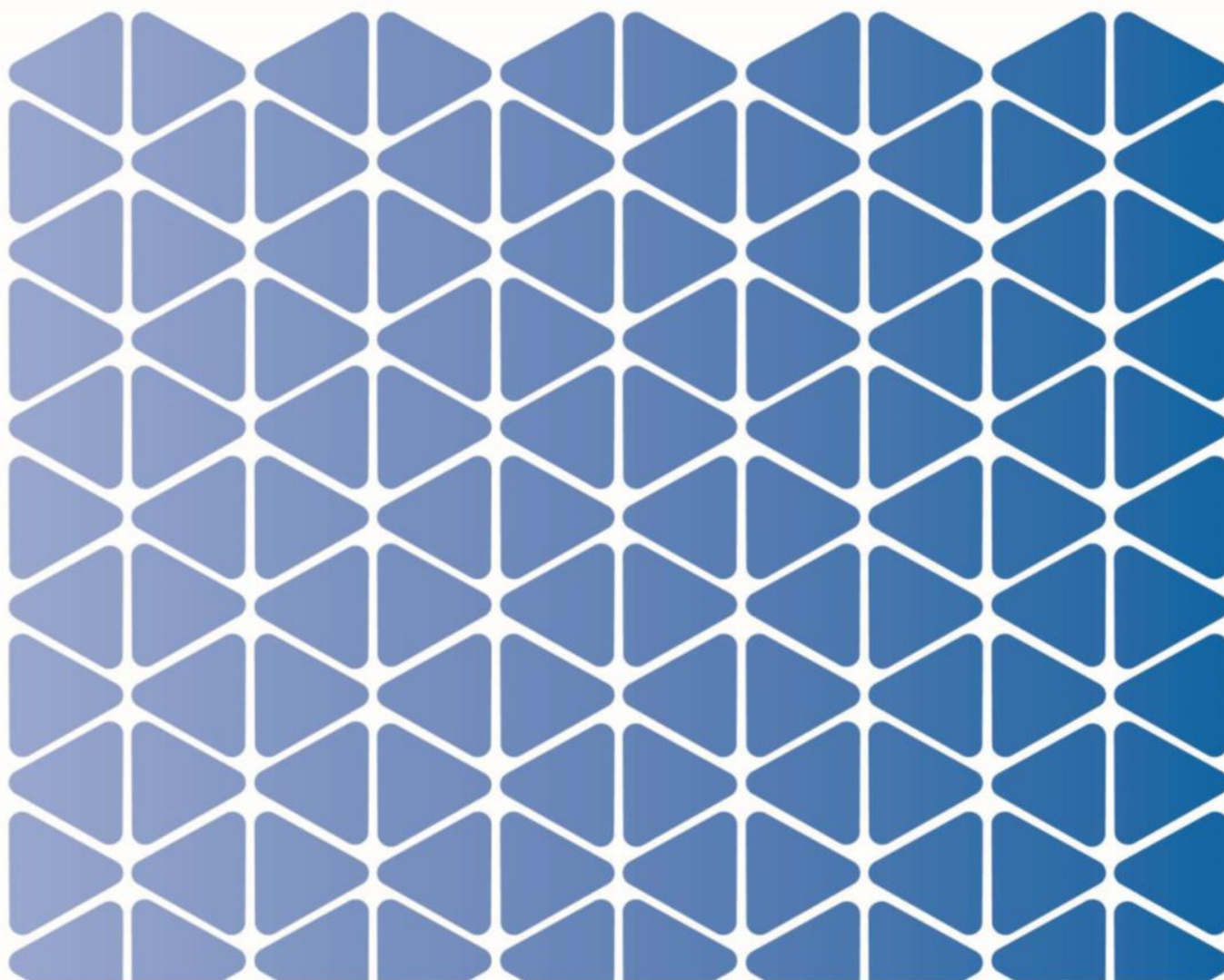


INVESTIGATIVE PROCEDURE INFORMATION
ENDOSCOPY UNIT

**ENDOSCOPIC ULTRASOUND
(EUS)**

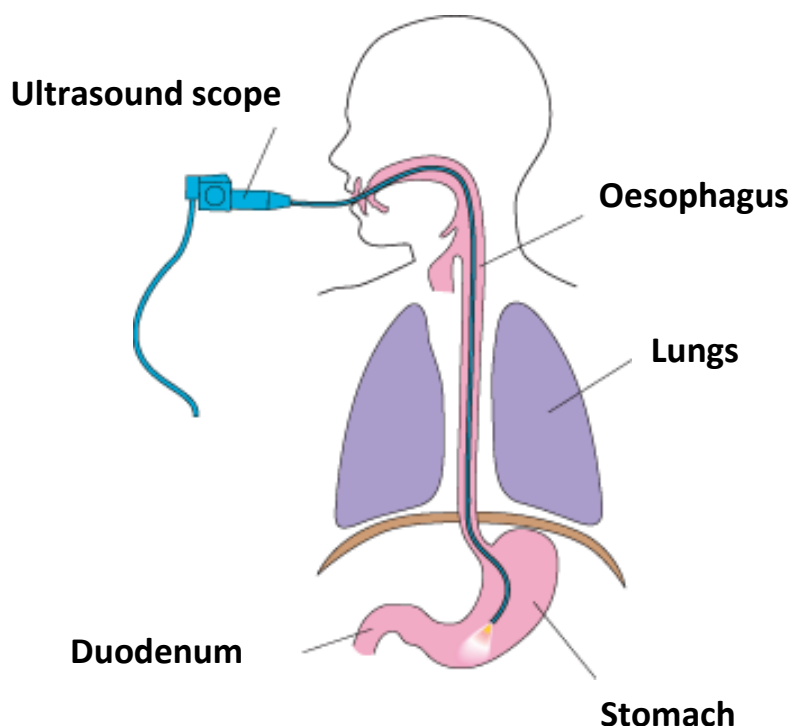


It has been recommended for you to have an endoscopic ultrasound (EUS) to help assess the upper portion of the gut. Endoscopic ultrasound is a procedure that combines the ability to look directly at the lining of the upper gut with ultrasound, while also showing the structures beneath the lining. This is done using an ultrasound scope, this is a long flexible tube (thinner than your little finger) with a light and a built in miniature ultrasound probe at the tip. It is passed into the mouth and on down the gullet (oesophagus) and stomach into the duodenum to see structures in the upper abdomen. The procedure may cause a little discomfort and will be performed under sedation (not a general anaesthetic). It can take between 20 and 30 minutes, but if it takes longer, you should not worry.

Sometimes it is helpful to take a fluid or tissue sample; this is done by passing a small needle through the scope to obtain the samples which are sent to the laboratory for analysis.

This leaflet explains some of the benefits, risks and alternatives to the procedure. We want you to have all the information you need to make the right decision. Please ask your doctor about anything you do not fully understand or want to have explained in more detail.

We recommend that you read this leaflet carefully. You and your doctor (or other appropriate health professional) will also need to record that you agree to have the procedure by signing a consent form. Your doctor or health professional will give you this form, or you may already have received it through the post with this leaflet.



Benefits of the procedure:

The aim of the procedure is to assess the lining of your upper intestine and upper abdominal organs to see whether there are any problems, and decide if further treatment is necessary.

Serious or frequent risks:

- Everything we do in life has risks. EUS is considered to be a safe procedure, but carries a small risk (1:10,000) of haemorrhage (Bleeding) or perforation (tear) of the gut following which surgery may be necessary.
- The use of guided needle sampling slightly raises the risk of haemorrhage but the risk still remains slight. The risk of perforation is around 1:1000 when using an endoscope to take samples with EUS.
