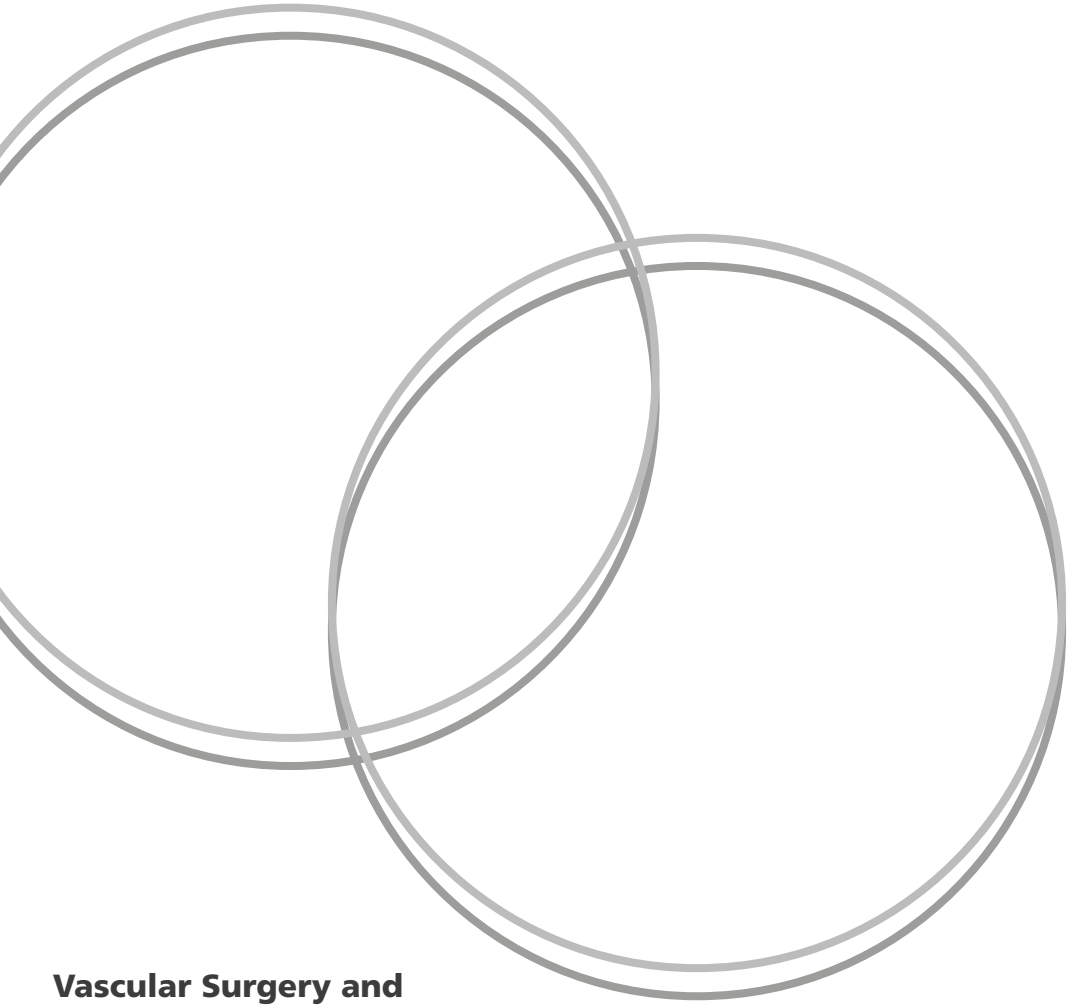
Oxford University Hospitals
NHS Foundation Trust

Endovascular Aneurysm Repair (EVAR)

Information for patients



Vascular Surgery and
Interventional Radiology

What is an Aortic Aneurysm?

The aorta is the main blood vessel that carries blood from your heart to the rest of your body.

