

# Thoracotomy (Lung Surgery): *Preparing for surgery*

## What is a thoracotomy?

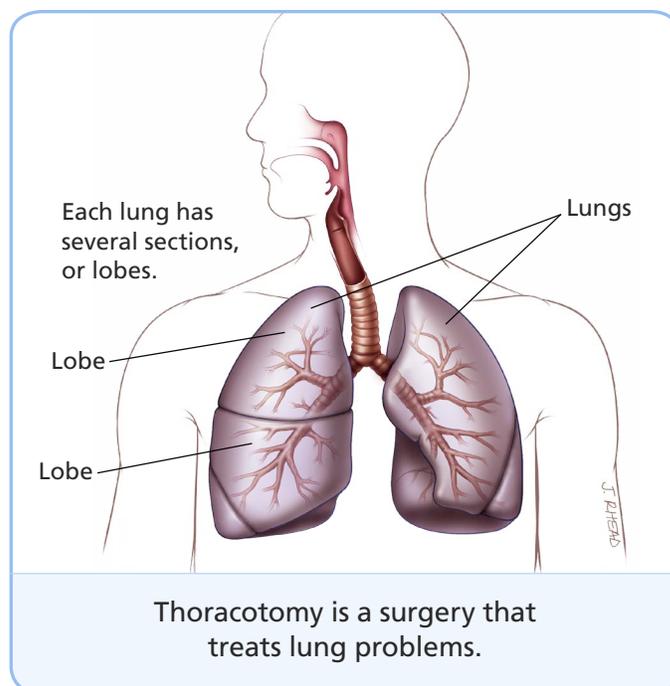
**Thoracotomy** [thohr-uh-KOT-uh-mee] is surgery that repairs or removes tissue or fluid from the lungs or the area around the lungs.

## Why do I need it?

Depending on your situation, this surgery can be performed to:

- Take a small bit of tissue (a **biopsy**). A biopsy helps your doctor find out more about the problem.
- Remove lung tissue. This may be recommended if you have lung cancer or a lung disease such as emphysema. Depending on your situation, the surgery may remove:
  - An entire lung
  - A main section (a **lobe**) of a lung
  - Part of a lobe
- Treat an infection or scarring around the lung.
- Inflate a lung that has collapsed.
- Remove weak spots in the lung that can leak air.
- Remove extra blood or fluid that has collected around your lungs.
- Remove a blood clot in the artery that carries blood to the lungs (a **pulmonary embolism**). A pulmonary embolism is often treated in other ways, but a thoracotomy is the best option in some cases.

Talk with your doctor about the goals of your surgery, based on your situation.



## How do I prepare for surgery?

To make your surgery and recovery go more smoothly, here's what you should do:

- Talk with your doctor about the risks and benefits of the surgery.** See page 2 for information about having this conversation with your doctor.
- Tell your doctor about your allergies and about all medicines you take.** In your medicine list, include vitamins, over-the-counter medicines, and herbal supplements.
- Keep your test appointments.** Your doctor will order a variety of tests to check your health. These may include blood tests, imaging tests, and tests of your heart and lung function.

- If you smoke, talk to your doctor** to learn about resources or medicines that can help you stop.
- Prepare for a hospital stay.** You'll probably be in the hospital for 3 to 5 days. Your doctor will give you a checklist of items to bring.
- Ask about how to handle your medicines.** Your doctor might ask you to stop taking some medicines for at least 5 days before the surgery. These include medicines that thin the blood like warfarin (Coumadin). They also include anti-inflammatory medicines like ibuprofen (Advil), naproxen (Aleve), aspirin, and some herbal supplements.
- Follow all instructions on when to stop eating and drinking before your surgery.** This will help prevent possible problems with the anesthesia.
- Take a shower the night before or the morning you come to the hospital.** You may be given a special soap to use to help prevent infection.

