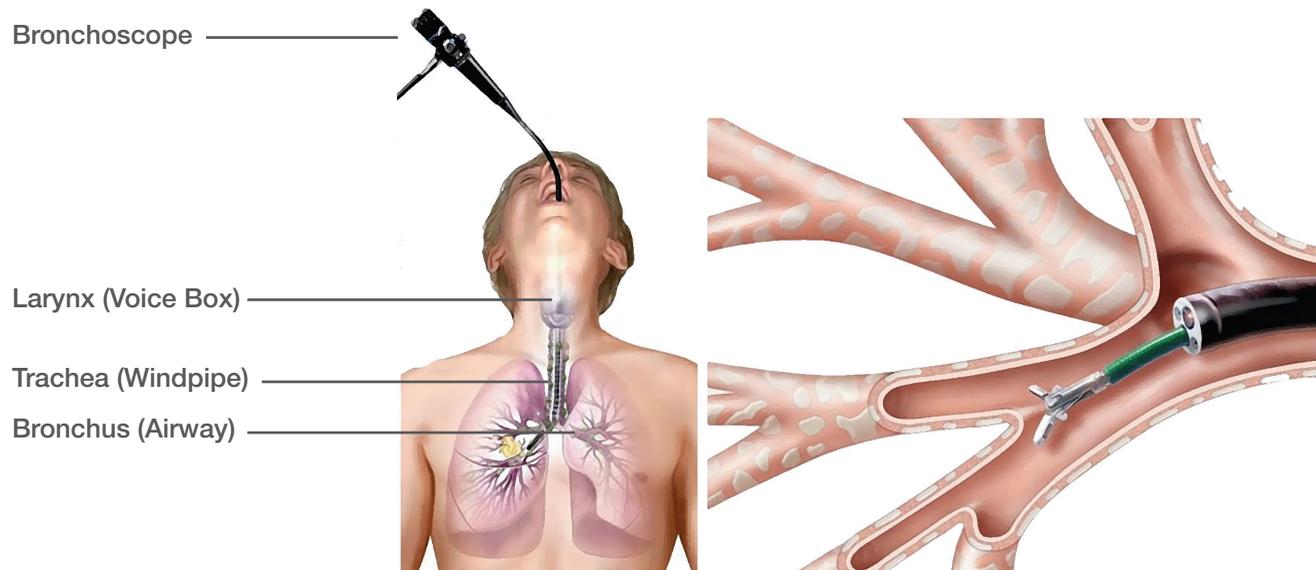


## FLEXIBLE BRONCHOSCOPY

### What is flexible bronchoscopy?

In a bronchoscopy, a long flexible tube with a tiny camera, called a bronchoscope, is passed through the nose or mouth into the airways of the lungs. The doctor can see what the vocal cords, trachea and the airways in the lungs look like.

The bronchoscope will be shown on a video screen and videotaped for the doctor to look at later.



### Anaesthesia

Anaesthesia means that your child will be given medication to make him / her sleep. Your child will not feel any pain during the test or remember it afterwards. An anaesthetist experienced with children, will give your child the anaesthesia medications and will explain the specific procedure to you.

### Home preparation

There are important rules for eating and drinking that must be followed in the hours before the test. One to two business days before your child's test, you will receive a phone call from the practice between the hours of 8am and 5pm. Please have paper and pen ready to write down these important instructions.

**Your child may have a solid meal or formula milk until 6 hours before the start of the procedure.**

**Your child may continue breastfeeding until 4 hours before the start of the procedure.**

**He/she can drink water/clear apple juice until 2 hours before the start of the procedure.**

**Please inform the medical staff immediately if you have not followed these instructions as it can put your child at risk.**

### Medications

If your child takes chronic medication by mouth, he or she may take it with a small sip of water. If your child uses an inhaler, your child may use it before the procedure as he / she usually does. Please make sure to mention which inhaler medication and what time it was last used when asked about medications by the doctors before the bronchoscopy. You may bring along a "comfort" item – such as a favorite stuffed animal or blanket – for your child to hold during the procedure.

### Before the flexible bronchoscopy

After you have registered your child at the reception, you will be directed to the paediatric ward. The flexible bronchoscopy is usually done in theatre. If your child is in an Intensive Care Unit (ICU) the bronchoscopy can be done at the ICU bed without moving him or her.

## The flexible bronchoscopy test

You and your child will be moved to a holding room near the theatre. There might be other patients and parents in the holding area at the same time. You and your child will meet with the anaesthesia team who will be giving the anaesthetic.

