



Sir Charles  
Gairdner Hospital

# THORACIC SURGERY

## PATIENT INFORMATION BOOKLET

***Please bring a hard copy of this booklet into hospital with you or bookmark it in your phone or tablet, it will be referred to during your admission***



## **INTRODUCTION**

Welcome to Sir Charles Gairdner Hospital. This booklet has been designed to help patients undergoing thoracic surgery, and their families, better understand what will happen during their hospital stay. It will also help prepare you for your return home.

Please feel free to ask any questions at any time.

**TYPE OF SURGERY**

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**DATE OF SURGERY**

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**YOUR SURGEON IS**

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**PATIENT EDUCATOR**

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**PHYSIOTHERAPIST**

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You will be cared for by an excellent team of staff who specialise in the care of patients undergoing lung surgery. They will assist you in your recovery and provide information if required on dietary recommendations, stress management, quit smoking programmes and home aids. The social work department can provide advice with financial matters, as well as family and home difficulties. Please inform your nurse should you require any of these services

### **WHAT DO I NEED TO BRING ?**

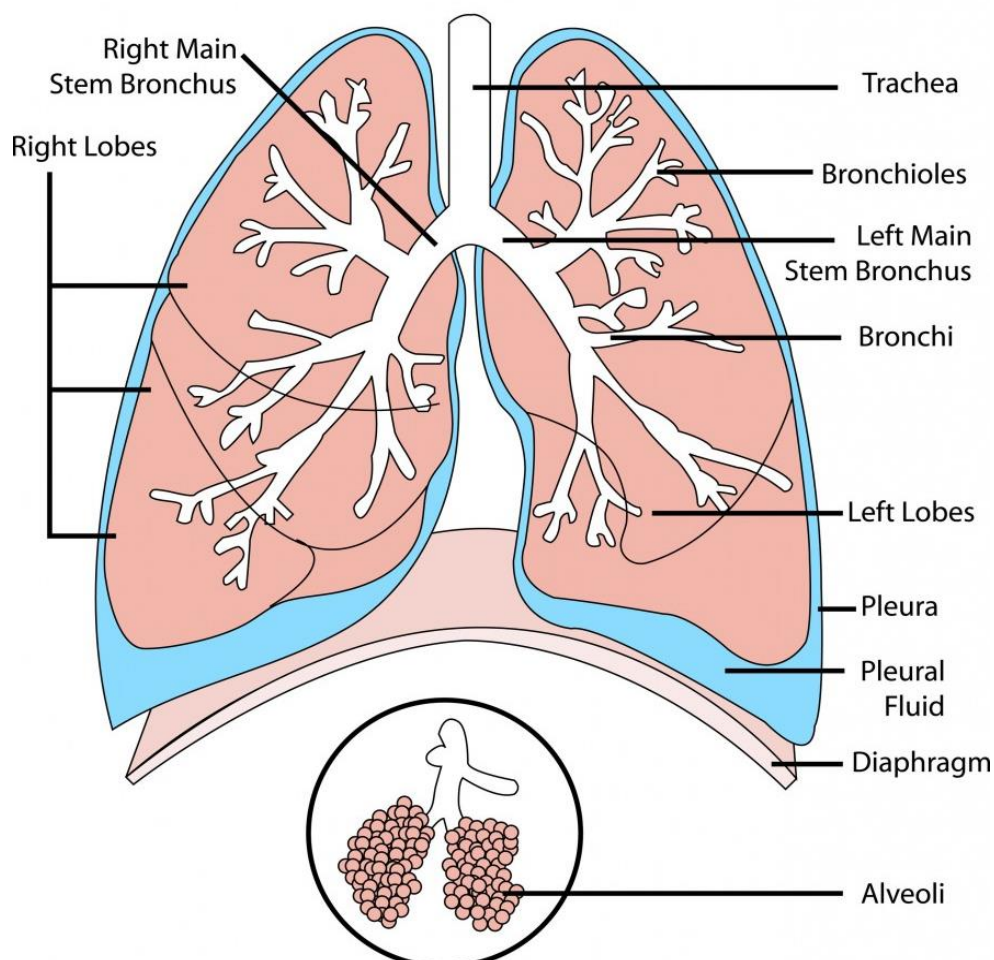
- Toiletries
- Any medications currently prescribed
- Glasses with protective cover
- Dentures/hearing aids
- Pyjamas or nightgown
- Dressing gown and slippers if desired
- A hard copy of this **THIS BOOKLET** or bookmark it in your phone/tablet

Please leave all jewellery (including wedding bands) with your family. Avoid bringing valuables and large sums of money into hospital. The television and phone service is operated via a private company, please ask for an information brochure and price list when you are admitted.

