

# Oesophageal function tests



**Information for patients**  
Gastrointestinal Physiology



**PROUD TO MAKE A DIFFERENCE**

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## **The aims of this booklet are:**

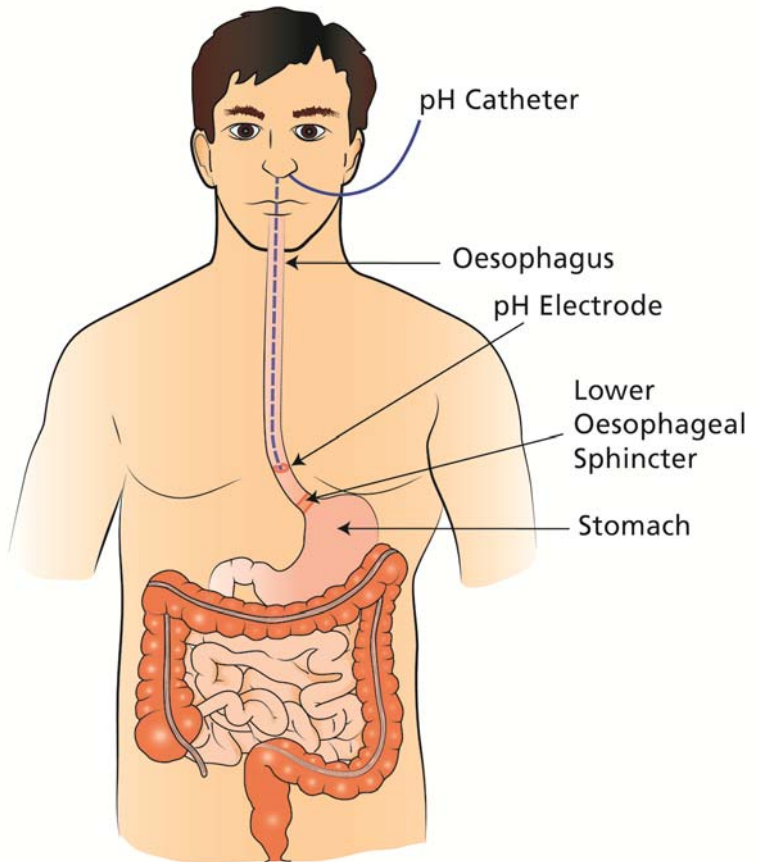
- **To inform and involve you in your care**
- **To explain what happens on the day of the test**
- **To answer questions you may have about the tests**

Your Consultant has requested that you have tests which will help find the cause of your symptoms. These tests are not painful and should not cause you any discomfort afterwards. We do understand that you may have concerns about having this type of test and we would like to reassure you that they are conducted in a quiet private room. A Clinical Scientist or Clinical Physiologist will be conducting the test. They will ensure your comfort is maintained at all times.

The oesophagus (food pipe) connects your throat to your stomach. Each time you swallow the valve in your throat should relax to allow food through. The muscles in your oesophagus contract, pushing your food down, through another valve located at the opening of the stomach. This valve will then close to prevent food and stomach acid flowing back into your oesophagus. Problems with the way the valves relax or with the action of the muscles of the oesophagus may cause symptoms such as difficulty swallowing, heartburn and chest pain.

Tests may include:

- Oesophageal manometry
- Ambulatory pH monitoring
- Combined ambulatory pH and impedance monitoring



## What is oesophageal manometry?

Oesophageal manometry is a test that allows the Clinical Scientist or Clinical Physiologist to assess how well the muscles in your oesophagus work when you swallow and to check the relaxation of the valves at the top and bottom of your oesophagus. The results of the test will help your Consultant decide what treatment is best for you.

The instrument used to carry out the test is called a manometry catheter and is a tube about the thickness of a straw. The catheter has many sensors all down its length which measure how well the muscles of the

oesophagus contract. The results can then be displayed on a computer screen which helps illustrate why you may be getting your symptoms.

You will be given a small amount of local anaesthetic spray in your nose and the back of your throat before the test. The catheter is then gently passed into your nose and you will drink water through a straw to help the tube pass into your stomach. You will then be given measured amounts of water to swallow and the swallow measurements are recorded.

## **What is ambulatory pH monitoring?**

This is the measurement of the acidity (or pH) within the oesophagus. The pH measurements are made using a very thin catheter. The tip is positioned 5cm above the valve at the entrance to the stomach. You will usually have this test at the same visit and immediately after the oesophageal manometry.

Once the catheter is in position it is connected to a battery powered recorder which can be fastened around your waist. You will be given instructions on which buttons to press on the recorder and you will also be asked to fill out a diary of when you get your symptoms, when you eat and drink and when you go to bed. The test is carried out over 24 hours and the physiologist will give you an appointment to return the next day. The information collected will be uploaded onto a computer and the tube quickly and painlessly removed. You will be able to go back on any medication that may have been stopped for the tests.

