

**Questions you may like to ask your anaesthetist:**

**Q Who will give my anaesthetic?**

**Q Do I have to have this type of anaesthetic?**

**Q Have you often used this type of anaesthetic?**

**Q What are the risks of this type of anaesthetic?**

**Q Do I have any special risks?**

**Q How will I feel afterwards?**

# Your anaesthetic for aortic surgery

**Tell us what you think**

We welcome suggestions to improve this booklet.

You should send these to:

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The Royal College of  
Anaesthetists



The Association of  
Anaesthetists of Great  
Britain and Ireland

**Information for patients**

This booklet gives information about your anaesthetic for open surgery on your aorta. It has been written by patients, patient representatives and anaesthetists, working in partnership.

You can find more information in other leaflets in the series on the website [www.rcoa.ac.uk/patientinfo](http://www.rcoa.ac.uk/patientinfo). They may also be available from the anaesthetic department in your hospital.

The series also includes the following:

- Anaesthesia explained (a more detailed booklet)
- You and your anaesthetic (a shorter summary)
- Your child's general anaesthetic
- Your spinal anaesthetic
- Epidurals for pain relief after surgery
- Headache after an epidural or spinal anaesthetic
- Your child's general anaesthetic for dental treatment
- Local anaesthesia for your eye operation
- Your tonsillectomy as day surgery
- Anaesthetic choices for hip or knee replacement

### Risks associated with your anaesthetic

A collection of 14 articles about specific risks associated with having an anaesthetic has been developed to supplement to the patient information leaflets. The risk articles are available on the website [www.rcoa.ac.uk/patientinfo](http://www.rcoa.ac.uk/patientinfo).

Throughout this booklet we use these symbols:



To highlight your options or choices



To highlight where you may want to take action



To point you to more information

## Introduction

### What is the aorta?

The aorta is a large artery that carries blood from the heart to the major organs (e.g. liver and kidneys). Within the abdomen, the aorta divides into two arteries, which supply each leg with blood.

### Why are operations sometimes necessary?

There are two main reasons for having an operation on the aorta:

- Fatty deposits, known as **atheroma**, in the walls of arteries can disturb the flow of blood. Over the years, this can cause weakness in the walls of the aorta, which can then form a balloon-like swelling, known as an **aneurysm**. This occurs more often in men than in women. Although 1 in 30 men over the age of 60 has an aneurysm in his aorta, most people are unaware of its presence because they rarely have symptoms. Most people only find out about the aneurysm when they have tests for other medical problems. As the aneurysm continues to swell, the walls become even weaker and the aorta may eventually burst.
- Atheroma (fatty deposits) can also cause narrowing of the aorta. If the blood flow to the legs is reduced you may get a cramp-like pain, called **claudication**, when you walk. An operation can improve the blood flow to the legs by making the aorta much wider. If the narrowing is severe, the operation may be needed to prevent gangrene in the lower limbs.

## The operation

The surgeon replaces part of the aorta with a tube of man-made material similar to nylon. This is a major operation which takes about four hours and which has some risks. Careful preparation and skilled care during your stay in hospital keep these risks to a minimum.

This booklet explains what happens before, during and after the operation and how you can help make your operation a success.

## Avoiding an open operation

For some patients, a repair to the aorta is possible working through a catheter (tube) inserted into an artery in the groin. It is only suitable for certain patients and certain types of aorta. Your surgeon will be able to tell you if this is recommended for you. It is called Endo-vascular aneurysm repair (or EVAR). Much of the information in this leaflet does not apply if you are having this procedure.

## Before you come into hospital

### How do I decide whether to have the operation?

A number of things will happen before you are asked to decide:

- The surgeon will ask you questions about your general health.
- The surgeon will also ask you to have a number of tests. This includes blood tests, a heart tracing (electrocardiogram or ECG) and sometimes an ultrasound (echocardiogram or 'echo') or other type of heart scan.
- The surgeon may ask the anaesthetist to talk to you about your health and any particular problems you may have had with anaesthetics in the past. The anaesthetist may ask you to have more tests.

