University Hospitals Dorset
NHS Foundation Trust

Advice for patients and carers about having an Endoscopic Ultrasound (EUS) with or without fine needle aspiration/biopsy (FNA/B) /coeliac plexus neurolysis (CPN)

Endoscopy Department Patient information

This booklet is designed to be practical and informative. Please read all of the information or you may miss important instructions.

If you have any questions regarding the information or instructions in this booklet, please call the Endoscopy Department on the number below, and a member of staff will be pleased to help you.

Royal Bournemouth Hospital Endoscopy Department: 0300 019 4668

Poole Hospital Endoscopy Department: 0300 019 2772

If you would like to look around the Endoscopy Department before you come for your procedure, you can do so by appointment. Please contact the Endoscopy Department as above to arrange this.

If you have internet access, there are several videos about the Department and the procedures that we carry out which you can view. This may help to answer many of your questions and make you feel more familiar and at ease when you visit us.

The website address below will take you to the homepage for Royal Bournemouth Hospital. Please search for “endoscopy”. This will take you to a link for Bournemouth Digestive Diseases Centre, where you can view the videos.

Website: www.uhd.nhs.uk

How do I prepare for an endoscopic ultrasound (EUS)?

1. **Read this booklet before you attend your appointment**
2. **Inform the Endoscopy Department if you take anticoagulant medication (see page 4)**
3. **Do not have anything to eat or drink for at least six hours before the procedure***
4. **Arrange for someone to collect and accompany you for at least 12 hours after sedation (you will not be able to drive or work for 24 hours afterwards)**

   (*Please contact the Endoscopy Department if you need additional advice)

What is an endoscopic ultrasound (EUS)?

Endoscopy is a procedure that looks at your digestive system from the inside using a flexible telescope with a light source and camera built into the tip. It can be done either through your mouth (upper endoscopy), or through the rectum (lower endoscopy). Endoscopic ultrasound is an extension of these techniques. A tiny ultrasound transmitter in the tip of the endoscope produces images of the tissues outside the intestine (through reflections of sound, like radar). The principle is the same as regular ultrasound scanning, but EUS provides greater detail since the instrument can get very close to the places of interest, and allow samples to be taken.

Why has my doctor recommended that I have an EUS?

You may have been referred for EUS for closer investigation of an area of concern such as lump or lesion identified on a scan or assessment of a polyp. EUS may include fine needle aspiration/biopsy (FNA/B) which is primarily used for tissue acquisition and diagnosis. It can also be helpful in treating conditions such as cysts, and in coeliac plexus neurolysis (CPN) for the management of pain.

What is fine needle aspiration/biopsy (FNA/B)?

The EUS instrument can be used to direct a tiny needle into any area of concern, to take a sample of cells and fluid for analysis in the laboratory. This is called a fine needle aspiration/biopsy (FNA/B). If a tissue
sample is required, this can also be performed in a similar way (FNA/B). The results can help your doctors to diagnose your condition and plan treatment. This process can also be used to help with treatment, such as the drainage of local cysts or abscesses.

What is coeliac plexus neurolysis (CPN)?

The same type of needle can be used to inject medicines for the treatment of pain. This is called a coeliac plexus neurolysis (CPN) in reference to the group of nerves which supply the organs in the abdomen. CPN can help to relieve pain caused by conditions such as chronic pancreatitis or cancer.

Are there any risks with an Endoscopic Ultrasound?

As with many medical investigations, there are some possible risks associated with an endoscopic ultrasound. These happen very rarely, but it is important that you are made aware of them so that you are able to give your informed consent. The doctor who has referred you will have considered this, and whether the benefits of having the procedure outweigh the risks to you. The potential risks as they appear on the consent form include:

Perforation: There is a very small risk that the investigation may result in a small tear or hole (perforation) in the lining of the digestive tract. If this happens you would need to stay in hospital, and might require an operation to repair it.

Bleeding: There is a small risk of bleeding when a sample is taken (FNA/B). Bleeding can also arise if perforation occurs, or from damage to the lining of the intestine, from the endoscope. This usually stops by itself but you may need to stay in hospital for treatment and observation if it persists or is excessive.

Infection: The risk of infection is very low but cannot be eliminated entirely; the endoscope is disinfected according to strict guidelines. Everything else is single-use (disposable). Very rarely, during FNA/B, infectious matter may be drawn back along the track of the needle (for example if fluid is extracted from a cyst or collection, or bacteria transferred from the stomach lining into a cyst). This can result in infection being transferred from one part of you to another. If you are thought to be at risk, the endoscopist may prescribe antibiotics.

