

Information for patients

Endovascular repair for Abdominal Aortic Aneurysm (EVAR)



Sheffield Vascular Institute

smoke-free
hospitals

Northern General Hospital

You have been diagnosed as having an Abdominal Aortic Aneurysm (AAA) and it has now reached a size where it can be repaired. This leaflet explains more about Endovascular Aneurysm Repair (EVAR) which can be used to treat abdominal aortic aneurysms and answers some of the most frequently asked questions. If, after reading it, you have any more questions or concerns, you should write them down and discuss them at your next appointment.

Where will my hospital appointments take place?

Your appointment will usually take place at the **Northern General Hospital** with staff from the Sheffield Vascular Institute. We also run local outpatient clinics at the Royal Hallamshire Hospital, Rotherham and Barnsley District Hospitals.

The Sheffield Vascular Institute is one of the largest vascular centres in Europe. We specialise in the treatment of all circulatory conditions affecting the arteries, veins and lymphatics. If you wish to find out more about the Sheffield Vascular Institute then look under the Guide to Services of the Sheffield Teaching Hospitals NHS Foundation Trust website (<http://www.sth.nhs.uk>)

Why do I need the procedure?

We have found that the wall of the main artery (aorta) in your tummy (abdomen) has become weakened and developed a bulge (aortic aneurysm). Large aneurysms are at risk of rupture (bursting). Endovascular repair is a procedure to protect the weakened aorta and greatly reduces the risk of rupture, by lining the inside of the vessel with a special tubular device called a stent graft.

Will I need any tests first?

Yes, we will need to do a range of tests to check that you are fit enough for the operation. We normally send you for these tests before we make the decision to operate. You will then be seen in the Pre-admission Clinic 1 or 2 weeks before your operation when you will have a number of further pre-operative tests if these have not already been performed. These may include blood tests, an electrocardiogram (ECG) and a chest X-ray (CXR).

How long will I need to be in hospital?

You will need to be in hospital for a few days, and the operation will usually be carried out on the day of your admission or the day after. If you are on warfarin you will be asked to stop this at least 2 days before the procedure, and restart afterwards.

Do I need to bring anything in particular with me?

Please bring all the medicines you are taking in to hospital with you. You will also need to bring toiletries, nightwear, and glasses or hearing aid, if you wear them. However, we do advise that you leave valuables and cash at home, with the exception of a small amount of cash for you to purchase newspapers and other items, or to pay to use the patient-line.

Before your procedure

We must obtain your consent for any procedure or treatment beforehand. Staff will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

Before the procedure, one of the consultant radiologists (the specialist x-ray doctor who will carry out the operation), will see you to check that you are happy to go ahead with the procedure and the anaesthetist will also see you to check your fitness and to explain the anaesthetic. Your nurse will explain the ward routines and will answer any other questions that you may have.

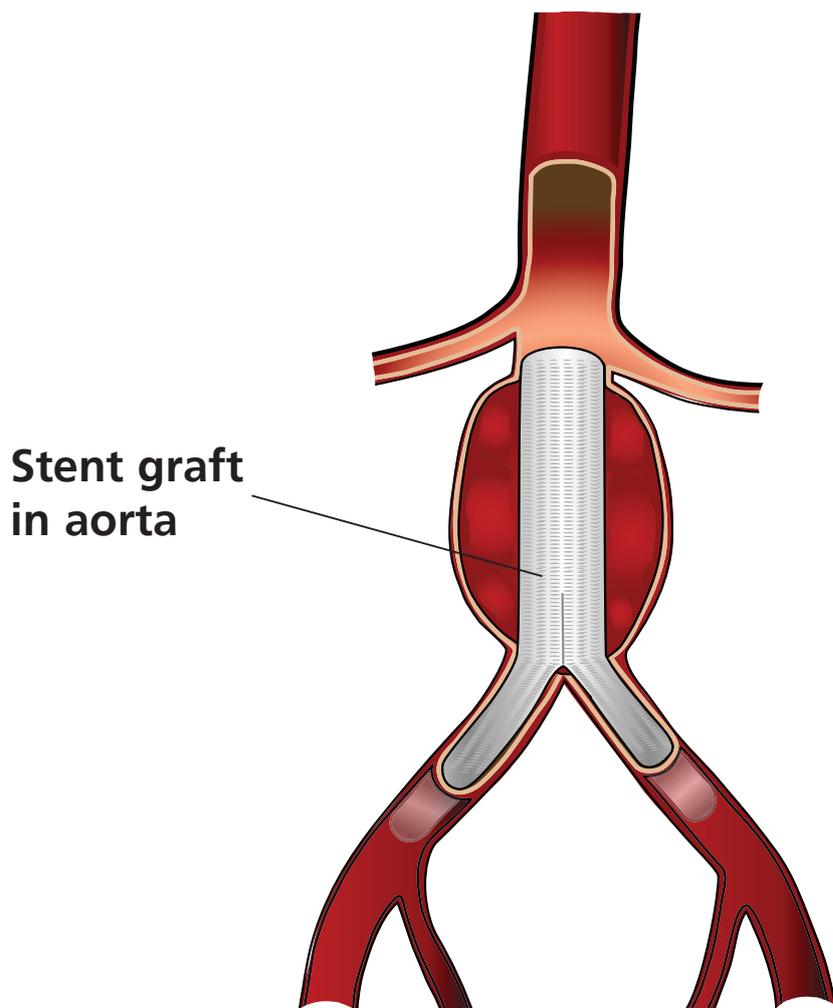
You will be asked not to eat or drink anything at all for 6 - 12 hours before the operation. About one hour before the procedure, you may be given a sedative.

