Open Thoracic Aortic Surgery

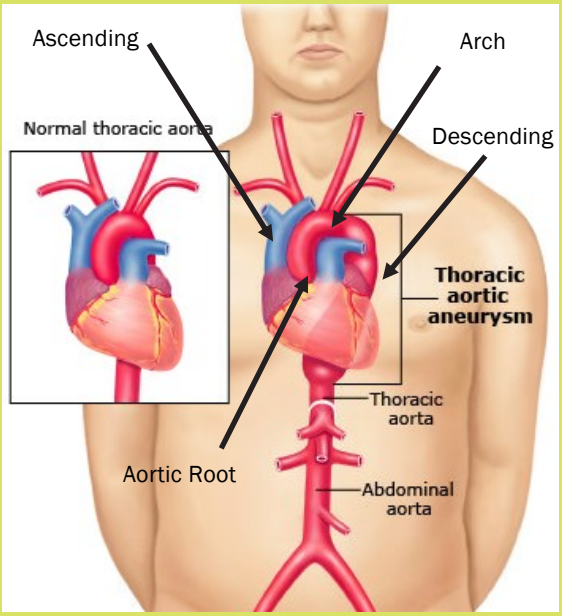
The Basics

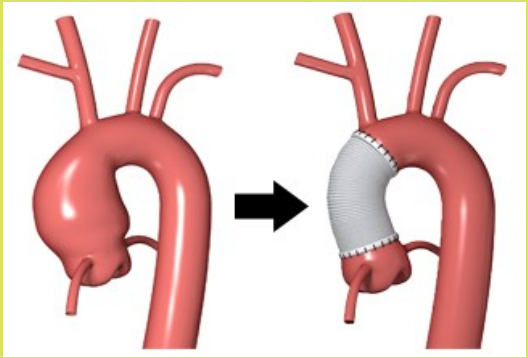
If your thoracic aortic aneurysm (TAA) or aortic disease is in the **aortic root** and/or **ascending aorta** (the part closest to the heart), it needs to be repaired with **open surgery**. If the diseased aortic segment is anywhere in the **arch** or **descending thoracic aorta,** open surgery might also be indicated. Sometimes your surgeon will also replace your aortic valve if it is not functioning well at the same time.

- Open thoracic aortic repair involves open heart surgery, cardiopulmonary bypass and sometimes circulatory arrest. The diseased segment of the aorta (including an aneurysm, dissection, etc) is replaced with a **graft**.
- *Anatomy is evaluated using imaging: CT scan, MRI, or echocardiogram (ultrasound of the heart).*

Procedure

- Performed under general anesthesia.
- The doctor will need to cut open your chest/breastbone or make an incision in the side of your chest (rare) to get to your aorta. They will place clamps on the aorta to stop blood from flowing through.
- Then, they will replace the bulging/weakened/damaged part of the aorta with a prosthesis made of synthetic fabric material (known as a tube **graft**) that is sutured into place. If there are problems with other parts of the aorta, its branches, or the heart valves, these can also be fixed during open surgery.
- The doctor might need to stop your heart for a short time and place you on cardiopulmonary bypass (also called the **"heart-lung machine"**). This machine takes over the work of your heart while the aorta is being fixed. The machine keeps blood flowing throughout your body. After the graft is in place, the doctor restarts your heart, remove the clamps, and blood flows normally through the graft.
- If work is being done on the aortic arch, blood flow to your brain may be stopped for a short period of time. Your brain is protected by cooling the body during surgery and helps reduce the risk of stroke or brain damage (called deep circulatory hypothermic arrest).
- The doctor will close the incision with skin glue and either cover with clean bandages or leave open to air
- This procedure often takes 6-8 hours, sometimes longer





Ascending Aortic Repair

Possible Complications

- **Blood clots** or **bleeding**
- **Ischemia** (reduced blood flow) to organs or limbs
- **Stroke**
- **Paralysis**
- **Kidney** or **lung** problems
- **Infection**
- **Heart failure, heart attack, irregular rhythm**
- Need for **reoperation**
- **Death**

University of Vermont Health

Post-Op Recovery

- Patients go to the intensive care unit (ICU) for monitoring after surgery.
- You will have a breathing tube, and this will be removed in the ICU as soon as it is safe. You will have a bladder catheter, chest tubes and pacing wires coming out of your chest. These will all be removed over the next few days. You might feel groggy or confused for a short time.