Once in the theatre, your child will be given a small amount of anaesthesia gas through a face mask to make him or her sleep. Once he / she is asleep, an intravenous or IV line will be placed into a vein in your child's arm, unless your child already has an IV line in place.

In cases when the bronchoscopy is being done through the mouth, the doctor will place a laryngeal mask with a tube going through your child's mouth and ending just above the vocal cords. The bronchoscope will go through this tube.

In some cases, a child might need an endotracheal tube placed through the mouth and ending in the trachea. The bronchoscope will go through this tube.

The channel in the bronchoscope allows the doctor to spray a numbing medication onto the airway or vocal cords to keep your child comfortable during the test.

Your child's heart rate, blood pressure, temperature and blood oxygen level will be checked continuously throughout the test.

The doctor might perform a procedure called bronchoalveolar lavage or BAL. Using sterile saline, the doctor will wash a small area of the lung, then suction out the liquid and send it to the laboratory to be tested. Sterile saline is completely safe to use inside the body.

In some cases, other specialists, such as ENT or surgeons, might do tests while your child is still under anaesthesia. Doing these tests one after the other during the same procedure is safer for your child so your child only has to undergo anaesthesia once. If other doctors will be doing tests while your child is under anaesthesia, it will be discussed beforehand and you will have met with them before your child goes to the theatre.

The flexible bronchoscopy itself only takes about 15 minutes. However, preparation time before and after the bronchoscopy may take up to 90 minutes, depending on what tests are being done.

## Waking up

After the bronchoscopy, your child will be moved to the recovery room. You will be called so that you can be there as he / she wakes up. Your child might be wearing an oxygen mask to help him or her breath during recovery from the anaesthesia.

Children coming out of anaesthesia react in different ways. Your child may cry, be fussy or confused, feel nauseous, or vomit. These reactions are normal and will go away as the anaesthesia wears off. The length of time it will take for the medication to wear off will vary, as some children take longer than others to become alert. Generally most feel better within 30 minutes.

Your child might be sleepy when he / she wakes up, and his or her throat might still feel numb. After your child's throat stops feeling numb and he / she is wake enough, they may drink. The time in recovery is usually 20 minutes, depending on how quickly your child recovers from the anaesthesia and the bronchoscopy. Thereafter you may go back to the ward. Your child may resume normal activities, eating and drinking at the rate he / she is comfortable with within 2 hours after the bronchoscopy.

## A parent's/guardian's role during the test

The most important role of a parent or guardian during the test is to help your child stay calm and relaxed. The best way to help your child to stay calm is for you to stay calm. Feel free to ask any questions.

## After the flexible bronchoscopy

After the flexible bronchoscopy, your child might feel tired for several hours and might have a sore throat, a cough and/or some blood in his / her saliva (spit) when he / she coughs. These should go away by the next day. If they don't, you should contact the doctor's office.

About half of the children who have had a bronchoscopy with bronchoalveolar lavage (BAL) will develop a low-grade fever 4 to 8 hours afterwards. This fever is a normal response of the body and can be treated with Calpol or Panado. If your child develops a fever that is higher than 39.1°C, or does not respond to medication, you should call the hospital and ask for the pediatric pulmonologist on call.

## Complications

*These are the common risks. There may be other unusual risks that have not been listed here. Please ask your doctor about any other specific concerns you may have.*

### Common risks (>5%)

1. Fever in first 24 hrs. Usually mild and treated with paracetamol.
2. Low oxygen levels while waking up after procedure. This can last up to 24 hours and will be treated with oxygen.
3. Coughing.
4. Wheezing or noisy breathing.

### Uncommon risks (< 5%)

1. There is a theoretical risk of bleeding into the lung and introducing air into the chest causing the lung to collapse (pneumothorax), **only if biopsies are taken**. Usually the risk of this complication is less than 1 in 1000. In that event, the air around the lung would have to be removed with a chest tube. This would mean your child would have to stay longer at the hospital until the hole in the lung is healed, which usually takes 1 to 3 days. Please ask the doctor if this risk applies to your child.
2. Narrowing of vocal cords (laryngospasm). This is usually brief and rarely a problem.

## Cost

A flexible bronchoscopy is performed in hospital. Costs include hospitalization, theatre cost, anaesthesia costs and procedure costs. If you are a member of a medical aid we provide the necessary codes that you will need to obtain authorization for these costs before the procedure. However each medical aid determines their own scheme rate. It is important that you confirm with your medical aid what your possible expenses may be.