- There is a similar risk of causing inflammation of your pancreas (pancreatitis)
- Infection can rarely occur during aspiration of cysts, so you may be given antibiotics to reduce the chance of this happening.
- If you have had 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 experience diarrhoea after the procedure for a few days, and a small number may experience an increase in pain.
- Other side effects and complications include:
 - Bloating and abdominal discomfort (this is not unusual for a few hours following the test).
 - Possible damage to any teeth which are loose in your mouth, please let the nursing team know if you have any crowns or dental bridgework.
 - The back of your throat may feel a little sore for 24 hours after your procedure.
 - Bleeding from the sample site.
 - Reactions to the drugs given.
 - The oesophagus or stomach puncturing during the procedure.
 - Aspiration pneumonia can be caused due to inhalation or choking on vomit.
- You will be cared for by a skilled team of doctors, nurses and other healthcare workers who are involved in this type of procedure every day. If problems arise, we will be able to assess them and deal with them appropriately.

Other procedures that are available:

An endoscopic ultrasound is considered to be an excellent way of examining your upper intestine and upper abdominal organs. Endoscopic ultrasound can also be used to examine the lower GI tract, e.g: rectum, in this case, an enema would be needed on the day. There is no safer alternative to this procedure although CT, MRI and PET scans can provide extra information that will help the doctor decide the best treatment for you. Sometimes it may be possible to perform tissue sampling using a different approach; however this is likely to be more risky.

Your anaesthetic:

You will not need a general anaesthetic but we usually use a sedative injection. We will give you this through a small tube (venflon) in the back of your hand. This is not a general anaesthetic, but will relax you and may make you feel sleepy. After the test is over you will need to recover on the Endoscopy Unit for at least 1 hour, maybe longer. You must be accompanied home by a responsible adult, and you must not drive. You should not be left alone for 24 hours after you have been sedated. If you fail to make appropriate arrangements for someone to accompany you home, we may have to cancel your procedure.

