PATIENT INFORMATION

Abdominal Aortic Aneurysm

Open Surgery for my AAA

CIRCULATION FOUNDATION
The Vascular Charity

The following information is applicable to the majority of patients, but there may be additional specific considerations for you personally. The information provided here should be used to supplement any specific conversations your team have with you.

Some words and technical terms are coloured green, and have further explanation in the glossary - which can be found here.

WHAT IS AN ABDOMINAL AORTIC ANEURYSM (AAA)?

"Aneurysm" means a dilatation, or in other words a ballooning or bulge, affecting a blood vessel. The Aorta is the main artery that leaves the heart and delivers pressurised oxygen-rich blood to the various organs as it travels down through the body. Aneurysms can occur in most blood vessels in the body, but the Aorta is the most commonly-affected. When an aneurysm occurs in the segment of Aorta within the Abdomen (tummy), it is called an Abdominal Aortic Aneurysm (AAA).

What causes an AAA?

In general, this is a degenerative, age-related disease, most commonly affecting people over 65 years of age. Men are about 6 times more commonly affected than Women. Risk factors for developing an AAA are typically the same as those for other cardiovascular conditions like heart attacks and strokes; 90 out of 100 patients with AAA have a history of smoking, with other factors including high blood pressure and cholesterol. Genetic factors can play a role, so there may be a family history of aortic aneurysm, particularly if they develop at a younger age.

How do I know I have an AAA, and why are they important?

AAAs generally do not cause any symptoms, and usually grow very slowly over time. The ultimate concern with an AAA is the risk of it rupturing or "bursting", if it grows to a large size. If an aortic aneurysm ruptures, this is fatal for most people, although a small proportion of people may survive with emergency life-saving surgery.

The NHS offers screening to men over the age of 65, so that they can be detected early and monitored, although most aneurysms are still picked up by chance during scanning for other reasons.

What happens when an AAA is found?

Once an Aortic aneurysm is identified, regular surveillance scans are usually advisable; the type of scan and frequency of scanning is determined by a number of factors such as location and size of the aneurysm, and overall fitness of the individual.

Do I need treatment for my AAA?

Small aneurysms can be safely observed, as the risk of rupture is negligible. AAAs slowly grow over time, at an average of around 2mm per year; some will grow slower, while others may grow more quickly. The increased risk of rupture in a large aneurysm means you may be advised to undergo surgery if your AAA exceeds 5.5cm in diameter, when the rupture risk is around 1 or 2 in 100 chance per year; this slowly rises as the aneurysm continues to grow, if left untreated.

WHAT DOES THE OPERATION INVOLVE?

This is major surgery, performed with you asleep under a general anaesthetic. You can expect a series of other drip lines, tubes and connections to monitors.

Once you are asleep you will be transferred into the operating theatre. Each aneurysm has some unique characteristics that your Vascular Surgery team will have planned a particular approach for. The surgery involves a large incision on your abdomen to allow the Aorta and associated arteries to be exposed. The aneurysm is then isolated from the circulation by clamping the Aorta above and below it. The aneurysm is opened and replaced by hand-sewing a prosthetic graft in its place using permanent stiches. The clamps are then released and blood flows through the new graft. The existing Aorta is then wrapped around the new graft. The operation usually takes around 4 hours.

Your wound will be closed either with stitches under the skin that dissolve by themselves, or by metal staples that will need to be removed after 10 – 14 days.

What should I do before Open AAA Surgery?

- **Stop smoking**
  - If you are a smoker, the single most important thing you can do to help yourself is to give up.
  - Stopping smoking before surgery will reduce the chances of complications.
  - This will help to protect all your arteries, making it less likely that you will suffer from heart attacks, strokes and problems with the circulation in your legs .
- **Take the medications you are prescribed**
- **Increase your activity levels** – brisk walking, swimming or an exercise bike are all excellent
- **Prepare your home** (see later)
- You will usually be given some **body wash and nasal ointment** to use for a few days prior to the operation. Please use this, as it reduces the risk of infections.

What happens after the operation?

