



The Shrewsbury and
Telford Hospital
NHS Trust

EUS

**Endoscopic Ultrasound
Endoscopy Unit**

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For any queries, please contact the
Endoscopy Booking Office on 01743
261064

Opening times

8.00am to 5.00pm Monday to Friday and

8.00am to 12.00pm Saturday and Sunday

Introduction

Your doctor has advised that you should have a test called an EUS.

This procedure will be undertaken at The Royal Shrewsbury.

This leaflet tells you why you need the investigation and what to expect on the day and immediately afterwards. If you have any remaining concerns or queries when you have read this leaflet, please telephone the Endoscopy Booking Office.

What is an EUS?

Endoscopic Ultrasound plays a role in evaluating disorders of the oesophagus, stomach and surrounding organs, including the pancreas and bile ducts; it also measures the thickness and spread of abnormalities in the oesophagus and stomach, or to assess a cancer that has already been found. EUS is an examination that combines endoscopy and ultrasound in order to obtain images and information about the digestive tract and the surrounding tissue and organs using a flexible endoscope. An endoscope is a long flexible tube about the size of your little finger, with a bright light at the end. It also has a small ultrasound transducer at the end that can send out sound waves allowing the doctor to examine and take pictures of your digestive system. In certain conditions EUS is also used to guide a special injection as treatment for severe pain, this is called a Coeliac Plexus Neurolysis (CPN)

During the procedure tissue (biopsy) samples may be taken. This is sometimes referred to as "fine needle aspiration" FNA. This means that a very small needle will be inserted through the flexible tube to sample cells in the oesophagus (food pipe), stomach, bowel, pancreas or from a lymph node or other lump that is near to the stomach oesophagus or duodenum. These abnormalities have often been noticed in previous tests or x-ray. This is normally a painless procedure but it may cause some slight discomfort. Sometimes EUS can be used to take fluid samples.

All biopsies taken will be sent to the laboratories for analysis. Your endoscopist will advise you on how you will be informed of these results.

What are the risks and benefits of having a EUS?

The majority of these procedures are safe and uncomplicated. However, as with any procedure there is a small chance of complications or side effects. We have enclosed an example of our consent form for you to read at the end of this leaflet.

You may suffer from:

- A sore throat
- Feel some wind in your stomach, this will settle in a few days

National studies have shown that serious complications are very rare. Such as:

- Drug reaction
- Bleeding
- Perforation
- Missed lesions (unable to see an abnormality)

- If FNA is performed on the pancreas, pancreatitis (inflammation of the pancreas) may occur. It is severe in about 1 in 100 procedures and you may require hospitalisation.

Bleeding: occurs in less than 1 in 5000 cases

Perforation: (a hole or tear in the gullet or stomach) occurs in approximately 1 in 5000 cases.

If you have a Coeliac Plexus Neurolysis (CPN) we will observe your blood pressure for a while after the procedure. CPN may temporarily lower your blood pressure, but this is very unusual. Some patients may have diarrhoea for a few days after the procedure. A very small number may experience a temporary increase in pain. A very rare complication that may occur is an abnormal heart beat (arrhythmia) which could potentially be serious. During the procedure we will monitor your heart for signs of this.

- **If a complication occurs it may be necessary to stay in hospital**

What if I do not have an EUS?

There are no other tests that are as good as an EUS to help assess diseases of the digestive tract.

Things you need to know before your test

If you need an interpreter, please contact the Endoscopy department before your appointment. They will make sure someone is there to interpret for you. Family members cannot do this.

If you are planning to fly or travel outside of the UK within two weeks after your test, please contact us.

You may need to attend the unit for a pre-assessment. If this is required, you will be contacted by a member of the team to arrange this.

How to prepare for your test

- **Do not eat or drink anything** in the 6 hours before your appointment.
- **You can drink small sips of water only up to 2 hours before the test.** This is to make sure your stomach is empty so we can have a clear view of your stomach.
- Please do not bring valuables to the hospital. We cannot accept any responsibility for the loss or damage to personal property during your time on these premises. Please remove all jewellery other than one wedding band.

Medicine

- If you are taking a **Direct Oral Anticoagulant (DOAC)** e.g. Rivaroxaban, Apixaban, Dabigatran and Edoxaban **please do not take the morning dose on the day of your**

test. If you have been advised to stop this medicine for longer, then please follow the advice you have been given. **If you have not been given any advice, contact the Endoscopy Booking Office.**

- If you take **Aspirin**, this can be taken as normal before your test.
- If you are taking **Warfarin**, please make an appointment to get your INR checked at your GP surgery. This should be 2 to 3 days before the test. If your INR is too high, you may not be able to have the test. We decide on the day of your appointment. Please ensure you bring your current Warfarin record card.
- **If you are a diabetic on tablets or Insulin**, please contact the Endoscopy Booking Office as soon as possible to discuss your diabetic treatment before the test. We will ask you for the name of the medicine you are taking. Our pre-assessment team will contact you to give you advice. This will normally be a phone call.
- **Keep taking all other medicines as normal (including blood pressure medicines).** If you have any concerns, please contact the Endoscopy department.

