

# About Aneurysms



**S**ometimes when we experience pain or discomfort, it's difficult to know if we should contact our healthcare provider. Most aortic aneurysms do not show symptoms until they are large and develop a complication, so they are often referred to as a

"silent" condition. If you are experiencing symptoms of an aortic aneurysm, you should speak up and contact your healthcare provider immediately, or call 911.

## What is an aortic aneurysm?

The aorta is the main artery of the body that supplies oxygenated blood to your heart, lungs and brain. This artery runs from the heart through the center of the chest and abdomen.

An aortic aneurysm is an enlargement of this main artery that occurs in a weakened portion of the artery's wall. An aneurysm occurs when a segment of the vessel becomes weakened and expands. The pressure of the blood flowing through the vessel creates a bulge at the weak spot, just like an overinflated inner tube can cause a bulge in a tire. The bulge usually starts small and grows as the pressure continues.

An aneurysm may occasionally cause pain which is a sign of impending rupture. When the rupture occurs, it causes internal bleeding. Because the abdominal aorta is such a large vessel, a ruptured abdominal aneurysm is a life-threatening event.

Fortunately, not all aneurysms rupture right away. Many grow very slowly and cause no symptoms or problems for many years. When detected in time, most aneurysms can be electively repaired with an operation so they do not rupture.

Aneurysms are about two-thirds more common in men than in women, and most aneurysms occur in people aged 55 years or older. The number of aneurysms in the United States is increasing as the population increases and ages.

## Signs and symptoms

Most aortic aneurysms do not show symptoms until they are large and develop a complication. When one arises, the patient usually experiences severe pain. Do not remain silent if you experience the following symptoms. Call your healthcare provider or call 911 one if you experience:

- Chest pain or discomfort
- Pain in the jaw, back or upper neck
- Difficulty breathing (this maybe affected by position)
- Trouble swallowing
- Hoarseness
- Abnormal changes in heartbeat or murmurs

Usually, aortic aneurysms are detected by ultrasound, MRI or CT scans.

There are two main types of aortic aneurysms:

- Abdominal aortic aneurysms
- Thoracic aortic aneurysms

Abdominal aortic aneurysms occur in the section of the aorta that passes through the abdomen.

The exact cause of this is unknown, but tobacco use, atherosclerosis (hardening of arteries) and infection can contribute to abdominal aortic aneurysms. Tears in the wall of the aorta are the main complication of abdominal aortic aneurysm. This could lead to internal bleeding.

Thoracic aortic aneurysms occur in sections of the aorta in the chest. This is often caused by atherosclerosis, a hardening of the arteries that damages the artery's walls and causes them to bulge.

Thoracic aortic aneurysms can increase health risks for atherosclerotic plaque, a clot forming in the site of the aneurysm, aortic dissection (tearing of the layers of the aorta) and aneurysm rupture.

Thoraco-abdominal aortic aneurysms occur in the lower part of the thoracic aorta and the upper part of the abdominal aorta. Causes are much like both thoracic and abdominal aneurysms, including hardening of the arteries caused by a buildup of fatty substances, plaque and other elements.

## Surgical treatment options

If the thoracic aortic aneurysm is large or symptoms are overbearing, surgical treatment is necessary. The section of the vessel can be surgically removed and replaced with a graft of artificial material. If the aneurysm is close enough to the aortic valve, valve replacement may also be recommended.

Aside from open aneurysm repair, there is a newer procedure called an endovascular aneurysm repair (EVAR, TEVAR, TA-EVAR). Endovascular surgery is performed using a catheter through a small incision in the groin. The catheter then guides the stent-graft through the blood vessels to the site of the aneurysm.

## Nonsurgical treatment options

In cases where the aneurysm is small and asymptomatic, it's likely that a doctor will recommend monitoring the aneurysm through CT or MRI scans and medication for blood pressure or high cholesterol.

