



Endoscopic ultrasound (EUS) explained

This leaflet tells you about having an EUS at the RBH. It explains what is involved and what the possible risks are. If you have any questions or concerns, please do not hesitate to speak to a doctor or nurse caring for you in the Endoscopy Unit. Please bring this leaflet with you.

Introduction

- Your GP or hospital doctor has advised you to have a procedure known as an endoscopic ultrasound scan (EUS). This is an examination of your oesophagus (gullet), stomach and the first part of the small bowel, called the duodenum. It will be performed with a flexible endoscope using a local anaesthetic throat spray and you will have sedation. The procedure will be carried out by an appropriately trained doctor.
- This leaflet aims to give you enough information to enable you to make an informed decision in relation to agreeing to the investigation.
- If you are unable to keep your appointment please inform us 0118 322 7459 as this will enable the staff to give your appointment to someone else and they will be able to arrange another date and time for you. **Any patients failing to attend for their appointment will not routinely be offered another appointment.**
- There is limited free drop off / collection parking and 3 disabled spaces outside the Endoscopy Unit. There are limited 30 minutes free drop off parking bays on the left side as you enter the car park. Some limited Pay and Display bays are available. Public parking can be found in the main multi-storey car park on levels 0, 1, 2 and 3. Payment is 'on exit' with pay point machines on level 0 and 2.
- Please note that there is no access to the Endoscopy Unit through the main hospital, the entrance is in Craven Road. The Unit is situated at the top of Craven Road, past the main entrance and maternity block.
- Please arrive at the time stated in our letter so you can be assessed by the nurse and if necessary have a blood test taken pre-procedure.
- Please note your appointment time is your arrival time on the Unit, not the time of your test. Your test will happen sometime later and although there may be other patients in the Unit who will arrive after you but are taken in for their test before you, this is for medical reasons or because they are seeing a different endoscopist (doctor).

For our information: collection details

Please write your relative's or friend's name and telephone number below:

Name: _____

Telephone number: _____

What is EUS?

- EUS is an endoscopic procedure that uses ultrasound (sound waves at a higher frequency than can be heard by the human ear) to visualise the gut wall and the structures surrounding it, this gives the team information about the relationship of these structures (such as the blood vessels) to each other.
- Within the endoscope is a channel that enables light to be directed onto the linings of the oesophagus, stomach and duodenum and another that displays the images on a monitor. Also on the end of the 'scope' is an ultrasonic transducer that helps to produce the ultrasonic pictures.
- Photographs and a video recording may be kept for your records and for documentation purposes.
- If an abnormal area is identified within the internal organs, a very fine needle can be passed through the wall of the stomach or duodenum into the surrounding structure to take a sample. This is called an FNA (fine needle aspiration). **If you need an FNA, you may need to stay in hospital overnight for observation.** Whether or not you may return home will be decided following the procedure so **it is advisable to bring an overnight bag with you** just in case.

Why do I need EUS?

You have been advised to undergo this procedure to obtain more information about your upper digestive tract and the structures adjacent to it. The doctors or specialist nurse looking after you will be happy to explain your individual need for this procedure, so please ask. The procedure may be similar to previous endoscopies you may have had.

Preparing for EUS

- It is necessary to have clear views so your stomach must be empty. Therefore, **do not have anything to eat or drink for at least 6 hours before the procedure.**
- If your appointment is in the morning, have nothing to eat after midnight. If your appointment is in the afternoon, you may have a light breakfast no later than 8am.
- Small amounts of water are safe up to two hours before the test.

What about my medication?

- If you have diabetes, please read the section at the end of this leaflet.
- **Anticoagulants and Antiplatelet (drugs that affect the blood):** Please telephone the Endoscopy Unit on 0118 322 7458/5249 if you are taking anticoagulants such as Warfarin, Clopidogrel, Dabigatran, Rivaroxaban, Apixaban, Edoxaban, Prasugrel and Ticagrelor, Dipyridamole.
- All other routine medication should be taken as normal.

How long will I be in the Endoscopy Unit?

This largely depends upon how busy the department is. You should expect to be in the Unit for approximately **2-4 hours**. The unit also looks after emergencies and these can take priority over outpatient lists. If you require an overnight stay following an FNA, you will be transferred from the unit to a ward.

What happens when I arrive?

