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Bronchoscopy

What is bronchoscopy?

Bronchoscopy is a procedure a doctor uses to look inside the lungs. This is done with a **bronchoscope**, a thin, flexible tube with a light and a lens or small video camera on the end. The tube is put in through your nose or mouth, down your throat, into your trachea (windpipe), and into the airways (bronchi and bronchioles) of your lungs.

Why do you need a bronchoscopy?

There are a few reasons you might need a bronchoscopy:

To find out why you are having lung problems

This test can be used to look for the causes of problems in the airways of the lungs (such as trouble breathing or coughing up blood).

You have a suspicious area that might be cancer

Bronchoscopy can be used to look at an abnormal area seen on an imaging test (such as a chest x-ray or CT scan).

Any abnormal areas in the airways that are seen with the bronchoscope can be **biopsied** to find out if they are cancer. This is done by passing long, thin instruments down the bronchoscope, such as small forceps (tweezers), hollow needles, or brushes to collect the samples. The doctor can also sample cells from the lining of the airways by passing sterile saltwater down the bronchoscope to rinse the airways, and then suctioning up the fluid. (This is known as a **bronchial washing**.) The biopsy samples are then looked at in the lab.

To look at lymph nodes near your lungs

Bronchoscopy can be done as part of an **endobronchial ultrasound (EBUS)** to look at the lymph nodes and other structures in the area between the lungs. For this test, a bronchoscope is fitted with a microphone-like instrument called a transducer on its tip. It is passed down into the airways and can be pointed in different directions to look at nearby lymph nodes and other structures. The transducer gives off sound waves and picks up the echoes as they bounce off these structures, and the echoes are converted into an image on a computer screen. If suspicious areas such as enlarged lymph nodes are seen, a hollow needle can be passed through the bronchoscope and guided into these areas to obtain a biopsy. (This is known as **transbronchial needle aspiration, or TBNA.**)

To treat certain lung problems

Bronchoscopy can be used to treat blocked airways or some other types of problems in the lung. For example, a small **laser** put on the end of a bronchoscope can be used to burn away part of a tumor that is blocking an airway. Or a bronchoscope can be used to place a rigid tube called a **stent** into an airway to help keep it open.

What's it like to have a bronchoscopy?

This is a general outline of what typically happens before, during, and after a bronchoscopy. But your experience might be a little different, depending on why you're having the test, where you're having the test done, and your overall health. **Be sure to talk to your health care provider before having this test so you understand what to expect and ask questions if there's anything you're not sure about.**

Before the test

Be sure your doctor knows about any medicines you are taking, including vitamins, herbs, and supplements, as well as if you have allergies to any medicines.

You may be asked to stop taking blood-thinning medicines (including aspirin) or some other medicines for several days before the test. You might also be asked not to eat or drink anything for at least several hours before the procedure. Your doctor or nurse will give you specific instructions. Be sure to follow them, and to ask questions if you don't understand something.

Getting the test

Bronchoscopy can usually be done as an outpatient procedure (where you don't need to stay overnight in a hospital).

For this test, you'll lie on your back on a bed or table, with your head raised up slightly. Your mouth (and possibly your nose) and throat will be sprayed first with a numbing medicine. You may also be given medicine through a vein (IV) to make you feel relaxed. Less often, you might be asleep (under general anesthesia) for the test.

If you are awake, the insertion of the scope might make you cough at first. This will stop as the numbing drug begins to work.

The procedure usually takes about 30 minutes, but it might take longer, depending on what's being done.

After the test

After the procedure, you will be watched closely to make sure you don't have any complications. If you got a sedative, you might not remember the procedure.

Your mouth and throat will probably be numb for a couple of hours. You won't be allowed to eat or drink until the numbness wears off. Once the numbness is gone, you may have a sore throat, cough, or hoarseness for the next day or so.

Because a sedative was used to help keep you more comfortable during the test, you will most likely need to arrange for a ride home after the test. Many centers will not discharge people to go home in a cab or a ridesharing service, so you might need someone to help you get home. If transportation might be a problem, talk with your health care provider about the policy at your hospital or surgery center for using one of these services. There may be other resources available for getting home, depending on the situation.

Your doctor or nurse should give you specific instructions on what you can and can't do in the hours after the test.

If biopsies were done as part of the procedure, the results typically will be available within a few days, although some tests on the biopsy samples might take longer. After the procedure, you will need to follow up with your doctor to get your results.

Possible complications of bronchoscopy

Bronchoscopy is usually safe, but there is a small risk of:

- Bleeding in the airways
- Pneumonia (infection in the lung)
- Collapse of part of a lung (pneumothorax)

Your doctor might order a chest x-ray after the bronchoscopy to check for pneumothorax (or other lung problems). Some problems might go away on their own, but if they're causing symptoms (such as trouble breathing) they might need to be treated.

Your doctor or nurse should give you specific instructions on when you might need to call the doctor's office (for problems such as chest pain, trouble breathing, coughing up blood, or a fever that doesn't go away). Be sure you understand when you should call.

References

American Thoracic Society. Flexible Bronchoscopy (Airway Endoscopy). *Am J Respir Crit Care Med*. 2015; 191:7-8. Accessed at <https://www.thoracic.org/patients/patient-resources/resources/flexible-bronchoscopy.pdf> on November 27, 2018.

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