How is the stent-graft procedure done?

This procedure is usually performed under a spinal or epidural anaesthetic, which provides very good pain relief. If you feel anxious, we will give you some sedation to help with this. Occasionally you may be given a general anaesthetic. The procedure takes place in the angio (X-ray) suite.

Most patients who need this operation have a stent graft inserted that looks like an upside 'Y'. The stent graft is usually put in place in two sections, going through the artery at the top of each leg.

The stent graft is collapsed down and contained in a small tube called a delivery system. The delivery system is then placed into the arteries and guided to the correct position. Once in position, the stent graft is expanded and re-lines the inside of the aorta. The x-ray machine guides placement, and x-ray dye or contrast is injected periodically to check correct positioning. Once all the pieces of the stent graft have been inserted and fitted together, the aneurysm is sealed off at the top and bottom. The delivery system is then removed, leaving the stent graft in place.



Sometimes, it is possible to do this operation with just small cuts or incisions in one or both groins. This is called percutaneous EVAR. The small hole in the artery is then closed with a special closure device which uses a stitch. The skin incision is then closed with either paper skin closures or a stitch but this depends on the size of the incision.

For some patients this is not possible, and a longer incision, up to 10cm may need to be made in the skin. The incisions are then closed after the stent graft has been positioned using surgical stitches or clips.

The procedure usually takes about 2 to 3 hours to complete. Occasionally other types of stent graft may be required to deal with complex and challenging cases. Your radiologist will have discussed this with you in the outpatient clinic.

What happens after the procedure?

Patients are usually taken to the Post Operative Surgical Assessment Unit (POSU) or the High Dependency Unit (HDU). This allows us to monitor your progress closely.

You may be given oxygen through a mask to help you breathe. You will have a drip which will give you fluids until you are able to drink and eat again. You will have a tube in your bladder (catheter) which will help us monitor the amount of urine you are passing.

The nurses and doctors will try and keep you free of pain by giving you pain killers by injection, via a tube in your back, or by a machine that you are able to control yourself by pressing a button (patient controlled analgesia). As you improve the various tubes will be removed. Once you have got over the initial recovery period and your condition is stable you will be transferred back to the ward until you are ready to be discharged home. Depending upon how complex your operation was, we will discharge home between 2 to 6 days after your operation.

If dissolvable stiches have been used for the groin wounds, these do not need to be removed. If you have stitches or clips that need removing then the ward nurses will arrange for this to be done by your practice nurse or district nurse once you are discharged.

You will usually be prescribed aspirin to reduce the stickiness of the blood and a statin to reduce your cholesterol level if it is raised. Another anti-platelet agent (clopidogrel) may be used if you cannot tolerate aspirin. Tablets for blood pressure may also be started, or your blood pressure medication changed after the operation. All these medications are aimed at reducing the risk of further trouble from arterial disease.

Are there any risks with the procedure?

Groin bruising and discomfort is common after this procedure and we will give you painkillers for this, if required. Occasionally the artery in the groin is damaged by the delivery system, and surgery is required to repair a hole or blockage (1 in 50 - about a 2% risk).

Since the aneurysm is not actually replaced, there remains a small risk of rupture. This is why we need to monitor the stent-graft with regular scans after the procedure.

About 1 in 20 (5%) patients develop a leak following this procedure. Most of these leaks are small, do not cause risk and can simply be monitored using regular CT scans. If the leak does need treatment then most can be replaced in the X-ray department. Very rarely is an open surgical repair required following a leak'.

Other potential risks include heart attack, kidney failure, bowel ischaemia (depriving the bowel of a normal blood supply), leg vessel damage and stent graft malpositioning (where the stent graft ends up in the wrong place).

Extreme care is taken to avoid these complications and they are rare.

How long before I can resume normal activities?

It is important that you take regular exercise during the first few weeks following this procedure. However, do not do much more than a short walk combined with rest.

Within 2 - 4 weeks, you should be able to start a gradual return to your normal levels of activity. this may be sooner if the percutaneous technique is used.

Will I need to come back to hospital for a check up?

Yes, we will need to check the position of the stent-graft. This will be done by tummy (abdominal) CT scan, about 1 month after the procedure. You will then be seen in the outpatient clinic by one of the radiologists to discuss the findings of these tests.

National Vascular Database

The Sheffield Vascular Institute participates in the National Vascular Database. This is so our results can be compared with other vascular units in the UK. The data that we collect includes your name, date of birth, NHS number, hospital number, GP practice as well as details of your treatment. If you have any questions about this please discuss them with one of the vascular doctors.

How can I help myself?

If you smoke, you must make a determined effort to stop completely. Continued smoking will cause further damage to your arteries. Smoking cessation help is available from your GP or the hospital. General health measures, such as reducing weight and regular exercise, are also important.

What if I think there is something wrong when I get home?

If you think that there is something wrong with your wound once you get home, you should contact the ward from which you were discharged. This should be either:

**Firth 2 - 0114 271 4686 /
0114 271 4602**

Other useful contacts:

Circulation Foundation

Provides support and advice for patients and their families

Website: www.circulationfoundation.org.uk

Sheffield NHS Stop Smoking Smoking Service

Website: sheffieldstopsmoking.org.uk

Telephone: **0800 068 4490**

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