

Patient information factsheet

Endovascular aneurysm repair (EVAR)

Arteries carry blood away from your heart to the rest of your body. An aneurysm occurs when the artery walls weaken and the vessel swells and balloons out. These usually happen in the abdominal aorta which is the vessel that leads from the heart, through the tummy (abdomen) to the rest of the body and is called an abdominal aortic aneurysm (AAA).

If the aneurysm grows large enough there is a danger that it will burst (rupture), which can be life threatening, so we treat them to prevent this from happening.

Aneurysms can affect people of any age and both sexes. In most cases, the exact reason why an aneurysm forms is not known.

The surgery

EVAR is a minimally invasive keyhole surgery to repair an aneurysm. It is performed through small holes in each groin while x-rays are used to guide the surgeon during the procedure. The swollen artery in the abdomen is relined from the inside using a series of covered stents, which is a special device made of metal mesh that is placed across a narrowing or blockage to keep the artery open. This prevents the AAA from getting bigger and removes the risk of it bursting.

It is very rare that an aneurysm less than 5.5cm in diameter bursts. The risk is less than 1 in 100 per year but an aneurysm of 5.5cm and larger is more likely to rupture and it is usually at this size that surgery is considered. Each individual's risk from their AAA and from surgery will be different.

Repair of an AAA is a surgical procedure that is usually carried out when the risk of it rupturing is higher than the risk of an operation. Any decision on treatment will be carefully considered by your vascular multidisciplinary team (MDT) and discussed in detail with you.

What are the risks of treatment?

An EVAR is often deemed safer than a conventional open abdominal aortic aneurysm repair, however as with any operation there are risks involved which vary according to your health but typically include:

- **Heart attack (uncommon).** Surgery can expose the body to stress which can lead to a heart attack. During the pre-assessment process the nurses and doctors will assess and optimise your heart prior to surgery.
- **Kidney injury (uncommon).** We use an iodine dye (contrast) to fill the arteries so that we can see them more clearly on an x-ray screen. This dye is very safe but can occasionally affect kidney function, particularly if there is already some kidney damage, which the blood tests performed before the procedure will show. Intravenous fluids and medication can be given before and after the procedure to try to reduce this risk.

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- **Large bruise/haematoma (uncommon).** Sometimes bleeding can occur under the skin where the catheter is inserted. In severe cases this may involve further surgery.
- **Re-interventions (uncommon).** Around 1 in 10 patients will need to have a further smaller operation in the future if a leak is detected around the stent at your follow-up scan. We will take further scans to ensure all is well. These are usually performed annually but may be more frequent if needed.
- **Infection (very rare).** Skin infections can occur and be treated with antibiotics. Graft infections, which thankfully occur very rarely (less than 1% of cases), would require further surgery.
- **Risk to life (uncommon).** As with any major operation there is always a risk to life. This is usually extremely rare but is partially dependent on your age, weight and general health. It is important to note that this risk is smaller than the risk of the aneurysm rupturing.

As with any operation there is a small risk of you having a medical complication such as a chest infection, stroke or deep vein thrombosis [DVT]. The doctors and nurses will try to prevent these complications and to deal with them rapidly if they occur.

We will be happy to discuss these risks with you, or answer any questions that you may have.

Are there any alternatives to this treatment?

Unfortunately there aren't currently any drug based treatments that are able to strengthen the wall of the aorta.

A major operation to repair the aneurysm is possible in most patients. This involves a large cut from top to bottom of the tummy (abdomen) and replacing the weakened part of the aorta with a tube. This is not suitable in all cases. If you would like more information about this please speak to your doctor or nurse.

Consent

We must seek your consent for any procedure or treatment before it can go ahead. Your medical team will explain the risks, benefits and alternatives where relevant before they ask for your consent. If you're unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

Before your surgery

Preparing for your operation

Smoking is a major risk for arterial disease, increases the chances of getting a chest infection and slows your recovery. So if you're a smoker, you need to stop. The NHS Quitters service is available to help support you. You can contact them on 0300 123 3791 or visit www.solenthealthyliving.nhs.uk. You can also talk to your GP who can prescribe nicotine replacement for you. Exercise can boost your immune system and help your recovery so try gentle exercise, such as walking and cycling.

Thinking about your return home

Before your operation, it's a good idea to start thinking about how you will manage at home after your surgery. We encourage patients to stay with family or friends or to have a relative staying with them if possible. If you live alone or require additional support then we may need to help you make plans for a short period before you go home. The sooner we know this, the sooner we can start arranging something for you. Talk to your close family, friends and GP to see what options you have.

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You will need to be collected from hospital on the day you are discharged so, before you come into hospital, you should arrange who will collect you. It's also worth asking someone to get you fresh food so you have something at home when you leave hospital.

High blood pressure

High blood pressure increases the risk of an aneurysms rupturing so it's very important that you have your blood pressure checked regularly. If you have been prescribed medication for high blood pressure you must make sure that you take it according to the instructions you have been given.

Driving before your surgery

If you have a small AAA of less than 5.5cm you are allowed to continue to drive. The DVLA should be notified if your aneurysm reaches 6cm in diameter. If your AAA reaches 6.5cm in diameter you are not allowed to drive.

