Patient information

Abdominal Aortic Aneurysm Endovascular Repair (EVAR)

Vascular Department

Your Consultant /Doctor has advised you to have an Endovascular repair of an Abdominal Aortic Aneurysm (EVAR).

What is an aneurysm?

An aneurysm is a dilated or stretched blood vessel caused by weakness of the arterial wall.

The commonest artery affected is the aorta in the abdomen. Men over 65 are the patient group most at risk with 4 in 100 affected. The incidence increases with age. Risk factors are family history high blood pressure and smoking.

What is Endovascular repair?

Endovascular means ‘inside the blood vessel’ – in this case ‘inside the aorta’. The operation places a large stent covered with material inside the aneurysm to stop blood from flowing into the aneurysm and restore the normal diameter of the artery. The graft/stent is placed through the femoral artery in the groin or iliac artery just above it via a small incision. Radiological imaging with X-rays is used to guide the graft/stent into place.

If your aneurysm is complex and involves other branches of the aorta you may need stents to fix each one or even a femoral side to side bypass at the same time.

What are the benefits of having an endovascular repair of aneurysm?

The aim of the operation is to exclude high pressure blood flow from the aneurysm and to stop the aneurysm from expanding. Aortic aneurysms larger than 55mm diameter have an increased risk of rupture and are recommended for surgical repair. The immediate risks of conventional open aneurysm repair are much greater than endovascular repair. The hospital stay is reduced and overall recovery is much quicker with the graft/stent technique.

What are the risks?

Common risks (greater than 1 in 10) include bruising and possible bleeding from the wound.

Occasional risks (between 1 in 10 and 1 in 100) include misplacement of the stent or subsequent dislodgment resulting in leakage around the stent back into the aneurysm (endoleak). An additional stent may have to be placed if this is found.

Some patients may have an embolism (moving debris or blood clot) from the aneurysm down the legs or damage to the femoral artery both of which may lead to lack of blood supply to the legs. Additional procedures may be needed to avoid loss of a limb.

As with any operation, you may develop a chest infection. This is more likely if you smoke. It may need treatment with antibiotics and physiotherapy.

Occasionally, a collection of blood forms around the wound. This is called a haematoma. If this is small it may disperse by itself, but larger haematomas will need to be evacuated in a second operation and a repair of the femoral artery may be needed.

Collections of lymphatic fluid may also occur and need to be drained by needle aspiration.

Infection of the wound is a small risk (1 in 100) – infection of the bypass graft is less common than this but is a serious complication.

A heart attack or disturbance of heart rhythm may also occur in 1 in 100 patients. This may lead to medical treatment especially if the heart is weakened (heart failure).

Disturbance of bowel habit may be caused by the procedure or by painkiller medications.

A small number of cases require conversion of the endovascular operation to a conventional open repair of aneurysm. There is a separate information leaflet “Abdominal Aortic Aneurysm Open Repair” which is available.

Less common, rare risks (less than 1 in 100) include superficial nerve injury to the leg causing an area of permanent numbness or weakness/paralysis of the leg.

Swelling of a leg may occur with the possibility of deep vein thrombosis or pulmonary embolism. Internal bleeding from damage to an internal artery is possible – this may require repair with another stent or open surgery.

Ischaemia (lack of blood supply) to the bowel is a very serious complication that may result in a colostomy or even be fatal is fortunately very rare.

Paraplegia (spinal paralysis) is another rare complication of any abdominal aortic surgery.

Risks of stroke, transient ischaemic attack (stroke symptoms lasting less than 24 hours) and kidney failure requiring dialysis are small risks but may be fatal.

Retrograde ejaculation and erectile impotence can occur in men as a result of the operation.

The need for a second operation (usually another stent) is 1 in 10. The immediate fatal risk of EVAR surgery is 1 in 100.

These procedures are performed using X-ray beams.

Occasionally if the procedure is more difficult than anticipated and prolonged, the X-ray dose can be high leading to skin damage.

This is usually a strong sunburn type visible skin burn if the procedure takes much longer than usual.

These skin reactions may take a year or more to demonstrate themselves, so if we identify that you have had a procedure with a high radiation dose, we will ask you to monitor this area of skin and review this in the outpatient clinic for at least one year afterwards.

Are there any alternatives available?

Conventional open aneurysm repair of an abdominal aortic aneurysm may be advised if you are in the younger age group (55 to 65) or if your aneurysm is not suitable for EVAR device placement. The planning CT scan will identify any factors that determine whether open or endovascular surgery is the best procedure for you. Some patients may be medically unfit for any surgery to the aneurysm.

What happens if I decide not to have treatment?

Your aneurysm may expand to the point of rupture. The majority of patients (9 out of 10) do not survive aneurysm rupture.

What sort of anaesthetic will be given to me?

You will be given a general anaesthetic. General anaesthesia is drug-induced unconsciousness: it is always provided by an anaesthetist, who is a doctor with specialist training.

Unfortunately, general anaesthesia can cause side effects and complications. Side effects are common, but are usually short-lived: they include nausea, confusion and pain.

Complications are very rare, but can cause lasting injury: they include awareness, paralysis and death.

There is a risk of damage to teeth, particularly caps or crowns and veneers. Your anaesthetist will take every care, but occasionally damage can occur.

The risks of anaesthesia and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well.

For more information, please ask for a copy of the leaflet **“You and Your Anaesthetic”** (PIF 344).

You will be given an opportunity to discuss anaesthetic options and risks with your anaesthetist before your surgery.