## **Combined ambulatory pH and impedance monitoring**

This test is for more complex reflux problems; in some people it may be more difficult to prove that reflux is causing their symptoms. By combining the pH measurement and also impedance (electrical resistance) of the oesophagus, it is possible to confirm that reflux is causing or contributing to your symptoms. You will still have one thin

catheter positioned with the tip 5cm above the valve to your stomach and attached to a recorder. The test is carried out over 24 hours and you will be given an appointment to return the next day. The information collected will be uploaded onto a computer and the tube quickly and painlessly removed. You will be able to go back on any medication that may have been stopped for the tests.

## **What are the risks of having the tests?**

As with all procedures there may be risks. In some people the tests may cause dizziness or fainting, but there is a very small risk of perforation and bleeding of the oesophagus. As your Consultant will usually have carried out an examination, such as gastroscopy, before he or she decided to send you for these tests, they confirm that there is no increased risk to you from having to undergo these further tests. Therefore the overall risk is considered to be low.

## **What are the alternatives?**

These tests are considered gold standard tests. A barium examination is another test which may give some of the information which relates to your condition, but these tests are considered the best way of confirming that your symptoms relate to your oesophagus.

## **Before the tests**

If your Consultant requests that you stop medication for your tests then it is very important that you follow the tablet instruction sheet enclosed with your appointment.

It is important that you do not eat or drink for at least 6 hours before your test.

You would usually have had a gastroscopy or a barium swallow prior to this appointment. If you have not had a gastroscopy or it is over 12

months since your last, would you please ring **0114 271 4293** as we will have to speak to your Consultant and rearrange your appointment.

You will be asked to read a consent form before you have the test. If you are happy with the information given to you and fully understand the tests you may sign the form. However, you may want to ask further questions and the person conducting your test will be happy to answer them before you sign.

For health and safety reasons, your employer may not want you to work with the pH recording equipment on - please check this before your test.

You do not need to be sedated for the tests and it is not necessary for a friend or relative to accompany you, unless you have a condition which requires that you travel accompanied. If you do bring friends or relatives they will be asked to stay in nearby waiting areas; either in GI Physiology (if not busy) or in Chesterman reception.

## **Where do I go?**

The department is located in the Chesterman building on 'C' floor (ground level). If you come in via the main Chesterman entrance, please walk past the café, turn left, walk a few yards down the corridor and the Department of GI Physiology is on the right hand side. Please ring the bell on the wall and a member of staff will open the door. You will be asked to take a seat in the small waiting room. You will be taken into a private room where the member of staff will discuss the tests with you. Although you are very welcome to bring someone to accompany you, when it is busy we may ask them to wait in the main waiting area in Chesterman.

## **Can I bring my children with me?**

**Unfortunately it is not appropriate to bring children under the age of 16 into this area without appropriate adult supervision. Adult supervision should be provided by someone other than the**

**patient as children will not be allowed to accompany the patient in to the clinical rooms. Failure to ensure that you have arranged appropriate childcare may result in the cancellation of your procedure as staff in the department are unable to care for your child / children during your investigations. If this is likely to cause you any significant difficulties we kindly ask that you contact the department to arrange a more convenient appointment time or discuss your needs with the team.**

## **What should I expect?**

We will explain the tests in full and will ask you to sign a consent form. We must seek your consent for any procedure or treatment beforehand. Staff will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

You will be asked to sit upright on a couch and we will usually spray local anaesthetic into your nostril and the back of your mouth.

For the manometry, we will put 5ml of water from a syringe into your mouth to swallow and this will be repeated at least ten times. During this time the action of the oesophagus is displayed in detail on a computer screen.

The tests usually take about 45 minutes from start to finish, although you should expect to be here for up to 1 hour.

The Northern General Hospital is a teaching hospital and has a responsibility to ensure that students receive a high standard of training. Occasionally there may be a trainee or an assessor observing the tests. If this is going to happen, we will tell you about it beforehand and it is your right to decline anything you are not comfortable with.



## **Can I carry out my normal activities during the 24 hour recording period?**

Yes. It is important that you carry out your normal activities as far as possible during the recording period to see if they might be related to your symptoms. However you will be unable to have a bath or shower while the recording equipment is attached to you. You will be asked not to drink alcohol and other acidic or fizzy drinks and not to eat fruit during the tests, to make the test more accurate.

## **What happens if I vomit during the 24 hour pH test?**

If you vomit during the 24 hour period, the catheter may move from its correct place which may feel uncomfortable. Coughing and sneezing do not usually cause the catheter to move. A member of staff will explain how to deal with any problems before you leave the department.

## **What happens after the tests?**

We will give you instructions on how to use the recorder and what to write on your diary. We will give you an appointment to return the next day if appropriate.

You may go home straight after the test.

Your results will be passed on to the Consultant who referred you. If you have not already been given an appointment to see your Consultant, then you will usually be contacted in due course.

For further information please contact the Department of GI Physiology on **0114 271 4293** (try to ring between 8.00am and 4.00pm, otherwise you will have to leave a voicemail message). We will try to answer your questions as soon as possible.

## Further reading

- Heartburn and gastro-oesophageal reflux disease;  
<https://www.nhs.uk/conditions/heartburn-and-acid-reflux/>





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