INFORMATION FOR PATIENTS

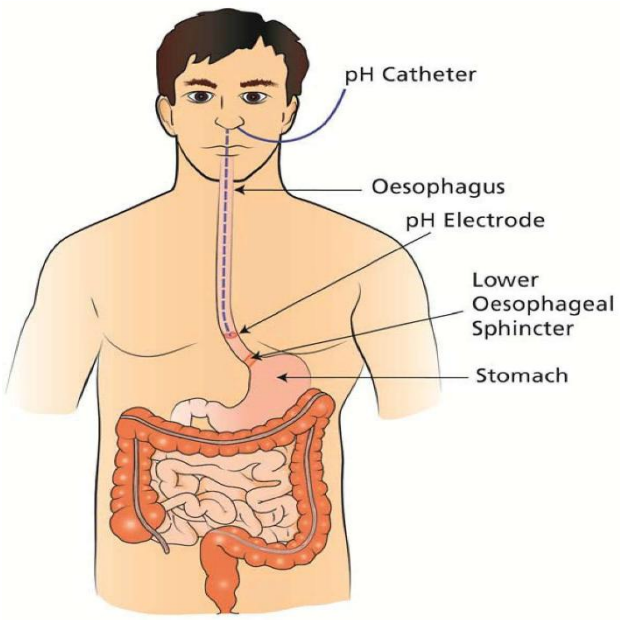
Oesophageal manometry and 24-hour pH study

Your consultant or clinician has requested that you have tests which will help find the cause of your symptoms. These tests are not generally 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 nurse endoscopist 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 the following:

- 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 nurse endoscopist 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 may 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 and biscuit to swallow and 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 clinical scientist or nurse endoscopist will give you instructions on the removal of the catheter the next day. They will also arrange an appointment to return the monitor 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 again you will be given instructions on how to remove the catheter the next day will be given. An appointment will also be made to return the monitor 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.

Why do I need the tests?

The tests will give information to your doctor about how well the gullet contracts to move good and fluid down, and how much acid is coming back up, so he/she is able to decide the best treatment to your condition.

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, there is also 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 decides 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 and/or BRAVO studies are other tests 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

Please note it is very important that you follow the medication cessation instruction below before your appointment.

It is important that you do not eat or drink for at least six 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 01623 622515, extension 4603 as we will have to speak to your consultant and may need to 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 so please check this before your test.

You cannot be sedated for the tests, therefore 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.

Where do I go?

Please check in at the reception desk in the Endoscopy department.

The receptionist will then be able to mark you as arrived for your appointment and direct you to the most appropriate waiting area. When it is time for your appointment you will be taken into a private room where the member of staff will discuss the tests with you.

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 into 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. We may also ask you to perform some biscuit swallows (please bring along your own biscuits should you have any food sensitivities/intolerances). The catheter will then be removed, and a small one will be placed which to measure reflux, which you will wear at home for around 24 hours.

The tests usually take about 45 minutes from start to finish, although you should expect to be in the department for up to one hour.

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 may be asked not to drink alcohol and other acidic or fizzy drinks and not to eat fruit during the test, 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 clinic.

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 also instruct you on when and how to remove the catheter the next day and give you an appointment to return the monitor to us the next day. 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.

How do I complete the diary sheet?

The clinical scientist or nurse endoscopist will explain this to you on your visit. Most importantly we want you to record when you experience your symptoms, e.g. heartburn, regurgitation, etc. Please do this by:

1) Pressing the button on the recorder every time you become aware of your symptoms (this inserts an electronic mark onto the recording).

And

2) By writing on your diary sheet the nature of the symptom and the time it occurs (as displayed on the recorder).

You will also need to write down everything you eat and drink, and when you go to sleep (noting the start and finish times).

Please bring your completed diary sheet with you when you return your catheter.

Will I be able to feel the catheter?

You will be aware of the catheter in the back of your throat, but most patients find they become less aware of it with time.

Will I be able to eat and drink as normal during the 24-hour pH test?

We especially want you to continue with your normal diet throughout the test as we need to see what happens during a normal day. Please do not chew gum. The catheter may move very slightly as you eat, and it may feel strange, but we would like you to persevere as it is important to know what happens after mealtimes.

Will I be able to sleep?