If you are worried about any of these risks, please speak to your Consultant or a member of their team.

Getting ready for your operation

- You will usually be seen in the pre-operative clinic before you are admitted to hospital. Here you will have blood tests, and sometimes a heart trace or a chest X-ray. You will be assessed to see if you are fit for the anaesthetic.
- The staff will ask routine questions about your health, the medicine you take at the moment and any allergies you may have.
- You will be given instructions on eating and drinking before your operation.
- You will be able to discuss the operation with a doctor. You will be asked to sign a consent form to say that you understand the procedure, and what the operation involves.
- If you smoke, you should stop completely. The risks of stroke are greatly increased in smokers and there are additional risks of heart attack and lung disease with surgery. Advice and help is available via your physician, GP and through NHS 111.

The day of your operation

- You will come into hospital on the day of your operation. Please make sure you contact the ward before you leave home to check bed availability.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping. General Office is open between 8.30 and 4.30 Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.
- Please bring any medication you take into hospital with you.
- Please bring in toiletries, nightwear and towels.
- You will be asked to remove jewellery - plain band rings can be worn but they will be taped.
- Please leave body piercings at home. False nails and nail polish will also need to be removed if worn.
- If you are on regular medication, you will be told to take this if necessary.
- You will be asked to put on a gown and disposable underwear.
- A bracelet with your personal details will be attached to your wrist.
- You may be prescribed some medication to take before your operation by the anaesthetist. A member of the nursing staff will give this to you.
- A nurse and porters will take you to the operating theatre.

- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.

- When you arrive in the theatre area, the ward nurse will leave you, and you will be asked to put on a disposable hat.

- You will then be taken to the anaesthetic room and a member of theatre staff will check your details with you.

What should I expect after my operation?

- After your operation you will be kept in the theatre recovery room before being transferred to the enhanced recovery ward or critical care unit (ITU or HDU).

- A nurse will check your pulse, blood pressure, breathing rate and urine output regularly. We will also carefully monitor your wound for any bleeding or swelling.

- **It is important that if you feel any pain you must tell the nursing staff, who can give you painkillers to help**.

- The nursing staff will also advise you when you can start taking sips of water. Anaesthetics can make some people sick. If you feel sick we advise you not to drink until this feeling has passed. The nursing staff may offer you an injection to help this sick feeling go away.

- The following day after surgery, you will be allowed to sit out, drink and eat. Return to mobility can take a few more days.

Going Home

A plain X-ray will be done before you go home. This is normally at three to five days after surgery.

Pain relief and medication

The nursing staff will advise you about painkillers before you leave the hospital. Please tell the nurses what painkilling tablets you have at home.

Your wound

The surgeon usually uses a dissolvable suture in which case you may not require the District Nurse.

Getting back to normal

You will probably feel tired for several weeks after the operation. Build up your activity level slowly and ensure you get enough rest. You should avoid strenuous activity for about six weeks.

You will be safe to drive when you can do an emergency stop and drive without discomfort. This will normally be at about four weeks but if in doubt, check with your doctor. Avoid long distances and motorway driving at first.

Returning to work

Depending on your job, you will be able to resume in one to two months. If in doubt, please ask your doctor. Avoid any heavy exercise or lifting for six weeks.

Further Appointments

You will have an ultrasound scan, CT scan and blood tests at four weeks and see your consultant in outpatients at approximately six weeks after the operation.

Further blood tests, X-rays and scans with ultrasound and/or CT scanning will be used to monitor the operation at yearly intervals. More complex operations and complications will require more frequent check-ups.

Medication

You will need some antiplatelet medication such as aspirin or clopidogrel 75 mg daily unless you have a medical contraindication to both. Please take any other medication that has been prescribed e.g. for high blood pressure or high cholesterol, and ensure that you have regular blood pressure and cholesterol tests. Your family doctor (GP) or practice nurse can do this.

Feedback

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

Further information

LiVES Contact Numbers

During your contact with us, it is important that you are happy with your care and treatment. Please speak to a member of staff and/or the ward/department Sister/Charge Nurse if you have any questions or concerns.

Vascular Ward
Ward 3
Aintree University Hospital
Tel: 0151 529 2028/2262

Vascular Nurses:

Aintree via switchboard
Tel: 0151 525 5980 Bleep 5609/5594 or extensions 4691/4692

Royal Liverpool Hospital via switchboard
Tel: 0151 706 2000 Bleep 4212 or extension 4675
Text phone number: 18001 0151 706 2000 Bleep 4212

Southport via switchboard
Tel: 01704 705124

Whiston Hospital
0151 290 4508/ 430 4199

Secretaries:

Aintree University Hospital
Tel: 0151 706 3691/ 3523/3524/3481/3457/11813
0151 529 4950/4953

Southport/Ormskirk Tel: 01704 704665

Whiston Hospital
St. Helens and Knowsley NHS Trust
Tel: 0151 430 1499

NHS 111
Tel: 111

Circulation Foundation:
www.circulationfoundation.org.uk/vasculardisease/

Smoking cessation:

Liverpool	**Tel: 0800 061 4212/ 0151 374 2535**
Sefton	**Tel: 0300 100 1000**
West Lancashire	**Tel: 0800 328 6297**

Liverpool Vascular and Endovascular Service
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Participating Hospitals in LiVES are:

- **Liverpool University Hospitals NHS Foundation Trust**
- **Southport District General Hospital**
- **Ormskirk District General Hospital**
- **Whiston and St Helens Hospitals**

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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