- In your chest, it is called the thoracic aorta
- In your tummy (abdomen), it is called the abdominal aorta

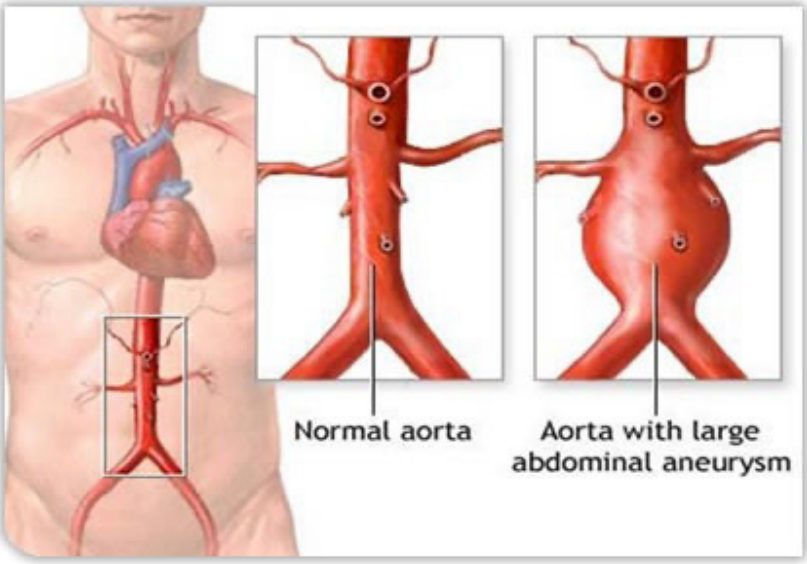
The abdominal aorta supplies blood to the lower part of your body. In the lower abdomen, it divides into two arteries (called iliac arteries) that supply blood to your legs.

A normal abdominal aorta is about 2 cm wide.

An abdominal aortic aneurysm (AAA) happens when a section of the aorta becomes weak and stretches. This causes it to widen or bulge, rather like a balloon.

Most AAAs do not cause symptoms and are often found during scans or through screening. However, if an aneurysm becomes large, it can be serious and may need treatment.

Fig.1 Schematic diagram of an abdominal aortic aneurysm



When is treatment recommended?

Treatment is usually considered if:

- The aneurysm is **5.5 cm or larger**
- The aneurysm is **growing quickly**
- The aneurysm is **causing pain**
- The aneurysm has **ruptured** (this is an emergency)

Your vascular surgeon will discuss the best option for you.

Treatment options for AAA

There are two main ways to repair an AAA:

Open surgical repair

- A cut is made in the abdomen
- The weakened section of the aorta is replaced with a strong synthetic tube (graft)
- This is a major operation
- Recovery takes longer
- Usually does **not** require long-term scan follow-up

Endovascular aneurysm repair (EVAR)

- A stent graft (a fabric-covered metal tube) is inserted through small cuts in the groin
- The stent is guided into place using X-rays
- The graft lines the inside of the aorta and strengthens it
- Less invasive than open surgery
- Shorter hospital stay and quicker recovery
- Requires **lifelong follow-up scans**

Am I suitable for EVAR?

You may be suitable for EVAR if:

- Your aneurysm has not ruptured
- It is large enough to need treatment
- There is enough healthy artery for the graft to attach securely

EVAR may be recommended if you have other medical conditions that make open surgery higher risk.

Open surgery may be recommended if:

- You are fit for surgery
- You have a long life expectancy
- The shape of the aneurysm is not suitable for EVAR

Your case will be discussed by a specialist team, including a vascular surgeon and an interventional radiologist.

Preparing for treatment

Before treatment, you may have tests such as:

- **ECG** – to check your heart
- **Exercise or breathing tests** – to assess heart and lung fitness
- **CT scan** – to look closely at the aneurysm

These tests help your team decide the safest treatment for you.

Risks and possible complications

Most people recover well, but complications can happen.

Possible risks of EVAR include:

- Blood leaking around the graft (**endoleak**)
- Movement of the graft over time
- Blockage of blood flow through the graft
- Heart or breathing problems
- Kidney problems caused by X-ray dye (usually temporary)
- Infection (rare)

Rare but serious complications include stroke, paralysis, blood clots, or damage to organs.

Some men may notice difficulty with erections after treatment. Please tell your doctor if this happens, as help is available.

What happens during EVAR?

EVAR is usually carried out in an operating theatre or specialist X-ray suite.

At the start of the procedure:

- You will be given medication to help you relax (sedation).
- Your groin will be numbed with a local anaesthetic or epidural.
- Some patients may need a general anaesthetic (where you are asleep). This depends on your health and will be discussed with you beforehand.

Your surgical team will:

- Clean your skin and shave a small area in the groin to reduce the risk of infection.
- Make one or two small cuts (about 1–2 cm) over the arteries in your groin.

A vascular surgeon and an interventional radiologist work together during the procedure.