- On arrival, please go to the main desk where the receptionist will check your personal details.
- You will be greeted by a nurse and escorted to the assessment area. Here we will ask you some questions about your medical history.
- **As you will be receiving intravenous sedation and a painkiller, you are not permitted to drive, take alcohol, operate heavy machinery or sign any legally binding documents for 24 hours. Following the procedure, you must have someone to accompany you home and stay with you for up to 8 hours. You are not allowed home alone in a taxi. If you are having sedation and you do not have anyone to accompany you home, then your procedure will be cancelled.**
- The nurse will need to be given their telephone number so that they can contact them when you are ready for discharge.
- The nurse will ensure you understand the procedure and discuss any outstanding concerns or question you may have.
- You will have a brief medical assessment with the endoscopy nurse, who will ask you some questions regarding your medical condition and any past surgery or illnesses you have had to check that you are sufficiently fit to undergo the procedure.
- Your blood pressure and heart rate will be recorded and if you have diabetes, your blood glucose level will also be recorded. If you suffer from breathing problems, a recording of your oxygen levels will be taken.
- If you are on anticoagulants and antiplatelet drugs, you will have a blood test to check your clotting level.
- You will be asked to sign an electronic consent form.

Intravenous sedation and pain relief

- The sedation and painkiller will be given via a vein in your hand or arm. This will make you lightly drowsy and relaxed but not unconscious. You will be in a state called co-operative sedation: this means that, although drowsy, you will hear what is said to you so will be able to follow simple instructions during the procedure. Sedation makes it unlikely that you will remember anything about the procedure.
- While you are sedated, we will continually check your breathing and heart rate, so any changes will be noted and dealt with accordingly. You will be connected by a finger probe to a pulse oximeter, which measures your oxygen levels and heart rate during the procedure. You will be able to breathe normally throughout. Your blood pressure may also be recorded.

The procedure

- You will be escorted into the procedure room, where the endoscopist and the nurses will introduce themselves and you will have the opportunity to ask any final questions.
- If you have any dentures, you will be asked to remove them. Your teeth will be protected by a small plastic mouth guard, which will be inserted immediately before the examination commences.
- Local anaesthetic throat spray will be administered while you are sitting up – it works very rapidly. The nurse looking after you will ask you to lie on your left side and will then place the oxygen monitoring probe on your finger. The sedative drug and painkiller will be given via a cannula (tube) in a vein and you will quickly become sleepy.
- Any saliva or other secretions produced during the procedure will be removed using a small suction tube, like the one used by a dentist.
- The endoscopist will introduce the endoscope into your mouth, down your oesophagus into your stomach and then into your duodenum. Your windpipe is deliberately avoided and your breathing will be unhindered.
- After the procedure, you will be returned to the recovery area and your condition monitored.
- The results of the procedure will be discussed at the relevant multi-disciplinary team (MDT) meeting. These team meetings usually take place once a week.

What are the risks of the procedure?

Endoscopic ultrasound is classified as an invasive procedure so has possible associated complications. These occur very infrequently but we would wish to draw your attention to them.

Risks of the endoscopic examination:

The main risks of any endoscopic procedure are of mechanical damage, such as:

- Damage to crowned teeth or dental bridgework. You should tell the doctor or nurse beforehand if you have any of these.
- Damage to the lining of the gullet and stomach, perforation and bleeding. These complications tend to occur in severely ill inpatients and are very rare among outpatients.
- If an FNA is done, there is a small risk of bleeding or infection but these can be treated if they arise.

Risks of sedation:

- Sedation can occasionally cause problems with breathing, heart rate and blood pressure. If they occur, they usually only last a short time. You will be carefully monitored by an endoscopy nurse to ensure any problems are identified and rapidly treated.
- Older patients and those who have significant pre-existing health problems, for example, people with significant breathing difficulties due to a breathing condition, may be assessed by a doctor before being treated.

After the procedure

- Unless specifically instructed otherwise, you will be allowed to rest for as long as is necessary. Your blood pressure and heart rate will be recorded and if you have diabetes, your blood glucose will be monitored. If you have underlying difficulties or if your oxygen levels were low during the procedure, we will continue to monitor your breathing and can administer additional oxygen.
- Once you have recovered from the initial effects of any sedation (which normally takes 30 to 60 minutes), it will be necessary to check that there are no immediate complications. This may involve you having a chest x-ray and being asked to swallow some water.
- Depending upon your individual case, you may be admitted to hospital or you may be allowed home. Before you leave the department, the nurse or doctor will explain the findings, any medication or further procedures required and will also inform you if you require further appointments.
- Sedation can make you forgetful. The nurse will discuss the results with you and we will give you a short written report to take home. You will also receive aftercare advice.
- Although you may feel fully alert following the procedure, the sedative drug remains in your blood system for about 24 hours and you can intermittently feel drowsy with lapses of memory. If you live alone, you **MUST** have someone to take you home and arranged to be supervised for 8 hours once home.

