Pneumonectomy and Extra Pleural Pneumonectomy

Information for patients

Read this booklet to learn:

• how to prepare for your surgery
• what to expect while in hospital
• what to expect after you return home
• who to call if you have any questions

Your surgery has been scheduled for:

Date: ____________________________________

Time: ____________________________________

Come to the hospital at: ________________

You can expect to stay in the hospital for about: ____________________
Getting ready for your surgery

What type of surgery am I having?

You are having a **pneumonectomy**. In your body, you have 2 lungs that help you to breathe. This surgery is done to remove one of your lungs.

A **pneumonectomy** means the surgeon will remove one of your lungs. This surgery is usually done for lung cancer or other cancer involving the lung. More rarely it will be done for a benign disease. Benign means you do not have cancer.

An **extra pleural pneumonectomy** means the surgeon removes:

- an entire lung
- the pleura (lining of the lung)
- the diaphragm (muscle between chest and abdominal cavities)
- a part of the pericardium (lining or sac of the heart)
This surgery is usually done for mesothelioma which is a cancer of the pleura (lining of the lung) that damages the way your lung works.

**What happens during the surgery?**

1. You will get an intravenous (IV) catheter. You will get fluids and medications through the IV and general anesthesia.

2. Once you are asleep, you will have a bronchoscopy. During a bronchoscopy, your surgeon uses a special tool called a bronchoscope to look down into your lungs.

3. Your surgeon will make an incision (cut) on the side of chest. The incision will be around 20 cm long (7 or 8 inches).

4. The surgeon will remove the lung (pneumonectomy).

5. If you are having extrapleural pneumonectomy, the surgeon will remove:
   - the lung
   - the pleura
   - the diaphragm
   - the pericardium

6. The removed linings will be rebuilt using a special material called Gore-Tex®.

7. The surgeon then will close the chest with sutures.

**How long will I need to stay in the hospital?**

You will stay in hospital for 4 to 7 days for a pneumonectomy and 7 to 10 days for an extrapleural pneumonectomy. You can leave the hospital when the health care team says you are well enough. During morning rounds (check-ins), your health care team may tell you that you are well enough to go home that day. Plan your own ride home before coming to the hospital.
Will I need tests before surgery?

Before your surgery we do a complete check of your health. This may include many tests. These tests help the surgeon to plan your surgery.

These tests may include one or more of the following:

- A chest x-ray
- CAT (CT) scan of your chest and abdomen
- PET scan
- MRI brain
- Echocardiogram (ECHO)
- Ventilation/perfusion scan (V/Q scan)
- Pulmonary function test (PFT)
- Bronchoscopy and EBUS (endobronchial ultrasound)
- Blood work

We will give you information about the tests that you need. We do these tests to look for any other health problems. Taking care of these health problems can lower the chances of problems happening during or after surgery.

What will happen during my pre-admission visit?

During your pre-admission visit, we will do a complete check of your health and talk to you about the surgery. You can find more information about your pre-admission in the My Surgery Guide.

If you don't come for your pre-admission visit, your surgery will be canceled (unless you were given other instructions).

Can the time for my surgery change?

Yes. Several of our Thoracic surgeons do lung transplants. If we need to do a transplant or another emergency comes up, we may need to reschedule your surgery for another date and time.
My hospital stay

In this section, we explain what to expect while you are in the hospital. We will help you understand the equipment that we use to care for you and tell you how your family can help.

Where will I go after surgery?

You will stay in the Post Anesthetic Care Unit (PACU)/recovery room for a few hours. When you are awake and stable, we will take you up to the Step Down Unit (SDU) on 10 Eaton South (10ES).

There are 4 beds in the SDU. Both male and female patients are cared for in this room. A Thoracic Nurse will be in the room with you at all times. You will stay in the SDU for 2 to 3 days. Once you start to feel better you will be moved to a regular ward room on 10ES until you are discharged.

How will I feel after surgery?

During your surgery, we will give you a general anesthetic. This will make you feel sleepy for some time after the surgery.

You may be sick to your stomach or feel as though you need to throw up (nausea). The nurse will tell you to take deep breaths. This helps to stop that feeling and fully expand your lungs.

During your surgery, you will also have a breathing tube in your throat. This may cause your throat to be sore afterwards. It should feel better after a couple of days. Tell your nurse and doctor if your throat is sore.
What will happen after surgery?

A physiotherapist may treat you once or twice a day. How often you see the physiotherapist will depend on how you feel during the day. The physiotherapist will help you with your:

- Deep breathing and coughing exercises. These exercises help to get rid of mucuous in your lungs. (see the My Surgery Guide for more information)

- Shoulder exercises on the side of your operation. These exercises help to keep your shoulder joint moving properly.