Pancreatitis: The pancreas produces enzymes and hormones that help with our digestion. It lies in the abdomen, near the stomach, and is very sensitive to injury. It is possible, during FNA/B in this area, to irritate the pancreas, causing inflammation (pancreatitis). Your endoscopist will advise you if you are at particular risk, and you will be closely observed and told what symptoms to look out for when you go home.

Failure to complete the procedure: Your comfort and safety are our priority; we will stop at any time if we cannot ensure this, or if there is a problem with equipment, which is rare.

Are there any risks with Endoscopic Ultrasound (continued)?

Miss rates: We cannot guarantee that we will spot everything there is to be seen. We will of course be as thorough as possible and it is unlikely that we would miss anything significant.

Inadequate sample: In some cases it may not be possible to obtain a sample from the area of interest. Every effort will be made to do so, using the ultrasound imaging as a guide.

Adverse reaction to medication: We will watch you closely for signs of allergic reaction to any throat spray or sedation that is given. Too much sedation could compromise your breathing. This is unusual. Reversal agents are available and we will support you as necessary.

Aspiration: (Upper endoscopy) While the throat is numb there is a risk that you may inhale secretions which you would usually swallow. This could lead to a chest infection. Sedation makes you drowsy and adds to this risk. We will protect your airway during the procedure by suctioning secretions away.
Fasting before your endoscopy helps to ensure your stomach is empty and reduces the risk of aspirating any stomach contents. (Aspiration is far less likely in lower endoscopy).

Risk of damage to teeth: There is a slight risk to crowned teeth or dental bridgework. A protective mouth guard is used which the nurse will support in place for the test.

CPN only: The effectiveness of CPN is variable, and cannot be guaranteed. It may not always be possible to perform the injection successfully during the procedure.

Are there any alternatives to this procedure?

You will usually have been referred for Endoscopic Ultrasound after having undergone a range of other investigations. Depending on the reason for your referral, there may be alternatives; it is advisable to speak to the doctor who has referred you for this procedure.

Can I seek a second opinion?

Yes, at any stage. This can be arranged through your GP.

Can I change my mind?

You are quite within your rights to change your mind at any stage. You may find it helpful to discuss the test with your family, friends and / or GP. If you decide not to go ahead with your endoscopic ultrasound, please let us know in good time.

Why have you sent the consent form to me?

The consent form gives the hospital and the endoscopist a formal indication that you are agreeing to have an endoscopic ultrasound. Please read the consent form to familiarise yourself with it, and bring it with you to the Endoscopy Department on the day of your test. You do not need to fill it in; a nurse or doctor will complete the form with you and witness your signature as part of your admission process. **Please do not sign the form before then**. Before you sign the form you should understand what you are consenting to. The information about your test is included in this booklet. The Endoscopy staff will also be happy to answer any questions you may have.

Do I have to have sedation for this procedure?

The procedure may cause a little discomfort (although it is not usually painful) and can take between 30 and 60 minutes. In some cases, it may take a little longer. It is important that you remain still so that the endoscopist can perform the procedure safely and thoroughly. Therefore sedation is recommended, particularly for Upper EUS. The sedation we use is a form of conscious sedation. It will reduce your awareness of time and may make you forget the procedure itself. Afterwards, you will need to be monitored for approximately an hour before you can get up and have refreshments. It takes about 24 hours for the sedation to leave your system. Until then your reaction times will be slower and your judgement will be impaired, therefore:

You must be supervised by an adult for the next 12 hours. For 24 hours you must not drive any motor vehicle, work, operate heavy machinery, sign anything legally binding, drink alcohol or take sedative medication, or look after babies or young children.

Before you come for your test:

It is important that you do not have anything to eat or drink for six hours before your appointment. Having an empty stomach reduces the risk of contents coming up during upper endoscopic ultrasound.

If the EUS involves the rectum, you will be sent instructions with this booklet about how to prepare the bowel.

If you are suffering from a heavy cold, sore throat or chest infection, it may be advisable to postpone your procedure until you are feeling better. Please contact your GP or the Endoscopy Department to seek advice.

Please ensure that a responsible adult is available to collect you after your EUS and **stay with you for at least 12 hours**. Bring their contact details to your appointment. **Remember you will not be able to drive or work for 24 hours after sedation**.

Should I take my medicines as normal?