## THE LUNGS

Your lungs fill most of the chest (thoracic) cavity, which is made up of the ribs, the breastbone and the diaphragm. When we breathe, air enters the trachea (windpipe). This divides into two branches called the left and the right bronchi. These bronchi divide into smaller branches (bronchioles), which end in small sacs (alveoli) where the exchange of gases, like oxygen and carbon dioxide, take place.

Each lung is divided into lobes. The right lung has three lobes, whilst the left lung has two lobes. The left lung is smaller than the right lung to account for the space taken up by the heart. Covering each lung is a double walled layer called the pleura – your drainage pipe(s) will sit in this space post-operatively. Between the pleura is a small amount of fluid, which serves to reduce friction and allow the lungs to expand easily when we breathe.



## **TYPES OF LUNG SURGERY**

The following are different types of lung surgery. Your surgeon will discuss your operation with you.

**Biopsy:** removing a sample of lung tissue for examination

**Pleuradesis:** the “sticking together” of the pleura

**Decortication:** the removal of fibrous tissue surrounding the surface of the lung (usually after an infection)

**Wedge resection:** the removal of a section of lung

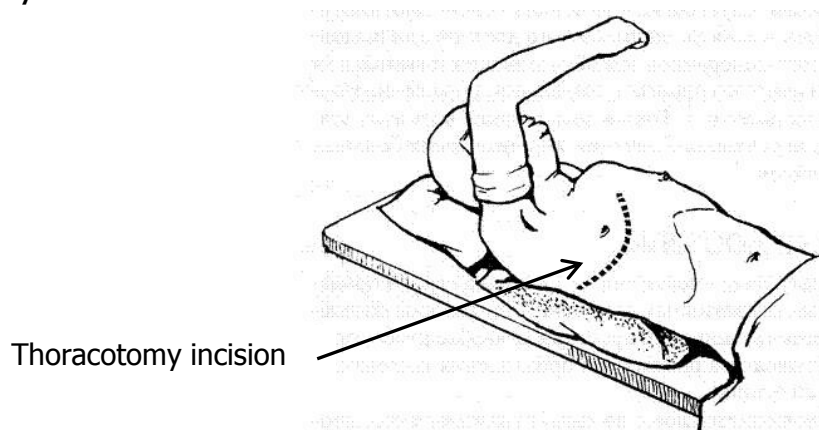
**Lobectomy:** the removal of a lobe of the lung

**Pneumonectomy:** the complete removal of one lung

## **HOW DOES THE SURGEON REACH THE LUNGS ?**

To get to the lungs there are two techniques the surgeon can use. Your surgeon will discuss this with you before your operation. One approach is **Video Assisted Surgery** (or VAT). This means the surgeon uses a camera to view inside the chest to perform the operation. This requires only small incisions through the skin, usually 3-5 cm; unfortunately this technique is not suitable for all operations.

The second approach is called Thoracotomy. This means that the incision begins midway between your waist and your armpit, and follows along your ribs round to the middle of your back. After surgery the wound is sutured together with dissolvable stitches (under the skin). This incision usually takes 6-8 weeks to fully heal



## **PREPARATION FOR YOUR SURGERY**

The majority of our patients attend a Pre-Admission clinic (PAC), where you will meet the Cardiothoracic Patient Educator, Anaesthetist and a Resident Medical Officer (RMO) who works for your surgeon. They will prepare you for your surgery prior to your admission. You will have certain tests at the Pre-Admission clinic; these include a chest X-ray, ECG (an electrical trace of your heart) and blood tests.

You may come into hospital the day before or the day of your surgery, this will be discussed with you in the clinic. Please call Day of Surgery Admission (DOSA) on 6457 3099 the day before your surgery between 3pm to 5pm to find out what time you need to attend the hospital, and when you need to fast from food and fluids.

