

Chest or Lung Surgery

Thoracic Surgery
Surrey Memorial Hospital

Your surgery and recovery at home

This booklet belongs to: _____

I am having:

- Wedge Resection
- Segmentectomy
- Lobectomy
- Pneumonectomy
- Mediastinal Mass Resection
- Bullectomy
- Pleurectomy with Decortication

We also give you '**Preparing for Your Surgery**' booklet.

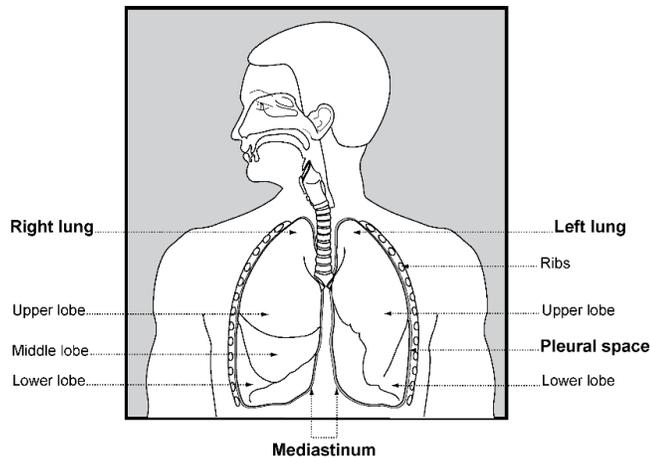
Read both booklets carefully.

Bring both booklets to every hospital visit before your surgery.

Read 'Preparing for Your Surgery' booklet for instructions on how to prepare for your surgery.

Chest Surgery

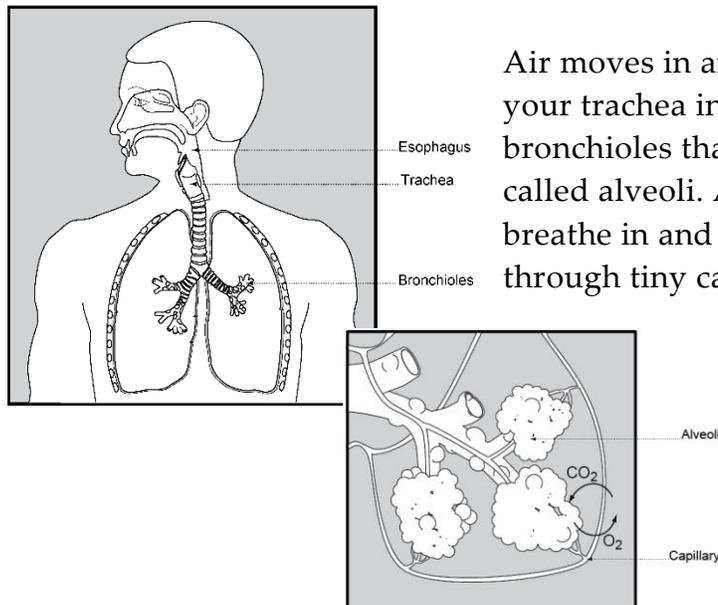
You are having surgery (an operation) on a lung, surrounding tissues, and/or area between the lungs. The medical term for chest is thorax. The area between your lungs is called the mediastinum (say *mee-dee-yah-sty-num*). This area contains the heart, aorta, esophagus (food pipe), thymus, trachea (windpipe), lymph nodes, and nerves. The thymus is part of your immune system.



In your chest, you have a right lung and a left lung. Each lung has sections called lobes.

The right lung has 3 lobes and the left lung has 2 lobes.

A thin tissue called pleura covers both lungs. The same kind of tissue lines the inside of your chest cavity. Between these tissues is the pleural space. It contains a tiny amount of fluid. This fluid allows the lungs to move smoothly as you breathe in and out.

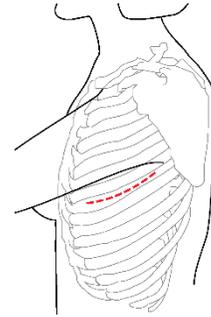


Air moves in and out of your lungs through your trachea into airways called bronchioles that lead to many tiny air sacs called alveoli. Alveoli take the oxygen you breathe in and transfer it into your blood through tiny capillaries.

