

Canterbury

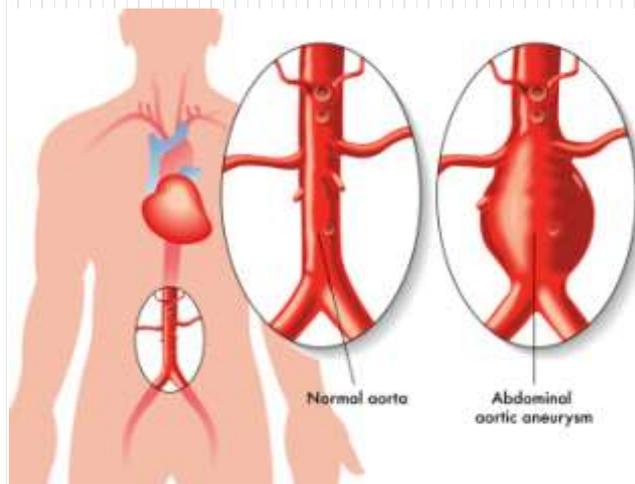
District Health Board

Te Poari Hauora Ō Waitaha

Patient Information

Surgery for Abdominal Aortic

Aneurysms

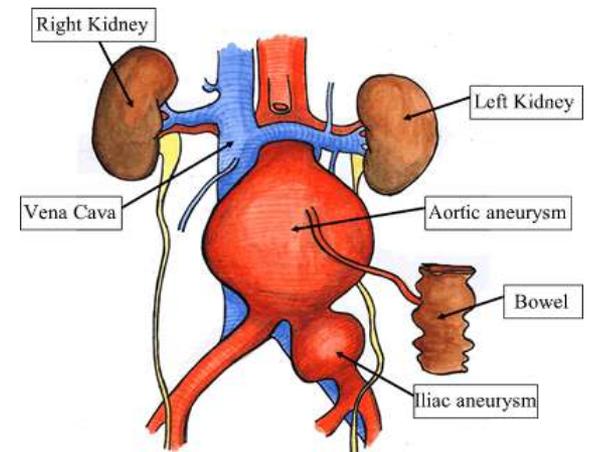


INTRODUCTION

- Most people make a rapid recovery after aortic aneurysm surgery and experience no serious problems. However, it is important that you should know about minor problems which are common after this operation, and also about more serious problems which can occasionally occur.
- The section "What problems can occur after the operation?" describes these, and we would particularly ask you to read this.

What is an aortic aneurysm

- An aneurysm is a weakening of the walls of an artery that results in it getting wider and thinner.
- Aneurysms are most often found in the aorta, the main blood vessel coming from the heart to supply the rest of the body with blood.
- The aorta travels up from the heart first to give branches to the head and arms and then down through the chest and abdomen to supply the rest of the body, the internal organs ending with two branches that supply blood to the legs.
- Most aneurysms develop in the abdomen, below the main branches to the kidneys and above the main branches to the legs.
- Aortic aneurysms are deep in the abdomen, where they can be difficult to feel. They usually cause no symptoms.



How do you get an aneurysm

- We do not know exactly why aortic aneurysms develop.
- We do know that they are the result of weakening of the wall, and that this is usually as a result of smoking related artery disease.
- There are other causes such as infection and genetic conditions but they are much more rare.
- Aneurysms are 3-4 times more common in men than women.
- They are very uncommon in people less than 55 years of age and start to become common after 65 years of age, increasing as you get older.
- There is a tendency for them to develop in the same family but there has been no specific genetic link identified in most cases.
- Your surgeon will be able to discuss this with you.

What harm can aortic aneurysms cause

- The normal aorta is less than 3cm wide, and only if it becomes wider than this then an aneurysm is present.
- Most aortic aneurysms grow slowly over time. There are usually no symptoms from an aneurysm.
- As they increase in size, so the risk of a serious problem increases. Even modest sized aneurysms hardly ever causes a problem, however, and usually do not need treatment.
- There is very little danger so long as the aorta is less than 5 to 6cm wide.
- Sometimes aneurysms grow to a large size or get larger more quickly than usual. In these situations there is a much increased risk of the aneurysm rupturing, bursting blood through the vessel wall.
- This often results in sudden death; even with emergency surgery the chance of survival is about one in twenty overall. The risk of rupture starts to become a concern when the width of the aorta reaches about 6cm.

How are aortic aneurysms managed

- If an aneurysm is discovered and treated before it gets to a size that risks rupture then the outcome is excellent.
- If a small aneurysm is found we keep it under surveillance to regularly check its size and speed of growth so we can plan surgery at the right time.
- We may advise against operating on patients for whom surgery would be very dangerous, more risky than the risk of aneurysm rupture, or whose life expectancy is short for other reasons.
- For most patients, however, aortic aneurysms are a treatable condition for which an operation offers a lasting cure and a return to their normal life expectancy.