## What happens during the surgery?

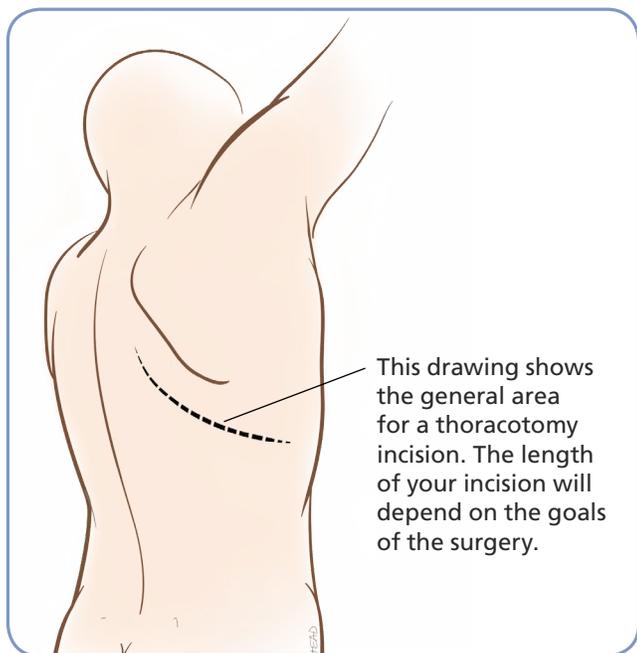
Here's what happens during a thoracotomy:

- **Getting ready.** Monitoring lines will be attached to you so your doctor can monitor your heartbeat, breathing, and blood pressure during the surgery. A nurse will place an IV (intravenous) line in a vein to give you medicine. You will lie on your side on an operating table, with your arm over your head. Your nurse will make sure you are secure in this position.
- **Preventing pain.** The surgical team will prevent pain in these ways:
  - You will have **general anesthesia** — medicine so that you sleep through the procedure, feel nothing, and don't remember it afterward. Before the anesthesia starts, your anesthesia provider will answer any questions you have.
  - You might also have an **epidural** — a narrow tube (a catheter) that delivers pain medicine into the area around your spinal cord. The epidural will help keep pain under control for the first part of your recovery in the hospital.

## Talking with your doctor about thoracotomy

The table below lists the most common potential benefits, risks and possible problems, and alternatives for thoracotomy. There may be other benefits or risks in your unique medical situation. Talking with your doctor is the most important part of learning about these risks and benefits. If you have questions, be sure to ask.

Potential benefits	Risks and possible problems	Alternatives
<p>Thoracotomy can treat a lung problem to improve your symptoms. Specific benefits depend on the type of problem your thoracotomy is being used to treat. Ask your doctor for more information.</p>	<p><b>Problems are rare</b>, but the chances are greater if you have heart disease, cancer, or a history of stroke.</p> <p>Here are risks and possible problems that can happen with any surgery:</p> <ul style="list-style-type: none"> <li>• Problems with general anesthesia, like vomiting, trouble urinating, sore throat, cut lips, headache, heart problems, stroke, or pneumonia</li> <li>• Infection, bleeding that requires a blood transfusion, or blood clots</li> <li>• Death (extremely rare)</li> </ul> <p>Here are risks and possible problems that are specific to this surgery:</p> <ul style="list-style-type: none"> <li>• Injury to the lungs or blood vessels in the lungs</li> <li>• An air leak in the lung or failure of the lung to fill with air after surgery</li> <li>• Repeated fluid buildup in the chest</li> </ul>	<p>The main alternative to thoracotomy is a surgery (a <b>thoracoscopy</b>) that involves smaller cuts, smaller tools, and the use of a tube with a tiny camera at the end (a <b>videoscope</b>). In your situation, thoracoscopy may not be the best treatment. Talk with your doctor if you have any questions about alternatives.</p>



## What happens after the surgery?

You will be in the hospital 3 to 5 days after the surgery. Here's what to expect:

- **Right after surgery, you will be taken to a special post-surgery care unit.** (In some hospitals this is the ICU — intensive care unit.) Your healthcare team will monitor you closely. Your family members will be led to the waiting room, and your surgeon will tell them how the surgery went. When you are stable, your family can visit you.
- **You may be swollen from fluids given during surgery.** Your family should be prepared to expect this — it is normal after surgery.

- **You will be connected to monitors and tubes.** Your breathing tube will be taken out as soon you can breathe safely on your own. You will also have tubes coming out of your incision that remove blood, fluid, and air. As you recover and improve, the monitors and tubes will be removed one at a time.

- **You'll move to a regular hospital room** as soon as your doctor feels your condition is stable and improving.

