



جامعة الإمام عبد الرحمن بن فيصل
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Pectus Excavatum

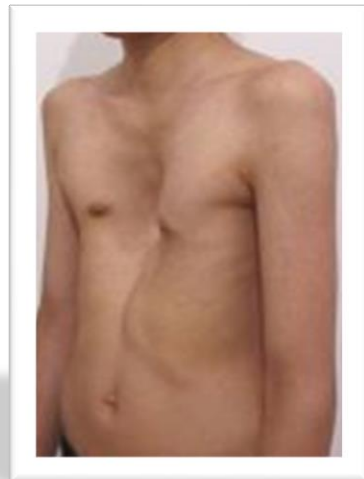


What is pectus excavatum?

Pectus excavatum is a birth defect characterized by an unusual growth of the cartilage connecting the ribs to the breastbone, causing the breastbone to be pressed inward.

Generally noticeable at birth, this condition can worsen during the adolescent growth spurts.

- In severe instances, pectus excavatum might affect heart and lung functions and impact a child's self-esteem.



What are the common physical symptoms of pectus excavatum?

when it exerts pressure on the heart and lungs, various symptoms may arise. It's important to seek medical advice if experiencing physical symptoms such as:

- chest pain.
- continuous tiredness.
- difficulty breathing.
- an unusually fast heartbeat.



In addition of psychological symptoms:

- depression.
- feelings of embarrassment.
- social anxiety.
- Disappointed or anger.



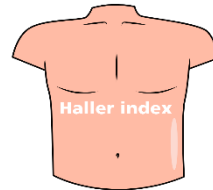
Who is considered a surgical candidate?

patient experiences physical or psychological symptoms due to their pectus condition.

The criteria for being a surgical candidate include:



Impact on heart and lung functions



Severity of the deformity, assessed by Haller index.



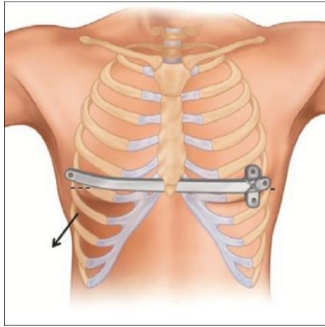
Psychological effects, such as severe self-esteem issues or clinical



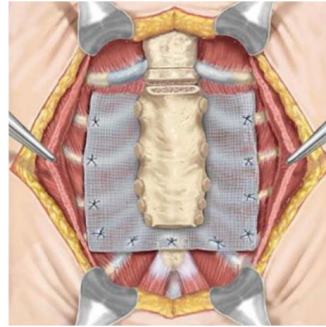
negative effect on quality of life



What are the surgical options?



Nuss



Ravitch

In the past, the procedure used to correct this type of deformity was “open” surgery, commonly referred to as the Ravitch procedure, which is the most common surgical option for repairing the sternum.

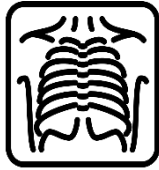
After that, the Nuss procedure became widespread, which is the installation of a stainless steel or titanium stent to reshape the rib cage.

What are the risks associated with surgical repair of pectus excavatum?

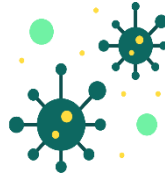
Some risks associated with surgical intervention that



Fracture or loosening of the implant



Inadequate or incomplete remodeling of the deformity, or the deformity's return



Skin irritation and infection



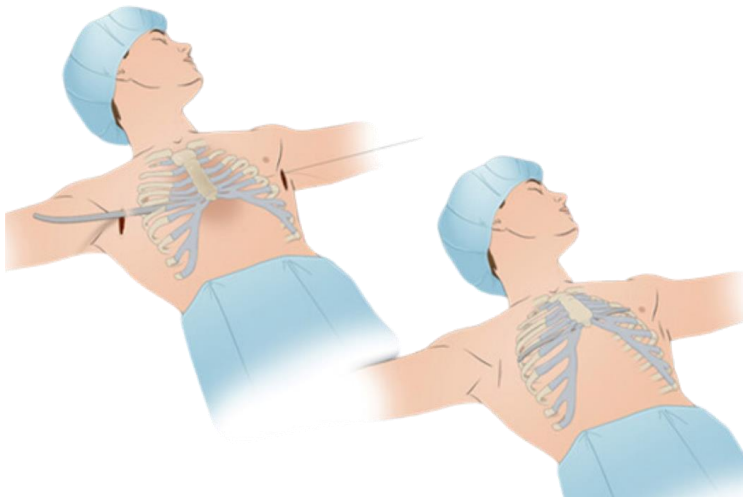
Metal sensitivity or allergic reaction to the implant

Some conditions that may not qualify for brace treatment include:

- Having an allergy to some metals.
- Insufficient quantity or quality of bone or tissue to allow reconstruction of the chest wall.
- The presence of a psychological condition that prevents compliance with postoperative care instructions.