How can aortic aneurysms be detected

- Aneurysms are usually found during an ultrasound scan or a CT scan carried out for an entirely different reason.
- It is important that a patient is followed up if an aneurysm is found incidentally like this.
- Patients will usually be invited to an aneurysm clinic with a specialist vascular nurse to discuss the aneurysm, the risks, the surveillance and, importantly, how lifestyle changes can affect both the growth of the aneurysm and the outcome of surgery if that comes.
- Patients with an aneurysm which does not currently represent significant risk are asked to enrol in aneurysm surveillance.
- Surveillance involves performing an ultrasound scan periodically to monitor the size and speed of growth over time.

What is the alternative to an operation

- If an aortic aneurysm is found which is less than about 5-6cm in diameter then it is reasonable to keep a check on it by ultrasound scanning every few months.
- We would discuss the pros and cons of this approach (as opposed to an early operation) with you. I
- If a person who is relatively young and very fit would prefer to have their aortic aneurysm operated on when it is quite small, then this may be a reasonable course of action.
- By contrast, we would usually discourage somebody who is very elderly or medically unfit from having an operation at all unless their aneurysm reached a large size, posing a serious threat to their life.
- An aortic aneurysm operation is never essential, and you can always choose to avoid treatment if you wish.

What kinds of operation are possible

- The conventional and standard type of operation involves an incision in the abdomen and is described later.
- A few decades ago EVAR stent repair was developed. These are stents that treat the aneurysm which are introduced through small incisions in each groin.
- The recovery from EVAR surgery is quicker than that after a standard operation, and the risks of the stent procedure are less than for a traditional operation.
- EVAR stents are not suitable for all cases though and once inserted can sometimes develop problems in the longer term so they need ongoing life-long surveillance
- The long term results of this type of stent grafting are still the subject of ongoing study but, in many places, the stent is the preferred choice for aneurysm treatment.

What happens before the operation

- You will have been seen by the vascular surgeon in clinic and the treatment options discussed with you.
- You will have likely had a CT scan of the aneurysm to check whether the aneurysm is suitable for repair using an EVAR stent.
- You will be invited to a pre-admission clinic and perhaps to an appointment with an anaesthetist.
- There will be detailed questions about your general health and fitness, blood tests are taken, and a chest x-ray and electrocardiogram (ECG) need to be done.
- Occasionally other tests of the heart, lung, and kidney function are required. These are used to determine the risks of operation, and to help us to minimize those risks.

What happens after you come into hospital

- You come into hospital the day of an operation for an aneurysm repair. You will see your surgeon and the anaesthetist and the nursing staff will prepare you for theatre.
- We can only go ahead with the operation if an intensive care bed is available for you after the operation. Sometimes emergency admissions mean that no bed is available on that day even if your operation has been planned well in advance. This means that we will need to postpone your operation to another date.
- After the final checks, you will be brought to the operating theatre.
- Several fine tubes will be inserted by the anaesthetist for treatment and for monitoring. These include a drip into a vein, another into an artery, and a further drip into a large central vein (via the neck). A fine tube is sometimes passed down the nose (to keep the stomach empty) and another into the bladder (to drain your urine during and after the operation).
- An epidural may be inserted into your back which helps with pain relief after the operation.
- Many of these tubes are put in when you are sedated or asleep.

How is the operation done

- The operation is performed through a long incision in the abdomen.
- Once the aorta is exposed, it is clamped above and below the aneurysm, opened up and a tube graft made of fabric (Dacron) is stitched inside.
- Then the aorta is closed over the graft and the abdomen stitched up again.
- Occasionally the graft is the shape of a pair of trousers to feed each leg separately.
- Rarely, further incisions are required in the groins. Your surgeon will explain if either of these might be required.

What happens after the operation

- Depending on your general level of fitness and how long the operation has taken you will wake up either in the recovery room, the intensive care unit or in the high dependency unit. There will be a lot of monitoring machinery around you, this is normal
- Sometimes the tube in your windpipe is left in place to help your breathing for a few hours after the operation. You may be aware of this, although you are likely to be kept quite sleepy until the tube is removed.
- If necessary you will spend either one or two days in the intensive care unit and then return to the ward.
- The nurses will help you out of bed on the first day after the operation and will help you begin walking on the second day.
- During the first few days your bowels will be slow and you can only have small amounts to drink until the bowel has recovered from the operation. As soon as your bowel starts working again you should feel hungry, and at this stage you can eat.
- You will have some discomfort from the incision in your abdomen, we will give you pain killers to help with this .
- You will do no damage through moving about or coughing. It is most important to breathe deeply and to cough, the nurses and physiotherapists will advise you.

