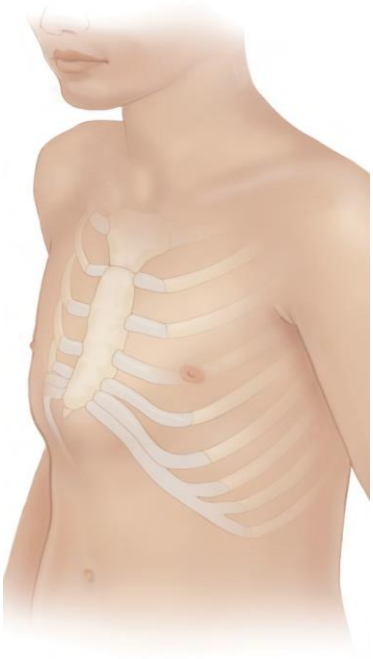
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Pectus Carinatum

Pectus carinatum which is also called pigeon chest, is when the sternum and ribs, or chest bones, look like they are too far forward. Each patient's needs are different, and the Stanford Chest Wall Care Team works with patients to help them reach their greatest health and improve their chest wall shape. This handout is a guide to understand how this is done.

Pectus carinatum

People can be born with pectus carinatum, but it may not be noticed until their body starts to grow quickly, such as during puberty. Boys are more likely to have pectus carinatum than girls.



The Stanford Chest Wall Care Team

The **Stanford Chest Wall Clinic** works with other health care providers and parents to create the best results for people that have chest wall problems. Having patients see the expert team of **Chest Wall Clinic Providers at Stanford** will help them to change their chest wall to have better health or appearance.

Treatments for pectus carinatum

If patients have **mild to moderate pectus carinatum,** it may be possible to be treated without surgery by using a bracing system.

Bracing system

A **bracing system** is the most common way to treat pectus carinatum. It slowly decreases how far a patient's chest is sticking forward. This is done by wearing a brace that is always compressing or putting constant pressure on their chest. The brace fits all the way around their chest to reshape their chest over time.

The brace works best if patients follow the recommendations on how long they should be wearing it. When patients start using the bracing system, it is recommended they wear the brace for **20 to 23 hours every day.**



Patients will need to be seen regularly in the Stanford clinic to check their progress and adjust the brace or change the schedule of how long it needs to be used.

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Patients are given a prescription from the chest wall care team for their brace that will be made to fit their individual chest shape. The brace is fit at a special location, called an **orthotics clinic**, which makes these kinds of braces. A list of orthotics agencies the Stanford Chest Wall Clinic works with will be given if a prescription for a brace is recommended.

Modified Ravitch procedure

In rare cases, if bracing systems are not able to correct a patient's pectus carinatum, a surgery called the **Modified Ravitch** can be an option to talk about with the chest wall care team. Having a surgery to correct pectus carinatum is not urgent, so time can be taken to plan when it will be done.

It is best to have this procedure done during early adolescence, or early teenage years, but it can also be done with great results in adults.

The Modified Ravitch procedure removes the deformed rib cartilage from the chest wall. The cartilage then grows back in a flatter position. The cartilage heals during the **4 months after surgery.**

When surgery is recommended

Patients will be given information about when and where to come to Stanford for appointments and surgery.

Preparing for surgery

Some things to do before surgery are:

- **Speak with the anesthesia team.** The anesthesia department will call patients to talk about their anesthetic plan and answer any questions they may have.
- **Take medicines as prescribed before the surgery.** Patients will be given instructions for taking medicine the day before their surgery to help them not have any problems pooping, which can sometimes happen after surgery.
- **Wipe down the chest with special cleaning wipes.** Patients will be given wipes to clean their chest the night before and the morning of their surgery to help reduce their risk of infection.

After surgery

For most pectus carinatum surgeries, patients stay in the hospital for **1 to 3 days.** Patients can often eat and move around right after surgery. During their time in the hospital, the care team will work with patients to help them learn how to:

- **Manage their pain.** The care team will help patients learn how to safely give themselves pain medicine as prescribed.
- **Work with physical therapy.** The physical therapy team will teach patients how to move and exercise to help them to recover.
- **Check incision sites.** This will help patients notice any signs of infection.
- **Practice taking deep breaths using an incentive spirometer.** This is a breathing device that helps patients to exercise their lungs after their surgery to keep their lungs healthy.

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Leaving the hospital after surgery

Patients will leave the hospital when their pain is well managed, and they can move around on their own. They will need caregivers to help them:

- **Manage their pain at home.**
- **Do exercises** that the physical therapy team gave them in the hospital.
- **Look at their incisions every day** to make sure there is no infection.

Follow-up after surgery

Patients will need to **return to the Stanford Wall Clinic** to be seen by their care team for the following visits:

- **1 month after the surgery** to make sure they are healing well.
- **1 year after the surgery** to check the correction of their pectus carinatum.
- Follow up **after 1 year** only if needed.

Travel Information

Many patients must travel long distances to reach the Stanford Chest Wall Care Team. If patients need help to know where to stay, the **Lucile Packard Children's Hospital Stanford** has a **Housing Office** that works with them to help find housing near the hospital. Please call the Housing Office to be given information about possible housing, which may include the:

- **Ronald McDonald House.** The Ronald McDonald House at Stanford gives a home and offers support to the caregivers of children or patients being treated at Lucile Packard Children's Hospital Stanford. They help families feel less stress so their focus can be the patient's recovery.
- **Corporate apartments.** There are a few local business apartments that give a lower, daily rate to families who have patients getting treatment at Lucile Packard Children's Hospital.

Housing services can be given to patient's families for only **1 night**, or **many months,** depending on the patient's need. For questions or more information about getting help to find housing by the Lucile Packard Children's Hospital Stanford please talk to the Housing Office:

Housing Office

Monday to Friday from **9:00 a.m. to 6:00 p.m.** at **(650) 498-7971.**
The housing office is located at the **Ronald McDonald House 520 Sand Hill Road, CA 94304.**
Translation services are available if patients do not speak English.

Clinic Locations

Stanford Medicine Children's Health tries to give the best care, even in the neighborhood where their patients live. To better serve their patients, Stanford Medicine Children's Health has clinic settings throughout the San Francisco Bay Area.

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You can scan the QR code to get a map, the addresses, and the contact information for these clinics. Follow the directions below:

a. Open the camera on your phone.
b. Hold your phone over the QR code so that you can see it on your phone screen.
c. The QR code will take you to the website.

On some phones, you may need to click a link or banner pop-up that appears when you scan the QR code.

You can also get to this information by going to the following website:
Contacts & Locations - Chest Wall Program - Stanford Medicine Children's Health

Click on the words **contacts & locations** to see clinic maps and information.

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