

## Endoscopy Department

### Endoscopic ultrasound (EUS)

#### Important Information

##### Before your appointment

- All medications should be taken as normal with a little water.
- If you take **Warfarin** please read the **Alert for patients on Warfarin** on page 2 as you may need to have an INR test seven days before your procedure.
- If you have **diabetes** please read the advice on **page 6 and 7**
- If you have any questions about the procedure or find that you cannot keep this appointment please contact the Endoscopy office between 9:00 and 17:00 Monday to Friday on 01223 257080

##### On the day

- Have **nothing to eat for six hours and nothing to drink for four hours** before your appointment
- If you are taking clopidogrel or warfarin, or you or your family have had bleeding problems in the past please tell us when you come for your procedure.

##### At the hospital

- Please come to the Endoscopy Department on level 3 of the Addenbrooke's Treatment Centre (ATC).
- Use the 'Patient and Visitor Treatment Centre Car Park', opposite the main entrance of the ATC. Take your parking ticket and appointment letter to the ATC reception desk to obtain discounted parking.
- **Please note that the appointment time is for your pre procedure check, not the time of your examination.** The length of time you will be here will vary enormously but may be anything from two to four hours or more. Please ask your admitting nurse for further information during your admission check.

# Alert for patients on **warfarin or clopidogrel** or other anticoagulant medication

You **must** read this guidance **before** your procedure.

If you have any questions **or do not know whether to stop your medication** before your Endoscopy please phone 01223 216515 .

## **Warfarin: for patients advised to continue medication**

- You should have an **INR seven days** before the Endoscopy.
- If that **INR result is 3.0 or less**, continue with your usual daily Warfarin dose
- If that **INR result is more than 3.0** ask your supervising anticoagulant service for advice to **reduce your daily Warfarin dose** so that your INR is 3.0 or less when you have the Endoscopy

## **Warfarin: for patients advised to stop medication**

- You should stop Warfarin five days before the Endoscopy
- After the endoscopy go back to your usual daily dose as soon as you are eating again (that will usually be the same evening)
- You should have your INR checked one week later to ensure you are adequately anticoagulated again.

If you have:

- a metal mitral valve,
- metal valve + previous stroke / thrombosis
- valvular heart disease

you may need Heparin injections instead of Warfarin. Ask your local anticoagulant service for advice.

## **Clopidogrel: for patients advised to continue medication**

- continue with your usual dose.

## **Clopidogrel: for patients advised to stop medication**

- you should **stop Clopidogrel seven days** before the Endoscopy

Other anticoagulant medication:

Acenocoumarol, sinthrome, phenindione, dindevan: if you are taking any of these please contact the Endoscopy department 01223 216515

## What is endoscopic ultrasound?

Your doctor has requested this procedure to help investigate and manage your medical condition.

Endoscopic ultrasound (EUS) is a procedure that combines the ability to look directly at the lining of the gut, with ultrasound, that allows the operator to see structures beneath the surface.

To do this a special endoscopy/ultrasound scope is used which is a long flexible tube (thinner than your little finger) with a light at the end and a built in miniaturised ultrasound probe. The scope 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 is performed under sedation (**not** a general anaesthetic). The level of sedation is such that generally no discomfort should be experienced. It can take around 20 minutes, but if it takes longer, you should not worry.

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

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

## Getting ready for the procedure

Wear loose fitting washable clothing and leave valuables at home.

On arrival at the department, we will explain the procedure to you and ask you to sign a consent form. You can change your mind about having the procedure at any time.

We will give you a sedative (by injection into a vein) to make you relaxed and sleepy. The sedative will not put you to sleep (this is not a general anaesthetic). This means you not be aware of the procedure. The injection will continue to have a mild sedative effect for up to 24 hours and may leave you unsteady on your feet for a while.

You **must** arrange for a responsible adult to come with you, wait with you and then take you home. You will not be able to drive. **If you come without an escort, we will have to cancel the procedure.** If you are entitled to use hospital transport, an escort is not required.

## During the procedure

In the procedure room, we will ask you to remove false teeth, glasses and hearing aids in the left ear. We will make you comfortable on a couch lying on your left side.

The endoscopist will give you the injection. A mouth guard will be put gently between your teeth so that you do not bite and damage the instrument. We will also put a plastic 'peg' on your finger to monitor your pulse and oxygen levels during the procedure. For your comfort and reassurance, a trained nurse will stay with you throughout the procedure.

As the instrument is gently passes the tube through your mouth you may gag slightly, this is quite normal and will not interfere with your breathing. Minimal restraint may be appropriate during the procedure. However, if you make it clear that you are too uncomfortable the procedure will be stopped.

## Potential problems

Diagnostic endoscopic ultrasound procedures carry a very small risk (1 in 10,000 cases) 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 remains very slight. The risk of perforation is about 1 in 1,000 when using an endoscope to take samples with EUS. There is a similar risk of causing inflammation of the 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 have diarrhoea for a few days after the procedure. A very small number may experience a temporary increase in pain.