What other after effects will there be, how quickly will you return to normal

- Aortic grafting is a major operation, and full recovery takes several weeks, although this varies a lot.
- While you should try to do anything that you feel able to do, you will get tired quickly in the early days after going home.
- By about a month after the operation you are likely to be doing all the things that you would like to do, but you will probably not regain your full strength and vitality for almost three months.
- In the first week or two after going home it is not unusual for people to experience days when they feel depressed, and even tearful.
- Sometimes the operation can disturb your appetite, the taste of food, your ability to concentrate for any length of time and your sleep. All these should gradually return to normal with time.
- Following a long abdominal incision aches, pains, and twinges are usual as you increase your activity, but you will not damage the wound by being active within the limits of your comfort.

What problems can occur after the operation

Wound problems

- Your wound may initially be painful, bruised and lumpy, but all these should settle within the first few weeks.
- Infection or gaping of the wound is a small risk, but this usually recovers with dressings alone.
- Antibiotics may be required.

Graft infection

- Infection of the bypass graft is a very uncommon but a very serious complication, further major surgery may be necessary if it happens.
- The risk is less than 1 in 100 of operations confined to the abdomen, if an incision is necessary in either groin it has a slightly higher risk.
- We take many precautions to guard against infection including the use of antiseptic coated grafts and antibiotics at the time of the operation.
- Very rarely the graft can erode into a part of the bowel causing bleeding: this also usually requires further surgery.

Deep vein thrombosis (DVT)

- Deep vein thrombosis, with the risk of blood clots passing to the lung, is an occasional complication, but we take special steps to protect against this.

Impotence

- In men there is a risk of about 1 in 5 (20%) of disturbed sexual function (difficulty with erection, ejaculation, and having intercourse). This is because the nerves controlling sexual function cross the front of the aorta and its branches. We take great care to avoid these nerves. We know very little about the potential effect on female sexual function.

What problems can occur after the operation

Risks to the legs and feet

- Aortic surgery poses serious but very small risks to the legs and feet.
- Very rarely small blood clots can pass from the aneurysm during surgery to the toes and feet, resulting either in a period of poor blood supply to the toes which gradually recover, or the loss of one or more toes.
- If the blood supply to a leg becomes seriously disturbed by blood clots then amputation is a risk.
- Less serious disturbance of blood flow to a leg can result in pain in the calf or thigh on walking a certain distance.
- Very rarely the blood supply to the spinal cord can be damaged resulting in paralysis of the legs. All these problems are extremely uncommon (a risk of less than 1 in 100).

Organ failure

- Heart problems, including heart attacks, abnormal rhythms requiring treatment, and heart failure are all possible risks of aortic surgery.
- Kidney failure (sometimes requiring dialysis) is another occasional complication. The kidneys usually recover.
- Chest problems, including pneumonia and respiratory failure (requiring prolonged artificial ventilation) are risks.
- Disturbance of blood flow to the gut can result in gangrene of part of the bowel, which is a very serious problem; and disturbed blood flow to the brain can result in a stroke.
- All these problems are uncommon following planned replacement of an aneurysm but may increase your hospital stay and slow your recovery

Death

- Aortic surgery does carry a risk of death. Overall the risk is about 5% (one in twenty), but the risk is lower in people who are relatively young and fit, and higher in those who are elderly and who have other medical problems.

The risks of a general anaesthetic

- Although safer than ever before, general anaesthetic has some risks. Some of the risks are increased if you have chronic medical conditions, but in general they are as follows.
- More common risks include bruising or pain in the area of injections, sleepiness and blurred vision, sickness, dental damage and sore throat.
- Less commonly there are risks that include headaches, muscle pains, confusion and temporary difficulties with breathing and speaking.
- Rare but serious complications include severe allergic reactions, permanent nerve injury, damage to the voice-box, brain damage and death.
- Your anaesthetist will be able to explain the risks in your

What should you do if you develop problems

- Most people who have grafts for aortic aneurysms recover well and have no serious complications. The whole aim is to get you back to a normal life with a normal life expectancy.
- If after leaving hospital you develop any problems which cause you concern, it is usually best to approach your General Practitioner first who will know all about what has happened to you.
- If you develop any acute problem, such as trouble with the blood flow to a leg or infection, we are always prepared to see you urgently in the hospital.
- As a matter of routine, we would normally plan to follow you up in the outpatient clinic, six weeks after your discharge from hospital.
- An appointment will be given to you prior to your discharge