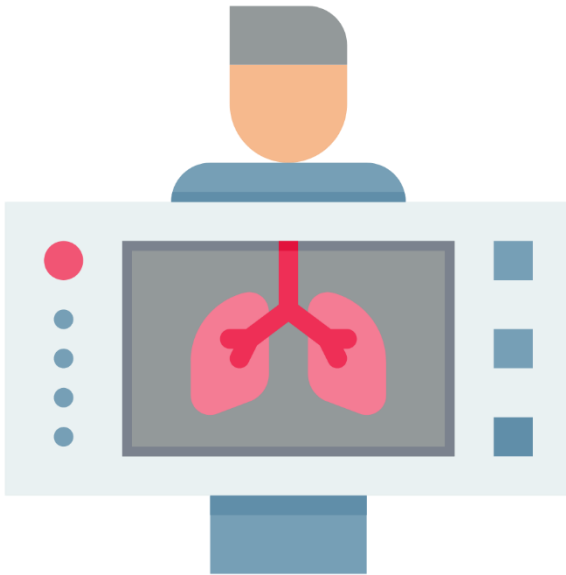
What are the benefits of the Nuss procedure?

The Nuss Procedure, a less invasive method offers several advantages over older "open" surgical options.



Does lung function improve?

Yes, They will have a noticeable improvement in lung function after Surgery and stent removal.



Does heart function improve?

benefits include improved heart and lung function

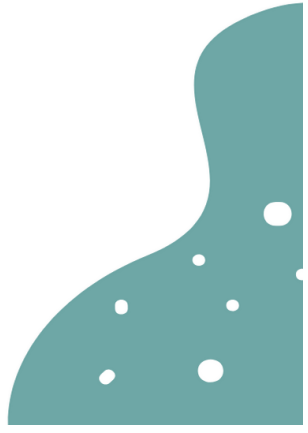
ability to participate in sports for a longer period





What is the incidence of recurrence of pectus excavatum?

Many patients are concerned that the pectus excavatum will return after treatment. Published data evaluating the success rate of the Nuss procedure indicate that recurrence occurs in less than 2% of cases.



What is the quality of life improvements?

Some aspects of outcomes related to quality of life include:

After surgery, many positive psychological and social effects can occur on the patient, including:



**General
Satisfaction**



**Confidence in
Changed Appearance**



**Higher
Self-Confidence**



**Increased
Interest in Sports**



**Enhanced
Sociability**



**Improved
Body Image**

Approximately 82% of parents report their child as being “satisfied” or “very satisfied” post-surgery.





What after surgery?

Length of stay in hospital

patients stay in the hospital for 3 to 5 days. to focus on managing post-operative pain,

+ + providing physical therapy

+ + giving recovery instructions.

1 to 4 Weeks After Surgery

Follow-up Appointments

physical activity restricted

+ + +
+ + +
+ + +
+ + +

What after surgery?

4 to 6 weeks after surgery

Cleared to return to daily activities but with continued doctor's advice on activity restrictions.

- Recommended Activities:
- Frequent walking
- deep-breathing exercises
- avoiding bending, twisting, or log rolling, and maintaining a straight back.

6 to 12 weeks after surgery

Gradual return to more activities, including certain non-contact sports.

12 weeks after surgery

Patients are generally cleared to resume all normal activities.

When is the chest bar removed ?

The Pectus Support Bar is typically removed 2 to 3 years after the initial surgery.

Procedure: Often done without an overnight hospital stay, using one or both of the original incisions.

Sources and references:

All pictures used from Canva.com

Review and audit:

The content of this booklet has been reviewed by Thoracic surgery unit in
Surgery Department at King Fahd University Hospital.

Surgery Department

Health Awareness Unit

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