On the morning of your operation you will need to shower with an antibacterial soap (you will do this at home if you are coming in on the day of your surgery).

If required, your nurse will clip your hair on the side of the chest to be operated on. The shaved area extends from your breastbone around to the middle of your back and possibly your forearms (where your IV drip will be in).

After the operation you will be transferred to the Recovery room where you will be monitored for an hour or two and, once stable, you will be transferred to ward G62.

## **WHAT EQUIPMENT WILL BE USED AFTER THE OPERATION**

### **Oxygen**

You will have an oxygen mask on your face initially, but once your oxygen levels permit, your nurse will change this to the nasal oxygen. Your oxygen levels will be monitored closely and will be removed when these levels are satisfactory and you are getting back on your feet.

### **Intravenous Line (IV)**

You will have a drip in your arm through which we give you fluids and pain medication. Will usually be removed between 1 – 2 days.

### **Patient Controlled Analgesia (PCA)**

The most commonly used way to control your pain after your operation is the PCA. You are actively encouraged to take control of giving pain relief medicine to yourself. This means you will need to press a button, which in turn gives you a dose of painkiller through the drip. You cannot overdose on the painkiller because the pump will control how much you receive by way of a 5 minute lock-out system. The PCA is routinely used for a few days after the operation and you will be visited daily by a team of Pain Specialists. You will also take regular Paracetamol which is important in your pain control. Your nurse will routinely ask you to rate your pain on a scale of 1-10 with 10 being the worst pain imaginable. This allows the team to assess the effectiveness of your pain management.

### **Nerve Block**

Sometimes you come out with a nerve block instead of a PCA mentioned above. A nerve block is small catheter that is inserted in your back to numb the area operated on, it is a slow and continuous infusion. The pain specialist team will visit the day after your surgery. Your nurse will routinely ask you to rate your pain on a scale of 1-10 with 10 being the worst pain imaginable. This allows the team to assess the effectiveness of your pain management.

## **Urine Catheter (IDC)**

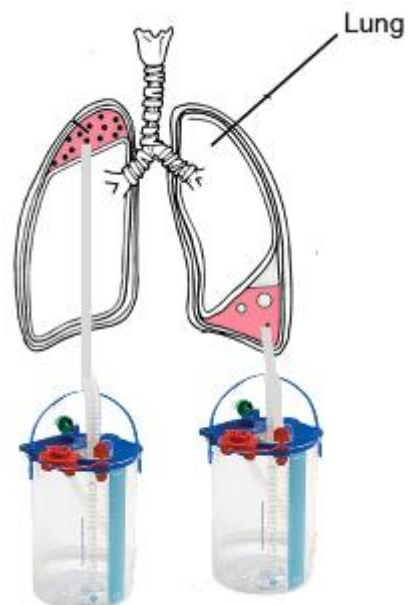
You may have a urinary catheter on return from surgery. This again will depend on the type of surgery you have. An IDC is a soft plastic tube that is placed in the bladder to drain urine. It is a comfort measure for yourself so you don't need to get up in the early stages after your operation but also allows the nurses to monitor your kidney function. Having a catheter may give you the sensation that you need to pass urine even when the tube is working normally. The IDC is routinely removed the day after your surgery.

## **Chest Drains (ICCs)**

You will have some chest drains, usually one or two, in your side that has been operated on. These drainage tubes are connected to containers that sit at your bedside. The chest drains are needed to drain fluid after your operation and any air that can leak, preventing your lung from expanding fully. Doctors and nurses will be checking on these containers to see how much fluid is draining and also the extent of any air leak. They will ask you to cough while they assess this. If the chest drains are draining or an air leak is evident they will remain in place. The ICCs are sometimes attached to additional tubing connected to suction which serves to speed up the recovery process. The ICCs should not limit your mobility, but you will need some assistance when walking. The physiotherapist will educate you further when they review you on the day following your operation.

You will generally be in hospital until the drains are removed. The time varies with each person and type of surgery.

