

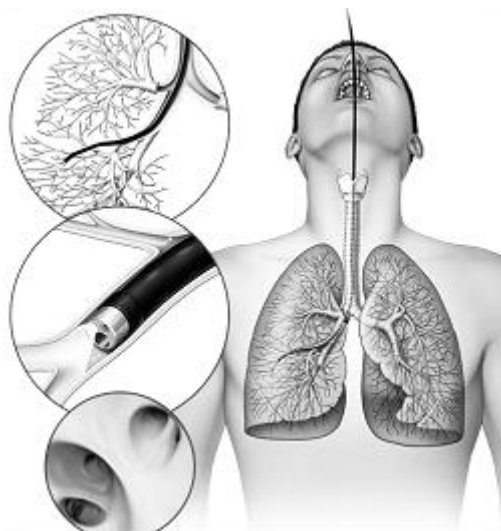
Cardiothoracic Surgery

Bronchoscopy and cryotherapy for lung biopsy

This leaflet provides information about the bronchoscopy procedure and explains what care you will need before and after the procedure. The care and treatment that you will receive will be specific to your needs.

What is a bronchoscopy?

A bronchoscopy is an examination of the windpipe, or trachea, and airways, also known as the bronchi. During the examination, a camera, or bronchoscope, is passed through the mouth into the breathing passages of your lungs. This gives your doctor a clear view of the lining of the bronchi, allowing your doctor to make a diagnosis.



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Why is a bronchoscopy done?

This procedure is done to get a closer look at your airways. The benefit of the procedure is that it allows us to examine your airways and your doctor can take samples, known as biopsies, for diagnostic purposes. This investigation has been recommended to you, keeping your best interests in mind.

Your doctor will explain the reasons why you will need a bronchoscopy during your consultation. Here are some common reasons why a bronchoscopy may be required:

- **Infection** - biopsies taken from your lungs can help your doctor give you appropriate treatment and also clear some of the mucus in your breathing passages.
- **Bleeding** - your doctor can check your breathing passages in case you are coughing up blood.
- **Abnormal CT scan or chest X-ray** - if there is a narrowing or abnormality in your lung, your doctor might want to investigate the cause.
- **Persistent cough** - biopsies taken during the bronchoscopy can sometimes help to determine the cause of a prolonged cough.
- **Stridor (noisy breathing)** - a bronchoscopy can be used for removing an inhaled foreign object such as small pieces of food that can cause additional sounds to your breathing.

What is cryotherapy for lung biopsy?

Cryotherapy uses freezing and thawing techniques to investigate what has caused narrowing of the airway.

The bronchoscope is put down your throat and into your airways. A tool called a cryoprobe is passed through the tube and placed on the target tissue. Once in position, the cryoprobe is frozen, which then freezes the target biopsied tissue. The frozen tissue sticks to the tip of the cryoprobe. It can then be removed, either as part of the treatment or for diagnosis.

The cryoprobe can also be used to destroy diseased lung tissue.

Patient Information

Benefits of cryotherapy:

- Reduced length of stay in hospital
- Less risk of complication such as punctured lung (pneumothorax)
- Shorter recovery time
- Less painful than open surgery

What happens during a bronchoscopy?

You will usually lie flat during this procedure. The bronchoscope will be passed through your mouth, and you will usually be asleep for this procedure.

What are the associated risks with a bronchoscopy?

All surgical procedures and treatments have risks, and your surgeon will discuss the risks associated with bronchoscopy with you.

- cough
- hoarse voice
- sore throat
- mild fever
- bleeding in the airways
- collapsed or punctured lung
- low oxygen levels

Serious, but rarely encountered problems

Other risks involved with general anaesthesia (these will be discussed with you). You should contact your doctor if you become unwell after a bronchoscopy, especially if you have one of the following problems:

- high temperature (fever)
- chest pain
- coughing up blood
- shortness of breath

What happens if I choose not to have a bronchoscopy? Are there any alternatives?

We encourage you to be fully involved in the decisions regarding your care and treatment. If you decide to go ahead with the procedure, we will ask you to sign a consent form. This is a legal requirement which confirms you agree to have a bronchoscopy and understand all the information given to you.

Although breathing tests, chest X-rays and CT scans provide additional information about your lungs, the bronchoscopy offers very precise information that will allow your doctor to formulate a diagnosis. If you have any reasons why you do not wish to go ahead with the bronchoscopy procedure, your chest doctor and chest surgeon will respect your decision and support you in every way they can.

How should I prepare for a bronchoscopy?

Pre-assessment: An appointment will be given to you to attend the outpatient pre-assessment clinic to have the following tests:

- Blood tests
- ECG (Electrocardiogram - a simple test that traces the electrical activity of your heart)
- Recent chest X-ray
- Pulmonary function tests (breathing tests) if needed
- MRSA screening - a simple nose swab to test for Methicillin-Resistant Staphylococcus Aureus. This helps reduce the chance of patients acquiring a MRSA infection or passing an existing infection on to other patients
- A full set of observations (blood pressure, pulse, respiratory rate, oxygen levels, temperature, height and weight)
- You may need other tests that are specific to you (these will be explained).

During the outpatient appointment, please tell the doctor if you need any help after the procedure. You should make arrangements for a relative or friend to accompany you to the hospital and take you home after the procedure.

Patient Information

Fasting - You will need to not eat or drink for a certain length of time before the procedure. You can have sips of water only until 2 hours before the procedure. Further information will be provided to you by the anaesthetists, surgeons and nurses.

Smoking - It is better if you do not smoke before the procedure - this can reduce the amount of oxygen that your blood can carry.

Are you taking anticoagulants/antiplatelets? If you are taking anticoagulants/antiplatelets such as warfarin, dabigatran, rivaroxaban, apixaban, aspirin, clopidogrel, please check with the doctor or surgeon if they **need to be stopped and for how long**.

Support at home - Before you come to the hospital, please make arrangements for a relative or friend to support you for 24 hours after the procedure.

Admission to hospital

On the day of your admission, you will be given information about fasting. You will receive a letter from the surgeon's secretary with clear instructions for you to follow.

Before going to theatre

You will be given thrombo-embolic stockings. These will help prevent you from developing blood clots (DVT) in your legs due to not moving for a length of time during and after the operation. You will need to wear them until you are discharged home.

What happens after a bronchoscopy?

Recovery - You will wake up in theatre and be transferred to the Recovery Unit or the Ward – this depends on the complexity of your procedure. You will be monitored until most of the effects of any medication given have worn off. You may feel woozy, thirsty, or cold after waking up from general anaesthesia.

Patient Information

Oxygen - After the procedure, you will be given oxygen via a mask to help maintain your oxygen levels.

Eating and drinking - When you feel ready, you can start eating and drinking. Start with small healthy snacks and build up to a normal healthy diet.

Hospital stay - The average hospital stay after a bronchoscopy is 1 day, but it may be shorter or longer depending on your recovery.

Medications - We will supply you with any **new** medication that you might need, but please make sure you have your own supply of regular medications. Further required medication will be supplied by the GP if required.

Bronchoscopy results - The results of your procedure will not be available straight away. It may take up to 14 days for the specimens to be analysed. Please note that you will be contacted by your doctor as soon as your bronchoscopy results are ready.

Please tell us about your experience from your stay

We are committed to improving our services and would like to hear your experiences about your stay with us.

The Trust has access to interpreting and translation services. If you need this Information in another language or format, please contact us on 024 7696 4000 and we will do our best to meet your needs.

The Trust operates a smoke free policy.

Did we get it right?

We would like you to tell us what you think about our services. This helps us make further improvements and recognise members of staff who provide a good service.

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