Sedation

As you will have sedation for your test you will need to make plans for an adult to take you home and stay with you afterwards for a minimum of 12 hours. Please bring the contact details of this person with you to the appointment.

You **must not** do any of the below for 24 hours following your test:

- Drive a vehicle
- Drink alcohol
- Operate machinery
- Sign any important or legal documents
- Attend work

What should I expect during my visit?

When you arrive at the Endoscopy Unit please report to reception and you will then be asked to take a seat in the waiting area. If you feel unwell at any time, please inform the receptionist.

A nurse will invite you into an assessment room to ask you questions about your health, explain about the EUS procedure and find out what arrangements you have made for going home. You will have the chance to ask any questions that you may have.

Please bear in mind that your appointment time is not your procedure time and there may be a delay before you are taken through for your procedure. You may be in the department for up to 4 hours. The Endoscopy Unit sometimes has to deal with emergency cases which may cause delays to your appointment time.

Consent

The nurse will explain the procedure to you and discuss any potential risks related to the procedure. You will have the opportunity to ask any further questions. You will be asked to sign the consent form confirming you understand and agree to go ahead with the procedure. You can change your mind about having the procedure at any time.

On admission you will be required to drink pre-procedure anti-foaming drinks that have been prepared by the nurse. The purpose of these drinks is to clear any bubbles and mucous away from your oesophagus, stomach and small bowel, giving the Endoscopist improved views of the lining. Studies conducted have provided evidence of the benefits of these drinks in detecting abnormalities. However, the two medications used are not licensed for this purpose and you do have the option of declining the drink.

In the procedure room

Before the procedure is done you will be asked to remove your glasses (contact lenses can stay in) and to remove any false teeth (a denture pot is provided). Outer clothing i.e. coats and jumpers will need to be taken off.

Local anaesthetic spray

This is sprayed to the back of your mouth and you are asked to swallow. After a few seconds it will start to make your throat feel numb.

Having the spray makes it more comfortable when the camera is passed down through your throat. After the EUS you will have to wait 1 hour before you can eat or drink. You may be able to go home sooner than this, the nurse will advise you.

Sedation

If you have chosen to have sedation, this is an injection into a vein in your hand or arm via cannula to make you feel drowsy and relaxed. Some people do not have any memory of the EUS being done. After the EUS you will be kept in the recovery area lying on a trolley until you are fully awake.

Sometimes sedation may not be advisable because of other health problems.

The EUS

A nurse will stay with you throughout the EUS. You will be made comfortable lying on your left side on a trolley. A mouth guard will be placed between your teeth (or gums); this keeps your mouth slightly open and prevents you from biting the camera. The nurse will hold this in place. You may be given some oxygen to breathe through a small plastic tube in your nostrils. Throughout the EUS a monitor is placed on your finger to check your pulse and oxygen levels.

The Endoscopist will pass the camera over your tongue to the back of your throat and will ask you to swallow. The camera will then pass into your Oesophagus (food pipe), stomach and duodenum. The procedure can take from 30 – 90 minutes.

You may feel the camera move inside you and you may feel full of air and bloated. This is because air is blown into your stomach to ensure good views are seen.

During the EUS the nurse, using a sucker similar to the dentist, will remove any saliva collecting in your mouth. Tissue samples (biopsies) may be taken painlessly during the EUS.

As soon as the camera is removed, the mouth guard is taken out of your mouth and the procedure is finished.

After the EUS

If you have had local anaesthetic throat spray, you will have to wait 1 hour before you can eat and drink. You may be able to go home sooner than this; the nurse will advise you and give you some written information to take home.

If you have had sedation, you will be cared for in the recovery area on the trolley until you are fully awake and it is safe for you to go home. This may be between 1 and 2 hours. You will have some written instructions to take home and you will need to have an adult to accompany you.

When will I receive the results?

The nursing staff looking after you will speak to you prior to discharge. A report of the test will be given to yourself and a copy sent to your GP. Biopsy results will take a number of weeks to be available.

An aftercare sheet will be given to you which will contain all the relevant information. If you have had sedation this can make you forgetful so it is important to have someone with you at this discussion.

Training

The Royal Shrewsbury and Princess Royal Hospitals are Regional Centre's for Endoscopy Training. Your examination may be performed by a trainee endoscopist. They are experienced healthcare professionals.

