



British Heart  
Foundation

# Diseases of the aorta

## What are diseases of the aorta?

The aorta is the largest artery in your body that leaves the left side of your heart and carries oxygen-rich blood to all parts of your body. Diseases of the aorta are very serious, and can often be life-threatening.

If the wall of the aorta becomes weakened, it can:

- bulge or dilate – called an aortic aneurysm
- tear – called an aortic dissection
- split or burst – called an aortic rupture.

## Aortic aneurysm

An aortic aneurysm is a swelling or bulging of the aorta. Most aortic aneurysms are found in the abdominal area of your aorta, which is known as an abdominal aortic aneurysm - or **AAA** for short. Less frequently, they can occur in your thorax (chest) - in either your ascending (up high) or descending (downwards) aorta. Anything that affects the elastic fibers in the wall of your aorta may make it weaker and more likely to bulge or swell.

Your risk of having an aneurysm increases as you get older. Your risk is also higher if you smoke, have high blood pressure, have coronary heart disease or it is a condition that affects other people on your family. (This means your brother, sister or a parent has or has had an AAA.) Getting certain infections, and inflammatory or autoimmune diseases such as Marfans syndrome, may also increase your risk.

Small or moderate sized aortic aneurysms are unlikely to cause you any symptoms, and so can be difficult to detect. Larger aneurysms in your chest may cause discomfort or pain in your chest or back. Abdominal aortic aneurysms can put pressure on your spine causing lower back or abdominal pain, which can be severe and accompanied by feeling lightheaded or fainting.

If you have an aortic aneurysm there is a risk that it may begin to leak or even rupture (burst), depending on its size. The bigger it is, the higher the risk. If it grows more than around 5.5cm you may need to have surgery to prevent it from rupturing. A specialist will discuss which treatment is best for you.

## Screening programme

AAA is far more common in men over 65. For this reason, all men are invited for a screening test when they turn 65. This test involves a simple ultrasound scan and takes around 10-15 minutes.

If you are female or under 65 and think that you may have AAA or are at risk of developing it, then speak to your GP about the possibility of being referred for an ultrasound scan.

Visit [nhs.uk/abdominal-aortic-aneurysm-screening](https://www.nhs.uk/abdominal-aortic-aneurysm-screening)

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bhf.org.uk

## Heart Helpline

**Our cardiac nurses and information support officers are here to answer your questions and give you all the heart health information and support you need.**

**Call us on 0300 330 3311**

Similar cost to 01 or 02 numbers.  
Lines are open 9am - 5pm Monday to Friday.

**This information does not replace the advice that your doctor or nurse may give you. If you are worried about your heart health in any way, contact your GP or local healthcare provider.**

## Aortic dissection

Aortic dissection most often occurs because of a tear or damage to the inner lining of the artery. This can put extra pressure on the wall of the aorta and may cause the wall to rupture. This is a potentially dangerous condition that needs emergency treatment. Aortic dissection is a rare condition – and it is not an easy diagnosis to make. There are two types of aortic dissection, Type A and Type B. Each type is located in a different area and the treatment and management of each is different.

Aortic dissection is caused by diseases that affect the aortic wall. The most common of these is atherosclerosis - the building up of fatty substances in the artery lining. It can cause many different symptoms, and the classic signs are a sudden onset of severe pain across the chest, often felt in the back or between the shoulder blades. It can also cause pain in the jaw, face, abdomen, back or lower extremities as well as shock, feeling cold, clammy and sweaty, fainting and shortness of breath. If you experience any of these symptoms you should call **999 for an ambulance**. This is a life threatening condition that needs immediate medical treatment.

If you have an aortic dissection you will be in a intensive care unit to monitor your blood pressure, heart rate and rhythm, breathing rate and oxygen levels closely. Pain relief will be given to keep you comfortable and medication to help control your blood pressure and heart rate. Once your condition is stable doctors will decide whether to recommend surgery or to continue medication therapy without

surgery. This decision will depend on which type of aortic dissection you have, Type A or Type B.

- **Type A** occurs in the arch and proximal descending aorta (the area from the left ventricle to the aortic arch). The risk of rupture is high, and usually requires surgery to repair the aorta and possibly replace the aortic valve.
- **Type B** occurs in the descending aorta. The risk of rupture is less than for Type A, and doesn't always require immediate surgery. Doctors may be able to keep the condition under control with the use of blood pressure lowering medicines.

All people who have an aortic dissection (including those treated surgically) have to take medication to control their blood pressure, usually for the rest of their lives. The medication helps reduce stress on the aorta and usually consists of a beta-blocker or calcium channel blocker plus another blood pressure tablet such as an angiotensin-converting enzyme (ACE) inhibitor.

## Aortic rupture

The aorta is a very large blood vessel. If it ruptures there is a massive amount of blood loss, and the person can very quickly go into shock and die. Ideally, an aortic aneurysm or dissection will be repaired before it ruptures, but for many people they simply don't know they have any underlying disease.