- **Your healthcare team will manage your pain.** Your nurse will regularly ask you to rate your pain level. At first you may have pain medicine through an IV line in your arm or an epidural line in your back. After a few days, you will change to pain pills. Ask for the Intermountain handout *Managing Your Pain after a Medical Procedure* to learn more.



- **You may have medicine through your IV to control your blood sugar.** The nurse may regularly check your blood sugar and may give you insulin, even if you don't have diabetes. Blood sugar levels naturally rise when the body is under stress. Because a high blood sugar level can slow down your healing, you may have insulin to keep it at a normal level.

- **Inserting tubes.** Your surgical team will place a breathing tube in your windpipe. It will be connected to a machine that will breathe for you.
- **Reaching the lung.**
  - The doctor will make a cut (**incision**) on your side between two ribs (see the picture above).
  - The doctor will separate the ribs.
  - The doctor will deflate the lung, so air doesn't move in and out of it during the surgery. (The breathing tube helps your other lung continue working during the surgery.)
- **Treating the problem.** Depending on the goal of the surgery, the doctor will remove diseased tissue, repair damaged tissue, or remove infection, blood, or blood clots.
- **Placing chest tubes.** The doctor will place tubes into your chest to drain fluids and air as you recover from the surgery.
- **Finishing the surgery.** The doctor will close up the incision with stitches or staples, and you will move to the recovery area.

Depending on the type of surgery you have, a thoracotomy usually takes around 2 to 6 hours.

- **You'll need to breathe deeply and cough.** This helps to prevent problems and will help your lung fill up with air again. A nurse may teach you how to use a device called a **spirometer** that measures your breathing.
- **You'll be expected to move and walk.** You'll get out of bed and walk several times a day and sit up in a chair as much as possible. Walking and sitting up are very important after surgery to get your digestive system working. It also helps your lungs begin to recover.
- **You'll learn some special exercises** to stretch and strengthen the muscles on the side where the surgery was done. See the panel at right.

**As soon as your doctor feels you're ready, you'll be released from the hospital to finish your recovery at home.**

## How should I care for myself at home?

Recovery after thoracotomy surgery can take several weeks. When you are ready to go home from the hospital, your nurse will give you a full set of instructions. You may receive the Intermountain fact sheet *Thoracotomy: Recovery at Home*. This fact sheet explains what you need to do.

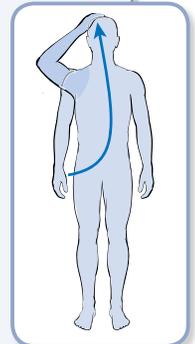


## Arm and shoulder exercises

After surgery, you'll need to do some exercises to regain the full movement and strength of your arms. Do these exercises 3 to 4 times a day.

### Hand on head

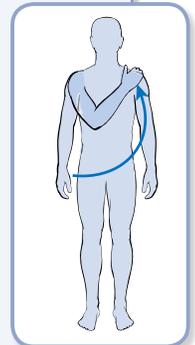
- Bring your hand and arm forward to the center of your body.
- Slowly raise your arm until the palm of your hand can be placed on the top of your head. Keep your neck straight — don't bend it forward to meet your hand.



### Hand to opposite shoulder

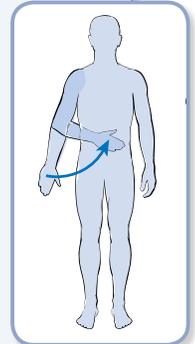
This exercise is part of the position you will need to support coughing.

- With your palm facing your body, reach across your body.
- Grasp your shoulder on the opposite side.



### Hand against back

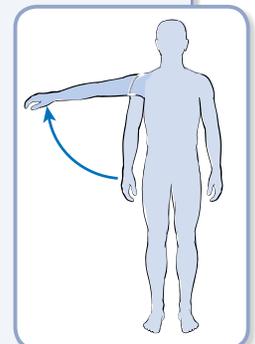
- Start with your arm down to your side, palm facing back.
- Bend your arm and place the back of your hand against your back. Reaching up is not as important as just getting the hand behind you.



### Arm up and out

At first try this lying down, using the bed for support. As you get stronger, sit or stand.

- Bring your arm out to the side, with your palm facing down.
- Keep the arm straight and slowly raise it until it is level with your shoulder.



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