Please let your health professional know if you are not able to arrange this so that alternative arrangements can be made

Preparations before you come into hospital:

To allow us to see clearly inside your stomach, it must be completely empty of food. If it is not, we may not be able to see certain areas of your stomach and we may have to repeat the test. As a result, you must not eat for six hours before the examination. You may take one or two sips of water up to two hours before the test.

Medication:

- Continue to take your normal medicines up to and including the day of your procedure.
- If you are taking **Warfarin, Phenindione, Clopidogrel (Plavix), Rivaroxaban, Apixaban , Dabigatran, Edoxaban, Prasugrel, Ticagrelor or any other blood thinning agents** (anti-coagulant) please contact the unit as our Doctors may decide that it is necessary for you to stop taking your tablets for a limited time before the procedure. Please ring the department directly on: **01905733085**
- Please bring a list of any medications you are taking and any medication you may need to take after your procedure.

We will need to know if you don't feel well and have a cough, a cold or any other illness when you are due to come into hospital for your investigation. Depending on your illness and how urgent your investigation is, your procedure may need to be delayed.

IF YOU TAKE LONG TERM STEROIDS OR HYDROCORTISONE FOR ADRENAL INSUFFICIENCY PLEASE RING THE RELEVANT DEPARTMENT AND SPEAK TO A NURSE IF THIS HAS NOT ALREADY BEEN ADDRESSED.

If you have diabetes:

If you monitor your blood glucose, please monitor your blood glucoses every 2 hours on the day of your procedure.

If your diabetes is treated with lifestyle measures only (diet and exercise), you don't need to take special precautions.

Instructions for on the day of your Gastroscopy

Basal-Bolus regimens (Injections **3 or more times** a day)

Before the procedure

For those taking long-acting insulin (e.g. **Lantus®**, **Levemir®**) in the morning, reduce dose by 20%.

For those taking a rapid acting insulin (e.g. **Novorapid®**, **Humalog®**) with breakfast, the rapid acting insulin should be omitted.

Capillary blood glucose should be checked at least every two hours until the end of the procedure.

If on an afternoon list, and therefore able to eat breakfast, give usual dose of rapid acting insulin with breakfast, but omit the lunchtime dose.

After the procedure

Usual insulin treatment should be resumed.

Twice daily regimens

Mixed insulin injections twice a day (e.g. Novomix 30®, Humalog Mix 25® or 50®)

Before the procedure

Half the usual morning dose of insulin should be given. Capillary blood glucose should be checked at least every two hours until the end of the procedure.

After the procedure

Usual insulin treatment should be resumed.

Once daily regimens

Injections once a day (e.g. Insulatard®, Humulin I®)

If taken in the morning, half the usual dose of insulin should be given. If taken in the evening, the usual dose of insulin should be given. Capillary blood glucose should be checked at least every two hours until the end of the procedure.

If there is any doubt or concern, the local diabetes specialist nurse or consultant should be contacted for advice.

If more than one meal is to be missed, or there are two consecutive blood glucose levels above 15mmol/l, consider commencing CVRIII.

Patients with Diabetes Treated With Tablets and/or GLP-1 Agonists

Instructions for on the day of the procedure.

Omit the morning dose of the diabetes drug. Take the usual dose of the diabetes drug when able to eat after the procedure. It is recommended that capillary blood glucose is checked every 2 hours from waking until the test.

If there is any doubt or concern, the local diabetes specialist nurse or consultant should be contacted for advice.

Adapted from **WAHT-END-012 – Guideline for the Management of diabetes for patients undergoing Endoscopy Procedures 2020**

On the day of the procedure

We may ask you to remove your body piercing and jewellery before your test. Please do not bring any valuables or money with you as Worcestershire Acute Hospitals NHS Trust cannot accept responsibility for these items. Please do not wear any nail varnish, lipstick or false nails.

Due to the nature of this test, you may find wearing loose-fitting casual clothes more comfortable to travel home in.

Before the examination you will be welcomed and assessed by a nurse who will fill in a patient questionnaire with you. They will need to know if you:

- have experienced any allergies or bad reactions to drugs or tests in the past;
- suffer from any other medical conditions, for example, diabetes or asthma;
- are taking any medications; and
- have had any previous endoscopies.

The nurse will also discuss the test with you and take your pulse and blood pressure.

As you will be sedated for the procedure you must have arranged for a responsible adult to collect you from the Endoscopy Unit.

You should not be left alone for 24 hours after you have been sedated.

If you fail to make appropriate arrangements for someone to accompany you home, we may have to cancel your procedure.

Please let your health professional know if you are not able to arrange this so that alternative arrangements can be made.