As with all endoscopic procedure there may be a slight risk to teeth, crowns or dental bridgework; you should tell the nurses if you have either of these. Other rare complications include aspiration pneumonia (inflammation of the lungs caused by inhaling or choking on vomit) and adverse reactions to intravenous sedative drugs and, when used, antibiotic treatment.

Like all test this procedure will not always show up all abnormalities and, on rare occasions, a significant abnormality may not be identified. If you have any questions about this please ask either at the time of your procedure or the person who referred you.

## After the procedure

You will be taken to the recovery area. When you are sufficiently awake, you may go home. You are advised not to drive, operate machinery, return to work, drink alcohol or sign legally binding documents for the next 24 hours. You are also advised to have a responsible adult stay with you for the next 12 hours. Afterwards the back of your throat may feel sore for the rest of the day and this will pass and needs no medication.

If you have any of the following, you should contact your GP, the Endoscopy department or the Accident and Emergency department.

- severe pain,
- black tarry stools
- persistent bleeding

## When do I know the result?

The endoscopist will give you information about the procedure at the bedside in the recovery area but if you would like more privacy, we will take you to a separate room. It is a good idea to have someone with you when you talk to the endoscopist because the sedation can affect your ability to remember the discussion.

Final results from biopsies will be given to you either by the healthcare professional who requested the procedure at a clinic appointment or by letter. These results can take several weeks to come through. You should discuss details of these results and any further treatment with that person.

## Alternatives

Due to the unique information obtained from an EUS there are no real alternatives although in a few instances other radiological tests may give the answers required.

## References

Mohamad A. Eloubeidi, MD, MHS, Ashutosh Tamhane, MD, MSPH, Shyam Varadarajulu, MD, C. Mel Wilcox, MD Frequency of major complications after EUS-guided FNA of solid pancreatic masses: a prospective evaluation. *Gastrointestinal Endoscopy* 2006; 63:622-29  
BSG Guidelines: Complications of Gastrointestinal Endoscopy, 2006 at [www.bsg.org.uk](http://www.bsg.org.uk)

## For more information

- Contact the Endoscopy Office between 0900 and 1700 on 01223 216546
- See [www.addenbrookes.org.uk/consent](http://www.addenbrookes.org.uk/consent)

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## Diabetic Advice - EUS Morning Appointment

**Please follow these instructions if you have diabetes which is controlled with insulin or tablets.**

**If you have any questions related to your diabetes during this preparation, please contact your GP or the diabetes specialist nurse on 01223 245151 bleep 152078.**

### Food and drink

- Do not eat for six hours prior to your appointment.
- Do not drink for three hours prior to your appointment.
- Test your blood glucose regularly. If it drops below 4, please treat with a sugary drink such as lucozade 100ml, apple or grape juice 200ml, until your level is 5.
- After your procedure, you may eat and drink normally unless specifically told otherwise.

### Insulin and tablets

Please adjust your normal insulin and tablet doses as instructed below.

#### If you take insulin once daily

- No change to insulin dose necessary.

#### If you take insulin twice daily

- Do not have your morning insulin. Bring it with you, plus something to eat.
- If you are able to eat before 11:00, have your normal morning dose with food.
- If you are able to eat after 11:00, have ½ your normal morning dose with food.
- Have your normal evening dose.

#### If you take insulin four times daily

- Do not have your morning insulin. Bring it with you, plus something to eat.
- If you are able to eat before 11:00, have your normal morning dose with food.
- If you are able to eat after 11:00, omit your breakfast dose and have your normal lunchtime dose with food.
- Have your normal tea time and bedtime evening doses.

#### If you take tablets for diabetes

- Do not have your morning diabetic tablets.
- After your procedure, re-start your tablets at the next dose time.

## Diabetic Advice -EUS Afternoon Appointment

Please follow these instructions if you have diabetes which is controlled with insulin or tablets.

If you have any questions related to your diabetes during this preparation, please contact your GP or the diabetes specialist nurse on 01223 245151 bleep 152078

### Food and drink

- Do not eat for six hours prior to your appointment.
- Do not drink for three hours prior to your appointment.
- Test your blood glucose regularly. If it drops below 4, please treat with a sugary drink such as lucozade 100ml, apple or grape juice 200ml until your level is 5.
- After your procedure you may eat normally unless specifically told otherwise.

### Insulin and tablets

Please adjust your normal insulin and tablet doses as instructed below.

#### If you take insulin once daily

- No change to insulin dose necessary.

#### If you take insulin twice daily

- Have your normal morning insulin dose unless your breakfast is smaller than usual. If so reduce your normal dose by 1/2.
- Have your normal evening dose.

#### If you take insulin four times daily

- Have your normal morning insulin.
- Do not have your lunchtime insulin.
- Have your normal tea time and bedtime evening doses.

#### If you take tablets for diabetes

- Do not have your morning diabetic tablets.
- After your procedure, re-start your tablets at the next dose time.



We are currently working towards a smoke-free site. Smoking is only permitted in the designated smoking areas.

For advice and support in quitting, contact your GP or the free NHS Stop Smoking helpline on 0800 169 0 169

## Help with this leaflet:



If you would like this information in another language, large print or audio format, please ask the department to contact Patient Information: 01223 216032 or

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)



## Document history

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