

# V08 Aorto-Bifemoral Bypass Surgery

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## What is atherosclerosis?

Atherosclerosis is a disease affecting the arteries. Abnormal fatty material (called atheroma) coats the inside of an artery, causing it to narrow or 'harden' (see figure 1). The amount of blood flowing through the artery is reduced.

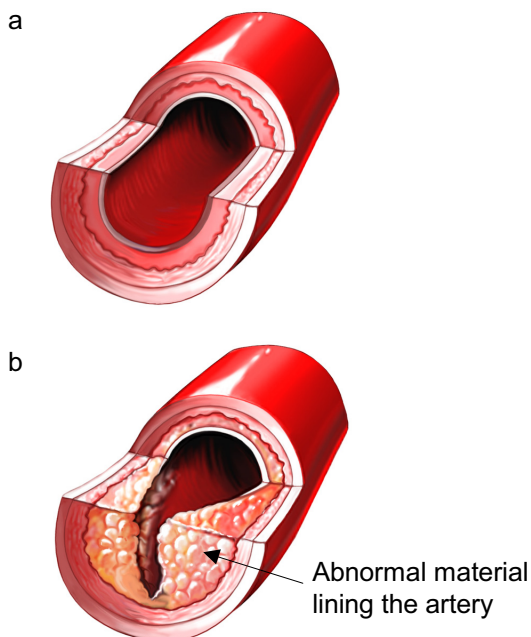


Figure 1

- a Normal artery
- b Narrowed artery caused by atherosclerosis

When the arteries to your legs are affected, you will have pain in the back of your calves and thighs and possibly in your buttocks when you walk. If the narrowing gets more severe, you may have pain even when you are resting. If the blood supply continues to get worse, you may develop ulcers or even gangrene of your toes or feet. Your surgeon has recommended an aorto-bifemoral bypass operation. However, it is your decision to go ahead with the operation or not. This document will give you information about the benefits and risks to help you to make an informed decision. If you have any questions that this document does not answer, ask your surgeon or the healthcare team.

## How does atherosclerosis happen?

Atherosclerosis develops because of one or more of the following risk factors – smoking, high blood pressure, a family history of atherosclerosis, age, diabetes and high cholesterol levels. These factors also cause heart disease and stroke (loss of brain function resulting from an interruption of the blood supply to your brain).

The atherosclerosis has caused a severe narrowing or blocking in one or more of the major blood vessels in your abdomen. Your aorta and the iliac arteries may be affected.

Your surgeon may have tried to improve the blood supply to your legs by simple techniques but now recommends that you have surgery.

## What are the benefits of surgery?

You should be able to walk with less pain. Surgery should improve the blood supply to your legs and prevent you from developing ulcers or gangrene.

## Are there any alternatives to surgery?

Exercise may help your body to develop other ways for blood to flow to your leg.

An angioplasty (stretching the artery with a balloon) and inserting a stent (metal mesh tube) inside the artery to keep it open is another treatment. However, this may not be suitable for you.

Your surgeon will discuss the options with you and will tell you why they have recommended an aorto-bifemoral bypass as the best treatment for you.

## What will happen if I decide not to have the operation?

Your doctor will make sure that you take blood-thinning medication and that the risk factors for this disease, such as high blood pressure, diabetes and high cholesterol levels, are treated. You should stop smoking as this is essential to prevent your leg from getting worse. The blood supply may continue to get worse, resulting in gangrene. As a result, your leg or foot may need to be amputated.

## What does the operation involve?

The healthcare team will carry out a number of checks to make sure you have the operation you came in for. You can help by confirming to your surgeon and the healthcare team your name and the operation you are having.

The operation is performed under a general anaesthetic and usually takes 90 minutes to seven hours. You may be given antibiotics during the operation to reduce the risk of infection. Your surgeon will make a long cut on your abdomen and cuts on both your right and left groin over each of your femoral arteries. They will clamp and open your aorta and sew an artificial graft in place. Your aorta is the main artery that carries oxygen-rich blood from your heart to the rest of your body. Your aorta arches through your chest and down into your abdomen. They will pass the lower ends of the graft under your groins and sew the ends to your common femoral arteries (see figure 2).

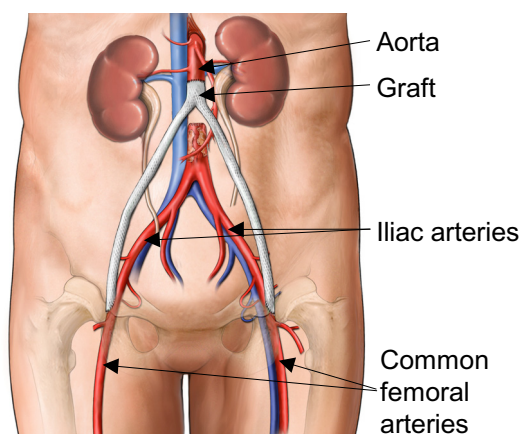


Figure 2

The graft bypasses the blocked arteries

Your surgeon will close the cuts on your abdomen and groins with stitches or clips. The healthcare team will place a small tube in a vein in your arm (drip) and in your neck (called a central line). They will also place a catheter (tube) in your bladder to help you to pass urine.

### What should I do about my medication?

Let your doctor know about all the medication you take and follow their advice. This includes all blood-thinning medication as well as herbal and complementary remedies, dietary supplements, and medication you can buy over the counter.

