

Endovascular Aortic Surgery

The Basics

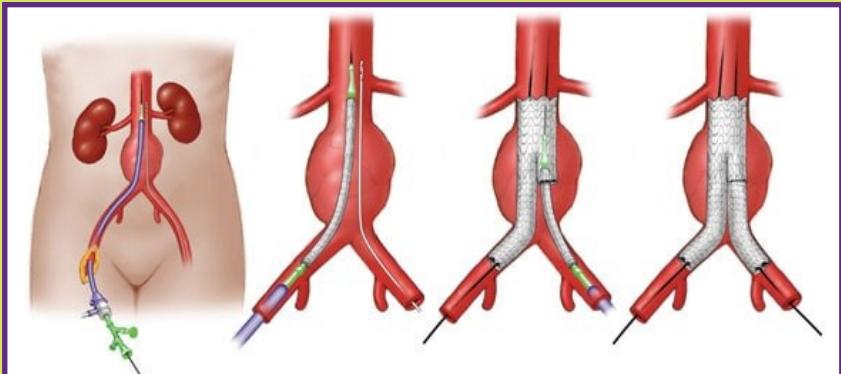
Endovascular aortic repair refers to a **minimally invasive approach** that involves placing a fabric covered stent into a section of the aorta for the treatment of a variety of aortic conditions (including aneurysms, dissections, trauma/injury, others). The purpose of the stent is to reinforce the weakened aortic wall and prevent rupture.

- Aortic anatomy, extent of the disease, and available landing zones (where the graft will land) dictate whether endovascular repair can be performed.
- *Aortic anatomy is evaluated using imaging such as CT scan or MRI.*

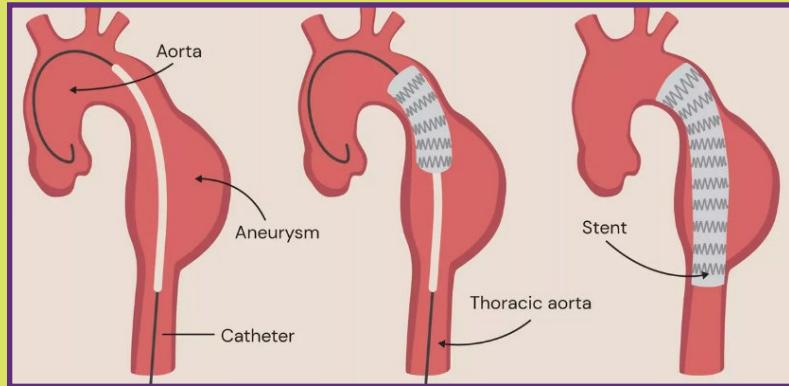
Procedure

- Performed under general anesthesia.
- The doctor makes an incision(s) into a blood vessel in your groin, inserts a thin tube, and dye is injected to guide placement of a stent graft.
- Then the doctor inserts the folded graft and uses x-ray to guide the graft up to the bulging or weakened part of the aorta and unfolds it. This reinforces the aortic walls.
- This type of graft does not need to be sewn into place. Blood flows through the graft instead of the dilated or weakened aorta, which decreases the stress on the aortic wall.
- The doctor will close your incision(s) and covers them with clean bandages
- This procedure often takes 2-4 hours.

Endovascular Abdominal Aortic Repair (EVAR)

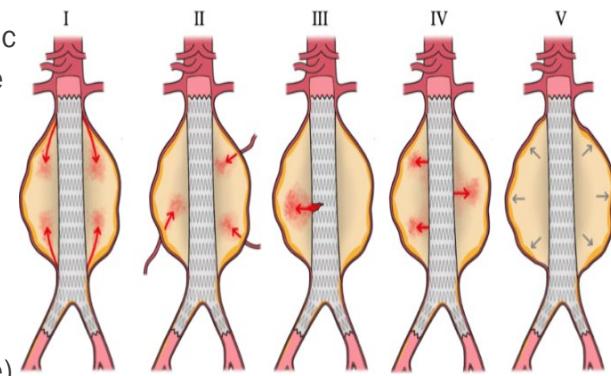


Thoracic Endovascular Aortic Repair (TEVAR)



Possible Complications

- **Endoleak** is continued blood flow within an aneurysm sac that may cause further expansion of the aorta, there are five types (I, II, III, IV, V)
- **Vascular Injury** at the access site or where the stent is deployed
- **Migration/movement** of stent
- **Blood clots or bleeding**
- **Ischemia** (reduced blood flow) to organs or limbs
- **Paralysis** can happen during TEVAR - (see picture above)
- **Infection**



Post-Op Recovery

- ▶ Usually, patients can be transferred to a regular floor once they have recovered from anesthesia, unless closer monitoring is needed where they may have a short stay in the Intensive Care Unit (ICU). If you have a spinal drain (sometimes placed with TEVARs) you will go to the ICU. You may feel groggy or confused at first, this will improve with time.
- ▶ Your team will often check your pulses and your strength at regular times and compare them to your baseline preoperative examination.

Diet: you will drink clear fluids and advance to a regular diet, as tolerated. Consume a cardiac friendly diet. Do not skip meals. Do not consume alcohol for the first week after surgery or while taking any prescription pain medications.

Pain: You will receive different kinds of pain medications to control your surgical pain. Most patients do not need strong pain meds after endovascular aortic surgery.

Medications: it is important to take newly prescribed medications EXACTLY as prescribed. Keep a current list of your medicines, dosages, and times to be taken. Common medications after aortic surgery: blood pressure medications, aspirin, cholesterol medication. Other medications can include: diuretics “water pills”, blood thinners, and stool softeners.

Activity: Walking is resumed on the first postoperative day. Slowly increase your activity. Do not lift heavy objects (more than 10lbs) or engage in strenuous activity/exercise for at least two weeks.

Surgical Incision: Your incision(s) will be in your groin area, and it is necessary to keep them dry and clean to avoid infection. Typically your incision will be closed with skin glue. Occasionally there may be staples or sutures if the incision is bigger.

- ▶ 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 in bath or pool. Avoid scrubbing.
- ▶ Do not apply lotions, creams, powders unless prescribed
- ▶ Be compliant 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: Most patients are discharged home within 1-2 days following endovascular repair. You will be encouraged to drink plenty of fluids after surgery to minimize the risk of kidney injury after the use of contrast during your procedure. Please monitor your blood pressure with a home blood pressure cuff. Keep a log of these readings 3 times a day and review with your primary care provider. Please attend any scheduled post op appointments and imaging. Your surgeon will want to see you about 1 month after surgery in clinic with a CT scan.

Endograft Surveillance: Routine surveillance is **MANDATORY** to assure the integrity of the repair. You may not feel if a malfunction with the stent is present. We suggest that surveillance should be performed at 1 month and then yearly thereafter for uncomplicated repairs to prevent late problems.