

Flexible Fiberoptic Bronchoscopy

Introduction

Bronchoscopy is a diagnostic examination of the major air passages of the lungs. It is done so that your pulmonary physician can look inside your lungs. Your physician will insert a bronchoscope, which is a flexible tube about the width of a pencil, through your nose or mouth and into your windpipe (trachea).

There are two types of bronchoscopes. The vast majority of procedures performed by **Pulmonary Medical Associates (PMA)** utilize a flexible instrument which consists of many small glass fibers that transmit light and allow your physician to see clearly through it. A small channel in the instrument allows small specimens to be obtained. This instrument can be passed either through the nose or mouth into the air passages. The second type of bronchoscope is a rigid tube and is used infrequently in the operating room to perform laser resection of cancer and to remove difficult foreign bodies.

Why a Bronchoscopy?

There are many reasons for having a bronchoscopy. Common reasons include: coughing up blood, a persistent cough that has not responded to the usual medication, and abnormal chest x-ray findings.

Diseases of the lung can be analyzed with bronchoscopy by sampling the lung tissue through the use of a bronchoscope. Samples are sent to the laboratory for analysis, from which your physician can make a diagnosis.

Adults, and children in particular, may inhale foreign bodies, such as peanuts, denture parts, pins, etc, into the lung. Sometimes a special grasping device can be inserted into the lung through the bronchoscope to remove the foreign body.

How Do I Prepare for a Bronchoscopy?

Your physician will review your medications. Some medications could cause you to bleed excessively. Coumadin (warfarin) and any medication with aspirin or another NSAID (eg: ibuprofen, naproxen, ketoprofen, etc...) can do this and need to be held before the procedure. Be sure to tell your physician about these and all other medications you are taking.

Unless you are told otherwise, you should follow these instructions to prepare for the procedure:

1. The night before your bronchoscopy, **DO NOT** eat or drink anything after midnight. You may use a very small amount of water or juice to swallow necessary medications. It is important that your stomach be empty to avoid vomiting.
2. Bring someone to drive you home, or arrange for alternate transportation.

How is Bronchoscopy Performed?

Before the procedure begins, you will receive medication that will help you relax and reduce coughing and throat irritation. Most patients will not remember the procedure after receiving these medications. A small IV needle will be inserted into a vein so that additional medications can be given.

Your nurse or physician will connect you to a heart and blood pressure monitor. You will be given extra oxygen through your nose during the exam. At this point, additional sedative medication may be given through your IV.

After the small, thin bronchoscope is passed through your nose or mouth and throat, it goes through your vocal cords into your windpipe and into your lungs. When the tube passes through your vocal cords, you may cough and feel like you cannot catch your breath. The feeling is not unusual and is temporary. Your physician will stop to let you catch your breath before continuing the examination.

During the procedure medicine will be administered through the tube to help relieve any coughing. You can help by taking slow, shallow breaths through your mouth.

Try not to talk while the tube is in your lungs. Talking can make you hoarse or give you a sore throat after the procedure.

Occasionally, the examination is done with the aid of x-ray equipment to help your physician locate the exact area from which to take biopsy specimens. You may feel pressure or tugging when the biopsy specimens are taken. However, pain is unlikely to occur during the bronchoscopy. A nurse and a respiratory therapist will be present during the exam to assist you and the physician.

Bronchoscopy is a safe diagnostic procedure and carries little risk.

Complications are infrequent, but if they occur, they may include:

Discomfort and Coughing – While the bronchoscope is passed through the nose, throat and breathing tubes, it may cause some discomfort. It may also tickle the airways leading to cough. Doctors try to reduce this discomfort and coughing with local anesthetics. To decrease these discomforts, medications are sometimes given to relax patients or make them sleepy.

Lung Leak or Collapse – The airway may be damaged by the bronchoscope, particularly if the lung is already very inflamed or diseased. If the lung is punctured, it may cause an air leak (called a pneumothorax). The air leaks around the lungs and can cause the lung to collapse. This complication is not common, but it is more likely if a biopsy is taken during bronchoscopy. An air leak (pneumothorax) may require treatment with placement of a needle or tube through the chest wall between the ribs to drain air from around the punctured lung.

Reduced oxygen – The level of oxygen in the blood may fall for several reasons during bronchoscopy. The bronchoscope may block the flow of air into the airway. Often during bronchoscopy, small amounts of liquid are injected into the lung to “wash” out the lung and/or to make it easier to see through the bronchoscopy. Fluid that is left behind after bronchoscopy can cause the level of oxygen in the blood to fall.

Bleeding – Bleeding can occur after a biopsy is obtained or if the bronchoscopy injures a tumor in the airways. Bleeding is more likely if the airway is already inflamed or damaged by disease. Usually bleeding is minor and stops on its own. Sometimes a medication can be given through the bronchoscope to stop bleeding. Rarely, bleeding can lead to severe breathing problems or death.

What Happens After Bronchoscopy?

When the procedure is finished, you will be observed by a nurse until you are awake enough to leave. Tell the nurse if you have any chest pain, difficulty breathing, or notice a large amount of blood (more than one tablespoon) in your sputum. It is normal to cough after a bronchoscopy and there may be a small amount of blood in your sputum for few days. A sore throat, sore nose, mild headache, fatigue and a delayed fever (several hours) can also develop after the procedure.

The nurse will recheck your blood pressure, pulse, and respiratory rate prior to your discharge. The IV needle will be removed, and a chest x-ray may be taken.

You cannot eat or drink anything for 1-2 hours after the procedure because your throat will still be numb.

When you are ready to be discharged, the nurse will go over some instructions with you. Most often acetaminophen (Tylenol) will suffice for the sore throat, aches-and-pains, or fever that can follow the bronchoscopy and you will be able to resume all prior medications unless told to do otherwise.

Your physician will be happy to discuss any questions you may have regarding the diagnostic examination and will tell you when to expect the results back from the laboratory. Many tests take a few days or longer to be reported back by the lab.

Contact your physician if you have any questions or problems after your bronchoscopy.