

Understanding Bronchoscopy

Patient information - Respiratory Services

What is bronchoscopy

A bronchoscopy enables your doctor to look into your lungs and if necessary take some samples for examination. This involves passing a small thin flexible telescope called a bronchoscope through your nose or mouth into your lungs.

Your doctor will have explained to you why the procedure is being undertaken. If you are uncertain, please ask.

Before your procedure

- You must not eat or drink anything for at least 4 hours before the procedure.
- All medications should be taken as normal with a mouthful of water. If you are taking Warfarin or other blood thinning medications, you must make sure the doctor organising the bronchoscopy is aware of this. You may need to alter the dose or stop it completely before your bronchoscopy.
- A small cannula will be placed in your vein – this will be used during the procedure to give you extra medication.
- An injection may be given to make you drowsy and dry your mouth. This may cause you to be unsteady on your feet. If you need to get up, please ring for assistance.



During your procedure

- For your comfort and reassurance, a nurse will stay with you throughout your procedure.
- In the procedure room, you may be asked to remove false teeth and glasses, and made comfortable on a bed in a sitting or lying position.
- Your nose and throat may be sprayed with a local anaesthetic to make them numb.
- You may be given a sedative drug by injection into your cannula to make you more comfortable. You may not remember having the bronchoscopy because of the sedative.
- If the tube is being inserted into your nose, local anaesthetic jelly will be used to numb your nasal passage. If the tube is being inserted into your mouth a plastic mouth guard will be placed gently between your teeth. This is to keep your mouth open so that you do not bite the bronchoscope.
- A pulse oximeter (plastic 'peg') will be placed on your finger to monitor your pulse and oxygen levels, and a cuff will be placed on your arm to monitor your blood pressure.
- As the bronchoscope is gently inserted, more local anaesthetic will be given to numb the larynx (voice box), this may make you cough a little. As the local anaesthetic takes effect your throat will relax. We will give you extra oxygen by putting a soft plastic tube just inside your nose or mouth.
- When your procedure is finished, the bronchoscope is removed quickly and easily.
- The whole procedure usually takes between 20 and 40 minutes.



How are samples taken?

If samples are taken, it may take a few days before we get a result. If a sample is sent to be tested for TB (tuberculosis), it may take up to 8 weeks before we get a result. These are some of the samples that can be taken:

- Endo-bronchial biopsy: A small sample is taken from the inside lining of the airways.
- Bronchial brushings: The doctor passes a small brush on the inside lining of the airways.
- Bronchial washings: A small amount of fluid is put into the airways and sucked back through the bronchoscope into a specimen jar.
- Broncho-alveolar lavage: Fluid (about 1 cupful) is put into a single small airway and sucked back up into a specimen jar. This collects cells from the air sacs of the lung.
- Trans-bronchial needle aspiration: A needle is passed through the wall of the airway to take samples from outside the wall. This may be performed using an endobronchial ultrasound

bronchoscope.

- **Trans-bronchial lung biopsy:** A sample of lung tissue is taken from the outer parts of the lung. X-ray equipment may be used to help find the abnormal area of the lung for biopsy.

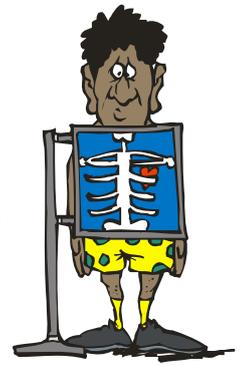
The procedure may cause you to cough or be uncomfortable at times, but you should not experience any pain.

How safe is a bronchoscopy?

Bronchoscopy is a safe procedure. It is unlikely to cause problems unless you have serious heart or lung problems. Major or life threatening complications are very rare.

What are the adverse effects / risks?

- **Fever:** This may occur within a few hours, or the day after your procedure. It is treated with paracetamol (Panadol). Rarely, you may get an infection.
- **Asthma like reactions:** The airways can be narrowed due to irritation by the procedure. This is usually treated with medications that help to relax and open the airways.
- **Heart problems:** Bronchoscopy may put a brief minor strain on the heart. This can cause abnormal beating of the heart, particularly if you have a serious heart problem.
- **Collapsed lung (Pneumothorax):** If you have a trans-bronchial biopsy, there is a risk of an air leak from the lung (1 in 20) which may cause the lung to collapse. In a small proportion of these cases, we might need to insert a chest drain (a tube) to remove the unwanted air and allow the lung to re-inflate. In order to detect a leak you will have a chest x-ray an hour after your procedure, and if a leak is detected you may need to remain in hospital. These leaks seal up quickly on their own.
- **Bleeding:** This can happen after biopsies. Normally it is only minor and settles quickly. If the bronchoscope is passed through the nose then bleeding from the nose may occur. Severe bleeding is rare (less than 1 in 1000) and is more common with trans-bronchial biopsies. Bleeding is more common if you have been taking Warfarin, aspirin, clopidogrel or drugs for arthritis or back pain. Ask your doctor if and when you should stop taking such drugs.
- **Other:** Rare complications of this procedure include aspiration pneumonia (inflammation of the lungs caused by inhaling or choking on vomit) and adverse reactions to the intravenous sedative drugs. There have been rare reports of death in very unwell patients.



After the procedure

After the bronchoscopy, you will be taken to a recovery area while the sedation wears off. Your temperature, pulse, breathing rate, oxygen levels, and blood pressure will be taken regularly during this time.

You will not have anything to eat or drink for about two hours after the procedure and use of local anaesthetic. Until full sensation has returned to your throat, you are at risk of inhaling food or fluid in your lungs. Your nurse will advise you when it is safe to eat or drink. Please ring the bell for assistance if you:

- Become short of breath
- Experience chest pain
- Cough up a large amount of blood
- You feel shivery or shaky
- Have any other unusual symptoms
- Are concerned.

If you have had a trans-bronchial biopsy, you may have a chest x-ray to make sure your lung has not collapsed. When you are sufficiently awake, you can go home.

After leaving the hospital

If you have had sedating medication, we advise you:

- Not to drive, operate machinery, return to work, drink alcohol or sign any legally binding documents for the next 24 hours.
- To have a responsible adult stay with you for the next 12 hours.

You may have a sore throat and/or hoarse voice and a slight nosebleed. If we take some biopsies, you might find some streaks of blood in your phlegm. These are quite normal and usually stop within 24 hours.

If you have any of the following you should contact your GP, the out of hours GP or the Emergency Department

- Pain when breathing, either in your chest or shoulder
- Difficulty breathing or expanding your lungs
- Persistent or increased bleeding
- Persistent fever

Results

Your doctor may be able to give you some information at the time of your bronchoscopy. Samples taken will take several days to analyse. Results will be discussed with you at a later date (such as your next clinic appointment).

If you have any questions about your bronchoscopy, please speak to your nurse or doctor.

For more information about:

- your health and medication, go to www.healthinfo.org.nz
- hospital and specialist services, go to www.cdhb.health.nz