

# Classification of Aortic Diseases and its Treatment

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## DESCRIPTION

The aorta is the largest blood vessel in the body and it carries oxygenated blood from the heart to all parts of the body. Aortic diseases refer to a group of medical conditions that affect the aorta. These conditions can range from mild to life-threatening and require prompt diagnosis and treatment. Aortic diseases can be broadly classified into two categories, aneurysms and dissections.

### Aortic aneurysms

An aortic aneurysm is a balloon like bulge that occurs in the wall of aorta, the large artery which carries the blood from the heart through the chest and torso. Aortic aneurysms can dissect or rupture. The force of pumping blood can split the layers of the walls of the arteries, allowing the blood to discharge in between them. The bulge can occur anywhere along the aorta, but most commonly it occurs in the abdominal and thoracic regions. Aortic aneurysms can be classified into two types, thoracic and abdominal.

**Thoracic aortic aneurysms:** It affects the part of the aorta that runs through the chest. They can be caused by a variety of factors, including high blood pressure, smoking, atherosclerosis, and genetic conditions such as marfan syndrome. Thoracic aortic aneurysms can be asymptomatic, or they can cause symptoms such as chest pain, back pain, difficulty in breathing, and coughing.

**Abdominal aortic aneurysms:** It affects the part of the aorta that runs through the abdomen. They are more common in men than in women and can also be caused by a variety of factors, including smoking, high blood pressure, atherosclerosis, and genetic conditions. Abdominal aortic aneurysms can be

asymptomatic or can cause symptoms such as abdominal pain, back pain, and difficulty in breathing.

### Aortic dissections

Aortic dissections occur when there is a tear in the inner layer of the aorta. Blood flows through the tear and causes the layers of the aorta to separate. Aortic dissections can be classified into two types, Stanford type A and Stanford type B.

**Stanford type A dissections:** It affects the part of the aorta that runs through the chest. They can cause a medical emergency and can be life-threatening. Stanford type A dissections can cause symptoms such as chest pain, back pain, difficulty in breathing, and coughing.

**Stanford type B dissections:** It affects the part of the aorta that runs through the abdomen. They are less likely to be life-threatening than Stanford type A dissections, but they still require immediate treatment. Stanford type B dissections can cause symptoms such as abdominal pain, back pain, and difficulty in breathing.

## Treatment

The treatment of aortic diseases depends on the type and severity of the disease. Mild cases of aortic aneurysms may not require treatment, but close monitoring is necessary to ensure that the aneurysm does not increase more. In cases of moderate to severe aortic aneurysms, surgery may be required to repair or replace the affected portion of the aorta. Endovascular repair is a minimally invasive procedure that involves the placement of a stent in the affected area of the aorta. Open surgery involves the removal and replacement of the affected portion of the aorta. In cases of aortic dissections, emergency surgery is often required to repair the tear in the aorta.

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