

What is pectus excavatum?

Pectus excavatum is a dip or inward curve of the breastbone (sternum). It is due to overgrowth of the cartilage (soft bone) that connects the ribs to the chest bone.

- It is not always noticed at birth. It is most often found by 2 to 3 years old.
- It can be mild with only a slight curve, or it may be more serious. With more severe cases:
 - The breastbone pushes down on the heart and lungs.
 - Surgery may be needed.

What causes pectus excavatum?

The causes of pectus excavatum may include an overgrowth of the soft tissue breastbone, weak chest bones or a poor diet.

- It is often found to run within families.
- It is more common in boys than girls.

What are the possible signs and symptoms?

Your child may have one or more of these:

- Sunken chest
- Rounded shoulders
- Round stomach
- Curved backbone or spine
- Problems breathing
- Feeling tired with exercise
- Chest pain

What medical tests could my child have?

Your child may have one or more of these tests to check how well his heart and lungs are working:

- Lung function tests
- Chest X-ray
- Chest CT scan
- Echocardiogram (moving pictures of the heart)
- Exercise test

What is the treatment?

Mild curves may correct themselves over time. Moderate to severe cases may need surgery.

- Most often, surgery is not done in children younger than 12 years old.

In case of an urgent concern or emergency, call 911 or go to the nearest emergency department right away.

Pectus excavatum, continued

- If the pectus excavatum is affecting the heart and lungs, the surgeon can perform either:
 - A Nuss procedure, or
 - A Ravitch repair

The Nuss procedure is the latest type of repair.

- 2 small cuts are made on each side of the chest.
- A curved steel bar is placed to force the breastbone to the correct shape.

In the Ravitch repair:

- The surgeon makes a long cut down the middle of the chest.
- They remove abnormal cartilage and lift the breastbone into a normal position.
- The cartilage then grows back toward the breastbone in a normal shape.
- Sometimes a metal pin is put in place to hold the breastbone while the bones and cartilage heal.

Are there any complications with surgery?

Your child's doctor will talk with you about risks and complications with surgery. Some may include:

- Pneumothorax (air in the space around the lung)
- Infection
- Movement of the bar

How do I care for my child after surgery?

Some care guidelines include:

- Limit your child's physical activity for 4 weeks. Your child should avoid:
 - Lifting anything heavier than 5 pounds for 8 weeks.
 - Contact sports for 12 weeks.
 - Book bags or back packs for 12 weeks.
 - Bending or twisting at the waist.
- Have your child:
 - Maintain good posture to help keep the bar in place - no slouching.
 - Sleep either on their stomach or back for 4 weeks.
- Talk about any other things that your child cannot do with his physical therapist.
- Your child may return to school when they are physically able.
- Keep your child's follow-up visits. These are most often 2 weeks after surgery and then regularly while the bar is in place.

After surgery, when should I call the doctor?

Call your child's doctor **right away** if your child has any of these:

- Signs of infection at the incision area, such as:
 - Drainage or bleeding

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Pectus excavatum, continued

- Swelling
- Redness
- Increased pain
- Trouble breathing
- Pain not helped by pain medicine
- Constant coughing
- Fever higher than 101°F
- Change in the way the chest looks since surgery
- Any chest injury that may cause the bar to move

Also call if you have any questions or concerns about how your child looks and feels

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

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