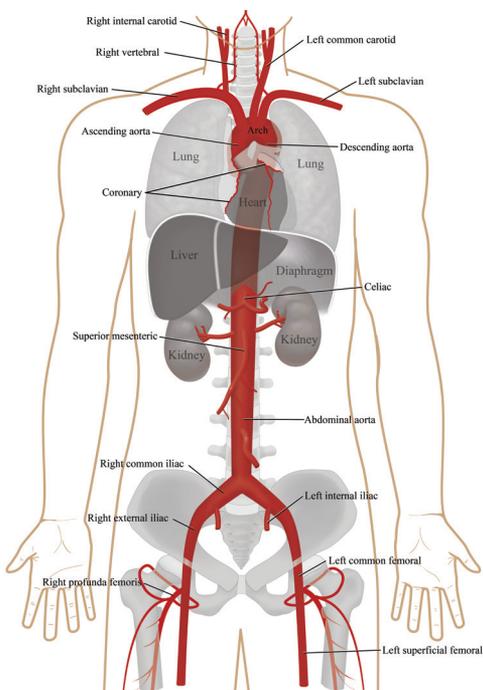


# TEVAR PATIENT GUIDE

## Endovascular Repair of Thoracic Aortic Aneurysms



## INTRODUCTION

You have been diagnosed with a thoracic aortic aneurysm. It is common for these aneurysms to have no symptoms, therefore you may feel well. These aneurysms can be a very serious health risk depending on the size and location within the thoracic aorta. An aneurysm has the potential to either rupture (burst) or dissect (layers of the aortic wall separate), which can be threatening. However when detected in a timely manner, aneurysms can be treated effectively.

Given the anatomy and configuration of your aneurysm and your overall health, an endovascular repair of your thoracic aortic aneurysm is the best treatment for you. Since this is a complex procedure, we've provided this guide to help you understand what you can expect with your procedure and recovery. If you have questions about the information you read or about your condition, please talk with your physician.

## WHAT IS A THORACIC AORTIC ANEURYSM?

A thoracic aortic aneurysm is a bulging in the portion of the aorta located in the chest that is caused by the pressure of blood pumping through areas where the wall of the aorta has weakened. Thoracic aortic aneurysms can develop in any segment of the thoracic aorta, including your aortic root, ascending aorta, aortic arch and descending thoracic aorta (Figure 1). The descending thoracic aorta is the most common location for a thoracic aortic aneurysm to form, followed by the ascending aorta and lastly the aortic arch.

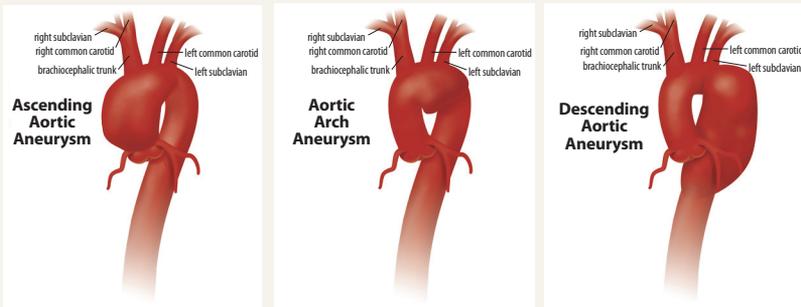


FIGURE 1

## WHAT CAUSES A THORACIC AORTIC ANEURYSM?

While aneurysms can occur due to several different causes, the most common cause is atherosclerosis (plaque build-up within the arterial wall). Over time, this plaque can cause the walls of the aorta to become stiff and weak, creating the potential for an aneurysm to form.