The surgeon and anaesthetist will then be able to give you information about what they think the risks of the operation are for you, and what the risks are of not having the operation.



Everyone varies in the risks they are willing to take. The doctors will explain the risks to you, but only you can decide whether to go ahead and have the operation.

Nothing will happen to you until you understand and agree with what has been planned for you. You have the right to refuse if you do not want the operation.



## Getting fit for your operation

It is important to prepare well for the operation. There is a lot that you can do to improve your fitness.

### Smoking

If you smoke, you should consider giving up. The longer you can give up for, the better.

- If you can stop smoking for a day or two your blood cells can carry more oxygen around your body.
- If you can stop smoking for about 6 weeks before you come into hospital you are less likely to get a chest infection after the operation.

### Alcohol

If you are used to drinking a lot of alcohol, it is helpful to reduce the amount that you drink. Alcohol can reduce the function of your heart and it also causes mild dehydration.

### Losing weight

If you are overweight, there is an increase in some of the risks of the anaesthetic and the operation. Losing weight will reduce these risks.

### Exercise

Regular exercise will increase your strength and fitness. There is no need to push yourself – a regular walk at your own pace will boost your stamina.

## Other medical problems

If you have a long standing medical problem, such as diabetes, asthma, chronic bronchitis, high blood pressure, or epilepsy it is helpful to have a check up from your own GP. In particular, it is important that your blood pressure is well controlled.

## The pre-assessment clinic

You may be asked to come to a pre-assessment clinic a few weeks before your operation. It may be some weeks or months since you saw the surgeon and decided to go ahead with the operation, and an up-to-date health check is needed.

- A nurse or doctor will ask you questions about your health
- More tests may be requested (usually blood tests and an ECG)
- You may be seen by an anaesthetist who can discuss the anaesthetic with you. If you particularly want to talk to an anaesthetist, you should ask for this to be arranged.
- If you have other medical problems that can be improved, you may be asked to see other specialists who can give advice about your treatment. Your operation may be delayed until your health can be improved.
- The nurse may be able to give some information about what happens before, during and after the operation. This is a good time to ask questions and discuss worries.
- You should also receive instructions about any medicines you take and whether you should continue to take them up to the day of your surgery.

## Coming into hospital

### Meeting your anaesthetist

Your anaesthetist will see you when you are admitted to hospital.

An anaesthetist is a doctor who has had specialist training in anaesthesia, in the treatment of pain and in the care of patients in the intensive care unit. He/she may:

- ask you again about your health
- look at all your test results
- listen to your heart and breathing
- look at your neck, jaw, mouth and teeth.

The anaesthetist will talk to you about your anaesthetic and methods of pain relief. He/she will be able to answer your questions and discuss any worries that you have.

- You will be given clear instructions about when to stop food and drink. It is important to follow this advice. If there is food or liquid in your stomach during your anaesthetic, it could come up into the back of your throat and damage your lungs.
- You will be asked to have a bath or shower and to put on a theatre gown.
- You may have a mild sedative to help you relax.
- A nurse will complete a pre-operative checklist and escort you to theatre.

- You can wear your glasses, hearing aid and dentures to go to the anaesthetic room. You will need to remove them before the anaesthetic begins so that they are not damaged or dislodged.

### The operating department ('theatres')

When you arrive in the reception area you will be met by a theatre nurse. After a brief check to confirm your identity and operation you will be brought to the anaesthetic room.

### The anaesthetic room

- It may take 30 or 40 minutes of preparation before the anaesthetic itself begins.
- The anaesthetist's assistant will connect machines to you that measure your heart rate, blood pressure and oxygen levels. Sticky pads on your chest are attached to the heart monitor and a small peg on your finger or earlobe measures the oxygen level in your blood.
- The anaesthetist will numb your skin with local anaesthetic before using a larger needle to insert a thin plastic tube (a cannula) into a vein on the back of your hand or forearm. This is attached to a bag of fluid (usually known as a 'drip').
- After injecting your skin with local anaesthetic another cannula is placed into the 'pulse' at the wrist (an arterial line). This allows the blood pressure to be measured continuously.

