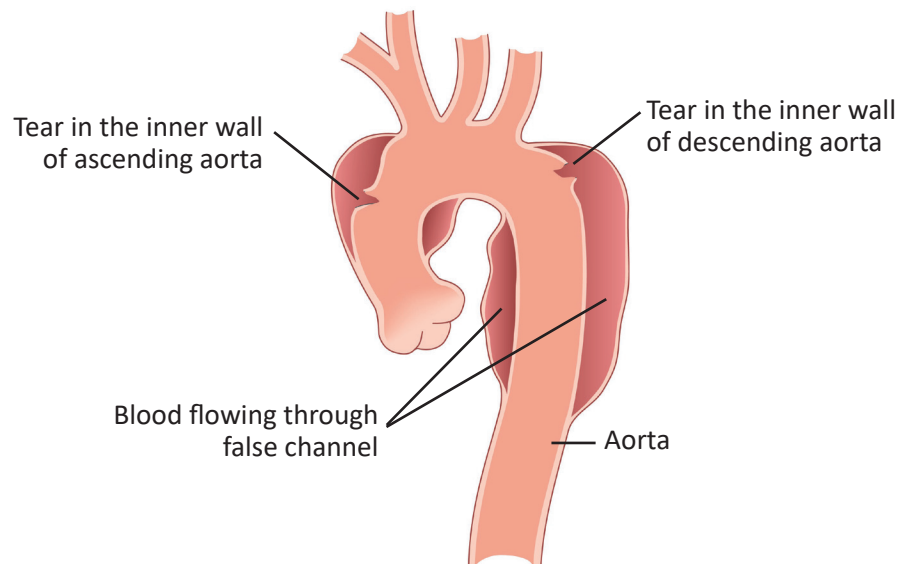


## Aortic Dissection

The aorta is the largest artery in the body. It carries blood from the heart to all parts of the body. The wall of the aorta is made of 3 layers. An aortic dissection happens when the innermost layer of the wall tears and separates from the other layers (Figure 1). This lets blood enter between the layers of the wall, creating an abnormal “false” channel. Blood flows through the false channel.

*If you have any questions, ask your physician or nurse.*

**Figure 1. Aortic dissection**



An aortic dissection can lead to serious problems. It can cause the aorta to grow larger or bulge (aneurysm). It can also cause less blood to flow to the vessels that branch off the aorta to your intestines, kidneys, spinal cord and/or legs. This can cause damage to those organs and parts of your body.

A dissection can happen suddenly (acute) or be present for years (chronic).

### Symptoms of an aortic dissection

Symptoms of an acute aortic dissection usually include severe chest and/or back pain between the shoulder blades. If you have these symptoms, go to the emergency department or call 911.

These symptoms will go away when the physician treats the acute dissection.

An aortic dissection may develop without any symptoms, but this is not common.

## **Risk factors**

The most common risk factors are:

- Smoking history (past or present)
- History of substance misuse or a substance use disorder
- High blood pressure (hypertension)
- High cholesterol (hypercholesterolemia)
- Bicuspid aortic valve (inherited disease of the aortic valve)
- Connective tissue disease, such as Marfan syndrome

## **Diagnosis and management**

The physician may use a computed tomography (CT) scan with IV (into the vein) contrast dye or an advanced magnetic resonance imaging (MRI) study to diagnose an aortic dissection in the acute phase. Sometimes, an echocardiogram may show a dissection. If so, the physician may order a CT scan or MRI to see the dissection in more detail.

Once the dissection enters a chronic phase, your physician will monitor it with imaging scans at various times. They will check for any changes in the size of the aorta or the extent of the dissection. Once there is a dissection in the aorta, there is a risk for further tearing or for the aorta to dilate (bulge). It is important to have regular imaging tests for a chronic aortic dissection.

## **Treatment**

Treatment options for aortic dissections vary. They may include:

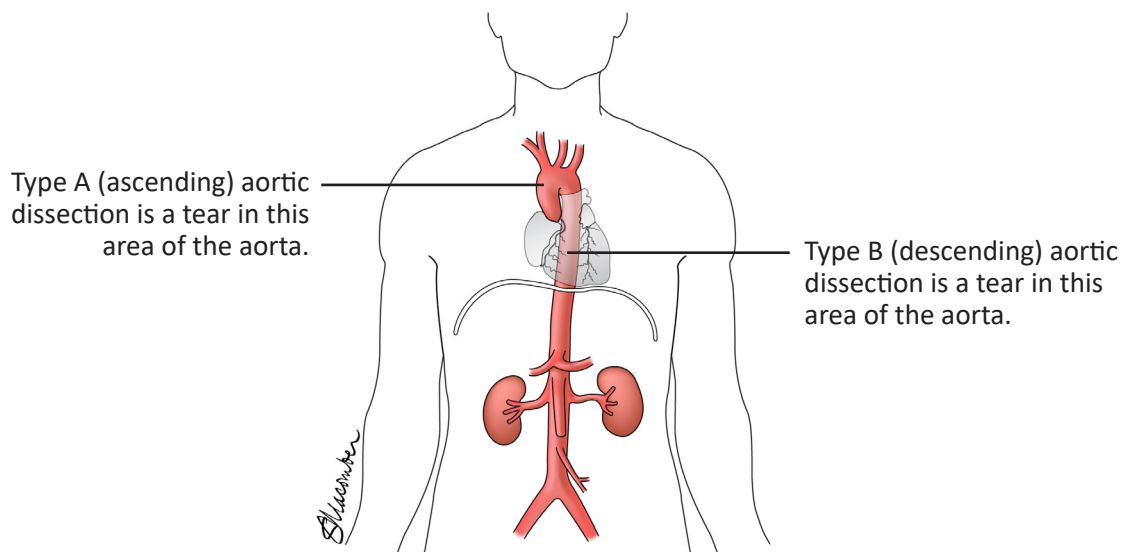
- Medications
- Open surgery (incision through the chest)
- Endovascular surgery (through the artery)
- A combination of open and endovascular surgery (hybrid approach)

The right treatment option for you depends mostly upon your symptoms and the location of the dissection.

**Type A (ascending) aortic dissections** happens in the beginning of the aorta right next to the heart (Figure 2). This type of dissection is usually a surgical emergency because it can quickly lead to conditions such as stroke, heart attack or cardiac arrest. People with a type A dissection will likely need immediate open surgery.

**Type B (descending) aortic dissections** can happen anywhere else in the aorta, although it is usually in the chest (Figure 2). It is common to have a type B dissection even after surgery for a type A dissection. Most people with a type B dissection need their blood pressure managed. Most often, managing blood pressure will relieve the pain and reduce the risk of other complications related to the dissection.

**Figure 2. Types of aortic dissection**



People with acute type B dissections sometimes need surgical treatment if any of the following happen:

- Pain that does not go away despite blood pressure management
- Poor blood flow to the organs in the abdomen, such as kidneys or intestines
- Poor blood flow to the legs

Some people with aortic dissections will eventually need surgery if their aorta gets bigger or if new symptoms appear. The timing of the operation and the best surgical method will vary for every person.

Please discuss your questions or concerns with your cardiologist or surgeon.