Ways surgery can be done

Thoracotomy

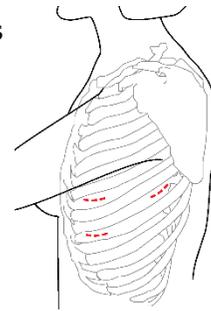
The surgeon makes an incision into your chest wall between your ribs. The surgeon spreads the rib on either side apart and does the surgery through this opening. The cut is 15 to 20 cm long and usually on the side of your chest. This large incision allows the surgeon to see and access the organs inside your chest.



Minimally Invasive Surgery (MIS)

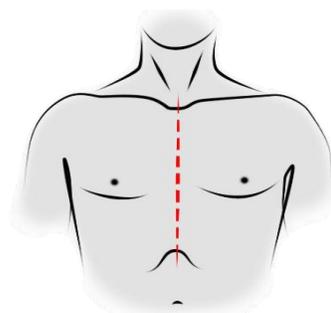
Also called video-assisted thoracoscopic surgery (VATS)

This is a way of doing surgery in the chest through small incisions without making large cuts and spreading ribs apart. The surgeon makes 1 to 4 small incisions in the chest wall between ribs, each 2 to 4 cm long. Through one of these openings, the surgeon inserts a thin flexible tube with a tiny camera (called a thoracoscope) so the area can be viewed a video monitor. The surgery is done using different long skinny surgical tools put into the chest through the other small incisions.

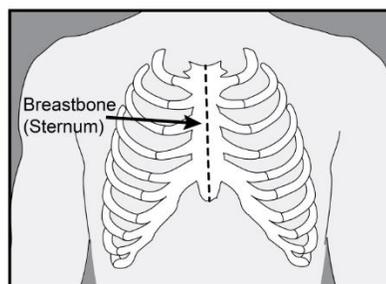


Sternotomy

The surgeon makes one long cut through the skin down the centre of your chest. Then the surgeon cuts the breastbone (sternum) down the middle and spreads apart the 2 halves to do the surgery through the opening. After the surgery, the surgeon joins the 2 halves and closes the incision.

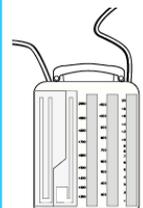


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Breastbone cut along the dotted line

After surgery, you will have one or more chest tubes. The tube(s) helps remove any extra fluid or air from around your lungs and allows your lungs to expand properly. We remove the tube(s) when it drains little or no fluid.



Common Chest Surgeries

Wedge Resection removes a small pie-shaped slice of lung tissue. This includes removing a small amount of normal tissue around the area. This type of surgery can be used to remove a tumour or some other type of tissue.

Segmentectomy or segmental resection removes a part of the lung larger than a wedge resection but smaller than removing a lobe of the lung.

Lobectomy removes one or more lobes of a lung, sometimes, along with lymph nodes. This type of surgery can be done to remove large tumours or diseased lung tissue. It can be done to treat other lung conditions.

Pneumonectomy removes a whole lung, sometimes, along with lymph nodes.

Mediastinal Mass Resection removes growths or abnormal tissue in the area between the right and left lung.

Bullectomy removes large air-filled spaces in the lungs called bullae. Sometimes they are called air blisters. They form when air sacs are damaged.

Pleurectomy removes the inner lining of the chest cavity (pleura). This surgery can include removing any visible tumours or diseased tissue from the surface of the lung (called decortication). Nearby lymph nodes might also be removed at the same time.

Possible Tests and Procedures Related to Surgery

Biopsy is when a piece of tissue is taken for testing.

Bronchoscopy lets the doctor look at your lungs and airways. The doctor passes a long thin tube with a camera on the end (called a bronchoscope) through your nose or mouth, down your throat, and into your lungs.