All trainees are under the direct supervision of an expert trainer until they are fully competent; the trainer is there to ensure your safety and comfort. With your help it will be possible to train the specialists of the future.

Clinical Photography

Clinical Photography is the visual recording of clinical conditions for use in your patient record. They are used by healthcare professionals to help monitor your clinical condition and are often used in the treatment planning process along with other tests such as x-rays, scans and blood tests, etc.

With your permission, clinical photographs can also be used for teaching Doctors, Nurses and other medical professionals, as well as research, audit and quality assurance purposes.

Example of Consent form

Please note this is a copy only and will be signed on the day of your procedure

Patient Agreement to Investigation or Treatment

Endoscopic Ultrasound (EUS)

Please insert patient label

- **Statement of health professional** - I have explained the procedure to the patient
- **Reason for Procedure**
 - Cancer staging
 - Assessment / tissue acquisition of oesophageal / gastric wall thickening / submucosal lesions
 - Assessment of mediastinal lesions / Lymph nodes of unknown origin / adrenal gland masses
 - Assessment / aspiration / tissue acquisition of pancreatic cysts / solid masses
 - Assessment for dilated bile / pancreatic duct, possible ductal stones or stricture
 - Clarification of abnormalities identified on another imaging modality
 - Imaging +/- targeting of tissues surrounding the oesophagus, stomach and duodenum
 - Coeliac plexus block
 - Pseudocyst drainage
- **The Intended Benefits**
 - To aid diagnosis and/or staging
- **Serious or frequently occurring risks: -**
 - Common Risks
 - Sore throat
 - Risk to teeth or dental work
 - Abdominal discomfort
 - Serious Risks (risks higher for fine needle aspiration/ biopsy/ pseudocyst drainage)
 - Perforation
 - Bleeding
 - Infection
 - Pancreatitis
 - Adverse reaction to drugs
 - Heart arrhythmia with coeliac plexus block
 - Death
- **Extra procedures which may become necessary during the procedure: -**
 - Fine Needle Aspiration or Biopsy
- **I have also discussed what the procedure is likely to involve, the benefits and risks of any available alternative treatments (including no treatment) and any particular concerns of this patient.**
- **The following leaflet has been provided:-** Endoscopic Ultrasound
- **This procedure will involve: -** Intravenous sedation/ Fentanyl Local anaesthetic
 General Anaesthetic

Patient Agreement to Investigation or Treatment: - Endoscopic Ultrasound (EUS)

Please read this form carefully. If this treatment has been planned in advance, you should already have your own copy of page 1 which describes the risk and benefits of the proposed investigation. If not you will be offered a copy now.

Name (PRINT) confirm as follows:

- I understand that I am able to decide not to have this investigation.
- I have been provided with a patient information leaflet. I have read this and I was able to understand it. I have had an opportunity to ask questions about the leaflet.
- I understand that there are risks associated with this investigation. These have been discussed with me, I have had an opportunity to ask questions about them, and I have taken this information into account in deciding to proceed.
- I understand that there are alternative options, including doing nothing, but taking into account the risks and benefits I wish to proceed with the investigation listed on this consent form.
- I understand that the procedure will be undertaken by a suitably qualified doctor or trainee under direct supervision but that no guarantee can otherwise be given as to the specific identity of that person.
- I do not need any additional time to consider matters before signing this form.
- I understand that any procedure in addition to those described on this form will only be carried out if it is necessary to save my life or prevent serious harm to my health

Additional information is available from

If you are worried or have any questions, please do not hesitate to contact the Endoscopy Booking Office.

- For further information, please refer to the link below:

<https://www.sath.nhs.uk/wards-services/az-services/endoscopy/>

Other Sources of Information

NHS 111

A fast and easy way to get the right help, whatever the time. NHS 111 is available 24 hours a day, 365 days of the year.

- Telephone: 111 (free from a landline or mobile)
- Website: www.nhs.uk

Patient Advice and Liaison Service (PALS)

PALS will act on your behalf when handling patient and family concerns. They can also help you get support from other local or national agencies. PALS is a confidential service.

Royal Shrewsbury Hospital
Princess Royal Hospital

Tel: 01743 261000 Ext 1691
Tel: 01952 641222 Ext 4382

Disclaimer

This leaflet is provided for your information only. It must not be used as a substitute for professional medical care by a qualified doctor or other health care professional. Always check with your doctor if you have any concerns about your condition or treatment. This leaflet aims to direct you to quality websites: these are correct and active at the time of production. The Shrewsbury and Telford Hospital NHS Trust is not responsible or liable, directly or indirectly, for ANY form of damages whatsoever resulting from the use (or misuse) of information contained in this leaflet or found on web pages linked to by this leaflet.

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