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# The 48-hour Bravo Esophageal pH Test

#### What is an esophageal pH test?

An esophageal pH test measures and records the pH in your esophagus to determine if you have gastroesophageal reflux disease (GERD). The test can also be done to determine the effectiveness of medications or surgical treatment for GERD.

#### What is esophageal reflux?

Esophageal reflux is a condition in which stomach acid refluxes or moves back into the esophagus (the "food pipe" leading from the mouth to the stomach).

What happens during esophageal reflux?

Ecophageal Sphineter - Stamuch

A specialized muscle, called the lower esophageal sphincter, is located where the esophagus meets the stomach (see figure). This sphincter opens to allow food and liquid to pass into the stomach, then closes. When the sphincter does not close tightly, food particles, stomach acid and other digestive juices can splash back up into the esophagus. When this happens, the condition is called gastroesophageal reflux. When reflux occurs on a regular basis,

it can cause permanent damage to the esophagus. The esophageal pH test measures how often stomach contents reflux into the lower esophagus and how much acid the reflux contains.

#### How does the Brayo esophageal pH test work?

A small capsule, about the size of a gel cap, is temporarily attached to the wall of the esophagus during an upper endoscopy. The capsule measures pH levels in the esophagus and transmits readings by radio telecommunications to a receiver (about the size of a pager) worn on your belt or waistband. The receiver has several buttons on it that you will press to record symptoms of GERD such as heartburn (the nurse will tell you what symptoms to record). You will be asked to maintain a diary to record certain events such as when you start and stop eating and drinking, when you lie down, and when you get back up. This will be explained by the nurse.

#### How do I prepare for the Bravo esophageal pH test?

Let your physician know if you have a pacemaker or implantable heart defibrillator, a history of bleeding problems, dilated blood vessels, and any other previously known problems with your esophagus.

- Seven days before the monitoring period, do not take proton pump inhibitors such as omeprazole (Prilosec®), lansoprazole (Prevacid®), rabeprazole (Aciphex®), pantoprazole (Protonix®), esomeprazole (Nexium®)
- Two days (48 hours) before the monitoring period, do not take the H2 blockers ranitidine (Zantac®), cimetidine (Tagamet®), famotidine (Pepcid®), nizatidine (Axid®); or the promotility drug, metoclopramide (Reglan®)
- Six hours before the monitoring period, do not take antacids (such as Alka-Seltzer®, Gaviscon®, Maalox®, Milk of Magnesia®, Mylanta®, Phillips®, Riopan®, Tums® or any other brands)
- Four to 6 hours before your appointment do not eat or drink

Please note: Occasionally, your doctor may want you to continue taking a certain medication during the monitoring period to determine if it is effective

### Once the test has begun, what do I need to know and do?

- Activity: Follow your usual daily routine. Do not reduce or change your activities during the monitoring period. Doing so can make the monitoring results less useful. Note: Do not get the receiver wet; it is not waterproof!
- Eating: Eat your regular meals at the usual times. If you do not eat during the monitoring period, your stomach will not produce acid as usual, and the test results will not be accurate. Eat at least 2 meals a day. Eat foods that tend to increase your symptoms (without making yourself miserable). Avoid snacking. Do not suck on hard candy or lozenges and do not chew gum during the monitoring period.
- Lying down: Remain upright throughout the day. Do not lie down until you go to bed (unless napping or lying down during the day is part of your daily routine).
- Medications: Continue to follow your doctor's advice regarding medications to avoid during the monitoring period.
- Recording symptoms: Press the appropriate button on the receiver when symptoms
  occur (as discussed with the nurse). Record the time you start and stop eating and
  drinking (anything other than plain water). Record the time you lie down (even if just
  resting) and when you get back up. The nurse will explain this.
- Unusual symptoms or side effects: If you think you may be experiencing any unusual symptoms or side effects, call your doctor.

You will return the receiver and diary when the monitoring period is over. The information on the receiver and diary will be downloaded to a computer and the results will be analyzed. Preliminary study data will be reviewed with you if you desire.

## After completion of the study

- Resume your normal diet and medications.
- Your doctor will discuss the results of your test with you during your next scheduled appointment.
- Normal activities -- such as swallowing, eating and drinking -- will cause the disposable pH capsule to detach and pass through the digestive tract in 7 to 10 days on average.
- No MRI exams (magnetic resonance imaging) should be performed for 30 days following capsule insertion.

#### References:

- Acid Reflux Accessed 11/5/2012
- Esophageal pH Monitoring Accessed 11/5/2012

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