You must not go home by public transport – a taxi is fine as long as someone accompanies you.

During your investigation

In the endoscopy room you will be made to feel comfortable on a trolley, prior to getting into position, a local anaesthetic throat spray will be administered to numb the back of the throat, you will then be asked to lie down onto your left hand side. A nurse will stay with you throughout the examination. You will be asked to remove any glasses dentures or jewellery at this point.

A nurse will attach a small device to your finger or thumb to monitor your pulse rate and your blood pressure will also be monitored throughout. You will be given oxygen throughout the test. To keep your mouth in a comfortable position, we will insert a plastic mouthpiece between your teeth and gums. As the endoscope is passed through the mouth you may gag slightly, this is quite normal and will not interfere with your breathing.

When the ultrasound scope has been gently passed into your stomach, air may be passed through it to expand the stomach to give a clear view of the lining and abdominal organs. This may make you feel bloated. The feeling will pass because most of the air is removed as the ultrasound endoscope is removed from your stomach. The test generally takes between 20 to 30 minutes to complete.

Sometimes EUS is used to take fluid or tissue samples; this is done by passing a small needle through the scope to obtain the sample which can be sent to the laboratory for analysis.

This procedure may need to be repeated if the biopsy sample is inconclusive.

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).

EUS may also be used to guide other procedures such as cyst or abscess drainage.

After your investigation

We will usually take you back to the recovery area. You may feel a little bloated with wind pains but these usually settle quite quickly. The doctor will usually come to see you and discuss the findings of this test. We will let you leave hospital when the person taking you home arrives.

Leaving hospital

Once you get home, it is important to rest quietly for the rest of the day. This is very important because you have been sedated. Sedation lasts longer than you think.

For 24 hours after sedation, you should not:

- be left on your own;
- drive a car;
- sign any legally binding documents;
- take sleeping tablets;
- work at heights – including ladders;
- use machinery; or
- Drink alcohol.

The effects of the test and injection should wear off after 24 hours, when most patients are able to carry out normal activities.

Antibiotics may be provided depending on the indication for the procedure.

The back of your throat may feel sore for the rest of the day, this will pass, so should not require any medication.

If you have any of the following, you should contact your GP or the Endoscopy Department. In an emergency, please go directly to the Accident & Emergency Department.

- Severe pain
- Black tarry stools
- Persistent bleeding

General information

We would also like you to be aware that while we will do everything we can to maintain the privacy and dignity of all our patients, the Endoscopy Unit cares for both male and female patients.

Contact details

If you have any specific concerns that you feel have not been answered and need explaining, please contact the following.

- Endoscopy Unit nursing staff (phone 01905 733085)
- Booking co-ordinator for EUS (phone 01905 733540)

Other information

The following websites contain information that you may find useful:

<https://www.worcsacute.nhs.uk> - Information about Worcestershire Acute Hospitals NHS Trust.

<https://patient.info> - Trusted patient information on health conditions and treatments.

<https://www.nhs.uk> - Trusted NHS health information and advice.

<https://www.asthmaandlung.org.uk> - The UK's lung health charity, providing information, advice and support for people living with lung conditions.

If your symptoms or condition worsens, or if you are concerned about anything, please call your GP, 111, or 999.

Patient Experience

We know that being admitted to hospital can be a difficult and unsettling time for you and your loved ones. If you have any questions or concerns, please do speak with a member of staff on the ward or in the relevant department who will do their best to answer your questions and reassure you.

Feedback

Feedback is really important and useful to us – it can tell us where we are working well and where improvements can be made. There are lots of ways you can share your experience with us including completing our Friends and Family Test – cards are available and can be posted on all wards, departments and clinics at our hospitals. We value your comments and feedback and thank you for taking the time to share this with us.

Patient Advice and Liaison Service (PALS)

If you have any concerns or questions about your care, we advise you to talk with the nurse in charge or the department manager in the first instance as they are best placed to answer any questions or resolve concerns quickly. If the relevant member of staff is unable to help resolve your concern, you can contact the PALS Team. We offer informal help, advice or support about any aspect of hospital services & experiences.

Our PALS team will liaise with the various departments in our hospitals on your behalf, if you feel unable to do so, to resolve your problems and where appropriate refer to outside help.

If you are still unhappy you can contact the Complaints Department, who can investigate your concerns. You can make a complaint orally, electronically or in writing and we can advise and guide you through the complaints procedure.

How to contact PALS:

Telephone Patient Services: 0300 123 1732 or via email at: wah-tr.PALS@nhs.net

Opening times:

The PALS telephone lines are open Monday to Thursday from 8.30am to 4.30pm and Friday: 8.30am to 4.00pm. Please be aware that a voicemail service is in use at busy times, but messages will be returned as quickly as possible.

If you are unable to understand this leaflet, please communicate with a member of staff.