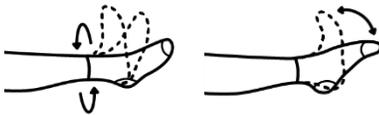
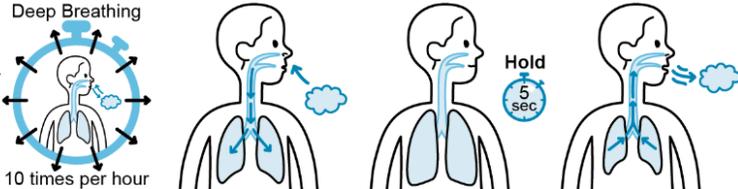
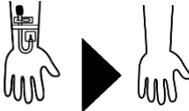
Endobronchial ultrasound uses a bronchoscope combined with ultrasound imaging to an ultrasound to see the airway wall and the structures beside it.

Mediastinoscopy lets the doctor look at the area between the lungs using a thin flexible tube with a camera on the end (called a thoracoscope). The doctor makes a small cut in your upper chest above your breastbone and puts the scope in through the opening.

Thoracoscopy uses a thoracoscope to look inside the chest at the outside of the lungs. The doctor makes a small cut near the lower part of the shoulder blade between the ribs and puts the scope through the opening.

Path to Home Guide: Chest or Lung Surgery

This gives you an example of a person's recovery in hospital after surgery.

Category	After Surgery			
	Surgery Day	Day 1	Day 2	Day 3 to home
Nutrition	 <p>Fluids to Regular diet</p>			
Activity	 <p>Up in chair for meals</p>	 <p>Walk 3 or more times</p>	 <p>4 or more times</p>	
	<p>Leg exercises every day</p> 			
Deep Breathing Exercises	<p>10 times every hour during the day</p>  <p>10 times per hour</p>			
Pain Control	 	 <p>*PCA pump, **epidural or pills</p>		
	<p>Pain at a level comfortable for you</p>			
Tubes and lines		<p>Intravenous Chest tube(s) Incision drain(s) Sequential compression device</p>	 <p>Chest tube Compression device removed Intravenous capped</p>	  <p>Chest tube and Intravenous taken out</p>

* PCA Patient Controlled Analgesia is a pump connected to your intravenous that lets you give yourself pain medicine when you need it.

** Epidural Sometimes the epidural catheter placed in your back for surgery is left in place. An epidural gives continued pain relief by numbing the nerves of the surgery area as long as the pump is running

After Your Surgery

Going Home



How long you stay in the hospital depends on:

- your health before the surgery
- the type of surgery
- how you recover from the surgery

Most people can go home 3 to 4 days after surgery.

You are ready to go when:

- ✓ Your chest tubes are removed.
- ✓ Your pain is controlled with pills or liquid pain medicine.
- ✓ You are up walking and moving well.
- ✓ You are eating and drinking regular food and drinks.
- ✓ Your bowels are working.
- ✓ Your incisions are healing.
- ✓ You know what medications (including new ones) you are taking, how to take them, and why you need them.
- ✓ You have prescription(s) for your medications, if needed.
- ✓ You have a ride home from the hospital.
- ✓ You have arranged for some help at home for the first few days.

Caring for Yourself at Home

Managing pain

If you have been living with pain before surgery, be sure to tell your surgeon how you manage this pain, such as with medicines, herbs, supplements, cannabis products, other substances, massage, yoga, meditation, etc. This helps your surgeon create the best plan with you for managing pain after surgery.

It is normal to have some discomfort or pain when you return home. This should steadily improve but might last for a few days to a couple of weeks.

How much pain you have and how much pain medicine you need depends on the type of surgery you had, how it was done, and if you were using anything for pain before surgery. Your pain should be at a comfortable level that allows you to move, take deep breaths, cough, and to do every day activities.

When you are ready to go home, your surgeon will give you instructions to take pain medicine. This might include a prescription for an opioid (narcotic).

For the first few days:

If your pain is at an uncomfortable level, take your pain medicine as directed. As your pain improves, take your pain medicine less often and/or a smaller amount until you have little or no pain, then stop.

At first, you might have to take a prescription medication. After a short time and as your pain improves, a non-prescription pain medicine should be enough to manage your pain.

