

96-hour Wireless pH Investigation (Bravo)

Why do I need the test?

The purpose of the test is to monitor the acid levels in your oesophagus (gullet) over a 96 hour period. The results will help to identify whether your symptoms are caused by Gastro Oesophageal Reflux Disease (GORD). They will help your consultant to see what treatment or surgery may be most suitable.

You may have already had a standard 24-hour pH investigation using a nasal catheter (tube). This test will allow us to measure over a longer time period and will therefore provide more information that will help with your treatment.

What is a 96-hour wireless pH investigation (Bravo)?

The investigation involves having a small (approx. 1 inch/3cm long) pH measuring capsule placed into the oesophagus as part of a Gastroscopy procedure (where a small camera called an endoscope, is inserted into the stomach). This capsule will measure the levels of acid in your oesophagus and send this data wirelessly to a receiver which you will carry with you for the duration of the 96 hour recording period. The recording period will start shortly after the capsule has been placed.

Preparation for your visit

Your appointment letter(s) will have the details of where and when your Bravo appointment will take place. You may also, if relevant, receive a separate leaflet regarding the Gastroscopy procedure. It is important to read everything you are sent carefully and follow the instructions they provide otherwise it may become necessary to rebook your appointment.

If you are taking any of the following medications you should temporarily stop these before your investigation and not resume them until after the 96 hour recording period has ended. These medications help to reduce or mask the amount of acid present and will give an inaccurate result if you are taking them in the days prior to or during the test:

A. PPI medication – stop 1 week before the test. For example:

- Omeprazole (Losec)
- Lansoprazole (Zoton)
- Pantoprazole (Protium)
- Rabeprazole (Pariet)
- Ondansetron (Zofran)
- Esomeprazole (Nexium)

B. H2-receptor antagonists and motility medication - stop 3 days before the test. For example:

- Ranitidine (Zantac)
- Cimetidine (Tagamet)
- Nizatidine (Axid)
- Famotidine (Pepsid)
- Motilium
- Maxalon

C. Antacid medication – stop 24 hours before the test. For example:

- Gaviscon
- Rennie
- Gastrocote
- Settlers
- Algicon

If you have any concerns or questions regarding stopping your medication, or any disabilities or allergies we need to be aware of please contact one of the GI Physiologists on 01392 402144 as soon as possible.

If you have previously experienced an allergic reaction/anaphylaxis to any of the metals contained within Stainless Steel (chromium, nickel, copper, cobalt, iron) it is important you inform us of this as soon as possible prior to your investigation on the phone number above as the Bravo capsule may not be suitable for you.

If you are unable to attend your appointment for any reason, please inform us as soon as possible so we may offer the appointment to someone else.

What happens during the investigation?

Shortly after your arrival you will be seen by a GI Physiologist who will explain the investigation in detail, take some details from you and ensure you are happy to proceed. They will also explain how to use the wireless recorder following the procedure to record your symptoms. You will also be seen separately by a nurse or Doctor who will ask you further questions and ensure all preparation and paperwork has been completed prior to the Gastroscopy and Bravo placement. They will ask you to sign a consent form for the Gastroscopy and the placement of the Bravo capsule.

Your Gastroscopy will then be performed by a Doctor. From the Gastroscopy we will obtain a measurement which will determine where the Bravo capsule needs to be placed. The endoscope will then be removed and a small tube (attachment device) will be inserted into your mouth and slid down your throat in the same way as the endoscope. This has the Bravo capsule attached to it. The Bravo capsule will be attached to your oesophagus using suction and a small metal pin (this process takes about 30 seconds). The attachment device will then be removed. After this the Gastroscopy camera will be inserted again to ensure that the probe is in the correct position.

Shortly after the Gastroscopy, and before you are discharged, you will be seen by the Physiologist again and given the receiver and a diary sheet. You will be asked to record the following information on the diary during the 96 hours:

- All your symptoms
- Start time and end time of everything you eat and drink
- When you go to bed and when you get up in the morning

The receiver will need to be kept within 1 metre (3 feet) of you throughout the 96 hour period, during both daytime and night time.

You will be encouraged to eat and drink as normal (once you have been told it is safe to do so following the endoscopy), and to continue with your normal routine as much as possible. You will be able to bath and shower during the test.

Returning the receiver

We will ask you to return the equipment and diary to the Department of Clinical Measurements, (Area D, Level 2), 96-hours after the investigation has begun. We will arrange this with you before you leave the hospital on the day of your Gastroscopy.

It is important that the equipment is returned promptly as it will be required for other patients.

What happens after the investigation?

Unless you are told otherwise you may go back on your medication once the diary and receiver have been returned to the Department of Clinical Measurements.

The findings of the investigation will be sent to your consultant who will then write to you or arrange for you to be seen in the outpatient clinic to explain the findings of the investigation and discuss any further treatment options with you.

The Bravo capsule will detach from the oesophagus naturally and pass through your digestive tract. You should not be aware of this.

You do not need to return the capsule. If, in the month following the procedure you experience severe abdominal pain or vomiting you should contact your GP or consultant reminding them you have had a Bravo investigation.

What are the potential risks of this investigation?

The risks of insertion of the attachment device and Bravo capsule are similar to those of the Gastroscopy itself, (which you will have been informed of separately). These risks may include tears or perforations in the oesophagus which may cause bleeding and which may require possible further medical intervention.

Potential, though rare, complications specific to the Bravo investigation include:

- Aspiration of the capsule (where the capsule may accidentally enter the respiratory system).
- The device failing to attach to the oesophagus or sending a signal, resulting in a failure to record.
- Failure of the Bravo capsule to detach from the oesophagus within the expected time or abnormal discomfort or pain caused by the capsule, either of which may in rare circumstances require endoscopic removal.

It is perfectly normal to feel some mild chest pain during the investigation, or to feel the capsule tugging in the oesophagus when you are eating. Any discomfort should be relieved with over the counter pain relief, (if you are normally able to take such medication – if you are unsure please discuss this with your GP). In rare cases some patients experience more significant discomfort. It is advised that you seek medical attention if you are concerned about the levels of discomfort you are feeling.

There is a small chance that the Bravo capsule may fail to attach or may detach early (before the end of the 96-hour recording period). If this were to happen the test may, with your consent, need to be repeated on a different day.

You should avoid having an MRI scan for 30 days following placement of the Bravo capsule. There is metal in the Bravo capsule, and the capsule therefore needs time to pass through your digestive system before it is safe to have an MRI scan. If an MRI scan is required before the end of this 30 day period it is important that you mention that you have had this test, to the Doctor requesting the MRI scan as they may need to perform an X-ray first.

There is a risk of developing an allergic reaction/anaphylaxis to the metal contained within the Bravo capsule. If you have previously experienced a metal allergy you will be advised whether it is safe to proceed with the test prior to the Gastroscopy.

Any further questions?

If you have any further questions about the investigation or wish to speak to one of our GI Physiologists regarding your appointment please telephone the Department of Clinical Measurements on **01392 402144**.

The Trust cannot accept any responsibility for the accuracy of the information given if the leaflet is not used by RD&E staff undertaking procedures at the RD&E hospitals.

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