



# Getting Ready for and Recovering from Lung Surgery



## About this Booklet

This booklet was developed with input from patients, doctors and health care providers. It provides general information to help you prepare for your surgery and recovery.

Please read this booklet as soon as you get it!

**If your surgeon or nurse gives you information that is different from what is in this booklet, please follow their directions.**

This booklet is meant to be read with the *Getting ready for and recovering from Surgery* booklet, which has general information to help you get ready for your surgery and recovery. It is important that you read both booklets. You can find copies by:

- Asking your surgeon's office, or
- Going to Island Health's Getting Ready for Surgery site:  
<https://www.islandhealth.ca/learn-about-health/surgery/getting-ready-surgery>

## Help your care team help you!

Share this booklet with your care team so they know about your plans to recover and get home as soon as possible.

Please note that the information in this booklet is current as of the date printed on it.

- Surgical Services, Island Health



## Getting Ready for Surgery

### Length of Stay

You will be in the hospital for 1-5 days, depending on the type of lung surgery you have and how fast you recover.



## About Your Surgery

Your two lungs are in your chest, inside your rib cage. They are made up of sections called *lobes*. These lobes are made up of pink sponge-like tissue. You have 3 lobes on your right side and 2 on your left side.

Air flows in and out of your lungs through 2 tubes called *bronchial tubes*.

The space between your two lungs is called the *mediastinum*.

There are many reasons for needing lung surgery, such as:

- A collapsed lung
- A mass in the lungs

A collapsed lung (also known as a pneumothorax) can happen when the lung wall is thin or if it tears. If this happens, air gets into the space around the lung. This space is known as the pleural space. When this happens, lung surgery is sometimes needed to repair the lung wall.

If a mass is found in your lungs, surgery can help to find out the cause of the mass. Your surgeon will take a sample (also known as a biopsy) of the lung tissue. The mass may need to be removed. There are 2 types of masses that can be found in the lung:

- Benign (no cancer)
- Malignant (cancer)

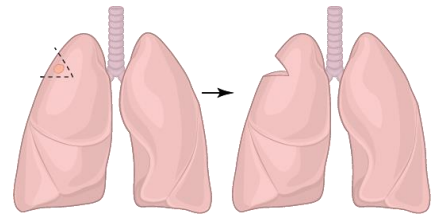
## Types of Surgery

The type of surgery you have will depend on how much of the lung needs to be removed, and how healthy the rest of your lungs are. Your surgeon will discuss which option is best for you.

There are 4 types of lung surgery:

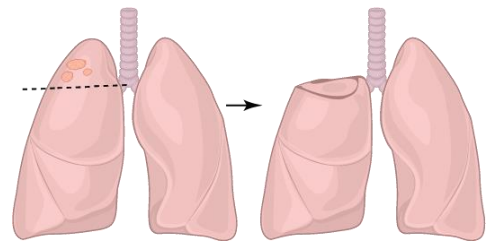
### Wedge Resection

A small, triangle-shaped piece of a lobe is taken out.



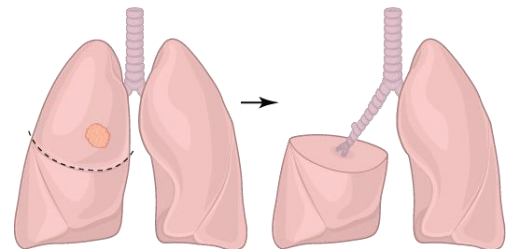
### Segmental Resection

A larger piece of a lobe is taken out.



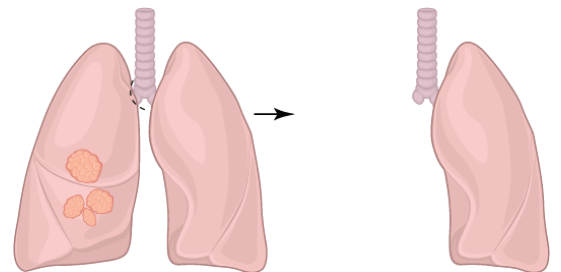
### Lobectomy

One of the 5 lobes is taken out.



### Pneumonectomy

The entire right or left lung is removed.

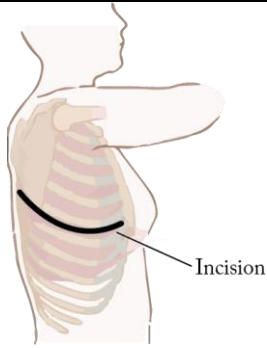
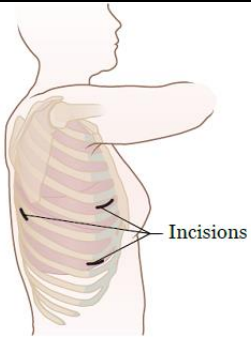


Your surgeon may need to check your mediastinal lymph nodes (the lymph nodes between your lungs) to see if there is cancer. To do this, they will do a mediastinoscopy or endobronchial ultrasound. This is a day surgery procedure (you are not admitted to hospital). Your surgeon will tell you if you will have a mediastinoscopy or endobronchial ultrasound.

