

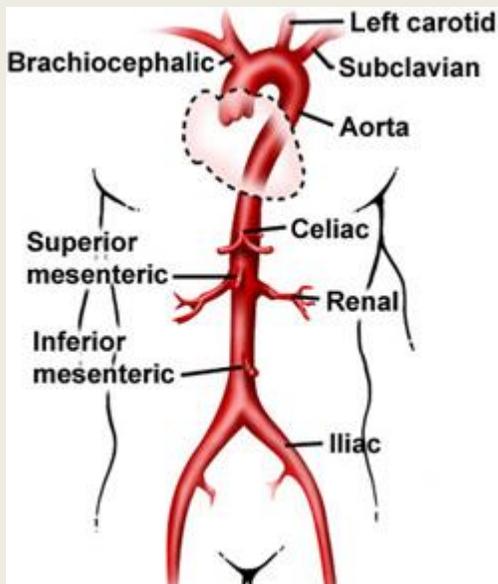
# Medicine for Managers

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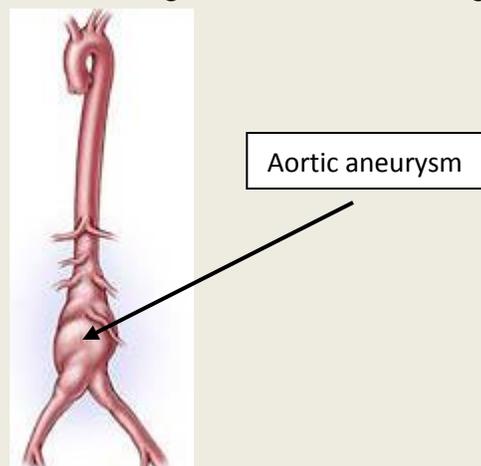
## Abdominal Aortic Aneurysm

The aorta carries blood from the heart downwards behind the lungs and through the abdomen supplying blood to the abdomen and its organs and dividing at its lower end into right and left common iliac arteries which supply the lower limbs. It is the largest blood vessel in the body, about two centimetres in diameter. If it dilates, it forms an aneurysm which may be very serious.



Predisposing causes, apart from being male and over 65, include raised blood pressure and smoking. It is also more common in diabetic patients. In addition raised cholesterol may result in the deposition of plaques of atheroma in the wall of the aorta. This may have two serious consequences. Firstly the deposits narrow the arterial channel which results in a rise in pressure as blood passes through it (remember the physics about the relationship between pressure and diameter of a tube), resulting in stretching of the artery. Secondly the atheroma impairs blood flow to the aorta itself resulting in fibrosis and weakening.

An aneurysm is very serious because, as it enlarges, the wall of the aorta progressively weakens until, finally, it bursts causing a huge internal bleed which is almost invariably fatal. It is most common in men aged over 65 and causes about 6,500 deaths a year, which represents more than one in fifty of all deaths for men in this age group.



The actual cause of an abdominal aortic aneurysm (AA) is not entirely clear.

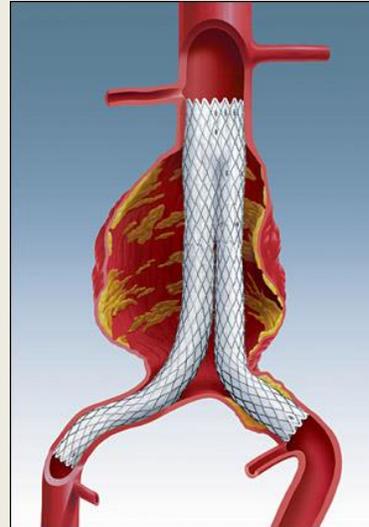
A family history is also a risk factor for an aneurysm.

An aneurysm develops insidiously without any symptoms although, in the more advanced stages, a pulsatile mass may be felt in the abdomen at the level of the umbilicus. It may be found coincidentally when examining a patient for another reason. As it enlarges further, an individual may develop back pain which becomes persistent and feels deep in the back. When rupture is imminent acute severe back and abdominal pain will develop. Once the aneurysm starts leaking the pain worsens and spreads down to the groins and the testicles. It is associated with the signs of shock; dizziness, sweating, cold clammy skin, shortness of breath, faintness and loss of consciousness.

It is frequently too late to save a patient whose aneurysm has started to bleed. It is estimated that eight out of ten people die of a rupture before reaching hospital or they do not survive the surgery.

For this reason screening of the abdominal aorta using ultrasound is recommended for men over age 65. It is a simple non-invasive procedure similar to maternity scanning. If an aneurysm is recognised it is managed according to its size. A small one can be monitored. A large one will result in the patient being referred to a vascular surgeon for treatment before it ruptures.

For those patients who are suitable for surgery, the procedure involves the replacement of the damaged and dilated part of the aorta with a synthetic graft.



The operation is a major procedure and therefore factors such as general health and prognosis are important. The operation itself may be done using an endovascular technique or as an open operation. The endovascular technique involves opening the iliac artery and feeding a graft (made of metal mesh and covered with a plasticised Teflon material) up to the aneurysm where it is sealed at either end forms a new channel through which blood can pass. Alternatively the abdomen can be opened and the operation undertaken by direct vision inserting the preformed graft into the artery. In patients where a graft procedure is used prophylactically (no bleeding has occurred), the success and full recovery rate is about 96% in the UK.

There is a National Aortic Aneurysm Screening Programme for all men aged over 65. According to the literature all men should receive an invitation when they reach 65. The procedure is simple, takes only a few minutes and is a simple ultrasound examination.

I realise I look very young but, amazingly, I am over 65. I didn't actually receive an invitation. If you haven't either you can look up the programme on the NHS Screening Programmes website (<http://aaa.screening.nhs.uk/>).

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