When going to bed, you may wish to sleep with the device around your waist.

Alternatively, you can undo the waist belt and put the recorder (still attached to you) on your bed or bedside table. Again, it is important that you sleep in your normal position and record any symptoms that disturb you during the night.

What happens if I need to cough, vomit or blow my nose?

The catheter will be securely taped to your cheek and behind your ear and is not likely to move on these occasions. If you have a cold and your nose begins to run, try not to blow it but dab it instead.

Very rarely, the catheter can be vomited back up into your mouth and if this happens you will have to remove it, instructions for this are included on the following page.

Can I take any medication for indigestion during the test?

No, as these have the effect of reducing or masking the amount of acid present and therefore will give us an inaccurate result.

Will I be able to go to work?

Yes, if possible, please follow your normal daily routine. However, if you feel you do not want to go to work, please still be as active as you normally would be.

Will I be able to have a bath or shower?

No, as the recorder must not get wet. Please do not go swimming either.

Is the equipment easily damaged?

The equipment is new and expensive so we would like to ask you to treat it with care. The catheter is particularly vulnerable and if it catches on a door handle, for example, it will be irreparably damaged. It is therefore advisable to wear a loose top over the recorder and catheter to protect against this.

What should I do if I cannot tolerate the presence of the catheter?

We would like to reassure you that this is very unlikely. However, if you feel that you cannot tolerate the catheter it is possible to remove it yourself, as follows:

- Untape the catheter from your face.
- Take a deep breath in and pull it out from the nose.

After removing the catheter, place all the equipment in a plastic bag and return for your appointment as arranged. Obviously, if this happens, we will gain less information about your condition.

What happens when I return the monitor?

The majority of patients will be able to remove the catheter themselves and will be given instructions on how to do this and drop off the monitor for us to retrieve the data. However, some patients may be given an appointment for us to remove the catheter for them. This appointment only takes between five to ten minutes. The recorder is stopped and the catheter is removed (this only takes two to three seconds and is not uncomfortable).

Medication cessation guidance

To ensure that your tests are performed accurately it is very important to check from the list of tablets below and follow the instructions on when to stop them.

If you are taking:

- **Losec/Mepradec (omeprazole)**
- **Nexium (esomeprazole)**
- **Protium (pantoprazole)**
- **Pariet (rabeprazole)**
- **Zoton (lansoprazole).**

Your doctor has requested that these must be stopped **seven days** before your appointment.

If you are taking:

- **Axid (nizatidine)**
- **Pepcid (famotidine)**
- **Tagamet (cimetidine)**
- **Zantac (ranitidine).**

Your doctor has requested that these must be stopped **three days** before your appointment

You should also stop any tablets that you take for pain, sickness and/dizziness, for example.

- **Stemetil (prochlorperazine)**
- **Motilium (domperidone)**
- **Maxolon/Gastrobid (metoclopramide)**
- **Morphine**
- **Codeine**
- **Co-codomol (Zapain)**
- **Tramodol.**

Your doctor has requested that these must be stopped **two days** before your appointment

Gaviscon, Maalox, Gastrocote, Kolanticon, Sucralfate, Rennies etc. can be taken up to the night before your visit.

Ideally you should stop any blood pressure medication 48 hours prior to the test.

However, it should only be stopped if you are taking it for uncomplicated high blood pressure.

If you have any other underlying or associated health problems for example (but not exhaustive) heart problems, kidney disease, risk of stroke or are unsure in any way please contact the clinic for advice.

Please continue to take any other medication not listed above as normal.

Please be aware that if you have not stopped taking any of the medications as required above then we may not be able to proceed with your test, and you may be asked to rebook your appointment.

Further sources of information

NHS Choices: www.nhs.uk/conditions
Our website: www.sfh-tr.nhs.uk

Patient Experience Team (PET)
PET is available to help with any of your compliments, concerns or complaints, and will ensure a prompt and efficient service.

King's Mill Hospital: 01623 672222
Newark Hospital: 01636 685692
Email: sfh-tr.PET@nhs.net

If you would like this information in an alternative format, for example large print or easy read, or if you need help with communicating with us, for example because you use British Sign Language, please let us know. You can call the Patient Experience Team on 01623 672222 or email sfh-tr.PET@nhs.net.

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