



**Wirral University  
Teaching Hospital**  
NHS Foundation Trust

## E08 Transbronchial Biopsy

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You can get more information locally from the Endoscopy Unit (9am to 5pm) on 0151 604 7095

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## What is a transbronchial biopsy?

A transbronchial biopsy involves removing small pieces of tissue from your lung.

## Shared decision making and informed consent

Your healthcare team have suggested a transbronchial biopsy. However, it is your decision to go ahead with the procedure or not. This document will give you information about the benefits and risks to help you make an informed decision.

Shared decision making happens when you decide on your treatment together with your healthcare team. Giving your 'informed consent' means choosing to go ahead with the procedure having understood the benefits, risks, alternatives and what will happen if you decide not to have it. If you have any questions that this document does not answer, it is important to ask your healthcare team.

Once all your questions have been answered and you feel ready to go ahead with the procedure, you will be asked to sign the informed consent form. This is the final step in the decision-making process. However, you can still change your mind at any point. You will be asked to confirm your consent on the day of the procedure.

## What are the benefits?

Your doctor (a lung specialist) is concerned that you may have a problem in your lungs. A transbronchial biopsy is a good way of finding out if there is a problem.

## Are there any alternatives?

An x-ray or scan can show that you have a problem but a biopsy will help to find out exactly what is causing the problem.

## What will happen if I decide not to have the procedure?

Your doctor may not be able to confirm what the problem is. If you decide not to have a transbronchial biopsy, you should discuss this carefully with your doctor.

## Before the procedure

If you are female, the healthcare team may ask you to have a pregnancy test as some procedures involve x-rays or medications that can be harmful to unborn babies. Sometimes the test does not show an early-stage pregnancy so let the healthcare team know if you could be pregnant.

If you take warfarin, clopidogrel or other blood-thinning medication, let your doctor know at least 7 days before the procedure.

Do not eat in the 4 hours before the procedure. If you have diabetes, let the healthcare team know as soon as possible. You will need special advice depending on the treatment you receive for your diabetes. You may drink water up to 2 hours before the procedure.

The healthcare team will carry out a number of checks to make sure you have the procedure you came in for and on the correct side. You can help by confirming to your doctor and the healthcare team your name and the procedure you are having.

## What does the procedure involve?

The endoscopist may offer you a sedative or painkiller to help you to relax. They will give it to you through a small needle in your arm or the back of your hand. You will be able to ask and answer questions but you will feel relaxed. You may not be aware of or remember the procedure. The healthcare team can give you more information about this.

Your doctor may give you medication by injection into a muscle to reduce your chest secretions. They may use local anaesthetic gel and spray to numb your nose and throat. This can taste unpleasant but will allow your doctor to perform the procedure without causing too much discomfort.

Your doctor may also use a small needle to inject local anaesthetic through your skin into your windpipe. This will usually make you cough but is effective at reducing a cough later.

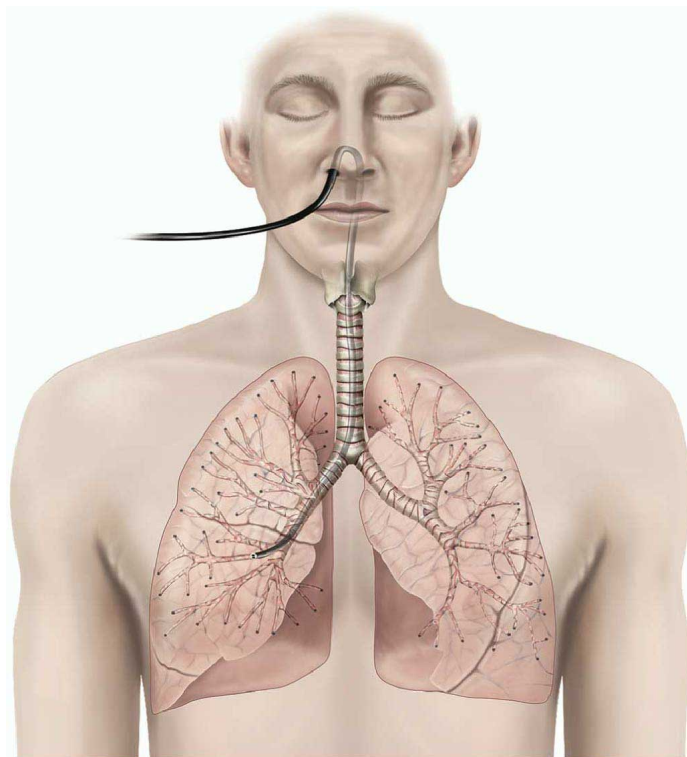
The healthcare team will monitor your oxygen levels and heart rate using a finger or toe clip. If you need oxygen, they will give it to you through a mask or small tube under your nostrils.