## Your anaesthetic

### An epidural for pain relief

Many people having this operation are advised to have an epidural for pain relief.

- Your anaesthetist will insert a fine plastic tube between the bones of your back using a needle. Local anaesthetics and pain relief medicines are given through this tube during the operation and for several days afterwards.
- Alternatives to an epidural for pain relief exist, but they are not generally as effective, and for this operation in particular you may be advised to have an epidural.
- You can find out more about the risks and benefits of epidurals from other leaflets in this series (see inside front cover), from the nurses who care for you or from your anaesthetist.



### The anaesthetic

You will be asked to breathe oxygen through a mask while the anaesthetist slowly injects drugs into your 'drip'. You will not be aware of anything else until the operation is finished. The operation usually takes about four hours.

While you are anaesthetised, you will also have:

- a breathing tube placed in your mouth into your windpipe
- a cannula placed into a vein in your neck (a central venous line). This is used to monitor the amount of fluid that you are given and to give medicines to regulate your blood pressure
- a tube passed through your nose into your stomach which keeps your stomach empty
- a tube passed into your bladder (a catheter) which is used to measure the amount of urine that your kidneys produce.

## After your operation

### Intensive care or high dependency care (ICU or HDU)

After your operation you will be cared for in an intensive care or high dependency unit. Most patients recover consciousness in the operating theatre shortly after the operation is finished. Occasionally it is necessary to continue a light anaesthetic for a few hours until your condition is stable.

On the high dependency or intensive care unit you may have your own nurse or one shared between two patients. Your heart rate, blood pressure, breathing, and kidney function are measured and the fluid that you receive is carefully controlled. Your arterial line and central venous line will stay in place for at least 24 hours after surgery and will be removed as your condition stabilises.

The nurse will also ensure that you are comfortable, usually by attending to your epidural. If the epidural is working effectively (as is usually the case) it can continue for several days, until you are comfortable with pain relief tablets. If the epidural is not effective it is usually removed and you may be given a morphine pump that you control yourself. This is known as patient-controlled analgesia or PCA.

### Physiotherapy

It is very important that you can breathe deeply and cough effectively, to help you avoid a chest infection or pneumonia. A physiotherapist will explain breathing exercises to you and help you to cough vigorously. The intensive care nurses will also encourage you to do these exercises regularly.

The nurses will also encourage you to move your legs to prevent deep venous thrombosis (DVT, or clots in the leg veins).

### Back to the ward

When the surgeon, anaesthetist and intensive care unit staff are satisfied that you are recovering safely, you will return to the surgical ward.

You may still develop a chest infection three or four days after the operation so it is important to continue your breathing exercises.

## Risks and complications

### What are the risks?

Although this is a major operation, about 19 out of 20 people survive this type of surgery. The risk to you as an individual will depend on:

- your age
- your general fitness
- whether you have any medical problems (especially heart disease)

Serious complications include heart attack (1 in 20), a degree of kidney failure (1 in 8–10), and a blood clot on the lungs (1 in 100).

## Useful organisations



Most intensive care units have information leaflets available for patients and relatives. Sometimes you can visit the intensive care unit beforehand so that you know what to expect.

### The Royal College of Anaesthetists

Churchill House  
35 Red Lion Square  
London WC1R 4SG  
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website: [www.rcoa.ac.uk](http://www.rcoa.ac.uk)  
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This organisation is responsible for standards in anaesthesia, critical care and pain management throughout the UK.

### The Association of Anaesthetists of Great Britain and Ireland

21 Portland Place  
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This organisation works to promote the development of anaesthesia and the welfare of anaesthetists and their patients in Great Britain and Ireland.

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