If you take medicines prescribed by your GP (for example, for epilepsy, or a heart condition) you may take these with small sips of water. It is safe to take your essential medications with small sips of water during the six hour period where you are otherwise taking nothing by mouth, provided that you let us know when you come for your procedure.

If you are diabetic, you should find that an advice sheet is enclosed with this booklet and your appointment letter. Please telephone the number below for further advice if needed:

Diabetes Nurse Specialist: 01202 704888

If you are taking warfarin, or similar medication to prevent clotting (e.g. Apixaban, Clopidogrel, Dabigatran, Dipyridamole, Prasugrel, Rivaroxaban, Ticagrelor, Warfarin or Sinthrome) please telephone the number below to inform us. A trained nurse will be able to advise you about taking your medication. You may need to have a blood test on the day of your procedure to check your clotting levels. You may continue to take aspirin.

Anticoagulant Nurse Advisor: 01202 704665

Do I need to bring anything with me?

Please ask your GP's receptionist to print out a list of your medication and allergies and bring this list with you on the day of your appointment. You do not need to see your GP for this. We will also ask you for details of your medical history.

It is always sensible to bring your medication with you, particularly if you are diabetic.

Do not bring valuables or large quantities of money into the hospital as we cannot accept responsibility for them.

You may be asked to get undressed for your test, and it is advisable to wear loose, comfortable clothing.

The Endoscopy Department is very busy and sometimes appointments are delayed due to emergencies or unforeseen problems. Every effort will be made to see you punctually, but it may not always be possible for you to be seen at precisely the time stated on your appointment letter. It is advisable to bring a book or something to read to help you pass the time.

Your appointment time is not the time you will have your test. It takes time to safely admit you and prepare you for your procedure. You should expect to be in the Endoscopy Department for most of the morning or afternoon of your appointment.

Please ensure that you bring the details of the person who will be collecting and staying with you after discharge when you come to the Endoscopy Department for your procedure.

What will happen on the day?

Please report to the Endoscopy Department at the time indicated on your appointment letter. The receptionist will check your details and ask you to complete a form, if you have not already done so, giving details of your medical history, regular medications, allergies, and contact details of the person collecting you / next of kin.

You will then be escorted to a seating area from where a nurse will collect you to complete your admission. We ask your family and friends not to accompany you beyond this point. The department is very busy and space can be limited at times. We will tell them the approximate time that you will be ready to leave and ask them to return at that time.

A nurse will check your details and documentation and admit you for your EUS. Your blood pressure, pulse and oxygen levels will be measured to ensure that you are well enough to have the procedure. If you are diabetic the nurse may also measure your blood glucose level at this time. A cannula (flexible needle) will be inserted into your hand or arm in order that a sedative can be given. The sedation used is a conscious sedation, not a general anaesthetic.

The nurse will discuss the risks and benefits of having an endoscopic ultrasound and make sure that you understand what the procedure involves. You will then be asked to sign the consent form to indicate that you understand the information given and that you give permission for the procedure to go ahead. You will have the opportunity to ask any questions at this point.

If you have any communication difficulties, or require a translation service, please let the nursing staff know on the day and they will ensure that you have the support you require.

Who will be in the procedure room with me?

You will be accompanied into the procedure room by a nurse who will monitor and support you throughout your procedure. Also present will be the endoscopist performing the procedure, another nurse and a health care assistant who will assist with equipment and the collection of samples.

The procedure will be performed by an appropriately qualified and experienced endoscopist. In some cases a trainee may be present, who may be learning to perform endoscopic ultrasound under direct, expert supervision. If you would prefer not to have your EUS performed by someone who is training, you will have the opportunity to make this known before entering the procedure room.

What will happen to me during an Upper EUS?

When you enter the procedure room you will be asked to sit upright on a trolley. A probe will be placed on your finger so that your pulse and oxygen levels can be monitored throughout the procedure. If you have any dentures or plates we will ask you to remove them at this point and keep them safe with the rest of your belongings.

To help you swallow the endoscope, the back of your throat will be sprayed with local anaesthetic. This can taste a little unpleasant and will numb your throat. We will then ask you to lie on your left side. If you find this difficult please let the nurse know and the staff will assist you. A plastic mouth guard will be put in place to protect you and keep your mouth slightly open.

A small sponge will be placed just inside your nostril so that oxygen can be given to support you while you are sedated. The sedative and an analgesic (pain-killer) will then be injected via the cannula in your hand or arm. This will make you feel drowsy, relaxed and will reduce your awareness of time. The endoscopist will then insert the endoscope.