HGV drivers are disqualified from driving if their AAA is bigger than 5.5cm.

Contact the DVLA for more information.

Pre-assessment

Before you are admitted for surgery you will be seen by a specialist nurse and an anaesthetist in clinic. We'll take a detailed medical history, as well as perform blood tests, a physical examination, blood pressure checks and a heart trace (ECG). The anaesthetist will talk to you about your anaesthetic and how your pain will be controlled.

You should bring in a list of the medications you take and when you take them. We'll let you know if you need to make any changes to your medication for your surgery.

You will also be asked to fill in a questionnaire for the therapy team to help identify if you may need any help or support after the operation. If you do then a member of the therapy team may contact you before you come into hospital. You will also be given information on local services which may be useful to you.

Coming into hospital

What to bring

When you come into hospital there are a few items that you should bring:

- All your medications (including insulins and inhalers)
- Nightwear and changes of clothes
- Toiletries
- Dentures, glasses and hearing aids if you have them

Bring them in a small bag labelled with your name. There isn't much storage space on the ward so it should only be a small bag.

We recommend that you leave valuable items at home; especially as you'll be asked to remove jewellery prior to surgery. The ward cannot accept responsibility for items left on the ward and not handed to the cashiers for safe keeping.

What to expect during your stay in hospital

Prior to surgery you will be assessed to ensure nothing has changed. You may need to have further blood tests. A drip (cannula) will be inserted into your arm to allow for medications or fluids to be given.

On the day of surgery you will be taken to theatre where your details will be checked before you're taken to the anaesthetic room and then into surgery.

After theatre you will usually return to the ward. If you require observation you will be taken to the high dependency unit (HDU). Your anaesthetist will tell you if this is necessary.

Pain

The wounds in your groins are likely to be uncomfortable at first so you'll be offered pain relief. The pain should improve over time.

Eating and drinking

Once you're awake you will be allowed to eat and drink. You may find you're not very hungry at first but it's important to eat regularly to help your recovery.

Moving around

Moving around soon after surgery will help speed up your recovery and prevent complications.

Deep breathing and coughing exercises help to prevent chest infections so it's important that you do these. The ward staff will help you to regain your normal mobility. Moving around will not cause any damage to the surgical sites.

You will be encouraged to maintain as much independence as possible with your personal care and toileting during your recovery.

Changes to medication

You'll be given aspirin (or an alternative) and a cholesterol lowering drug, if you're not already on one. You will usually have to take these for the rest of your life.

Your wound

There may be a dry dressing over your wound. This can be removed after a couple of days. Very occasionally special dissolvable stitches are used to close the wound.

Following your surgery you may have some swelling and bruising. This is normal and it will disappear within a couple of weeks.

When you are resting, keep your legs up on a stool with your heels clear and your feet ideally higher than your knees. This is to help reduce the swelling in your legs after the operation.

If your wounds becomes red, sore or is oozing please let your GP know, as this could be a sign of an infection.

Frequently asked questions

How long will I have to stay in hospital?

You will usually be discharged the day after your surgery. Recovery times vary and it can take several weeks to feel 'back to normal'. It also depends on your health and activity before surgery.

Can I shower/have a bath?

Once your wounds are dry you will be able to bathe and shower as normal.

Can I exercise?

Exercising after your operation will aid your recovery and help you to return to normal daily life more quickly. It's important to start slowly. Initially you should not lift heavy objects, or do any strenuous activities or sports.

Walking is an excellent form of exercise not only for your muscles but also for your heart and lungs. Take it easy at first. You will tire easily and will need to rest but do not stay in bed. Some days you will feel better than others. Go for short walks and build up over time with a gradual return to normal activity.

You will be able to manage light work around the house, in the garden and at work when you feel fit and able. Excessive activity will cause pain rather than actual damage. Don't try to do too much, too quickly.

When can I return to work?

Most people are able to go back to work after six weeks. If you need further time off, talk to your GP.

Can I drive after the operation?

You can start driving again after 48 hours and when you are able to do an emergency stop. You can practice doing this in the car without the engine on. If you drive a manual car you need to be able to lift both legs at the same time to push down on the brake and clutch, quickly and forcefully. If this causes you pain, then you're not ready to drive yet. Sometimes this can take four weeks. If in doubt, you should check with your GP and insurance company.

Can I fly?

There aren't any cases that we know of where flying after treatment has been harmful. You may need to advise your insurance company of any recent illness or treatment you are receiving prior to travelling.

Storing your personal information

Vascular surgeons record information about surgical interventions on the National Vascular Database (NVD). This is a secure database that is used to help monitor and improve vascular services throughout the country. Strict data governance and confidentiality rules mean that personal details on the NVD can only be accessed by staff directly involved in your treatment. If you have any questions or concerns regarding this please speak to your surgeon.

Who should I contact if I have any queries?

If you need any further information about your surgery or anything covered in the booklet, you can contact the vascular nurse specialists between 9am and 5pm, Monday to Friday on **023 8120 6039**. This number has an answerphone.

Information about general health conditions can be found at www.nhs.uk

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This information is intended as a guide only. Everyone is different and treatment and recovery may vary from one person to the next.

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If you need a translation of this document, an interpreter or a version in large print, Braille or on audiotape, please telephone 023 8120 4688 for help.