

# EBUS

## Endobronchial 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 EBUS.

This procedure may be undertaken at The Royal Shrewsbury Hospital or at The Princess Royal Hospital. Your appointment may be at either site.

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 EBUS?

EBUS is used to help diagnose the cause for some conditions of the lungs by taking tissue samples from lymph nodes (“glands”) and other masses adjacent to the airways. It involves using a thin flexible tube called a bronchoscope, which is about as thick as a pencil. This is passed via the mouth to the back of the throat, into the windpipe and then further on into the airways. The bronchoscope has an ultrasound probe at the end of it, which the doctor can use to look at the tissue outside your airways, in particular the lymph nodes.

A fine needle can then be passed down the scope in order to take tissue samples from areas outside of your airways. This technique is called transbronchial needle aspiration (TBNA). The sample can then be sent to the laboratory for more tests to help reach a diagnosis.

## What are the risks and benefits of having an EBUS?

As with every medical procedure, the risk must be compared to the benefit of having the procedure done.

### Common (more than 1 in 100 cases):

- Sore throat- This usually settles within 24 hours.
- Minor bleeding- It is not unusual to cough up small amounts of blood. This usually settles within 24 hours.

### Rare: (less than 1 in 100 cases):

- Throat or chest infection- If you start to cough up yellow/green phlegm, or feel more chesty, then this may be a chest infection. Your GP will be able to advise you about the need for antibiotics.
- Major bleeding- This is rare (1 in 100) and may require admission into hospital for observation. In more severe cases, transfer to another hospital may be required for further procedures to stop the bleeding.
- Pneumothorax- This occurs when an air leak forms between the airways/lung and the chest wall, causing the lung to collapse. It often requires a chest tube to be inserted, in which case admission to hospital for a few days is usually necessary.
- Myocardial infarction (“heart attack”)

- Cardiac dysrhythmia- Rarely the heart may beat in an abnormal rhythm as a consequence of the procedure, which usually requires treatment as an inpatient.
- Over sedation- If sedation is used, then there is a risk of over-sedation. This results in the abortion of the procedure and often the administration of drugs to reverse the effects of sedation. In mild cases, you may need to stay in hospital for a few hours, but in more severe cases you will need to be admitted to hospital overnight and may require care on the high dependency unit (HDU) or intensive care unit (ICU).
- **If a complication occurs it may be necessary to stay in hospital**

## What if I do not have an EBUS?

Some of the lymph nodes outside of your airways can also be biopsied by mediastinoscopy. This is a surgical operation performed under a general anaesthetic. It is done by making a small cut at the bottom of the neck and inserting a scope through the cut to access the lymph nodes. This carries a higher risk than EBUS, and not all of the lymph nodes that can be biopsied using EBUS can be accessed with a mediastinoscopy.

# 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 take any medicines to thin your blood, then please follow the advice you have been given in clinic. **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 EBUS 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.

## 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 EBUS 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

Sedation 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 EBUS being done. After the EBUS 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 EBUS

A nurse will stay with you throughout the EBUS. 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 procedure a monitor is placed on your finger to check your pulse and oxygen levels.

Before the tube is passed any further, some local anaesthetic is sprayed onto your voice box and upper airways to numb these areas. This may cause some coughing which usually settles. The endoscopist will then use the ultrasound to find the relevant sites to biopsy. You will not feel any pain during the biopsies, which are taken by a second doctor.

The whole procedure takes between 45 – 60 minutes. It may be necessary during the procedure to take a photograph of part of your airways.

## After the EBUS

As 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. Sedation 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

Please insert patient label

➤ **NAME OF PROCEDURE (delete as applicable)**

**Fibreoptic Bronchoscopy- Diagnostic- Biopsy, Brushings, Washings**  
**Fibreoptic Bronchoscopy- Diagnostic- Transbronchial needle aspiration**  
**Fibreoptic Bronchoscopy- Therapeutic- Removal of foreign body/secretions**  
**Endobronchial ultrasound +/- Transbronchial needle aspiration (EBUS+/- TBNA)**

➤ **STATEMENT OF HEALTH PROFESSIONAL-** I have explained the procedure to the patient:-

- **The intended benefits (delete as applicable)**
  - To detect disease or ensure no disease is present
  - To collect biopsy material which may guide appropriate treatment
  - To remove a foreign body/secretions
- **Serious or frequently occurring risks-**
  - Sore throat/Coughing
  - Bleeding from where lung tissue samples taken from
  - Throat/chest infection
  - Pneumothorax (air leak causing partial or complete collapse of the lung, potentially requiring admission/chest tube insertion)
  - Myocardial infarction (heart attack)/cardiac dysrhythmia
  - Over-sedation
  - Death (1 in 5000 cases)
- **Any extra procedures which may become necessary during the procedure**
- **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-** Fibreoptic bronchoscopy/EBUS
- **This procedure will involve-**  Local Anaesthetic     Intravenous Sedation/ Fentanyl



## Patient Agreement to Investigation: -

**Fibreoptic Bronchoscopy- Diagnostic- Biopsy, Brushings, Washings**

**Fibreoptic Bronchoscopy- Diagnostic- Transbronchial needle aspiration**

**Fibreoptic Bronchoscopy- Therapeutic- Removal of foreign body/secretions**

**Endobronchial ultrasound +/- Transbronchial needle aspiration (EBUS+/- TBNA)**

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 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](http://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.

## Website: [www.sath.nhs.uk](http://www.sath.nhs.uk)

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