Diet: You will drink clear fluids and advance to a regular diet, slowly as tolerated. Consume a heart healthy diet.

Pain: You will receive different kinds of pain medications post op to control your surgical pain.

Activity: The staff will help you get out of bed and start moving around early in your recovery.

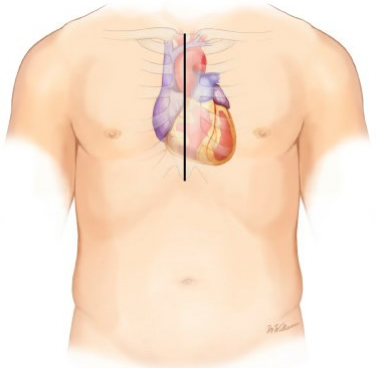
- Walking is resumed 1 day after surgery. Slowly increase your activity.
- You can expect that your energy level will be reduced.
- Going up stairs is okay, just go slowly.
- Sternotomy incision - "Keep Your Move In The Tube" (see below)
  - Surgical bra for females
- Thoracotomy - 10lb weight restriction on the side of the surgery for 2 weeks
- No driving following your surgery for 4 weeks.

Surgical Incision: Typically, the incision is closed by skin glue or stitches.

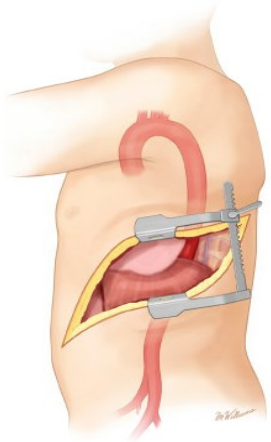
- Check incision every day. Mild redness or bruising is normal.
- Once you no longer need to keep the incision dry, it is ok to gently wash daily with mild soap and water and completely pat dry. Do not submerge. Avoid scrubbing.
- Do not apply lotions, creams, powders unless prescribed
- Comply with weight and activity restrictions, if you over-exert it can damage your incision.
- Call your doctor if:
  - There is drainage from the incision line
  - Increased redness or swelling around the edges of your incision, or if it separates
  - Increased pain and tenderness
  - Persistent fever.

Discharge: The majority of patients can be discharged home within 5-7 days after surgery. Continue to wear TED compression/stockings on your legs daily. You can remove at night.

Surveillance: Patients have a CT scan within 1 year post repair, with stretched out intervals if no complications occurred. This also depends on if there is still an unrepaired/diseased section of the aorta.



Sternotomy - opening the breast bone

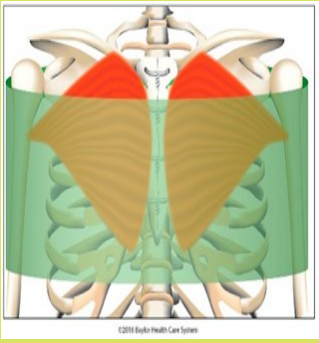


Thoracotomy - opening the side of the chest between the ribs (rare)

QR CODE: Sarasota Memorial Health Care System - Educational YouTube videos about KYMITT

KYMITT

(Keep Your Move In the Tube)



Imagine a tube around your upper body. During weight-bearing activities (like getting out of bed, lifting, or pushing), keep both arms inside this tube.

- **Weight-bearing activities:** Keep arms close to the body, avoiding stretching across the chest or using chest muscles in a way that would stress the sternum.
- **Non-weight-bearing activities:** Patients are allowed freedom of movement during activities like hygiene, toileting, and bathing, as long as it's pain-free.
- **Pain as a guide:** Pain and discomfort should be used as a guide for safe limits of movement.
- Brace your chest with a pillow/arms when coughing/sneezing/laughing.
- Sleeping on either side or on your back is permitted. DO NOT sleep on your stomach.

UVMHealth.org