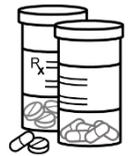
Non-prescription pain medicines (also called 'over-the-counter' medicines) – You buy them at the pharmacy without a prescription. You might only need to take this type of medicine if you don't have much pain after surgery.

Examples of non-prescription medicines (and brand names):

- acetaminophen (Tylenol®)
- acetylsalicylic acid or ASA (Aspirin®)
- non-steroidal anti-inflammatory drugs (NSAIDs)

Examples: ibuprofen (Advil®, Motrin®) ★
 naproxen (Naprosyn, Aleve®) ★

★ **Note:** **NSAIDs are not for everyone after surgery.** If you have (or have had) health problems such as stomach ulcers, kidney disease, or a heart condition, check with your surgeon or family practitioner before using NSAIDs.



Questions about medicines?

Call your local pharmacy and ask to speak to the pharmacist.

For after-hours help, call 8-1-1. Ask to speak to a pharmacist.

Family Practitioner:

Refers to either a family doctor or nurse practitioner

Remember

You can do other things to help ease your pain or distract you from the pain:

- ✓ Slow breathing
- ✓ Listen to music
- ✓ Watch T.V.

Opioid (narcotic) pain medicines – You might get a small number of pills for severe pain.

They are only meant to be taken for a short time. Take only as much as you need to allow you to do daily activities.

Examples of opioid pain medicines:

- Tramacet[®] (tramadol and acetaminophen) ★
- Tylenol #3[®] (codeine and acetaminophen) ★
- Oxycocet[®] / Percocet[®] (oxycodone and acetaminophen) ★
- tramadol, hydromorphone, morphine, oxycodone

★ **Note:** These medications also have 300 to 325mg acetaminophen in each tablet. All total, **do not** take more than 4000mg of acetaminophen in 24 hours (too much can harm your liver).

When taking non-prescription pain medicines as well, most people need to take a lower amount of the opioid or take the opioid less often.

Always read the label and/or information from the pharmacist for how to take medication safely.

Drinking and eating

Return to your normal diet when you get home. To heal, your body needs extra calories and nutrients, especially protein. Eat foods high in protein such as meat, poultry, fish, eggs, dairy, peanut butter, tofu, or legumes.

Need help with food choices?

Call 8-1-1.
Ask to speak to a dietitian.

Keeping your bowels regular

Constipation can happen because you are taking opioid pain medication, are less active, or eating less fibre.

To prevent constipation:

- Drink at least 6 to 8 glasses of liquid each day (unless you have been told differently because of a medical condition).
- Gradually add fibre to your diet.
- Increase your activity.

If you continue to be constipated, talk with a pharmacist or family practitioner.



Caring for your incision

Always wash your hands before and after touching around your incision site(s).

Remove the bandages from the incision as instructed by your surgeon or nurse. If you have white skin tapes (steri-strips) over your incision(s), leave them on until they fall off on their own, or remove them as instructed by your surgeon or nurse.

You can only shower if you do not have any dressings covering your incisions and you do not have a drain or chest tube still in place. If you still have a drain or chest tube, wash yourself with a washcloth at the sink until your surgeon or nurse removes the drain or chest tube.

If you have staples or stitches, we give you instructions before you leave the hospital for when to have them taken out.

For at least the next 2 weeks or until the incision is healed:

- ✗ No soaking in a bathtub or hot tub.
- ✗ No swimming.
- ✗ No creams, lotions, or ointments on your incision, unless directed by your surgeon.

Doing any of these things could delay healing.

Managing moods and emotions

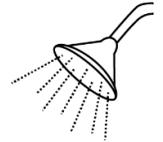
After major surgery, it is quite common to have a low mood or changeable mood at times. If you find your mood is staying low or is getting worse, contact your family practitioner.

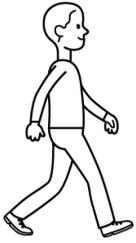
Getting rest

It is very common in the first few weeks to feel tired and have low energy. Rest and sleep help you heal.

Try to get at least 8 hours of sleep each night. Take rest breaks and naps during the day, as needed.

If you have trouble sleeping, talk to your family practitioner.





