



Your Journey Through Pectus Excavatum Repair


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Cincinnati Children's Hospital Pectus Program





Why Choose the Pectus Program at Cincinnati Children's






Facts about Pectus Excavatum

- Occurs in about 1 in 300-400 children
- It may be minimal or quite severe
- Increases with age and often worsens during growth spurts during late childhood and adolescence
 - Usually stabilizes after skeletal growth is complete


Testing to be completed PRIOR to scheduling surgery:

1. Cardiac MRI
2. Pulmonary Function Test (PFTs)
3. Metal Allergy Testing
4. EKG


Testing to be completed just PRIOR to having surgery:

1. Staph screening (4-6 weeks prior to surgery)
2. Opioid screening
3. Genetic testing (if recommended by surgeon)
4. History and Physical (within 30 days of surgery)



In preparation for surgery

- Patient
 - Take a stool softener 3-5 days prior to surgery
 - Hibiclens or Dyna-hex wash (evening prior and morning of surgery)
 - Practice taking pills
 - Remove make-up and nail polish
 - Stop eating and drinking per SDS nurse guidelines



In preparation for surgery

- Caregiver
 - Prepare your house for when your child comes home (i.e. recliner, extra pillows, etc.)
 - Arrange necessary appointments
 - Prepare list of questions for surgeon
 - Pack hospital bags
 - Clothes
 - Toiletries
 - Favorite blanket/pillow
 - Neck pillow
 - Lounge pants
 - Books
 - Computer
 - Slippers





Day of Surgery:

- Come to Same Day Surgery (SDS) Department
 - Nurse will get height, weight, vital signs and review health history
 - Nurse will wash the chest and underarms with Dyna-hex wipes
 - Pain team will meet with you
 - Consents will be obtained (surgery, anesthesia and blood)




Once in the Operating Room:

- Epidural is placed
- IV is placed
- Anesthesia is administered and patient goes to sleep
- Foley catheter is placed
- Child is positioned and prepped for surgery
- And then...surgery is performed





Nuss Procedure

- Procedure takes approximately 2 hours; each additional bar can take an additional hour
- The number of bars placed is determined by:
 - Depth of pectus
 - Height of child
 - Determined in the OR



Nuss Procedure

Before

08/23/2016



After

10/16/2017




Haller Index- 6.2
Surgery on 07/08/2017 with 3 bars placed



After Surgery Post Anesthesia Care Unit (PACU)

- Called the “wake up” room
- 1:1 nursing care
- Stay here until pain is controlled and floor room is ready (approximately 2 hours)
- Can have 2 visitors at a time
- Allowed to eat and drink




After surgery Surgical Recovery Floor

- Private room
- Private bathroom
- TV
- Parent bed
- Surgical checklist






Hospital Routine

- Surgery Fellow/resident rounds between 6:00-6:30
- Surgery Nurse Practitioner rounds twice a day and relays the plan for the day and expectations
- Pain Team (MD & NP) rounds twice a day
- Pain nurse rounds in the evening



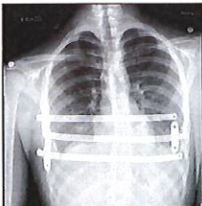

Post-Op Day 1

- Chew gum
- Get out of bed
- Foley catheter is removed
- Eat and drink
- Incentive spirometer (breathing machine)- 10x/hour
- Compression boots while in bed
- Review discharge paperwork



Post-Op Day 2

- Epidural is turned off and then removed
- Try to take only oral pain medications
- Chest x-ray is obtained



Post-Op Day 3

- Discharge home if:
 - Your pain is controlled only on oral pain medications
 - You have been signed off by PT
 - You are eating and drinking well


Pain Management

- Day of Surgery/Post-Op Day 0
 - Same Day Surgery
 - Meet the team
 - Give dose of Lyrica
 - Give light sedative
 - Operating Room
 - Epidural is placed or PCA started
 - IV Methadone given
 - IV Tylenol given
 - After Surgery
 - Epidural and/or PCA is continued
 - Scheduled IV Robaxin
 - Scheduled IV Toradol
 - Scheduled IV Zofran (nausea/vomiting)
 - IV Valium as needed for muscle spasms
 - IV Dilaudid or IV Morphine as needed for incisional pain

