

Pectus Excavatum: Surgery

What happens before surgery?

Your child is having surgery to fix the sunken area of the chest called pectus. Special directions, tests and appointments will be needed before surgery. They include:

- Directions on when your child will need to stop eating and drinking the night before surgery. **This is very important. If directions are not followed, surgery may be cancelled.**
- Washing with a special soap the night before surgery. This is one way you can help prevent infection after surgery.
- Medicine to prevent hard stools, which is called constipation, will be started 4 days before surgery. A special sheet with directions will be sent to you.
- An appointment in the Pre-op Anesthesia Clinic. Blood tests may be needed.
- A pre-hospital tour given by Child Life Specialists is available. Many families find this helpful before surgery. Call (414) 266-3495 to schedule a tour.

What happens on the day of surgery?

- When you come to the hospital, stop at a Welcome desk to get a badge. They will direct you to the day surgery area. A member of the surgery team will meet with you to answer any questions.
- You will go with your child to the holding room. You will meet with the doctor who will give your child medicine to help them sleep through the surgery. This doctor is called an anesthesiologist. This doctor will also tell you the ways your child's pain will be treated after surgery.
- Your child will be taken to the operating room. After your child is asleep, an IV will be started to give medicines and fluids. A foley catheter will also be placed to drain urine from the bladder. A thin plastic tube called an epidural catheter may be placed to give your child pain medicine.

Nuss procedure: Small cuts, called incisions are made in the sides and sometimes the front of the chest. This is where the steel bar will go under the breastbone (sternum) and skin to push out the sunken area of the chest. The bar may be seen from the outside and stays in for 2 to 3 years. When it is time for the bar to be removed it will be done with same day surgery.

Ravitch procedure: A cut is made across the chest, normally below the nipple line. Abnormal cartilages are taken out which lets the sternum move to a more normal position. Usually a chest drain is left in place after surgery for a few days. It will be removed before your child goes home.

What happens after surgery?

- After surgery, your child will go to the recovery room and then to an inpatient unit.
- Your child must not roll on their side, twist or side bend/flex at the waist for 6 weeks after the surgery. This will help the bar and chest stay in a good position.

- Your child will have some pain after surgery. We will do everything we can to keep your child as comfortable as possible. Your child may have an epidural and a patient controlled analgesia (PCA) pump. The Pain Management Team will see your child each day. They are available 24 hours a day if needed. See the PCA and epidural information sheets.

Day of surgery	Day 1 after surgery	Day 2	Days 3 to 5
<ul style="list-style-type: none"> In bed most of first night. Must lay flat for 6 hours. The head of bed can be raised to 30 degrees. No eating and drinking until the morning. 	<ul style="list-style-type: none"> May drink fluids. If fluids go well, then food will be offered. Breathing exercises with the incentive spirometer (IS) are taught. It helps to take deep breaths to keep the lungs open. Use it in both the hospital and at home. A chest x-ray is done to check your lungs and the position of the bar if you have one. Will learn to safely sit on the edge of their bed. Learn how to get out of bed with the nurses and therapists. Physical and Occupational Therapy (PT/OT) will teach your child how to move and do their self care. Some time in the afternoon, your child may bend at the waist. The head of the bed may go up as far as it is comfortable. Have your child hold their cup, use the TV remote and call light to work on strength. 	<ul style="list-style-type: none"> Sit on the edge of the bed, stand and move to a chair. Your child may walk as able. The therapist and nurses will continue to work with your child daily to safely bathe, dress and wash up. 	<ul style="list-style-type: none"> Your child will walk in the halls and on the stairs. <p>Day 3 to 5:</p> <ul style="list-style-type: none"> If your child has an epidural for pain it may be stopped and different medicines for pain started by mouth. Foley catheter taken out a few hours after the epidural is stopped. <p>Day 5:</p> <ul style="list-style-type: none"> May bathe or shower. Chest X ray will be done to make sure the bar is in a good position and the lungs have no problems. <p>Your child will be able to go home as soon as they:</p> <ul style="list-style-type: none"> Are able to get up and walk around comfortably. Have good pain control with medicine by mouth. Are able to eat regular food. Have a bowel movement.

What happens when we go home?

Activity limits are important for healing and to keep the bar or chest in a good position.

- Have your child take it easy** for the first 4 weeks after surgery. Have your child walk, take deep breaths and do the exercises given by PT/OT. Walking often is the best way to build strength.
- Bend only at the hip for the first 6 weeks after surgery. There should be no slouching or slumping when sitting. Good posture will help keep the chest in a good position.
- No heavy lifting for 3 months.** This includes heavy backpacks. Ask for an extra set of books at home for 3 months. Be sure your child has time between classes to go back to their locker often so they carry fewer books. The first 6 weeks after surgery, your child may lift up to 10 pounds, which is a gallon of milk. The next 6 weeks, your child may lift up to 25 pounds.

At home after surgery (continued)

- **No karate, judo, gymnastics, gym class or contact sports for the first 3 months.**

Pain and constipation

- Prescriptions will be given at discharge with directions for taking pain medicine at home. The medicine will be similar to what your child was taking while in the hospital. Some medicines will need to be slowly decreased before stopping them. Ibuprofen every 6 hours works very well to control pain, unless your child has been told not to use it in the past.
- Constipation is common when taking pain medicines. Keep taking the stool softener. Eating a healthy diet with fruits, vegetables and fiber will also help.

Incision care

- Check the incisions daily for signs of infection: redness, swelling or pus-like drainage.
- The stitches do not need to be removed as they will dissolve in the skin. There are 2 kinds of bandages used. Small paper tapes called steri-strips and a gauze, or a liquid bandage called dermabond. If gauze is used, it will be taken off the day after surgery.
- The steri-strips or dermabond will slowly come off with bathing. They can be taken off after 10 days if they have not already fallen off.

Return to school/work

Your child may go to school or work when off all narcotic pain medicine and their energy level is improved. This will be 2 to 3 weeks after surgery. Start with half days at first and then slowly move up to full days.

Follow up

Your child will need to be seen in the surgery clinic 3 to 4 weeks after surgery. A chest x-ray will need to be done in the Imaging department about 20 to 30 minutes before the clinic visit.

Special information for the Nuss Procedure

- CPR can be done if your child has had a Nuss procedure. More force may be needed due to the bar in the chest.
- Defibrillation for an abnormal heart rhythm may be done.
- MRI exams may be done but discuss this with your surgeon.
- During the first 3 months after a Nuss bar is placed, antibiotics might be given before any major dental work. This includes tooth pulling or braces being put on. After 3 months, antibiotics are not needed. Please discuss this with your surgeon.

ALERT: Call your child's doctor, nurse, or clinic if you have any questions or concerns or if your child has:

- A fever.
- A cough or chest pain that does not go away or any trouble breathing.
- Redness, drainage or swelling at the incisions sites.
- Constipation or not stooling at least every 2 days.
- Trauma or any hitting of the chest.
- Any change in the appearance of the chest.
- Special health care needs that were not covered by this information.

This teaching sheet is meant to help you care for your child. It does not take the place of medical care. Talk with your healthcare provider for diagnosis, treatment, and follow-up.