If you are awake during the procedure and at any time you want it to stop, let the endoscopist know. The endoscopist will end the procedure as soon as it is safe to do so.

A transbronchial biopsy usually takes less than 30 minutes. Your doctor will pass a flexible telescope (bronchoscope) through your nose and down into your lungs. Sometimes they will pass the bronchoscope through your mouth instead of your nose.

Your doctor will use the bronchoscope to examine your airways (bronchi).

They will gently push small forceps down one of your airways (a bronchus) into your lung. Your doctor will use the forceps to take samples of lung tissue. They may use x-rays to guide them while they perform the biopsy.



A transbronchial biopsy

The samples will be examined under a microscope to find out the cause of your problem. You will usually have a chest x-ray after the procedure.

### Can I be sent to sleep for the procedure?

In rare cases the procedure can be performed with you asleep under a general anaesthetic or deep sedation. However, most centres do not offer this. If this an option for you, the healthcare

team will talk to you about this before your procedure date.

General anaesthetic is given through the cannula, or as a mixture of anaesthetic gas that you breathe through a tube that passes into your airways. This means you will be unaware of the procedure.

A general anaesthetic has a higher risk of complications than other forms of medication. The healthcare team can give you more information about these. You may also need to wait longer for your procedure.

Most patients manage well without a general anaesthetic.

### What complications can happen?

The healthcare team are trained to reduce the risk of complications.

Any risk rates given are taken from studies of people who have had this procedure. Your healthcare team may be able to tell you if the risk of a complication is higher or lower for you.

Some complications may be serious and can even be life threatening.

You should ask your healthcare team if there is anything you do not understand.

The possible complications of a transbronchial biopsy are listed below.

- Shortness of breath. This usually settles quickly but sometimes your breathing can be more difficult caused by the effect of the sedative or inhaling saliva. The healthcare team will monitor your oxygen levels and will give you oxygen if you need it.
- Bleeding from a biopsy site (risk: 9 in 100). Usually there is little bleeding. It is normal to cough up some streaks of blood for 1 to 2 days.
- Pneumothorax, where air escapes into the space around your lung. A pneumothorax is usually small and does not cause any problems (risk: 1 to 6 in 100). If a lot of air escapes, this can cause a large pneumothorax (risk: up to 3 in 100). The air will need to be sucked out using a needle (aspiration) or let out by inserting a tube in your chest (chest drain). You will need to stay in hospital for 1

to 2 days. If you suddenly become short of breath or have severe chest pain while at home, call an ambulance.

- Developing a high temperature a short while after the procedure. This is easily treated with paracetamol.
- Developing a sore throat, husky voice or a cough getting worse. This gets better quickly.
- Allergic reaction to the equipment, materials or medication. The healthcare team are trained to detect and treat any reactions that might happen. Let your doctor know if you have any allergies or if you have reacted to any medication, tests or dressings in the past.
- Death. This is rare (risk: less than 1 in 1,000).

## What happens after the procedure?

After the procedure you will be transferred to the recovery area where you can rest.

Once you are awake enough and can swallow properly you will be given a drink (usually after about 2 hours).

You should be able to go home after you have recovered from the sedative.

If you had sedation:

- A responsible adult should take you home in a car or taxi and stay with you for at least 24 hours.
- Be near a telephone in case of an emergency.
- Do not drive, operate machinery or do any potentially dangerous activities (this includes cooking) for at least 24 hours and not until you have fully recovered feeling, movement and co-ordination.
- Do not sign legal documents or drink alcohol for at least 24 hours.

You should be able to return to work the next day unless you are told otherwise.

The healthcare team will tell you the results of the procedure and talk to you about any treatment or follow-up care you may need.

Results from the biopsy will not be available for a few days so the healthcare team may arrange

for you to come back to the clinic for these results.

Once at home, if you have severe chest pain, continued vomiting, a high temperature lasting more than 12 hours, sudden shortness of breath or you cough up more than a tablespoon of blood, let your doctor know straight away.

You should usually not fly for a month. If you have a small pneumothorax, it may get larger during the flight, making it difficult for you to breathe. If you want to fly in less than 1 month, you should discuss this with your doctor.

## Lifestyle changes

If you smoke, stopping smoking will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

## Summary

A transbronchial biopsy is usually a safe and effective way of finding out if there is a problem in your lungs. However, complications can happen. You need to know about them to help you make an informed decision about the procedure. Knowing about them will also help to detect and treat any problems early.

Keep this information document. Use it to help you if you need to talk to the healthcare team.

Some information, such as risk and complication statistics, is taken from global studies and/or databases. Please ask your surgeon or doctor for more information about the risks that are specific to you, and they may be able to tell you about any other suitable treatments options.

This document is intended for information purposes only and should not replace advice that your relevant healthcare team would give you.

## **Acknowledgements**

### **Reviewer**

Samuel Kemp (MBBS, MD, FRCP)

### **Illustrator**

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