Pain Management

- Post-Op Day 1
 - Epidural and/or PCA is continued
 - Movantik is started if older than 12 years old (constipation)
 - Scheduled IV Methadone for 1-2 doses
 - Scheduled Lyrica for 4 doses
 - Scheduled oral Oxycodone is started
 - Scheduled IV Robaxin, IV Tylenol and IV Toradol
 - Scheduled IV Zofran (nausea/vomiting)
 - Scheduled IV Zofran (nausea/vomiting)
 - IV Dilaudid or IV Morphine as needed (incisional pain)
 - IV Valium as needed (muscle spasms)





Pain Management

- Post-Op Day 2
 - Epidural is turned off at 6:00 am
 - IV Dilaudid or IV Morphine as needed
 - Continue Movantik
 - Begin transition to oral pain medications
 - Oxycodone
 - Robaxin
 - Tylenol
 - Valium
 - Ibuprofen




Pain Management

- Post-Op Day 3
 - Continue taking oral pain medications
 - Discharge home with follow-up pain clinic appointment if child is older than 12 years (scheduled prior to surgery)

Pain Management

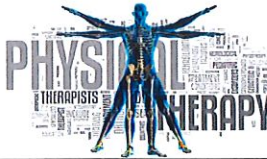

- Integrative Care/Holistic Health
 - Massage therapy
 - Healing touch
 - Music therapy
- Pet Therapy
- Child Life





Physical Therapy

- Evaluation on Post-Op Day 0-1
 - Asking questions about home set-up, school and enjoyable activities
- Teach techniques on how to sit up without rolling or breaking surgical precautions



Physical Therapy

- Day 0-1
 - Up to chair
- Day 1
 - Walks short distances, sits in chair
- Day 2
 - Walks longer distances
- Day 3
 - Climbs stairs, walks and sits in chair




Physical Therapy

- Surgical Precautions
 1. No lifting/pushing/pulling with arms
 2. No bending/twisting of trunk
 3. No rolling in bed or sleeping on side
 4. No arms past 90 degrees





Occupational Therapy


- Evaluation on Post-Op Day 1
- Assist patient with activities of daily living (dressing, bathing and going to school) within the limits related to surgery




Eating




Bathing




Dressing




Transferring



Toileting





Walking or moving around




Discharge Information

- Letter for school/work
- Discharge instructions
- Prescriptions for medications

Discharge Instructions

- Care of the incisions
- Activity restrictions
- Medications
- How to wean off pain medications
- Medical alert bracelet information
- When to call the office
- Follow-up in 2-3 weeks with surgeon (scheduled prior to surgery)



Medical Alert Bracelet

- Can be ordered at almost any major pharmacy chain
- Inscription should read **"Surgical steel bar in place under sternum"**
- Assists with passing through security areas with metal detectors






Activity Restrictions After Surgery

- Do not raise arms above head for 2 weeks
- Activity restrictions for 12 weeks
- No activities that have the potential for chest trauma (i.e. football, wrestling) for 6 months
- Sleep on back for 12 weeks
- Sleep in raised elevation (recliner or wedge pillow) for 4-6 weeks
- No driving for 6 weeks



What to Expect at Home

- Child will experience discomfort
- Child might have problems sleeping
- Child will need 24 hour care for 1-2 weeks after discharge
 - Additional caregiver may be necessary



Frequently Asked Questions

- How long do the bars stay in place?
 - Bars are left in place for a minimum of 3 years if the bars were placed when the child was younger than 18 years. If the child is older than 18 years or had a prior surgical pectus repair, bars are left in place for a minimum of 5 years



Frequently Asked Questions

- How long are you in the hospital when the bars are removed?
 - Bar removal is outpatient surgery and the child goes home from the recovery room following surgery



Frequently Asked Questions

- What are the potential complications of surgery?
 - Pneumothorax (60%)
 - Overcorrection (5%)
 - Bar displacement (2.2%)
 - Infection (1%)
 - Allergy to bar (0.5%)



Have Additional Questions

- Please contact our Chest Wall Team

513-803-1062

Chest-wall-center@cchmc.org

Surgery Scheduling
513-803-0300



