

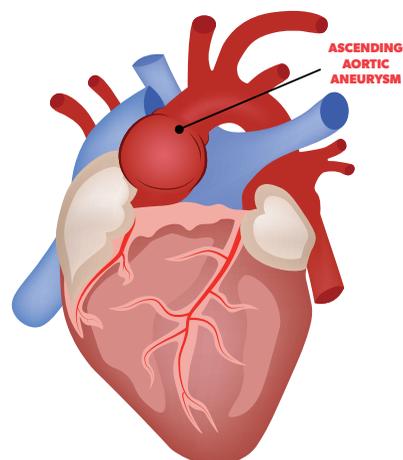
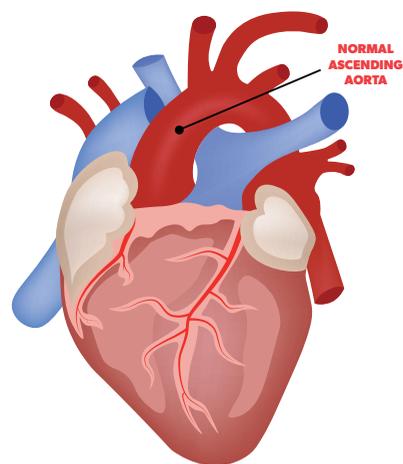
AORTIC ANEURYSMS

WHAT IS AN ANEURYSM: WHY IS IT IMPORTANT?

The word “aneurysm” means out-pouching or bulging of a portion of a blood vessel that can occur anywhere in the body. When an aneurysm occurs in the aorta, the largest blood vessel in the body, it is either a thoracic aneurysm, located near the heart, or an abdominal aneurysm, located in the descending portion of the aorta.

When a blood vessel wall bulges, or dilates, it becomes thin and tense, just like blowing too much air into a balloon. At a certain size, that dilated portion of the vessel wall is in danger of rupturing or tearing (called a “dissection”). This can be a life-threatening emergency.

The goal of surgery is to intervene before that happens by removing the dilated portion of the vessel and replacing it with a graft, or tube of synthetic material, that won’t rupture or tear.



WHAT CAUSES AN AORTIC ANEURYSM?

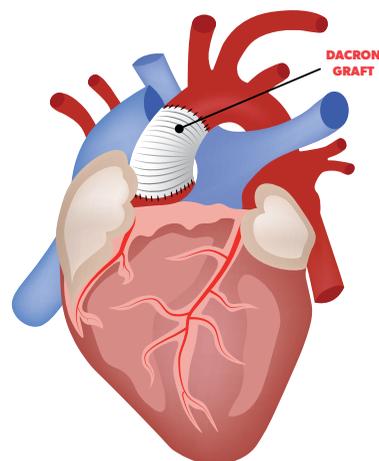
- Atherosclerosis (hardening of the arteries)
- Chronic or untreated high blood pressure
- Smoking
- Injury from trauma (for example, a car accident)
- Congenital abnormality (present from birth)
- Inherited conditions (for example, Marfan syndrome, Loeys-Dietz syndrome)

These are all conditions that have the potential to weaken the wall of the vessel, allowing it to dilate or balloon out over time.

WHAT ARE THE SYMPTOMS OF AN AORTIC ANEURYSM?

Aneurysms usually do not cause symptoms until they get quite large. They often are found during an examination for a different medical condition. When they are large enough to cause symptoms, people may notice chest or back pain, palpitations, fatigue, dizziness or shortness of breath.

Sudden severe back pain that feels like the worst pain anyone has ever had is usually a sign of a tear or rupture and is an extreme medical emergency.



HOW ARE AORTIC ANEURYSMS DISCOVERED OR DIAGNOSED?

Most aneurysms are found incidentally. Large aneurysms can be seen on a chest X-ray. They are also detected by studies such as CT scan, MRI or echocardiography. These studies also help to determine the exact location and size of the aneurysm. When a small aneurysm is found, the study used to find it is repeated on a regular basis, usually every six to 12 months, to monitor any change in size. This helps determine the ideal time for surgical intervention. Aneurysms can be found in almost any area of the body but are most often found in the chest, abdomen and pelvis. The location of your aneurysm will determine the appropriate surgical technique for its repair.

HOW IS THE ANEURYSM FIXED?

Surgical repair involves opening the chest or abdominal cavity to expose the aorta in the area of the aneurysm. A heart-lung machine is connected to maintain circulation while the surgeon removes the diseased portion of the aorta.

Clamps are placed above and below the aneurysm, which is then cut out and removed. A fabric tube, or graft, is sewn onto both cut ends to replace the diseased portion that is removed. The chest/abdomen is then closed. The breastbone is closed with permanent wire closures and/or sternal plates to allow it to heal; the rest of the skin and muscle is closed with sutures that eventually will dissolve.

Depending on the location there is another technique for repairing an aortic aneurysm that can be used for patients with the appropriate anatomy. This involves placing a device called a "stent graft" inside the diseased portion of the aorta without removing it. The stent is placed from the outside of the body through a catheter that is put through an artery in your groin leading to the aorta. This stent graft can relieve most of the pressure of blood flowing through the aneurysm, preventing rupture.

HOW WILL I RECOVER FROM THORACIC AORTIC ANEURYSM SURGERY?

Your recovery is similar to that of any open-chest procedure. This is described in the previous section of this booklet discussing recovery from thoracic surgery.

In the future, it will be very important to:

- Permanently stop smoking.
- Maintain very good blood pressure control.
- Avoid heavy lifting.

It is also important to discuss all this with your cardiologist and primary care doctors.