Most people are woken up and taken off the ventilator at the end of the operation, and you will then be transferred to a High Dependency ward. You will be connected to various monitors, lines and tubes. You might not remember much about this initial period.

People typically spend 1 or 2 nights on the HDU, after which you will transfer to a standard Vascular ward for another 5 days on average. Most people are well enough to return home by about 7 days.

WHAT ARE THE BENEFITS OF OPEN AAA SURGERY?

Once you are recovered from surgery, you are able to essentially forget about your Aorta from that point forward; the chances of requiring further AAA-related treatments in the future are generally negligible. The trade-off that allows this is the up-front investment in a slightly higher short-term risk of complications in comparison to EVAR.

What are the risks?

Your operation and the aftercare will have been planned very carefully by an expert team who are fully equipped to perform the surgery and manage complications that might arise. In general, if complications occur, they tend to be in the first few hours and days after the operation and this is why you will be looked after on a High-Dependency ward in this initial period.

The National Vascular Registry keeps a record of all open AAA operations and their outcomes.

Short-term (in hospital)

- Breathing problems
- Bleeding
- Heart attack
- Disturbance in kidney function
- Infections – chest, wound and urine infections are quite common. Infections of the aortic graft are exceptionally rare
- Blood clots or disturbance of blood flow to legs or bowel– may require additional procedures
- Ileus
- Venous Thromboembolism (VTE): this can include a Deep Vein Thrombosis (DVT), or Pulmonary Embolism (PE).

These issues may prolong your hospital stay, require additional treatments including surgery, and delay your recovery to some degree.

There is (in general) around a 3 in 100 chance that a complication proved fatal; your Vascular team will fully discuss the pros and cons of these risks with you in detail before you commit to a particular decision.

Longer-term:

- Readmission after discharge – a "Short-term" issue might rarely occur a bit later and require a further hospital admission after you have gone home.
- Sexual dysfunction – up to 1 in 10 men may find difficulty getting / maintaining an erection or ejaculation problems. This is due to bruising or damage of the nerves controlling sexual function, which lie very close to the aneurysm.
- Wound healing issues might affect a small number of people

What are the alternatives?

Click on the following for more information

- EVAR
- Deferred or no operation

OTHER THINGS TO EXPECT IN HOSPITAL

Throughout your stay you will receive regular review from the surgical team and other healthcare professionals like Physiotherapy, who will give you breathing exercises and gradually help you get back to full mobility. It is important that you can move about, take deep breaths and cough comfortably. This will help minimise the risk of issues like chest infections, pressure sores, constipation, and Deep Vein Thrombosis (DVT). You will usually be given a daily injection and perhaps some special stockings to wear, which aim to reduce your DVT risk.

You will be advised what medications to take; this may include what you were taking before but there might be some amendments and you will receive advice about your medicines going forward. When you leave hospital, your GP will be informed of what has happened, and any ongoing medicines advice will be communicated to them.

Will I need a blood transfusion?

During the operation, your own blood is processed through a special system and can be given back to you. Many patients will not require any additional transfusion. It may be necessary to give you additional blood that has been specially checked for compatibility with your own. Your surgical team will discuss this with you before surgery, and again after the operation if it becomes necessary at a later point.

Pain control

It is quite normal to feel some discomfort in your abdomen after the surgery, but there is a range of different pain relief options available, that will be provided to ensure you are comfortable. Some of these painkillers can have side-effects like nausea (sickness) or constipation; other medicines are usually given to help alleviate these issues during your initial recovery.

Eating and drinking

Most patients are able to start sipping water once they are fully awake and alert, and slowly build up dietary intake over the next few days. Your appetite might be affected for the first few days. Sometimes the bowels take a bit longer to get going.

What can I do to help my recovery in hospital?

- Work with the Physiotherapy and Nursing team to regularly change your position in bed as well as getting up and moving around as much as possible when able.
- Use a pillow or rolled-up towel to support your wound when you need to cough or move.
- Once you are able, a warm shower may help you feel more normal.
- Relaxing: you may find this difficult to do but simple breathing exercises may help.
- If your appetite is not good, try to eat little and often.