### What can I do to help make the operation a success?

If you smoke, stop smoking now. Smoking is one of the main reasons why this problem happens. Stopping now can help to reduce the risk of you having a heart attack (where part of the heart muscle dies), having further narrowing of the arteries and developing certain cancers. If you continue smoking there is a higher risk that the bypass will fail. Stopping several weeks or more before the operation may reduce your risk of developing complications and will improve your long-term health.

Try to maintain a healthy weight. You have a higher risk of developing complications if you are overweight.

Regular exercise should help to prepare you for the operation, help you to recover and improve your long-term health. Before you start exercising, ask the healthcare team or your GP for advice.

You can reduce your risk of infection in a surgical wound.

- In the week before the operation, do not shave or wax the area where a cut is likely to be made.
- Keep warm around the time of the operation. Let the healthcare team know if you feel cold.

### What complications can happen?

The healthcare team will try to make the operation as safe as possible but complications can happen. Some of these can be serious. You should ask your doctor if there is anything you do not understand. Any numbers which relate to risk are from studies of people who have had this operation. Your doctor may be able to tell you if the risk of a complication is higher or lower for you.

#### 1 Complications of anaesthesia

Your anaesthetist will be able to discuss with you the possible complications of having an anaesthetic.

#### 2 General complications of any operation

- Pain can be severe with this operation. The healthcare team will give you strong painkillers either by an epidural or through the drip. It is important that you take the medication as you are told so you can move about and cough freely.

- Bleeding during or after the operation (risk: 1 in 20). If it is heavy, you may need a blood transfusion.
- Infection of the surgical site (wound). It is usually safe to shower after two days but you should check with the healthcare team. Let the healthcare team know if you get a high temperature, notice pus in your wound, or if your wound becomes red, sore or painful. An infection usually settles with antibiotics but you may need another operation.
- Unsightly scarring of your skin.
- Blood clot in your leg (deep-vein thrombosis – DVT) (risk: 1 in 100). This can cause pain, swelling or redness in your leg, or the veins near the surface of your leg to appear larger than normal. The healthcare team will assess your risk. They will encourage you to get out of bed soon after the operation and may give you injections, medication, or special stockings to wear. Let the healthcare team know straightaway if you think you might have a DVT.
- Blood clot in your lung (pulmonary embolus), if a blood clot moves through your bloodstream to your lungs (risk: 1 in 150). If you become short of breath, feel pain in your chest or upper back, or if you cough up blood, let the healthcare team know straightaway. If you are at home, call an ambulance or go immediately to your nearest Emergency department.

### 3 Specific complications of this operation

- Graft failure caused by a blockage. This can happen early after the operation or months or years later (risk: 1 in 3).
- Weakening at the bypass graft join, which can cause a false aneurysm (risk: 1 in 100 in 10 years). This is a potentially dangerous swelling and you may need another operation to repair it.
- Infection of the graft (risk: 1 in 10 in 10 years). You may develop an abnormal connection between your aorta and your bowel (aorto-enteric fistula). This is life-threatening and difficult to treat. The graft may be coated with an antibiotic to reduce the risk of infection. Have a bath or shower before the operation to wash your abdomen and groins to reduce this risk.
- Blocking (embolus) of one of the smaller arteries to your foot, if any of the abnormal fatty material caused by atherosclerosis passes through your bloodstream.
- Fluid collecting under your wound (seroma), which leads to a continued leak of fluid from your wound (risk: 3 in 200). This usually settles.

- Nerve injury. Small nerves to your skin can be cut, causing patches of numbness around your wound or down your leg. This usually gets better but may be permanent.
- Nerve damage and paralysis, if the blood supply to the nerves of your spinal cord gets damaged (spinal cord ischaemia) (risk: 1 in 400).
- For men, problems having an erection because of damage to arteries and nerves (risk: 3 in 4). For many men the atherosclerosis will have already caused problems having an erection.
- Death (risk: 1 in 20). An aorto-bifemoral bypass is a major operation. The risk is higher if you have other serious medical problems.

### How soon will I recover?

#### • In hospital

After the operation you will be transferred to the intensive care unit or high dependency unit for one to two days so the healthcare team can monitor you more closely. You will then go to the ward.

You will be given fluid through the drip. The healthcare team will use the central line to monitor the pressure of blood returning to your heart. This will help your doctor to know how much fluid to give you.

At first, you will need to rest in bed and you will be able to have only small amounts of water to drink. Over the next few days you should be able to move about and return to a normal diet.

The drains, drips and catheter will usually be removed after two to five days.

You should be able to go home after 7 to 10 days. However, your doctor may recommend that you stay a little longer.

If you are worried about anything, in hospital or at home, contact the healthcare team. They should be able to reassure you or identify and treat any complications.

#### • Returning to normal activities

To reduce the risk of a blood clot, make sure you follow carefully the instructions of the healthcare team if you have been given medication or need to wear special stockings.

The healthcare team will tell you when you can return to normal activities.

Regular exercise should help you to return to normal activities as soon as possible. Before you start exercising, ask the healthcare team or your GP for advice.

Do not drive until you are confident about controlling your vehicle and always check your insurance policy and with your doctor.

#### • The future

Most people can return to normal activities. Your surgeon will recommend that you have treatment with blood-thinning medication, such as aspirin or clopidogrel, to make the graft last longer.

#### Summary

Narrowing of the arteries in your legs is a common condition caused by atherosclerosis. You may benefit from surgery if you have severe disease and non-surgical treatment has failed to improve the blood supply to your legs. Surgery is usually safe and effective but complications can happen. You need to know about them to help you to make an informed decision about surgery. Knowing about them will also help to detect and treat any problems early.

**Keep this information leaflet. Use it to help you if you need to talk to a healthcare professional.**

#### Acknowledgements

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