Mediastinoscopy is done through an incision at the bottom of your neck that is about 2-3 inches long. Then a camera and surgical tools are used to see in the mediastinum. Your surgeon may take samples of tissue from this area. An endobronchial ultrasound (ebus) is done using a flexible tube that goes through your mouth and into your lungs. Then a camera and ultrasound tool are used to see in the mediastinum. Your surgeon may take samples of tissue from this area.

### How the Surgery Is Done

Your surgeon may do your operation through an open or thoracoscopic incision. The surgeon will take out the part of your lung and the mass. Your remaining lung will be closed with absorbable stitches or staples. A chest tube will be put in to drain any fluid or air from around the lung.

Thoracotomy	Thoracoscopy
 <p>The diagram shows a human torso from the side, highlighting the rib cage. A thick black curved line indicates a large incision made between the ribs. A label 'Incision' with a pointer line identifies this line.</p>	 <p>The diagram shows a human torso from the side, highlighting the rib cage. Three small black arrows point to small incisions made between the ribs. A label 'Incisions' with a pointer line identifies these small openings.</p>
<p>A thoracotomy is done through an incision in your chest between your ribs. The ribs are then moved apart to see in the chest cavity. The incision made in your chest to remove a small section, lobe, or entire lung.</p>	<p>VATS (video assisted thoracic surgery): The surgeon will create multiple small incisions in the chest. Then, a camera and surgical tools are used to see in the chest cavity without having to spread your ribs apart.</p>

### Smoking

Research tells us that people who stop smoking at least 1 month before surgery have fewer complications after surgery. Quitting smoking will lower the risk of serious problems, such as:

- Slower wound healing
- Infection in your wound
- Lung and chest infection
- Complications while under sedation

By quitting smoking, the length of time you need to recover in the hospital after surgery may be shorter.

If you need help quitting, talk to your doctor or contact QuitNowBC (<https://www.quitnow.ca>).

If you have not been able to quit smoking before surgery, tell the nurse on admission so that nicotine replacement can be arranged for you.

A non-smoking policy is in effect for all Island Health properties. This means that smoking is not allowed anywhere on hospital property, inside or out.

### Drugs and Alcohol

Street drugs (e.g., cocaine, marijuana, LSD, Ecstasy) and alcohol will react with your anesthetic and can cause serious problems.

It is best to avoid street drugs and alcohol for at least 3 weeks before your surgery.

If you are not able to stop, please tell your surgeon or family doctor. Not telling your doctor may result in your surgery being postponed, or in post-operative complications.

### Heart Rhythm Monitoring

After surgery your surgeon may want to monitor your heart rhythm. If needed your heart will be monitored for 3 days after surgery. This does not mean there is anything wrong with your heart.



## Recovering from Surgery While in Hospital

### What to expect After Your Surgery

#### Eating and Drinking

You will be able to eat as soon as you are awake and feel ready.

#### Going to the Bathroom

You may have a Foley catheter to drain urine (pee) from your bladder. This catheter will be taken out in the hospital, as soon as you can get up to the bathroom.

#### Wounds

You will have 1 or 2 chest tubes put into your chest cavity through small incisions.

After surgery, air and fluid can build up between your lungs and chest wall. These tubes allow for the air and fluid to be removed by suction. These tubes will be connected to a chest tube drainage system. This system helps your lung re-inflate faster. When your lungs have properly healed, your surgeon will ask your nurse to remove your chest tube(s). You may have a chest x-ray to make sure your lung has remained inflated once your chest tube is out.

#### Activity

You will be getting out of bed on the day of surgery. While your chest tubes are in, it is important for you to ring your call bell for assistance to get out of bed.



## Lung Exercises

Your nurse and physiotherapist will ask you to do deep breath and coughing exercises. When doing these exercises you may feel the need to cough. When you cough, there may be a small amount of blood in your mucous. This is normal after this surgery.

### Incentive Spirometry

Using an incentive spirometer will help you take slow, deep breaths and help keep your lungs strong and working well. This is especially important after lung surgery.