Your nurse will help you with these exercises at night.

You will be getting fluids through IV on the day of surgery. You will slowly be able to start your diet the next day. You will start with sips of water and clear fluids. Over the next two days, you will start to eat regular foods.

What can I expect to have on my body?

After your surgery you will have:

You will have an incision (cut) on your side about 8 to 25 cm (3.5 to 10 inches) long.

You will have a small incision on your side for the chest tube. This incision is 2 cm long.
**Stitches or staples**

The surgeons usually use dissolvable stitches to close your incision. This means they go away on their own. If they are not dissolvable, the nurse will remove the stitches 7 to 10 days after your operation. If you are had radiation therapy before surgery, the stitches or sutures will stay on for 4 to 6 weeks.

If your stitches or staples need to stay in after you are discharged home, your family doctor can remove them. We will tell you if this is the case and give you a staple remover to take to your family doctor.

**Dressings (bandages)**

Bandages will cover your incisions. We will remove these bandages 2 days after your surgery.

**Chest tube**

You will have 1 chest tube coming out of the side of your chest. This tube removes air and fluid from your chest cavity. The tubes are attached to a machine that helps suck the air and fluid out.

The chest tubes will go into your side through a small incision or hole. Your chest tube(s) is usually removed 1 day after your surgery.

We use stitches to keep the chest tubes in place. These are not dissolvable. The stitches will be removed 7 to 10 days after the tubes are taken out. You may need to go to your family doctor to have your stitches removed.
| **Heart monitor** | You will be on a heart monitor while you are in the Step Down Unit. This does not mean that there is a problem with your heart. We do this for all patients who have this surgery. |
| **Urinary catheter** | You may have a tube draining your bladder. You will have this tube for 2 to 3 days. While you are in the hospital, the nurse measures how much you urinate. |
| **Intravenous (IV)** | You will have an IV so we can give you fluids and medicine. It stays in until you are drinking well. The IV usually stays in for 2-5 days. The IV must stay in as long as you are getting pain medication through a pump. |
| **Arterial Line** | This tube looks like an IV. It is used to take blood samples without having to poke you with a needle. It also closely watches your blood pressure. |
| **Oxygen** | You may need oxygen after your surgery. You will get the oxygen either by facemask or through your nose (nasal prongs). We remove the oxygen once your lungs are working well enough. |
**How can I deal with my pain?**

We will work with you to ease your pain. You should take the pain medicine regularly to stop the pain from getting worse. You will only be on the pain medicine for a short time. We can give you pain medicine in different ways.

These include:

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<th>Method</th>
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<tr>
<td><strong>Epidural</strong></td>
<td>With an epidural, a doctor puts a small tube in your back. They usually do this right before your surgery. The tube is left in place to give you pain medicine after your surgery.</td>
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<td></td>
<td>It's attached to a pump that gives you the medicines. They include a pain killer and medicine which numb the area where you had surgery. They may make your legs feel numb or heavy.</td>
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<tr>
<td><strong>Extrapleural catheter</strong></td>
<td>You may get pain medicine through a small tube placed under your skin near your incision. It’s usually placed near your chest tube. The tube is attached to a pump which gives you the medicine. The tube stays in place until your chest tube is removed.</td>
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Intravenous (IV) Patient Controlled Analgesic or PCA

A PCA pump is connected to your IV. The pump gives you pain medicine through your IV when you push the button. You should press the button:
- when you start to feel pain
- before you do something that brings on pain
- before you do deep breathing and coughing exercises
- before you start to move or turn.

You should start to feel better within 2 to 3 minutes. Let the nurse know if the pain isn’t going away.

You are only allowed to have a certain amount of pain medicine every 4 hours. To control how much medicine you get, the PCA pump has a safety timer called a lock out. If you press the button during the lockout time, you will not get more medicine. **Only you should press the button.**

Intravenous (IV) medicine

You get your pain medicine through an IV. It’s important to let your nurse know when you have pain so they can give you the pain medicine. If you don’t feel any pain relief after getting the medicine, let your nurse know.

Medicine by mouth

You may get your pain medicine in tablets that you swallow. This will happen once you are drinking fluids. Let your nurse know when you have pain, so they can give you the pain medicine.

Once you move out of the SDU, you must ask for your pain medicine when you need it. Your nurse will not be in the room with you at all times. For the first few days, you may need the pain medicine every 3 to 4 hours. As you heal, the pain will start to go away and you will not need the pain medicine as often.

Read the My Surgery Guide for more information on dealing with pain.
Going home

Your healing and recovery will not happen overnight and each person recovers differently. Recovery time depends on a number of things like age, general health and mental attitude. Your family doctor can help you to treat your symptoms as needed.

