
- Some medications are generally stopped for this test. Pro-motility agents such as Reglan (metoclopramide), Zelnorm (tegaserod), erythromycin, Motilium (domperidone) and antispasmodics such as Bentyl, Donnatal, Levsin, Robinul are generally stopped for two days prior to this test. This should be discussed with your doctor or health care provider.
- Medications that are not essential should not be taken for two days until after the test is completed. These medications include:
 - Pain medications such as Demerol, codeine, morphine, oxycontin, percocet, percodan.
 - Sedatives or tranquilizers, such as Valium, Librax, Ativan, Thorazine.
- Medications that need to be taken regularly, such as high blood pressure and heart medication, can be taken with small sips of water when you wake up in the morning of the test.
- If you have diabetes, skipping breakfast may affect the need for diabetic medication. Generally one-half of your usual dose of diabetic medication is taken on the morning of the test. This should be reviewed with your physician or health care provider.
- If you have questions about a specific medication, ask your physician or nurse.
- Women need to inform their physician or nurse if they are pregnant or think they may be pregnant.

The Test Procedure

Antroduodenal manometry, or small bowel manometry, uses a catheter that has pressure sensors to record the contractions of the GI tract. Before the tube is passed, the inside of your nose is numbed and an anesthetic spray or gargle will be used to numb the back of your throat. The catheter containing the pressure sensors is then passed through the nose into the stomach and small intestine. Proper positioning of the catheter is assisted and confirmed by using either X-ray fluoroscopy or endoscopy with conscious sedation.

The tube will measure stomach and intestinal contractions and will remain in place for approximately 6 hours (stationary recording) or for 24 hours (ambulatory recording).

During the study, special meals will be given to determine how food affects gastrointestinal tract motility. Usually ingestion of the food results in a marked increase in gastric and small bowel contractions. The first meal with the catheter given usually in the late morning is often an egg sandwich (2 eggs with 2 pieces of toast) with water. For ambulatory (24 hour) testing, patients should eat a dinner meal as follows:

Dinner meal: Turkey Sandwich with white bread and American cheese with lettuce
Salad with 2 tablespoons Italian dressing
gelatin dessert (Jello)
Soft drink such as a gingerale.

For the 24 hour ambulatory test, you should return to the GI section at 7:15 am the next morning. Patients should not eat breakfast on the morning of scheduled catheter (tube) removal.

Passage of the small bowel manometry tube may be associated with gagging and retching. To lessen the discomfort, the nose and throat will be numbed. The presence of the tube during the study can cause a feeling of discomfort in the throat. Occasionally, the tube cannot be passed out of the stomach into the small intestine. Since X-Rays are used to place the catheter, this test should not be done if you could be pregnant. Women will need to give a urine sample in the morning of the test for a pregnancy test.

How is the Antroduodenal Manometry Test Used?

Antroduodenal or small bowel manometry study provides information regarding the muscle activity of the stomach and small bowel during fasting, after a meal, and during sleep. These tests may help determine what area of the GI tract is not working properly - the stomach, the small intestine or both. The findings may help the physician to manage treatment and help improve symptoms.

These motility tests record the pattern of contractions of the GI tract muscles. Normally, there are three patterns of muscle contraction. The fasting pattern consists of 3 phases that reoccur at approximately 2-hour intervals. The muscles of the GI tract are at rest in Phase I, followed by a period of intermittent contractions in Phase II. Finally, in Phase III, regular rhythmic contractions start at the top of the stomach and continue down to the first part of the small intestine. Phase III contractions are responsible for undigested solids being moved from the stomach into the small intestine and then into the colon. These Phase III contractions are considered the "intestinal housekeeper" and clear food from the upper GI tract. Eating a meal produces a fed motility pattern with more frequent contractions. These contractions help to break down the food into small particles for transport down the GI tract for absorption.

Antroduodenal manometry may help to determine whether symptoms are due to a problem in the ability of the muscles of the GI tract to contract (a muscle disorder) or if the nerves that regulate the muscle contractions are not functional (a nerve disorder). Diseases such as scleroderma, amyloidosis, or visceral myopathy may affect the muscles of the GI tract and cause contractions too weak to move food through the GI tract. Nerve disorders may affect the pattern of the contraction. The contractions are uncoordinated and ineffective in moving food through the GI tract. Mechanical obstruction of the small intestine may be suggested by prolonged contractions after being fed. Gastroparesis (delayed stomach emptying) may be suspected by decreased frequency and force of contractions in the stomach. Occasionally, the test may demonstrate a pattern suggestive of rumination syndrome characterized by increases in intraabdominal pressures occurring at all levels of the upper GI tract at the same time.