Lung Volume Reduction Surgery (LVRS)

This surgery may be a treatment for some people with lung damage from emphysema. During this surgery, about 30% of each lung is removed, so there is more space for the rest of the lung to expand and work better.

This handout gives you information about what you can expect as you prepare for your surgery and during your hospital stay. If you still have questions, please talk with your doctor or others on your care team or call 614-293-4925.

Your surgery date
After you complete your pulmonary rehabilitation before surgery and see your surgeon, your surgery date will be set. You will be called the day before your surgery to be given the time you should arrive at the hospital.

Planning care after surgery
You should plan to have someone stay with you for the first 1 to 2 weeks after surgery. If you have no one who can stay with you after surgery, please talk with your doctor before surgery to discuss options for your care.

Some patients may need a short stay in a rehabilitation facility or have home nursing visits after leaving the hospital.

Check about your medicines
Talk to your doctor about all of the medicines you are taking because you may need to stop or change your dose for a period of time before your surgery.

Day before your surgery
- You need to shower with a special soap called CHG the evening before your surgery to reduce the germs on your body. Follow the instructions on the handout, Getting Your Skin Ready for Surgery.
- Do not shave or pull hairs from your chest the day before or the day of your surgery.
- Do not eat or drink anything after midnight. This includes candy, gum or mints. If you need to take any medicine, take it with small sips of water only.

Day of your surgery
- Take only the medicines you were told to take with small sips of water the morning of your surgery.
- Use any inhaler medicines you are to take.
- Take another shower with the CHG soap before going to the hospital.
- Brush your teeth and rinse your mouth, but be sure to spit out the rinse. Do not swallow it.
• Leave any valuables at home, including any rings, jewelry, watch and hairpieces.
• Do not wear any lotions, creams, make up or nail polish.
• You will need to remove any contacts or glasses, hearing aids, prosthesis or dentures before your surgery. It is best to leave them at home or give them to your family member to hold until after your surgery is done.

At the hospital
A nurse will talk with you and get you ready for your surgery either in the Ambulatory Surgery Unit (ASU) or in your hospital room.
• Your blood pressure, pulse, temperature and breathing rate will be checked.
• Blood tests will be done if needed.
• A small tube, called an intravenous (IV) line, to give you fluids and medicines will be placed in a vein.
• You will be reminded to remove any dentures or partial plates, contact lenses, eyeglasses, hearing aids and any other prosthesis. Nail polish, make-up, jewelry and hair clips will also need to be removed.

Your family can stay with you until you go to the operating room. The nurse will help answer questions and tell your family where to wait while you are in surgery. You will leave the ASU or your hospital room on a cart. Your anesthesiologist will talk with you about your anesthesia for surgery and the type of pain management you will have after your surgery. Your hair will be covered with a paper hat.

During surgery
All staff members in the operating room wear special scrub clothes, caps and masks. The room has bright lights and is kept cool. You will see special equipment and tables being set up with supplies and instruments for your surgery. The staff will explain what will happen to you before each step in the process.

A nurse will greet you and check your identification (ID) bracelet. You will be asked about your allergies. You will be made comfortable on the operating table. A safety strap will be put over your knees to keep you in place. You will be covered with an extra blanket if you are cold and your arms may be tucked in at your sides or put on an arm board.

During surgery, your blood pressure, heart rate and breathing will be closely checked. Your heart beat may be seen on a screen. A small clip, call a pulse oximeter, is placed on your finger to measure your pulse and the amount of oxygen in your blood.

Your surgery may take a longer or shorter time than you and your family was told. If your surgery takes longer than you were told, it does not mean that anything is wrong. Your family may ask the volunteer in the waiting area for updates. After your surgery is over, the surgeon or an assistant will call or come to the waiting area to talk to your family.

After surgery
After your surgery, you will be moved onto a cart and taken to the Post Anesthesia Care Unit (PACU). There will be other patients and a lot of activity and noise in this area.

As you come out of anesthesia, a nurse will watch you closely and check your temperature, heart rate and blood pressure. Your pulse and the amount of oxygen in your blood will be checked.
The nurse will try to wake you up during your time in the PACU. When you first wake up, you may feel cold and you may shiver. This is normal after general anesthesia.

You will be given oxygen through a tube in your nose or by a mask on your face. You will have dressings on your chest, and there will be tubes to drain fluid from your chest. If you have pain, ask your nurse to give you pain medicine.

When you are awake and your vital signs are normal, you will be moved to your hospital room in the Ross Heart Hospital. At this time, your family will be allowed to visit.

**Care after surgery**

You may be in the hospital for 6 to 10 days after surgery. During your hospital stay, you and your family members will be taught about the care you will need at home. Be sure you ask questions if you do not understand something.

**Food and drink**

After surgery, you will be placed on a clear liquid diet. After you are able to take clear liquids without any problems, you will be able to have solid foods.

**Oxygen**

You likely will be on oxygen while in the hospital. If you do not have oxygen at home, hospital staff will help arrange this at the time of your discharge from the hospital.

**Pain control**

Pain medicine may be given through your IV, through an epidural catheter or as pills. You will most likely be prescribed pain pills at the time of your discharge from the hospital.

**Activity**

- On the day of surgery, you will be moved out of bed and into a bedside chair. Nursing and pulmonary rehab staff will help you.
- You will start walking with pulmonary rehab staff the day after surgery. You will be helped to walk at least 4 times a day.
- Each day, the amount of time you are out of bed and the walking distance should increase. You may find it uncomfortable to sit or lay in certain positions. Pain medicine will be given to you, so you can move around easier.

**Tubes and equipment**

You will have tubes and equipment in place after surgery that may include:

- A heart monitor to check your heart rate and rhythm.
- One or two IV catheters for fluids and medicines. One may be a special line, called an arterial line, to check your blood pressure and blood gases.
- Infusion pumps to give you fluids and medicine through your IV.
- A Foley catheter that drains urine from your bladder into a bag. This is often removed the day after surgery.
- Chest tubes that connect to a collection device. These allow fluid and air to drain out of your chest, so your lungs can expand.

- An epidural catheter, a small tube going into your spine on the middle or upper part of your back, that is used for giving pain medicine. It is removed when your chest tubes are taken out.
• Your breathing exercises are very important to your recovery. Use your incentive spirometer, and cough and deep breathe every 1 to 2 hours when you are awake during your hospital stay. You will continue these exercises for 4 to 6 weeks after you leave the hospital.

**Incision and chest tube care**

• You will have a wound or incision closed with staples or stitches on each side of your chest after your surgery. Your incisions will be covered with dressings that will be removed 2 to 3 days after your surgery. Your nurse will check your chest tubes and the dressing each day.

• You will have x-rays done each day to check your lungs.

• Staff will measure the amount of drainage from your chest tubes. When you have little fluid draining or air leaking, the tubes will be removed. This often happens 1 or 2 days before you leave the hospital. If an air leak continues, you may go home with the tube in place with a smaller collection device attached. Your doctor will remove it at your follow-up visit.

• You will be taught how to care for your incisions and your chest tube sites before your discharge from the hospital.