ICCs for air (top)  
and fluid (bottom)





## **THE RECOVERY STAGE**

On return to ward G62 your nurse will be checking your vital signs frequently. The head of your bed is elevated 45 degrees to help your breathing. You will be able to start drinking water immediately after your operation. When you are able to drink good amounts, the intravenous fluid therapy is disconnected. You are able to have diet as desired on return to the ward. Please inform your nurse if you experience any nausea.

### **FOR PNEUMONECTOMY PATIENTS ONLY**

If the operation you are having is a PNEUMONECTOMY, you will return to the High Dependency Unit (HDU) on Ward G62. This room is monitored and equipped with higher levels of staffing than a standard room. Initially you will be in this room most of the time or until your condition stabilizes and when a bed becomes available on the ward.

When you return from theatre you will have additional attachments to the equipment described on pages 6 & 7. You will have an intravenous drip in the right upper shoulder or neck, allowing the staff to give medicine and take blood samples. This is usually removed after 2-3 days.

You will also be connected via leads to a heart monitor which allows for constant monitoring and remains in place for 1-2 days. Your chest drain may also look different to the standard drain we have shown on the previous pages.

## **POSITIONING**

If you have had a pneumonectomy you will only be allowed to lie on your back. For other operations it is advised that you lie on your back or the opposite side to your incision. Positioning is used for comfort and to help your lung inflate more fully and aid secretion clearance, which helps your recovery.

## **EXERCISES**

It is important to try to do post-operative exercises each hour immediately after your operation.

What you need to do:

- Use a pillow to support/splint your wound, breathe in deeply and then cough out (don't just clear your throat). Your Physiotherapist will educate you further on this.

### **Repeat the following exercises 5 times every 1-2 hours**

- Raise both your arms together in front of you towards the ceiling as you breathe in then lower your arms as you breathe out.
- Point both feet toward the foot of the bed, hold for 3 seconds then relax.
- Pull both feet down towards yourself, hold for 3 seconds then relax.
- Rotate ankles, clockwise and anticlockwise, in a circular motion.
- Bend your knees up and down in bed.

**Much of the success of your speedy recovery is in your hands. Your willingness to work with the nurse and physiotherapist to do your arm, breathing and coughing exercises and walking, will ensure your lungs expand properly which decreases the likelihood of any complications.**

The morning after your operation the nurse will help you get out of bed, shower and sit out in the chair. A chest X-ray will be taken each day, to determine if the lungs are fully expanded and when the chest drains can be removed.

You will feel tired after the operation. It is a good idea to limit the amount of visitors you have. However, even though you are tired, your Physiotherapy **is essential.**

## **WHAT ABOUT GOING HOME?**

### **Wound Care**

Observe wounds each day for signs and symptoms of infection (even if you have a plastic dressing in place) this includes any:

- Redness
- Swelling
- Increased pain
- Increased heat
- Any discharge / pus

If you witness any of these symptoms contact your local GP or the Cardiothoracic Patient Educator immediately.

### ***To care for wounds that are uncovered***

Wash them in the shower before the rest of your body

Use any soap that you may have at home and gently pat dry

### ***To care for wounds that are covered with tape or a plastic dressing***

Remove plastic dressing after 7 days

Trim any loose edges as the plastic lifts

If water pools beneath the dressing remove the dressing and pat dry

Cover the tape with a plastic drape when showering (the nurse should supply you with these on discharge).

When your drainage tubes are removed a large dressing is placed over these small incisions. It needs to stay in place for 48 hours. Therefore you may need to remove the dressing yourself if you are at home by this time. There may be a stitch in place where the tube(s) have been. If so the nurses at your local Medical Centre can remove the stitch **7 days after your drain was removed.**

Avoid swimming pools, spas and baths for 6 weeks, or until the wounds are completely healed. Do not apply any creams, lotions or powders to your wounds.

Your wounds will take approximately 6 weeks to heal. The colour of your wound will change from purple to red to pink over the next few months as healing takes place.

### **Pain Relief**

During the next 4-6 weeks you will get various types of pains associated with the wound or the muscles in your chest shoulders and back. The pains are quite often more evident as you become more active and the wound begins to heal. Your stretches should help ease some of the wound pain too.

It is important to take regular pain relief such as Panadol or Panadeine every 4-6 hours. If your pain becomes intolerable, see your GP.