What should I expect with my wounds?

Your wound should be dry and healed within 2 weeks. Wound infections do occasionally occur and may require a course of antibiotics. If you develop redness or swelling of the wound after your discharge, you should see your GP.
If staples have been used to close your wound, the team will usually liaise with a practice or community nurse to remove them after you have been discharged.

Once your wound is dry and you have left hospital:

- Take showers rather than baths to avoid soaking your wound
  - Do not scrub your wound
  - Pat the wound dry after a shower, rather than rubbing
- Avoid perfumed products on your wound, including moisturisers and talcum powder
- Non-perfumed moisturisers can be gently massaged around the wound to help it settle down

PLANNING FOR WHEN YOU LEAVE HOSPITAL

It's a good idea to have your home prepared for when you return from hospital.

You may want to rearrange your furniture to make it easier to move around and put any items that you use a lot at a convenient level in easy reach. This will mean you won't have to strain to reach them.

You may want to stock up on easy-cook meals, arrange for someone to do your shopping or order online, as you will be tired for a few weeks after your operation.

If you are on your own, you may wish to enlist the help of family / friends.

Medications

You will usually be sent home on a small dose of Aspirin and a Statin, if you are not already taking them. These two medications are taken for cardiovascular protection, helping reduce the risk of heart attacks and strokes, which are related to the underlying condition responsible for most AAAs.

Activities

- It can take 2-3 months (sometimes a bit longer) to get back to your normal levels of activity.
- Whilst you are recovering, you should plan periods of rest into your day, gradually reducing them as you get stronger.
- It is normal for you to feel tired easily.
- The best way to recover is to gradually increase your level of physical activity over 3 months.
- Gentle exercise such as walking or cycling are recommended to help improve your overall level of fitness.
- You may resume sexual relations as soon as you feel comfortable; however, see the comment [link] regarding the potential issues with sexual function.
- You should avoid heavy lifting or straining for around 6 weeks to allow your abdominal muscles to knit back together and regain strength. As a rule of thumb, if something is too heavy to lift comfortably with one hand, you should avoid lifting it for this time. You should avoid strenuous activities or sports for the first 6 weeks . Taking regular exercise such as a short walk combined with rest is recommended for the first few weeks, which you can gradually increase. Taking on light household chores and walking around your house is a good starting point.

WILL I NEED TO COME BACK TO HOSPITAL FOR A CHECK-UP?

You will usually receive an appointment to be seen in the Outpatient Clinic in about 6 - 8 weeks, to check you over and make sure everything else is ok. You will be enrolled in a surveillance programme, as described above.

OTHER INFORMATION FOR YOUR RECOVERY

Work
If this applies to you, you should normally be able to return to work within 6-12 weeks of surgery. Your surgical team can give you more advice, arrange for fitness to work certificates and so forth.

Driving
Following your operation, you can resume driving when you can perform an emergency stop safely. This will normally be by about 4 - 6 weeks after surgery. You should inform your insurers that you have undergone the procedure in case they have their own rules on this. If you are in doubt, check with your surgical team.

Flying
You should wait at least 4 - 6 weeks before flying after your operation, but check with your surgical team before you make any travel plans.

Please feel free to ask your Doctors and nurses about anything that is unclear, or if you have any unanswered questions about your care.

What if I think there is something wrong when I get home?
Please contact your Vascular Unit

SOURCES OF MORE INFORMATION AND HELP

CF links to General AAA info, EVAR, and Non-operative info

Please click on the following for more information:

- NICE decision support tool
- Smoking
- Exercise
- Diet
- Alcohol

Whilst we make every effort to ensure that the information contained in this patient information sheet is accurate, it is not a substitute for medical advice or treatment, and the Circulation Foundation recommends consultation with your doctor or health care professional. The information provided is intended to support patients, not provide personal medical advice. The Circulation Foundation cannot accept liability for any loss or damage resulting from any inaccuracy in this information or third party information such as information on websites to which we link.

CIRCULATION FOUNDATION
The Vascular Charity

BSET British Society of Endovascular Therapy

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