Being active

Activity and exercise help build and maintain your muscle strength, give you more energy, and help with recovery. You need to find a balance between rest and activity. Pace yourself for the first few weeks.

Slowly increase how much you do each day (your activity level). Increase the distance and time you walk. Only increase your activity level as much as you comfortably can. Continue the exercises you learned from the physiotherapist in the hospital.

If you are still having pain, exercise 30 minutes after you have taken your pain medication.

Your surgeon will tell you when you can increase your activities at your follow-up appointment.



A 4 litre milk jug weighs
4 kg or 9 pounds

For the next 4 to 6 weeks, limit heavy activities to protect your incision and abdominal muscles:

- ✘ **Do not** lift, push, or pull anything over 4 to 5 kilograms (10 pounds). This includes carrying children and groceries.
- ✘ **Do not** vacuum, rake leaves, paint walls, reach for things in high places, or any other reaching activity.
- ✘ **Do not** play any sports, do high intensity exercise, or weight training.

You can return to **sexual activity** when you feel ready and your pain is well controlled.



Usually, you can return to **driving** when you can shoulder check and comfortably wear your seatbelt. If you are not sure about it, ask your surgeon.

Remember: Do not drive when you are taking opioid pain medication.

For 6 weeks after surgery, it is best not travel by air. The change in air pressure could cause problems with your breathing. There is also a chance of a blood clot with sitting for long periods.



When to Get Help

Call your surgeon or family practitioner if:

- You have a fever over 38°C (101°F).
- Your incision is warm, red, swollen, or has blood or pus (yellow/green fluid) draining from it.
- Your pain does not ease with pain medicine, or stops you from moving and recovering.
- You have a cough that continues to get worse.
- You notice stinging, burning, or pain when you urinate (go pee) or your urine smells bad.
- You have redness, tenderness, or pain in your calf or lower leg.
- You feel increasingly tired or dizzy.

Cannot contact the surgeon or family practitioner?

Have any questions about your recovery?

▶ Call Fraser Health Virtual Care **1-800-314-0999** or live chat online at fraserhealth.ca/virtualcare, 10:00 a.m. to 10:00 p.m., daily.

▶ Call **8-1-1** (HealthLinkBC.ca) to speak to a registered nurse any time - day or night.

▶ **Call 9-1-1** if you have any of the following:

- trouble breathing or shortness of breath
- chest pain
- sudden, severe pain

9-1-1



HealthLinkBC is available in 130 languages.

For an interpreter, say your language in English. Wait until an interpreter comes on the phone.

Questions you might have:

Examples: 'How will my bowel habits change?' 'When will I be able to return to my regular activities?' 'When can I return to work?'

Appointments after surgery

See your family practitioner 7 to 10 days after going home from the hospital.

My appointment is on: _____

See your surgeon 10 to 14 days after going home from the hospital.

My appointment is on: _____

Safe use of opioid pain medicines

If you are using any medicines with opioids (narcotics) in them, we want you to do so safely. However, serious problems can happen. Take note of the following safety information.

Before taking opioids:

- Tell your surgeon if you have sleep apnea. Opioids can make your sleep apnea worse.

Safely storing opioids:

- Store opioid medicines in a secure place.
- Keep out of sight and out of reach of children, teens, and pets.
- Never share your opioid medicine with anyone else.

Safely disposing of unused opioids:

- Take any unused opioid medicines back to your pharmacy to be safely disposed.
Do not keep unused medicines at home.

Safely taking opioids:

- Your pain should lessen over the first week. You should not need to take opioid pain medicine for more than 1 week.
- Always use the least amount possible for the shortest amount of time.
- Common side effects include constipation, feeling sick to your stomach (nausea), a dry mouth, sweating, dizziness, and feeling drowsy.
- **Do not** crush, cut, break, chew, or dissolve opioids before taking. Doing this could cause serious harm, even death.
- While taking opioid pain medicines:
Do not drive or drink alcohol.
Do not take any sleeping pills unless your doctor has said you can.

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This information does not replace the advice given to you by your healthcare provider.

Catalogue #253834 (April 2021)
To order: patienteduc.fraserhealth.ca

