Patient information factsheet

Abdominal aortic aneurysm repair

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

During the operation the surgeon will make a cut either down or across the abdomen (occasionally a cut may also be needed in one or both groins). The aneurysm will be replaced with an artificial piece of blood vessel (graft) made of synthetic tubing.

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 or larger is more likely to rupture, which is why we consider surgery. Each individual's risk from their AAA and from surgery will be different.

Surgical repair of an AAA 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?

As with any operation there are risks involved which vary according to your health but typically include:

- **Chest/breathing problems (common)**. It is quite common to develop some breathing problems and specifically a chest infection after major surgery, but the risk can be reduced by doing regular exercises. The therapy team will advise you.
- **Kidney failure (uncommon)**. The aorta supplies blood to the kidneys and this supply can be affected by reduced blood supply during the operation. This is rare and usually temporary, however it may need further treatment.
- **Heart attack (uncommon)**. A large operation can put you at risk of having a heart attack. You will have an assessment beforehand and your anaesthetist will help manage your care to reduce your risk.

- **Loss of circulation in the legs or bowel (rare)**. Arteries that come from the aorta supply blood to the legs and the bowel and these can be affected during the operation. You will be monitored and further treatment will be required if this happens.

- **Wound infection (rare)**. If a wound infection occurs, it usually only requires antibiotic treatment. Occasionally the wound needs to be cleaned out under anaesthetic.

- **Infection in the graft (extremely rare)**. The graft is made from manmade materials and it can become infected. Your surgeon will ensure that everything is done to reduce the risk. Should this happen, a course of antibiotics is required but we may also have to remove the graft.

- **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.

Other possible complications:
- Up to 1 in 10 men experience difficulty keeping an erection or ejaculating following surgery due to injury to the nerves which lie on the front of the aorta.
- There is a risk of a deep vein thrombosis (DVT/blood clot) so you'll be given treatment during your stay in hospital to prevent this.
- Occasionally the wound may leak clear/yellow fluid called lymph. This usually settles after several weeks.
- There is a small risk of developing a hernia (when an internal part of the body pushes through a weakness in the muscle or surrounding tissue) at the wound site in future years.

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 any drug based treatments that are able to strengthen the wall of the aorta. In some cases we can insert a surgical stent into the aorta, but this depends on the size and location of the aneurysm and where other major blood vessels are located so isn't always a suitable option.

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.

High blood pressure

High blood pressure increases the risk of an aneurysm 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.

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.

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.

Pre-assessment

Before you're 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). You may be asked to to cycle on a stationary bike while wearing a breathing mask. This allows us to measure how well your heart and lungs work. 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 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 and have your details checked before being taken to the anaesthetic room to have your anaesthetic and surgery.

After theatre you will go to the high dependency unit (HDU) where you will be closely monitored until you are ready to come to the ward (usually 24-48 hours)

You may have a number of special tubes initially which will be removed as you recover:

A drip to give you fluids directly into a vein.

A naso-gastric tube which goes through your nose to your stomach to help drain away the contents so that you don't feel sick. It is removed when your gut is working.

A urinary catheter tube into your bladder to drain urine. The drainage is measured closely by the staff.

An oxygen mask for a few days.

A PCA drip that goes through a pump to give you pain relief.

A wound catheter, which is a tiny tube that goes near the wound to provide local anaesthetic to the wound to reduce pain. This will be removed after a couple of days.

Your pulse, blood pressure, temperature, breathing rate and heart rhythm will be very closely monitored.

Pain

The wound in your abdomen is likely to be uncomfortable at first. You may have pain relief drips (PCA and/or wound catheter) for the first few days after surgery. Once you are eating and drinking, you will be able to take pain relieving medications by mouth. The pain will slowly improve, but you may get twinges and aches for between three to four weeks. It's important your pain is controlled so that you can cough well and move about.

Eating and drinking

Once you are awake, as long as you're not feeling nauseous or being sick, you will be allowed to drink clear fluids and your drip will be discontinued. You will then move onto a combination of a light diet and nutrition support drinks. You may find you're not very hungry at first but it's important to eat regularly to help your recovery. The clinical team will guide you through this.

Moving around

Moving around after surgery will help speed up your recovery and prevent complications. The therapy team will see you the first day after your operation to teach you exercises to keep your joints and muscles supple. The exercises may be a bit uncomfortable to start with but with practise they will get easier. They will also start to get you up and moving as quickly as possible. The therapy team will help you to progress and return to walking normally. The nursing staff will be able to help you practise this.

Deep breathing and coughing exercises help to prevent chest infections so it's important to do these. The therapy team will give you advice and ward staff will give you any individual assistance you need to regain your normal mobility. Moving around will not cause any damage to the graft or to your wound. It is expected that you will sit out in a chair the day after surgery and then begin to walk a short distance the day after that.

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

Your wound

There will be a dry dressing over your wound. Special dissolvable skin stitches are used to close the wound. Non-dissolving stitches are occasionally used which will need to be removed around usually 8-10 days after the operation. Your nursing staff will tell you if this is the case. You'll probably be back home before your stitches need to come out, so the ward will ask for them to be removed by your practice nurse at your GP surgery.

The wound will appear to have healed within two weeks or so, but the underlying tissues can take several months to heal completely and you may find the scar and wound are lumpy and quite hard for several months.

Following your surgery you may have bruising over your abdomen. This is normal and will disappear within a couple of weeks. You may also get swelling around the lower part of your abdomen and genitals. This should also get better within a week or so but sometimes can take a little longer. You could experience areas of numbness or oversensitive areas around the wound. This is also normal.

If your wound becomes red, sore or is oozing when you have been discharged please let your GP know, as this could be a sign of an infection.

Sleeping and feeling tired

It's normal to feel tired for at least four to six weeks after your operation. You might need a short sleep in the afternoon for a few weeks, as you gradually increase your level of activity. You may feel low in spirits for a while, so it's good for you and your family to be aware of this.

Bowels

It's likely that you won't have a bowel movement for several days after the operation, and it might take several weeks to return to your normal bowel habit. You may find that your bowel motions are initially loose (this should settle within a couple of weeks once you are eating properly). You may get constipation (a common side effect of pain relief medications). If you do have problems, medication can be prescribed by your GP to help.

Frequently asked questions

How long will I have to stay in hospital?

You would usually be discharged after six days. 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 wound is 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 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 this 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**

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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