

What is a bronchoscopy?

A bronchoscopy is a procedure that allows doctors to look at your airways. A fine tube (bronchoscope) with a camera at its tip is passed through your nose or mouth, down your throat and into your lungs. Doctors usually use a flexible bronchoscope. They may use a rigid bronchoscope if there is bleeding or something is blocking an airway.

Why do you need a bronchoscopy?

You may need a bronchoscopy to find or confirm a problem with your lungs.

Common reasons might include to:

- determine the cause of a persistent cough or cough producing blood
- determine the reasons for shortness of breath
- follow up an abnormal chest x-ray or CT scan
- look for tumours or blockages
- assess damage after someone has inhaled chemicals or toxic gases
- take a cell sample or biopsy to assist diagnosis.

Bronchoscopy is also used as a treatment tool, such as delivering medication to your lungs, clearing an obstruction such as mucus plugs or foreign objects, or other treatment processes, for example:

- widening a blocked or narrowed airway with a stent
- treating cancer
- draining an abscess
- cauterizing a bleed.

What are the risks?

A bronchoscopy is a safe procedure, but complications can occur, such as:

- bleeding – this is more common when bronchoscopy is used to take a biopsy
- collapsed lung – if the lung is accidentally punctured during procedure and air collects in the space outside the lung. A collapsed lung is rare and is easy to treat, although it may require hospitalisation.
- fever
- abnormal heartbeat (arrhythmia)
- breathing difficulties
- infection
- low blood oxygen levels during the procedure.

If you have a heart condition, you may be at increased risk of a heart attack. As with any treatment or procedure, it's important to discuss any medical conditions and / or medications with your doctor.

What happens before the procedure?

Your doctor will probably ask you to avoid food and drink for up to 12 hours before the procedure. They may also ask you to stop taking certain medications, such as aspirin, ibuprofen, warfarin or other blood thinners. If you are taking any medication, don't forget to mention this to your doctor.

You won't be able to drive after the procedure, so you should arrange transport with a family member or friend to and from the hospital.

What can you expect?

The doctor will perform the procedure in an outpatient setting, and patients usually go home the same day. The entire process, including preparation and recovery time, takes about 4 hours, although the procedure itself only takes 30-60 minutes.

Most people will be awake during the procedure, although you will likely be given a sedative to help you relax.

The doctor will usually apply an anaesthetic spray in the nose and throat before gently inserting the bronchoscope into your nose and down into your bronchi (air passages). You may feel a mild tugging or pushing sensation as the bronchoscope moves around your bronchi, but the procedure is generally painless. The doctor will monitor how you're feeling throughout the procedure, and additional oxygen will be available if you need it.

What happens during the procedure?

The bronchoscope has a tiny camera at its tip, which displays a live image on a screen, and this gives the doctor a clear view as they move around the airways. Depending on the reason for the bronchoscope, the doctor may do one or more of the following during the procedure:

- check for obstructions, or issues with the walls of your airways such as mucus and inflammation
- insert a stent to open up an airway
- take a biopsy with a brush, needle or other instrument passed through the bronchoscope
- spray a saline solution in your airways to collect cells or fluids in a process called washing or lavage
- take an ultrasound to check your lymph nodes and the tissue around your bronchi
- deliver medication or removing a foreign object such as a piece of food.

Once the process is completed, the doctor will remove the bronchoscope.

What happens after the procedure?

You will be kept under observation for some hours after the procedure while the sedative and anaesthetic wear off, which may take 1-2 hours. Once you can cough and swallow normally, it will be safe to drink and eat again. Your blood pressure and breathing will also be monitored during this time.

As soon as you can function normally, you'll be able to go home. But it's important to remember you won't be able to drive, so arrange a friend or family member to pick you up after the procedure.

Most people can return to normal activities after 24 hours. However, you may experience a mild sore throat, hoarseness or cough for a few days. These symptoms are completely normal. You can ease the discomfort with warm gargles and throat lozenges.

Complications from bronchoscopies are uncommon. However you should call your doctor if you experience a fever for longer than 24 hours, experience chest pain or trouble breathing, or you are coughing up blood. As always, if you are in doubt about any new or unexpected symptoms, call your doctor.

Results and next steps

As soon as the medications have worn off, your doctor may be able to share with you what they saw during the procedure. Results from biopsies and other tests will usually take days or weeks to arrive.

If your doctor discovered anything abnormal during the procedure, they will discuss the next steps with you, such as further investigations or treatments.