Some factors that increase your risk for atherosclerosis are:

- ▶ Smoking
- ▶ High blood pressure
- ▶ High cholesterol
- ▶ Being overweight
- ▶ A family history of cardiovascular disease

Other factors that increase your risk for developing a thoracic aortic aneurysm are:

- ▶ Age (greater than 55)
- ▶ Gender (occurrence in males is more prevalent than females)
- ▶ Family history of aneurysms (please ask your physician about screening of family members)

## WHAT CAUSES A COMPLEX AORTIC ANEURYSM? (CONTINUED)

- ▶ Diabetes
- ▶ Genetic disorders that affect connective tissue, such as Marfan syndrome, Ehlers-Danlos syndrome, Loeys-Dietz syndrome
- ▶ Infections, such as syphilis or tuberculosis

## WHAT ARE THE SYMPTOMS OF A THORACIC AORTIC ANEURYSM?

It is common for thoracic aortic aneurysms to form without symptoms. Over half of patients do not experience symptoms. **For those who do experience symptoms, the following can be warning signs of a thoracic aortic aneurysm:**

- ▶ Chest or back pain
- ▶ Pain in the jaw, neck and/or upper back
- ▶ Coughing or shortness of breath
- ▶ Hoarseness caused by pressure on the vocal cords
- ▶ Difficulty swallowing caused by pressure on the esophagus

## TREATMENT

Treatment options for thoracic aortic aneurysms vary and include medical management (monitoring the aneurysm while controlling blood pressure), open surgery and catheter-based endovascular repair.

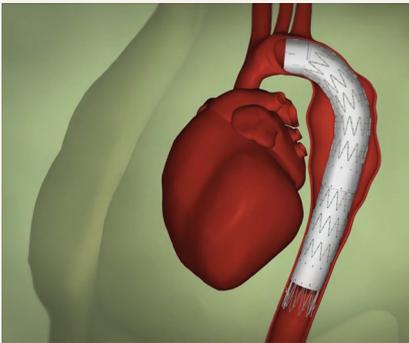


FIGURE 2

### Endovascular repair

Your health care provider has recommended an endovascular repair. This is a minimally invasive procedure and when performed to repair a thoracic aortic aneurysm, it is known as a TEVAR, or Thoracic Endovascular Aortic Repair. For this procedure, small incisions are made in your groin. Long, thin tubes known as catheters are guided through using an X-ray to obtain real-time images and a stent graft is inserted where the aneurysm is located (Figure 2).

## **TREATMENT** (CONTINUED)

The stent graft is positioned such that it realigns the weakened blood vessel and prevents the aneurysm from rupturing. Over time, your aorta will shrink back to its normal size.

### **Before the procedure**

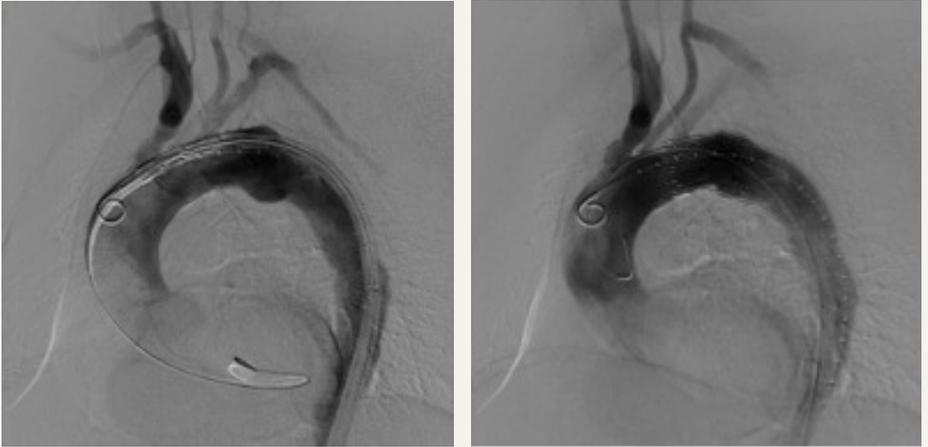
**Here are some tips and information that will help your procedure be as successful as possible:**

