



BRAVO pH Study, 24 hour Esophageal pH with Impedance and Esophageal Manometry/Motility Study (EMS) Information Sheet

You are scheduled to arrive for testing  
on \_\_\_\_\_ at \_\_\_\_\_ am/pm

Your physician has scheduled you for a BRAVO pH study, 24 hour Esophageal pH with Impedance or Esophageal Motility/Manometry Study (EMS) at Ochsner Medical Center on O’Neal Lane. You will need to report to the 5<sup>th</sup> floor of the main hospital building on the O’Neal Lane Campus at the time you have been scheduled. Please do not come earlier than your scheduled time since we have already allowed for the registration process in your assigned time`. Please plan to allow a minimum of 1 hour for the procedure itself. If you are having more than one procedure this time will definitely be longer.

For patients only having a BRAVO pH probe study, EMS or a BRAVO pH study with EMS or 24 hour Esophageal pH with Impedance with EMS you will not be sedated and will be able to drive yourself home from the procedures. If you are having your procedure along with an esophagogastroduodenoscopy (EGD) or colonoscopy you will be sedated and need someone to drive you home.

It is very important that you stop eating solid food 6 hours before your scheduled appointment time. You may continue with clear liquids until 4 hours before your scheduled procedure and then must not have anything to eat or drink for the 4 hours before your procedure(s). **If you are having an EGD or colonoscopy with your procedure you will not be able to have anything to eat or drink after midnight.**

An example would be....

If your procedure is scheduled for 1:00 pm...

You may eat breakfast up to 7am

You may have clear liquids only from 7am to 9am

You must not eat or drink anything after 9am.

You may take your routine morning medications with sips of water, especially if you are on medication for you blood pressure or heart. **If the doctor has instructed you to continue your reflux/heartburn medications, please take these the morning of the exam, do not wait until after the exam as it will affect your test results.**

There are medications that your physician may want you to avoid/stop prior to the procedure. **(Your physician will decide if you need to stop your reflux/heartburn medications...Please ask the doctor if the medications I've listed below are to be stopped for your study! Everyone's study is different so you need to find out how your doctor wants medications taken or stopped for yours!).** Some interfere with the normal functioning of the esophagus and will affect the motility study; others interfere with the acid production and will affect the pH study. I will list them below and how soon before the procedures they should be discontinued in order to obtain optimum results in your testing. **Please... Please...discuss these medication changes with the physician ordering your test; they will need to determine what medications should be stopped or continued.**

There are instances when your physician will want the testing done and have you stay on all your reflux/digestive medications to see how well they are working for you. We need to know if your physician intentionally leaves you on your reflux/digestive medications. **If you are instructed to continue your reflux/heartburn medications by your physician you need to make sure you take them the morning of your procedure. Please do not wait until after the procedure to take these medications.**

**Proton Pump Inhibitors:** These should be discontinued at least 7 days before pH testing based on your doctor's decision.

Example: Prilosec (omeprazole)  
Nexium (esomeprazole)  
Prevacid (lansoprazole)  
Protonix (pantoprazole)  
Prilosec OTC (over the counter)  
Zegerid (omeprazole and sodium bicarbonate)  
Aciphex (rabeprazole)  
Kapidex (dexlansoprazole)  
Dexilant

**Prokinetic Agents:** These should absolutely be discontinued 3 days prior to the Esophageal Motility/Manometry study.

Example: Reglan (metoclopramide)

**H2 Receptor Antagonists:** These should be discontinued 2 days prior to pH testing based on your doctor's decision.

Example: Axid (nizatidine)  
Pepcid (famotidine)  
Tagamet (cimetadine)  
Zantac (ranitidine)

**Antacids:** These may be taken up to 6 hours before the study, or as instructed by the physician.

Example: Tums, Maalox, Mylanta, Roloids, Gaviscon  
No Pepto-Bismal please for 72 hours before the exam

**Others:** Carafate (sucralfate) should be discontinued 2 days prior to the exam

Please remember not to stop important medications for the blood pressure and heart. Consult your doctor with any questions.

You will be sitting in a recliner during your procedures. You will be allowed to remain in your clothing so please wear something comfortable. Patients are not given sedation for these procedures. Local anesthetics are used to numb the nasal cavity and the throat. The esophageal motility catheter is placed through the nose and into the esophagus. This is done only on one side of the nose. In order to get optimal results from the EMS one must be awake and able to swallow to the best of their ability. You will be given room temperature water to swallow during the study, one teaspoon per swallow until the necessary numbers of swallows are saved in the testing system to be evaluated. Normally taking 10 to 15 saved swallows to complete the study. Once this is accomplished the EMS testing is done and the testing probe removed.

### **Contraindications for BRAVO pH testing:**

Ambulatory capsule based pH testing is contraindicated in the following conditions:

- ***Bleeding diathesis***
- ***Strictures***
- ***Pacemakers or Implantable Cardiac Defibrillators***
- ***Severe esophagitis, eosinophilic esophagitis***
- ***Varices***
- ***Obstructions***

### **Positioning the BRAVO pH Capsule:**

For esophageal positioning, the capsule should be positioned 6cm above the squamo-columnar junction otherwise known as the Z-line. Proper positioning is imperative for interpreting the test results. Standard positioning at 6cm above the Z-line/LES (lower esophageal sphincter) ensures that the capsule can detect reflux, yet will not advance into the stomach during swallowing when the esophagus shortens. It has also been found that the Z-line placement also correlates well with capsules placed 9cm above the proximal LES measurement obtained with esophageal manometry. The Z-line is sometimes noted on esophagogastroduodenoscopy (EGD) reports, but only sometimes. If your physician does

not have this information it may be necessary to perform esophageal manometry to establish the level of the LES for capsule placement. BRAVO pH capsules must have the area of placement measured prior to insertion. The capsules do not have to be removed. They adhere via suction and a small pin and will fall off within 5 to 10 days and pass through the digestive tract. BRAVO capsules are inserted through the mouth and into the esophagus after the throat has been sprayed with a numbing medication. There will be a receiver you will carry for 48 hours the capsule will communicate with. It will have symptom buttons on it that you will push for your designated symptoms. You will also keep a diary sheet to track meal times, times when you are sleeping or laying down, taking medications or exercising. You will need to return to the facility after the 48 hours to return your receiver and diary sheet to the nurse.

#### Positioning the Ambulatory pH catheter:

An esophageal Manometry study will be done first on anyone having a 24 hour esophageal pH study with impedance. Then the placement of the thin spaghetti like catheter will be based on the measurements obtained from the esophageal Manometry. It will be placed to a depth 5 cm above the proximal LES measurement obtained with Manometry. The catheter will then be taped in place and connected to a receiver you will keep with you for 24 hours. Please do not wear make up to your appointment since it will hinder being able to tape the probe in place. It is best to wear a loose or button down shirt when coming in for this procedure to be able to place to probe underneath your clothing. The receiver will have a symptom button on it you will need to push and buttons for meal times and periods you are laying down and when you take any medications. There will also be a diary sheet you will keep notes on for additional symptoms. You will need to return to see the nurse after 24 hours to have the nasal catheter removed and return the receiver so the results of the test can be uploaded into a computer. It is important you remember to bring your diary sheet back with you to the office.



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