

# Aortic aneurysm and dissection

### Heart information sheets

## **Aortic aneurysm**

#### What is an aortic aneurysm?

The aorta is the main artery that leaves the left side of your heart and carries oxygen-rich blood to all parts of your body. An aneurysm is a bulge the can occur in the wall of your 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. An aneurysm can also be 'localised or 'saccular', which means that an area of your aorta may stick out like a pouch.

#### What causes an aneurysm?

Anything that affects the elastic fibres in the wall of your aorta may make it weaker and more likely to dilate or bulge.

#### Am I at risk of having an aneurysm?

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 Marfan's syndrome, may also increase your risk.

Most aneurysms are found in people over 50 years and are 6 times more common in men than women, unless you have Marfan's syndrome. It is estimated that around 1 in 25 men aged between 65 and 74 in England have an abdominal aortic aneurysm. This is about 4% of men in the age group.

#### What are the symptoms?

Small or moderate sized aortic aneurysms in your chest can be difficult to detect in their early stages as they rarely produce symptoms. Large aneurysms in your chest can cause discomfort or pain in your chest or back.

Abdominal aortic aneurysms can put pressure on your spine causing lower back or abdominal pain. The pain can be severe and may be 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), if it is not detected. Leaking or ruptured aneurysms can be life threatening and need emergency treatment.

#### How are aortic aneurysms diagnosed?

Your GP may suspect that you have an abdominal aortic aneurysm if you have some unexplained symptoms or if he/she thinks that they feel something in your abdomen when they examine you. Your GP will send you for an ultrasound scan which allows the doctors to look at your aorta and identify possible areas of weakness or aneurysms.

Thoracic aneurysms are sometimes seen on chest x-rays, or you may have an echocardiogram (ultrasound of the chest) to diagnose them. In some cases you may be sent to have a, computerised tomography (CT) scan or magnetic resonance imaging (MRI) scans.

Because most people don't have any symptoms for an AAA, an NHS screening programme has been introduced nationally. It aims to identify aortic aneurysms early, and men over the age of 65 are offered an ultrasound scan. For more information visit <u>http://aaa.screening.nhs.uk/</u>.

#### How is it treated?

Most aneurysms are small (between 3 and 5.4 centimetres), but they can grow. The chance of an aneurysm bursting depends upon how big it is – the bigger it is, the higher the risk. If it grows to more than 5.5 centimetres you will be referred to a vascular surgeon to discuss the possibility of having an operation to repair it.

There are two main treatments for a AAA – surgical repair or endovascular repair (EVAR). Your surgeon will discuss which treatment is best for you. This often depends upon your general health, test results and the size of your aneurysm.

## **Aortic dissection**

#### What is a ortic dissection?

Aortic dissection is a condition in which there is bleeding into, and along, the wall of the aorta. The aorta is main artery leaving the heart and carrying oxygen-rich blood to all parts of the body. 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. An estimated 1 in every 100,000 people every year develops the condition.

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.

#### What causes aortic dissection?

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. Marfan's syndrome and other conditions that weaken the aortic wall lining are also possible causes of aortic dissection. People with aortic dissection often have high blood pressure.

#### What are the symptoms?

People can present with a number of different symptoms, depending on the extent and location of the aortic dissection. However, there are some classic symptoms associated with this condition – sudden onset of severe pain across the chest, often felt in the back or between the shoulder blades. Pain can be located in the jaw, face, abdomen, back or lower extremities. People may also experience symptoms such as shock, feeling cold, clammy and sweaty, fainting and shortness of breath.

#### How is it diagnosed?

You will need to have an electrocardiogram (ECG), which records the rhythm and electrical activity of the heart, and a chest X-ray. You will also need to have an echocardiogram with a transoesophageal echo (TOE), a computerised tomography (CT) scan or a magnetic resonance imaging (MRI) scan to help diagnose the condition and possibly blood tests.

#### Are there any complications?

The main complication associated with aortic dissection is rupture of the aorta, which will need an emergency operation. Aortic dissection may also disrupt the aortic valve, causing it to work inefficiently. Some people may show signs of shock due to rapid blood loss. Signs of shock include feeling faint, weak or nauseous, dizziness, sweaty, cold, clammy skin, rapid shallow breathing, low blood pressure or a fast, weak pulse.

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.

#### How is it treated?

If you have an aortic dissection you will be in a critical 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. If the dissection is here (the area from the left ventricle to the aortic arch) the risk of rupture is high. Your consultant may suggest you have an operation to repair the aorta and possibly an aortic valve replacement.

Type B occurs in the descending aorta. If the dissection here is less likely to rupture, you may not need to have immediate surgery - you can manage the condition by controlling your blood pressure with medication which reduces the risk of rupture.

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.

For more information see our Health Information series booklets *Having heart surgery* and *Tests for heart conditions* 

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Information & support on anything heart-related Phone lines open 9am to 5pm Monday to Friday Similar cost to 01 or 02 numbers

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