- ▶ The evening before your surgery, you may eat a normal dinner. However, you cannot eat or drink anything, including water, gum or hard candy, beginning at midnight prior to your operation.
- ▶ Bring a list of your current medications that includes the names, dosages and how often you take them.
- ▶ Talk to your physician about possible drug interactions. If you are taking anticoagulant (blood-thinning) medication, such as Warfarin, Coumadin or antiplatelet medication such as Plavix, or Aspirin, you may be asked to stop taking them because they make it more difficult for your blood to clot.
- ▶ Talk to your health care provider about which medications you should stop and for how long. You should also ask your health care provider which medications you should still take on the day of your surgery.
- ▶ You will be given a special soap to wash with the day before your surgery, which decreases bacteria on your skin and may help reduce the risk of infection after your procedure.
- ▶ For the comfort and safety of all patients, UF Health requests that you do not bring jewelry, valuables, electric appliances (hair dryer, shaver, heating pads, etc.), food or medications with you on the day of your procedure.
- ▶ Shortly before your scheduled time of surgery, you will be taken to the pre-op care unit. An intravenous, or IV, line may be started before the procedure to provide fluid and any pre-op medications you have not yet received.
- ▶ Before going to the operating room, remove all jewelry, including rings. You may wear your glasses/contacts, dentures and/or hearing aids until you go to surgery so you can communicate with members of the team in the preparation area. Prior to going to the operating room, your pre-op nurse will give these items to your family until you need them during recovery.

## Procedure

General anesthesia is used so you will be asleep during the procedure. To prevent spinal cord ischemia (paralysis) by decreasing spinal cord pressure, a spinal drain may be placed in your back if indicated.

Incisions will be created in both your right and left groin. Using wires and catheters, the aorta will be accessed through these small incisions. X-rays will be taken using a special contrast dye that helps visualize blood vessels (Figure 3). Under this direct visualization, a stent graft is guided over the wires into the aorta. Then it is positioned and deployed to cover and exclude the aortic aneurysm.



**FIGURE 3**

## After the procedure

You will be taken to the intensive care unit, or ICU. Once you are medically ready, typically after one or two days, you will move to a medical-surgical unit. You are asked to lay flat in bed until the spinal drain has been discontinued, usually 24 hours after your procedure. When you are tolerating a diet and able to walk, you may leave the hospital two to five days after the endovascular repair.

**There are risks associated with every procedure. Those specific to this operation include, but are not limited to:**

- ▶ Weakness or complete paralysis of legs
- ▶ Transient issues with the kidneys secondary to the dye (contrast)
- ▶ Endoleak (poor seal/apposition of the graft to the arterial wall)
- ▶ Infection of the groin incision
- ▶ Bleeding

## **Post-operative care**

For two weeks after the endovascular repair, you should not lift anything that weighs more than five to 10 pounds. If you are taking narcotic medications, do not drive or operate heavy machinery as these medications can impair judgment. You may shower and let soap and water run over your incisions, but must pat them dry afterwards. You may return to work when you are cleared by your doctor.

Check your incision daily for signs of infection (redness, increased tenderness, warmth or swelling). If you develop sudden shortness of breath or chest pain, or if you notice changes in color, sensation or strength in your legs, please seek medical attention immediately.

## **Follow-up**

Over time, stent grafts may have problems such as kinking, migration or leakage and you may or may not experience symptoms. Therefore, you will need lifelong routine surveillance with CT scans. Most problems seen after repair can be managed with endovascular techniques.

At the time of discharge, you will be provided an appointment at one month and six months from the date of repair with a repeat CT scan to evaluate the stent graft and remodeling of the aorta around the graft. After that, follow-up is typically done yearly. It is crucial that you are compliant with the follow-up plan provided to you to ensure the most successful outcome after your procedure.

***We look forward to caring for you.  
Our top priority is to make your procedure with us successful  
and as easy and comfortable as possible.***

### **Contact**

If you have any comments, questions or concerns about your experience at the UF Health Aorta Center, please don't hesitate to contact our program manager Julie Sablik, MBA, at 352.594.6239 or [sablij@shands.ufl.edu](mailto:sablij@shands.ufl.edu). Your feedback is very valuable in helping us to continually enhance the patient experience.

### **Location**

Appointments at the UF Health Aorta Center are held at UF Health Surgical Specialists, located on the first floor of UF Health Shands Hospital.



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