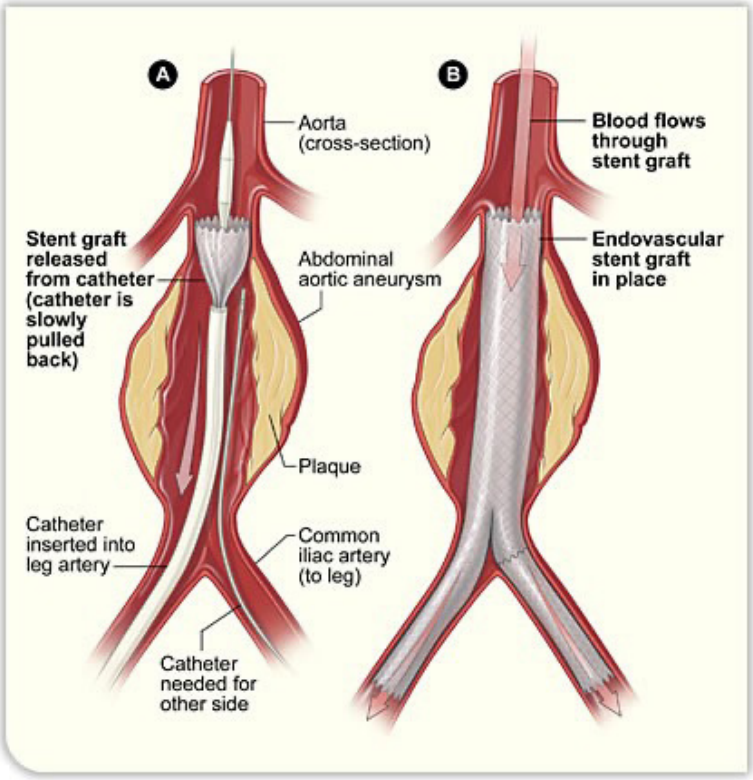
A thin wire (guide wire) is passed into the artery in your groin and gently guided up to the aneurysm. You will not feel the wire inside your artery, as there are no nerve endings there. If you are awake, you may feel some pressure or a mild pulling sensation in the groin.

Using continuous X-rays shown on a screen, the team guides a tube over the wire. A special X-ray test called angiography may be used to check the position. This involves injecting a dye into the bloodstream, which can cause a brief warm sensation.

The stent graft is then passed through the tube in a compressed form. Once it is in the correct position, the tube is removed and the graft opens out inside the artery. The graft lines the inside of the aorta and extends into the arteries that supply blood to both legs.

When the graft is securely in place, the small cuts in the groin are closed.

Fig 2. Schematic diagram demonstrating placement of stent-graft into abdominal aortic aneurysm.



After EVAR: what to expect

- You will usually stay in hospital for **1-2 days**
- You can eat and drink normally soon after
- You will be encouraged to get up and walk

At home: - Do not drive until your groin pain has settled and you can do an emergency stop - Avoid heavy lifting for **4-6 weeks** – Keep wounds clean and dry.

You will have regular scans to check the graft is working properly.

Endoleaks

An **endoleak** is when blood continues to flow into the aneurysm after EVAR.

- Some endoleaks are harmless and settle on their own
- Others need treatment

Endoleaks can occur months or even years after EVAR. This is why **lifelong follow-up scans** are essential.

Driving and DVLA guidance

- You can usually drive if your aneurysm is **under 5.5 cm**
- The DVLA must be informed if your aneurysm reaches **6 cm**
- You may not be allowed to drive if your aneurysm reaches **6.5 cm**

HGV drivers have different rules.

DVLA guidance can change. Please check with your doctor or the DVLA for up-to-date advice.

When to seek help

Contact your GP or vascular team if you have concerns.

Call 999 if you:

- develop sudden severe pain in your abdomen, back, or groin
- collapse or lose consciousness

How to contact us

If you have any questions or queries please contact us on the number at the top of your appointment letter.

Further information

Vascular Society of the United Kingdom

www.vascularsociety.org.uk

The Circulation Foundation

www.circulationfoundation.org.uk

British Society of Interventional Radiology

www.bsir.org

Royal College of Radiologists

www.rcr.ac.uk

Cardiovascular and Interventional Radiology Society of Europe

www.cirse.org

Further information

If you would like an interpreter, please speak to the department where you are being seen.

Please also tell them if you would like this information in another format, such as:

- Easy Read
- large print
- braille
- audio
- electronic
- another language.

We have tried to make the information in this leaflet meet your needs. If it does not meet your individual needs or situation, please speak to your healthcare team. They are happy to help.

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