Appetite

Your appetite should go back to normal within a few weeks. Your appetite will increase as you start to feel better and your activities increase. You may lose weight after this surgery because of poor appetite. If your appetite is poor, try eating smaller meals more often. Make sure you drink fluids (drink 6 cups a day unless your surgeon or dietician gives you other instructions). Try to eat food with a lot of protein and calories. If you still have a poor appetite you should see your family doctor.

Preventing constipation

Constipation (having trouble using the bathroom) can happen when taking pain medicine. To prevent constipation:

- Drink plenty of fluids (unless your surgeon or dietitian gave you different instructions)
- Add these foods to your diet:
  - bran
  - high-fibre breads and cereals
  - berries
  - dried fruit
  - prunes
- Your doctor may prescribe you a stool softener or a mild laxative while you are on pain medicine.

See your family doctor if you have any more problems.
Pain

As you become more active you may have more discomfort. We will order pain medicine for you when you are discharged. Take your pain medicine when you need it. This will help you to recover.

Feeling down

You may feel tired and discouraged for several days or weeks after surgery. Feeling depressed is also common after this surgery. As you recover, these feelings should start to go away. If you continue to feel depressed as you recover, please see your family doctor.

How do I take care of myself at home?

Activity

You may slowly go back to your everyday activities. Walk at least once every day as long as you are not in pain.

Caring for your incisions

- Keep your incisions clean and dry. They do not need to be covered, but if your clothes rub on your incisions you can cover them with clean gauze.
- Do not put lotions or creams on the incisions until they are completely healed.
- Most of the pain should be gone by 6 to 8 weeks after your surgery.
- There may be a bump along the incisions. This will get smaller in 4-6 weeks.
- The area around your incisions may feel numb. This numbness is normal. It may last for several months, or may not go away at all. It usually gets better with time.
- As the pain improves it may become worse for a short time. You may need to take more pain medicine but this is normal.
Showering or Bathing

- You can shower once you get home.
- You should have a shower every day.
- Use a mild soap.
- Let the water run over the incisions.
- Pat the incisions dry with a towel.
- Do not take a bath for 6 weeks.

Going back to work

You will not be able to work for at least 4 to 6 weeks. Ask your surgeon when it is safe for you to return to work.

Driving

- Do not drive until you have stopped taking pain medicine. The pain medicine you are taking may make you sleepy.
- You can drive once you can move your arm and shoulder normally. This is usually 1 or 2 months after surgery.

Lifting

Doing certain actions can open your incision. Do not do these actions for 4 to 6 weeks:

- heavy lifting (you may lift up to 5kg or 10 lbs)
- carrying heavy groceries
- pushing or pulling
- vacuuming
- shoveling snow

Your surgeon will tell you when you can go back to your everyday activities.
Sex

You can start having sex whenever you feel comfortable (have less pain and more energy). Choose positions that will not cause your incisions to re-open.

Sports

- Do not swim or play sports for 6 to 8 weeks.
- If you have had a pneumonectomy (whole lung removed), you may not be able to float as you did before. You must try swimming in shallow water first. When you are out on a boat, you must always wear a life jacket.

Travel

Please check with your surgeon about traveling. You should not travel by airplane for 2 to 3 weeks.

Follow-up care

Your surgeon will send a letter to your family doctor about your surgery. Once you leave the hospital you may go to your family doctor with any problems or questions about:
- medicines
- prescriptions
- dealing with pain
- sleeping
- appetite
- constipation

Follow-up appointment

We will let you know when to see your surgeon. Depending on your surgeon, your follow-up visit will be about 2 to 4 weeks after your surgery. If you do not have an appointment for follow-up before leaving the hospital, call your surgeon’s office the first week you are home.
On the day of your follow-up appointment, go to the x-ray department first to have a chest x-ray.

Please bring your health card (OHIP) to your follow-up visit.

**When should I call the surgeon or go to the nearest Emergency Department?**

**Call your surgeon if you:**

- have new redness or swelling around an incisions
- have pus (yellow or white liquid) or a bad smell coming from an incisions
- feel more pain than usual around an incisions that does not go away after taking pain medicine
- have a temperature higher than 38.5 °C or 101 °F
- continue to lose weight or have a poor appetite
- find it hard to breathe
- cough up mucous that is yellow or green or has a bad smell
- cough up fresh red blood

**Who can I call if I have any questions?**

If you have more questions about the time of your surgery, tests or appointments, please call your surgeon’s office:

Dr. M. De Perrot  416 340 5549  
Dr. S. Keshavjee  416 340 4010  
Dr. Cypel       416 340 5156  
Dr. G. Darling  416 340 3121  
Dr. A. Pierre  416 340 5354  
Dr. T. Waddell  416 340 3432  
Dr. K. Yasufuku  416 340 4290