When the endoscopist passes the tube over the back of your tongue it is important to stay calm. It may cause you to gag, but this will subside. It should not cause you any pain or stop you being able to breathe. Listen to the nurse and focus on your breathing. You can breathe through your mouth and nose as you wish. The nurse will keep you safe by suctioning excess saliva or wiping any secretions away to keep your airway clear.

What will happen to me during an Upper EUS?

As the endoscope is passed down through the oesophagus and into the stomach, the endoscopist will need to blow some air in so that he or she can get a clear view of the lining. This may make you feel bloated but it will pass.

The nurse will monitor your blood pressure, pulse and oxygen levels throughout, and watch you for signs of discomfort.

What will happen to me during a Rectal EUS?

You may be asked to change into a hospital gown before a lower EUS procedure. Special disposable shorts are available to protect your dignity if you wish. When you enter the room you will be asked to lie on your left side on a trolley. A probe will be placed on your finger so that your pulse and oxygen levels can be monitored throughout the procedure.

Many people tolerate Rectal EUS very well without sedation. If used, the sedative and an analgesic (pain-killer) is injected via the cannula in your hand or arm, making you feel drowsy, relaxed and reducing your awareness of time. You will be given oxygen via a face mask to support you if you are sedated. The endoscopist will lubricate your bottom and gently check that the way is clear. He or she will then insert the endoscope and introduce some air so that the lining of your bowel can be clearly viewed.

You may experience some windy discomfort but this will not last long. You may get the feeling that you need to go to the toilet but as your lower bowel should be empty this is unlikely to happen. When the procedure is finished, the endoscopist will gently remove the tube, sucking out as much air as possible to relieve any bloating sensation.

What happens after the procedure?

You will be taken to our recovery area to rest and to sleep off the effects of the sedation. Your blood pressure, pulse and oxygen levels will be monitored until you are fully awake.

(If you have had a coeliac plexus neurolysis (CPN) we will observe your blood pressure for longer, as CPN may lower your blood pressure temporarily. This is unusual, however).

When you are feeling alert, we will escort you through to our discharge lounge for refreshments. The nurse will contact the person who is collecting you.

When will I know the results of my procedure?

In some cases, the endoscopist may discuss the results with you afterwards. If not, the nurse will relay the information to you when you are fully awake. We prefer to do this once you have someone with you, as sedation can make it difficult for you to remember things. If you object to hearing your results with a friend or relative present please let the nursing staff know. You may be given a copy of your report.

In many cases, results may not be available until any samples taken have been analysed. Usually, an appointment will be made once these are available, for example, with the doctor who has referred you.

A copy of your report will be sent to your GP. Further details of the test, results of any samples and any necessary treatments or medications should be discussed with your GP or referring doctor. The nurse will give you discharge advice in writing and numbers to contact if you have any problems after you go home.

How will I feel after the procedure?

After upper endoscopy your throat may feel a bit sore for the rest of the day. It will settle without any treatment, but simple pain medication like paracetamol may help.

You may feel a little bloated. This is due to air remaining in your stomach or bowel after the procedure.

It will soon settle and does not require any treatment or medication. After lower endoscopy it may take two or three days before your bowel habit returns to normal. A small number of people experience a temporary increase in pain after CPN (nerve block).

What should I do when I get home?

After sedation you should rest quietly for the remainder of the day. You will be able to return to your normal activities after 24 hours. You will have been given an advice sheet which clearly details the safe advice and restrictions discussed earlier. Please abide by them; they are designed to protect you and others while you are recovering from sedation.

If you have been prescribed antibiotics following your procedure, please ensure that you follow the instructions enclosed with them and complete the full course.

What if I feel unwell after I have been discharged?

If you develop a fever, pain in the chest or abdomen, vomit blood or pass black stools, you should contact your GP or attend the Emergency Department. You can also call the following numbers for advice:

Royal Bournemouth Hospital Endoscopy Department: **0300 019 4668**

Poole Hospital Endoscopy Department: **0300 019 2772**

If you have had a fine needle aspiration/biopsy (FNA/B) or coeliac plexus neurolysis (CPN), the risk of infection or pancreatitis (inflammation of the pancreas) may be increased. The nurse will highlight this for you before you are discharged. You should seek urgent medical attention in the Emergency Department if you develop symptoms such as fever or pain.

Taking a copy of your discharge advice can help to ensure that you receive prompt investigation and treatment.