Summary of important information

- If you are unable to keep your appointment please notify the Endoscopy Unit as soon as possible on 0118 322 7459.
- It is our aim for you to be seen and investigated as soon as possible after your arrival. However, the unit is very busy and your procedure may be delayed. If emergencies occur, these patients will obviously be given priority over less urgent cases.
- The hospital cannot accept any responsibility for the loss or damage to personal property during your time on these premises.
- If you have any problems with a persistent sore throat, worsening chest or abdominal pain, please contact your GP immediately, informing them that you have had an endoscopy.
- If you are unable to contact or speak to your own doctor, contact the Endoscopy Unit during office hours (9.00am to 6.00pm) on telephone number 0118 322 7458.
- You can also ring your GP's out of hour's number or ring NHS 111; they can advise if you need to seek immediate medical care or not.
- Alternatively, for out of office hours and weekends, ring Sidmouth Ward on 0118 322 7468, as per the advice leaflet you were given upon discharge.

Royal Berks Charity Gastroenterology Support Fund U200

The Gastroenterology Support Fund was set up with the purpose of providing gastrointestinal services that may not otherwise be available through NHS resources. The Gastroenterology Department carries out many hundreds of complex diagnostic test procedures each year and is one of the most technically advanced departments in the UK. Nevertheless, much of the equipment and some of the staffing are funded through non-NHS money raised by donations and charitable resources. In Endoscopy, this funding supports specialist nurse training. In order to expand these facilities and to remain up to date with the technological advances that are continually occurring, further donations are greatly needed and appreciated.



Donate today to the Royal Berks Charity Gastroenterology Support Fund and help make a difference.

Contacting us

If you have any questions or need any advice, please do not hesitate to contact the Endoscopy Unit on: 0118 322 7459.

Checklist

Things to remember before your procedure

- Read the leaflet carefully.
- If you would like any of this information translated into another language or in large print format, or you need an interpreter at your appointment, please let us know.
- Note appointment date in your diary.
- Wear loose fitting clothing and bring dressing gown and slippers, if possible.
- Nothing to eat or drink for 6 hours and you may have sips of water up to 2 hours before your test
- If you are having sedation, you **MUST** have someone to take you home and have made arrangements to be supervised for 8 hours once home, or your procedure will be cancelled
- Bring your medications or a repeat prescription with you
- Please telephone the Endoscopy Unit, at least 7 days before your procedure, on 0118 322 7458/5249 if you are taking Anticoagulants and Antiplatelet (Drugs that affect the blood) such as Warfarin, Clopidogrel, Dabigatran, Rivaroxaban, Apixaban, Edoxaban, Prasugrel, Ticagrelor and Dipyridamole
- Bring this leaflet with you to the Endoscopy Unit

Advice for people with diabetes undergoing an EUS

The day before the procedure:

- **If not on insulin:**
 - Take your medications as normal
- **If on insulin:**
 - Reduce the dose of long/ intermediate acting insulin by 20% (divide by 5) (*Lantus* , *Levemir*, *Degludec*, *Humulin I*, *Insulatard*)
 - No change to Rapid-acting (*Humalog*, *Novorapid*, *Apidra*, *Humulin S*, *Actrapid*)
Humalog, *Novorapid*, *Apidra*, *Humulin S*, *Actrapid*)
 - No change to pre-mixed insulin (*Novomix 30*, *Humalog 25*, *Humulin M3*)

On the day of the procedure:

- **If not on insulin:**
 - Leave out morning dose of all tablets
- **If on insulin:**
 - Reduce dose of morning long acting/ intermediate dose by 20% (divide by 5) (*Lantus*, *Levemir*, *Degludec*, *Humulin I*, *Insulatard*)
 - Reduce the dose of your morning pre-mixed dose by 50% (half) (*Novomix 30*, *Humalog 25*, *Humulin M3*)
 - Leave out your rapid acting insulin until you are able to eat. (*Humalog*, *Novorapid*, *Apidra*, *Humulin S*, *Actrapid*)

Remember, you are allowed clear sugary drinks if your blood glucose levels are low i.e. below 5 mmol/L.

For people with Type 1 diabetes on Insulin Pump therapy (Continuous Subcutaneous Insulin):

Please discuss what to do before your procedure with a member of the Diabetes Specialist Team. As a general rule, use a temporary basal rate reduction of 10% (divide by 10) from 6.00am on the morning of the test.

Remember to monitor your blood glucose levels every four hours if you are on insulin. If your blood glucose level falls below 4mmol/L, take 4-5 glucose tablets or 150mls of a glucose drink. Remember to inform a member of staff in the Endoscopy Unit if your blood glucose level is low.

Patient and visitor Park & Ride 300 bus service

If you are coming to the Royal Berkshire Hospital and wish to avoid long waits for parking in the multi storey, please consider using the park & ride bus service. Running Monday to Friday between 6am and 7pm, the hospital park & ride 300 service links the Royal Berkshire Hospital with the Mere oak and Thames Valley park & ride sites. For timetables and more information, visit <https://www.reading-buses.co.uk/services/RBUS/300> or call 0118 959 4000.

To find out more about our Trust visit www.royalberkshire.nhs.uk

Please ask if you need this information in another language or format.

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Next review due: May 2026

Compassionate

Aspirational

Resourceful

Excellent