



**Bravo Recorder**

### **What is Bravo pH capsule monitoring test?**

Bravo™ pH capsule monitoring test helps confirm diagnosis of acid reflux or Gastroesophageal reflux disease (GERD) for patients who suffer from heartburn, chest pain, coughing, and sore throat or hoarse voice. It reveals how often stomach contents reflux into the lower Oesophagus and how much acid the reflux contains.

GERD can cause damage to your oesophagus, which could lead to more serious conditions such as Barrett's Oesophagus or Oesophageal Cancer.

### **How does a Bravo pH test work?**

The Bravo pH monitoring test is a system that includes:

- A pH-sensing wireless capsule that is placed into oesophageal tissue to measure pH levels.
- A recorder you wear to capture the data from the capsule
- A software system that makes it all work.

During a gastroscopy procedure, the Bravo pH capsule is attached to the wall of the oesophagus. The capsule then measures pH levels in the oesophagus and transmits readings to the recorder, which you'll wear on your belt or waistband.

The recorder has several buttons on it that you will press to record symptoms of GERD such as heartburn (a caregiver will tell you what symptoms to record). You will be asked to maintain a diary to keep track of events like when you start and stop eating and drinking, when you lie down and when you get back up. This will be explained by your consultant.

### **How do you prepare for the Bravo pH test?**

Please let your consultant know if you have a history of bleeding diathesis, strictures, severe esophagitis, varices, obstructions, pacemakers or implantable cardiac defibrillators.

**Seven days before your procedure:** Please don't take any proton pump inhibitors such as omeprazole (Prilosec®), lansoprazole (Prevacid®), rabeprazole (Aciphex®), pantoprazole (Protonix®), esomeprazole (Nexium®).

**Two days before your procedure:** Please don't take the H2 blockers ranitidine (Zantac®), cimetidine (Tagamet®), famotidine (Pepcid®), nizatidine (Axiid®); or the promotility drug, metoclopramide (Reglan®).

**Six hours before the procedure:** Aside from not eating any solid food and taking your usual medications, please don't take antacids (such as Alka-Seltzer®, Gaviscon®, Maalox®, Milk of Magnesia®, Mylanta®, Phillips®, Riopan®, Tums® or any other brands).

### **What happens on the day of the Bravo pH test?**

A gastroscopy with Bravo pH capsule test insertion usually takes between 15 to 30 minutes. We'll spray a local anaesthetic on the back of your throat to make it numb throughout the procedure and give you a sedative to help you relax. A small mouth guard will be placed between your teeth to protect them.

Your consultant will place a flexible tube called an endoscope into the back of your throat and down into your stomach. You may be asked to swallow to help guide the tube. The endoscope will not interfere with your breathing but initially, you may experience a retching sensation. If you have a lot of saliva, suction similar to that used at the dentist may be used.

Your consultant will check the lining of the gullet and also measure the target area for the capsule's placement. The endoscope will then be removed and the Bravo capsule will be inserted through the mouth down to the required position and pinned to the lining of the gullet. The placement will then be reconfirmed using the endoscope which will gently be removed when the examination is complete. The team also confirms that the capsule sends signal to the recorder.

### **Will it be painful?**

It will be uncomfortable during the procedure and you may feel a strange sensation around your chest bone where the capsule is attached. Some have reported discomfort when swallowing. If you experience this, chewing carefully and drinking liquids may help minimise this sensation. You also might have chest pain. You can take pain relief medication such as Paracetamol and Ibuprofen to help ease this.

### **What happens during recovery?**

If you were given a sedative, you will normally recover in about an hour. You may feel a bit bloated for a few hours but this will pass. When the local anaesthetic in the back of your throat wears off you can drink and eat normally.

Your consultant will tell you about the outcome and guide you on how to use the recorder to monitor your activity and record your symptoms. He/she will also discuss with you any treatment or follow-up you need.

You may develop a sore throat or dry mouth and slight hoarseness, following the procedure. Throat lozenges and saltwater gargles can ease these symptoms.

You should be able to go back to work the day after the endoscopy. Most people make a good recovery and return to normal activities following a gastroscopy.

### **What happens after discharge?**

Please ensure to keep the recorder dry and with you at all times until the end of the study. You may keep the receiver within 3 feet away from you.

**Activity:** Follow your usual daily routine. Don't reduce or change your activities during the monitoring period. Note: Don't get the recorder wet because it's not waterproof.

**Eating:** Eat your regular meals at the usual times. If you don't eat during the monitoring period, your stomach won't produce acid as usual, and the test results won't be accurate. Eat at least 2 meals a day. Eat foods that tend to increase your symptoms (without making yourself miserable). Avoid snacking. Don't suck on hard candy or lozenges and don't chew gum during the monitoring period.

**Lying down:** Remain upright throughout the day. Don't lie down until you go to bed (unless napping or lying down during the day is part of your daily routine).

**Recording symptoms:** Press the appropriate button on the recorder 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 you're just resting) and when you get back up.

**Medications:** Continue to follow your doctor's advice regarding medications to avoid during the monitoring period.

**Unusual symptoms or side effects:** If you think you may be experiencing any unusual symptoms or side effects, call your doctor.

You'll return the recorder and diary when the monitoring period (usually 96 hours) is over. The information on the recorder and diary will be downloaded to a computer and the results will be analyzed.

### **What happens after the Bravo pH monitoring test is completed?**

You can resume your normal diet and activities. This will cause the disposable pH capsule to detach and pass through the digestive tract in seven to 10 days on average.

You will meet with your consultant to discuss the results of the monitoring test. Your provider will work with you to develop a plan to manage your symptoms.

Patients are restricted from undergoing an MRI study within 30 days of the pH study. If the patient cannot positively verify the excretion of any Bravo™ pH capsule, the patient should contact the physician for evaluation and possible abdominal X-ray before undergoing an MRI examination.

### **Benefits and Risks**

The BRAVO study is a good alternative to measure acid reflux in patients who cannot tolerate a tube down the nose for 24 hours. Complications are very rare and those associated with gastroscopy are documented in the leaflets sent with your appointment letter. Potential complications with the BRAVO pH capsule include:

- Tears in the oesophageal lining, causing bleeding and possibly requiring medical attention
- Perforation of the oesophagus
- Premature detachment of the capsule