#### Instructions:

1. Place the mouthpiece in your mouth.
  - Make sure your lips cover the mouthpiece completely.
2. Inhale as deeply as you can.
  - The ball will start to rise. Keep the ball in the happy-face range for as long as you can.
  - You will feel the pressure in your lungs as they fill with air.
3. Hold your breath for as long as you can; 10 seconds is ideal.
  - The longer you hold your breath, the better.
4. Take the mouthpiece out of your mouth, and then breathe out slowly.
5. Repeat these steps 1-3 times.
6. After you have completed the steps 1-3 times, try to cough.
  - Hold a pillow or folded blanket or towels against your chest/abdomen. This will make coughing more comfortable.
7. When you are awake, try to do about 10 breaths every hour.







## Recovering from Surgery at Home

### Follow-Up

Call your surgeon's office when you get home, to book a follow-up appointment in \_\_\_\_\_ weeks.

### Wounds

You will have a dressing (bandage) where your chest tube was taken out.

Keep this dressing clean and dry. Leave the bandage on for 3 days after the tube is removed.

After 3 days, take off the dressing. You can now shower. If you have Steri-Strips™ on your incision, leave them on.

After you shower, pat the area around the incision dry with a clean towel. Put a small bandage over the incision. You will be given some bandages when you leave the hospital.

Keep the bandage on until the area is dry and the incision is healed. This will probably take a few days. After the incision is healed, you do not need to wear a bandage.

**Remove dressing on** \_\_\_\_\_

### Two Weeks After Your Surgery Date

- **If you have sutures**, they can be taken out 2 weeks after your surgery date. This will be done at your physician's/surgeon's office, or by home nursing care.
- **If there is glue where the bandage was**, use nail polish remover to help remove the glue 2 weeks after surgery.
- **If you have Steri-Strips™**, they might fall off on their own, or you can take them off 2 weeks after surgery.

### Activity

It is normal to feel tired for about 6-8 weeks after surgery. You will also feel short of breath when you are being active. This will get better over time.

**If you had a Video Assisted Thoracic Surgery (VATS) procedure, do *light activities only*, for 3-4 weeks after your surgery date.**

**If you had a thoracotomy, do *light activities only*, for 5-6 weeks after surgery.**

#### Light activity:

- When you get home from the hospital, do not lift or carry anything heavy, and do not pull or push anything. Gradually increase your activity over 6 weeks.
- Avoid lifting anything over 2kgs (5lbs). This includes things like children, grocery bags or a 4 litre jug of milk.
- Avoid activities that may put stress on the place where your incision is, such as housework and yard work.
- Do some slow, gentle stretches. If you feel pain while you are stretching, you are stretching too much.
- If you have more pain in the morning or evening, you are doing too much.



## Health Concerns

### Call Your Surgeon if You have any of the Following Symptoms:

- Bleeding – enough to soak through a tissue.
- Coughing up bright red blood.
- Drainage from your incision that changes in appearance or colour (especially yellow or green).
- Increased tenderness, redness, or warmth around the surgery site
- Pain that is not relieved by your medications.
- High-grade fever (38.5C/101.3F and over) for 2 days or more.
- Low-grade fever (37.5C-37.9C, or 98.5F-101.2F) for more than 3 days.
- Persistent nausea or vomiting.
- Excessive weakness.
- Shortness of breath.
- Swollen leg(s) or achy and red calves.

### Go to the Emergency Department if you have:

- Crushing chest pain (tightness, heavy pressure or squeezing).
- Rapid heartbeat or “fluttering” in your chest.
- Temperature of 39C (102 F) or higher.



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### Tell us what you think!

After reading *this booklet* please respond to the following statements. Your answers and comments will help us improve the information.

Circle one number for each statement:



1.	I read all of the information provided.	1	2	3	4	5
Comments:						
2.	The information is easy to read.	1	2	3	4	5
Comments:						
3.	The information is easy to understand.	1	2	3	4	5
Comments:						

## Getting Ready for and Recovering from Lung Surgery

4.	Reading this information helped me prepare for and recover from my surgery.	1	2	3	4	5
Comments:						
5.	The information answered my questions.	1	2	3	4	5
Comments:						
6.	I would recommend this information to other patients.	1	2	3	4	5
Comments:						

7.	I prefer to have this information in: (check one)  <input type="checkbox"/> A book just like this one.  <input type="checkbox"/> Separate handouts on each topic that I need.
	Comments:
8.	I would have liked MORE information about:
9.	I would have liked LESS information about:
10.	What changes would you make in this booklet to make it better?
11.	I am: (check one)  <input type="checkbox"/> a patient.  <input type="checkbox"/> a family member.

**Please give this evaluation form to your healthcare provider or mail to:**  
Manager of Surgical Quality Surgical Services, 2<sup>nd</sup> Floor, Memorial Pavilion,  
Royal Jubilee Hospital, 1952 Bay Street Victoria, BC V8R 1J8