

Abdominal Aortic Aneurysm

What is an Abdominal Aortic Aneurysm?

The main blood vessel in your body is the aorta. It carries blood from your heart to the rest of your body. The section of the aorta in your abdomen (stomach area) is called the **abdominal aorta**. It supplies blood to your stomach, intestines, kidneys, pelvis, and legs.

An **aortic aneurysm** is a ballooning or enlargement of the aorta. This condition can occur in any part of the aorta, but most commonly occurs in the abdomen. When it does, it is called an Abdominal Aortic Aneurysm (AAA). If an aneurysm forms and grows too large in your abdominal aorta, your aorta could tear or burst, and result in death.

What are the symptoms of an Abdominal Aortic Aneurysm?

An abdominal aortic aneurysm often grows slowly and typically produces no symptoms. As the size of an abdominal aortic aneurysm increases, some people may notice:

- Severe pain in your abdomen or back
- A pulsating feeling in your abdomen
- Feel full early or vomiting
- Leg swelling
- Leg pain

What causes an Abdominal Aortic Aneurysm?

The exact cause of an abdominal aortic aneurysm is unclear. Factors that can increase your risk include:

- Smoking

- Older age
- Male gender
- High cholesterol
- High blood pressure
- Hardening of the arteries (atherosclerosis)
- A family history of aneurysms

How is an Abdominal Aortic Aneurysm diagnosed?

To detect an abdominal aortic aneurysm, there are multiple tests that your doctor can order. These may include:

- Ultrasound - produces images of the inside of your body.
- Computerized Tomography Scan (“CT” or “CAT” scan)- is an x-ray that can see parts of your body that cannot be seen on regular x-rays.
- Magnetic Resonance Imaging (MRI)- provides a detailed picture of your heart and vessels. It also reveals how well your heart is functioning.

How is an Abdominal Aortic Aneurysm Treated?

If you have an abdominal aortic aneurysm, surgical repair is only recommended when the width of the aneurysm is greater than 5cm in women and 5.5cm in men. If your aneurysm is smaller than 5.5cm, your doctor will recommend medical monitoring, which will include regular appointments to make sure your aneurysm isn't growing, as well as management of other medical conditions you may have that could worsen your aneurysm.

An **exception to these guidelines** is when an aneurysm grows more than 1 cm in a year. In this situation, your doctor will discuss your options with you during your appointment.

Surgical options for the treatment of an Abdominal Aortic Aneurysm include:

- **Open Surgical Repair**

Open surgical repair involves making a cut in your abdomen (stomach area) to gain access to the aneurysm. The damaged section of your aorta is removed and replaced with a synthetic tube (known as graft). The graft, typically made of Dacron[®] or Gore-Tex[®], is sewn into place.

- **Endovascular Aneurysm Repair (EVAR)**

Endovascular Aneurysm Repair (EVAR) is a less invasive procedure and an alternative to open surgical repair.

There are three different types of Endovascular Aneurysm Repairs:

- **Standard Endovascular Aneurysm Repair (EVAR)**

This works by supporting the damaged aorta with a synthetic tube (graft). During the procedure the doctor makes cuts at the groin area and attaches the graft to a thin tube (catheter) to move it through an artery. The doctor then moves this graft up to the aorta where the aneurysm is and puts it in place. This is done without an abdominal incision.

- **Percutaneous Endovascular Repair (PEVAR)**

Percutaneous Endovascular Repair (PEVAR) also works by supporting the damaged aorta with a synthetic tube (graft), but is considered less invasive than a Standard EVAR because it is done without a cut. Like the Standard EVAR, the doctor attaches the graft to the catheter and moves it through an artery. The doctor then threads this graft up to the aorta without an abdominal incision.

- **Fenestrated Endovascular Repair (FEVAR)**

Fenestrated Endovascular Repair (FEVAR) is used when the aneurysm involves one of the major blood vessels that provides blood to the

kidneys, intestines or liver. A FEVAR also works by supporting the damaged aorta, but after small cuts to the groin area, it uses a special graft called a Fenestrated Endograft. A Fenestrated Endograft has holes to allow the blood to continue flowing to the kidneys, intestines or liver without putting pressure on the aneurysm.

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