### **Lifting**

For the first 2 weeks after your surgery, you will need to be careful with lifting, pulling and pushing with the arm on the side affected by the operation. This is to assist the healing process. If you have any pain or concerns, stop what you are doing immediately. Ensure that the un-operated side does most of the work. However it is still important not to overdo it, even with your good arm and back.

### **Driving**

If you have had **VAT** surgery, there are no driving restrictions. A good rule is if you have pain, don't do it. If you have had a **thoracotomy** and large incision, it is recommended that you do not drive for 4 weeks after surgery. In the meantime, it is fine to be a passenger and you are still required to wear a seatbelt. A folded towel or jumper supporting the affected side can offer some comfort.

### **Flying**

Due to atmospheric pressure changes associated with flying and scuba diving these activities must be avoided. Discuss any concerns with your Surgeon.

## **Work**

You will also need to discuss when you can return to work with your Surgeon as it will depend on your job. This can be done in hospital or at your follow-up appointment.

## **Support**

If you have had lung surgery for cancer, it is common to feel very much overwhelmed. These feelings are part of coming to terms with what is happening to you. Of course family are a great resource at this time, but please let your nurse know if you would like to talk to our Social Work or Chaplain. Various other support services are also available.

## **UPPER LIMB EXERCISES**

To maintain the mobility of the shoulder and to keep the muscles from becoming tight on your operated side, it is essential to do range of motion exercises after your surgery.

The following exercises should be performed **5 times each, twice a day for the first 4-6 weeks**. Aim to hold each stretch for up to 10 seconds. You should feel a comfortable stretch when doing these exercises. Stop short of pain.

**Sit on an upright chair** without arms, eg. A dining chair, so your back is supported and your arms are free to move sideways.

Clasp hands together. Keeping elbows straight or slightly bent, lift the arms upwards as far as you can in front of you.



Lift your arms sideways, away from your body, up towards your head.



Move your arm on the operated side up behind your back, trying to reach your hand towards your opposite shoulder blade.



Lift your arm on the operated side behind your head, trying to reach towards the back of your neck.



## **POSTURE**

It is important to be aware of your posture after the operation, as you may have a tendency to protect the side that you have been operated on by leaning towards it. To promote healing of your wound in the correct position, it is important that when you are standing or sitting that you keep your back straight, your shoulders level and your head up. Use a mirror to see how symmetrical you are.

## **WALKING**

It is essential to slowly build up your fitness again after your surgery. Aim to start with **one or two** walks a day at a comfortable pace for **5** minutes, and increase the time each day by about 1 minute. You should be able to **walk and talk** at the same time. Once you can manage to walk for 20 minutes reduce to one walk a day whilst continuing to increase the time.

It is important that you start with short achievable distances, and as you improve, slowly increase the pace and distance that you cover with each walk. It would be ideal if you could build up your walking time to 30 – 40 minutes once a day. There is no need to avoid stairs or inclines.

**If you get excessively short of breath, develop pain or dizziness  
- stop and rest –**

## **REFERENCE**

Finkelmeir, B.A. 2000. Cardiothoracic Surgical Nursing. Lippincott, Philadelphia.  
PhysioToolsLtd.1995

HHp://www.rocketmedical.com.2007

Current Edition Updated, 2018 by Yvonne Singaraju, Cardiothoracic Patient Educator and David Dever, Staff Development Nurse.

Thank you to the Cardiothoracic Department for expert opinion.

## **CONTACT NUMBERS**

### **Cardiothoracic Patient Educator**

Phone the hospital switchboard on 6457 3333 and ask to be put through to pager 4391 (during working hours 8-4pm).

### **Cardiothoracic Department**

Phone the Department on 6457 2383 (during working hours).

### **Cardiothoracic Physiotherapist**

Phone the hospital switchboard on 6457 3333 and ask to be put through to pager 4060 (during working hours 8-4pm).

### **After hours**

Phone the hospital switchboard on 6457 3333 and ask for ward G62 and speak to the Shift Co-ordinator. Please come in to the Emergency Department if urgent and medically unstable.

We hope this booklet has helped you with your hospital stay and recovery after lung surgery.