

## Patient information

### **Aorto-bifemoral and Aorto-femoral Bypass Surgery**

#### Vascular Department

**Your Consultant /Doctor has advised you to have Aorto-bifemoral or Aorto-femoral bypass surgery**

#### **What is aorto-bifemoral or aorto-femoral surgery?**

A bypass operation places a new artery around a blocked artery to restore the circulation and relieve symptoms.

An aorto-bifemoral bypass operation inserts a bypass graft from the abdominal aorta to each common femoral artery in the groin. The operation is a major undertaking similar to open aortic aneurysm surgery. If the bypass is one sided (right or left) it is called aorto-femoral bypass

The bypass grafts are usually manufactured from an artificial material called Dacron. Aorto-bifemoral grafts are sometimes called trouser grafts as they have a small body and two long limbs like a pair of trousers

#### **What are the benefits of aorto-bifemoral and aorto-femoral surgery?**

If the main arteries in the abdomen and pelvis (abdominal aorta and/or iliac arteries) become blocked by atheroma (hardening of the arteries) or thrombosis (blood clot) the blood supply to the leg, foot and toes may be severely affected. The initial symptoms may be of walking pain in the legs, almost always in the calf but also in the buttock and thigh muscles - this is called intermittent claudication.

Blockage of these major arteries is also a cause of male impotence and infertility.

If the ischaemia (lack of blood) is severe the pain may become more persistent and severe especially at night; the pain can affect the leg, foot and toes. If this has been present for longer than two weeks this is called critical limb ischaemia.

Other symptoms of critical limb ischaemia include arterial ulcer and gangrene. Critical limb ischaemia means that the leg is threatened leading to a risk of amputation.

The aim of the operation is to restore the blood supply in the legs and feet to relieve pain, allow healing of ulcers and areas that have become damaged by gangrene and remove the immediate risk of lower limb amputation.



## What are the risks?

Common risks (greater than 1 in 10) include bruising and possible bleeding from the wound.

Occasional risks (between 1 in 10 and 1 in 100) include embolism (moving debris or blood clot) from an artery into the leg, foot or toes or thrombosis of the bypass graft leading to lack of blood supply to the legs, feet or toes. Additional procedures may be needed to avoid loss of a limb.

As with any operation, you may develop a chest infection. This is more likely if you smoke. It may need treatment with antibiotics and physiotherapy.

Occasionally, a collection of blood forms around the wound. This is called a haematoma. If this is small it may disperse by itself, but larger haematomas will need to be evacuated in a second operation. There may be more serious internal bleeding from the bypass graft itself requiring further surgery.

Collections of lymph may also occur around the arteries and the bypass graft. These may need to be drained with a needle and may persist in some patients.

Infection of the wound is a small risk (1 in 100) – infection of the bypass graft is less common than this but is a serious complication.

The abdominal wall can become weak at the site of the incision and form a hernia early on or after a period of several years.

A heart attack or disturbance of heart rhythm may also occur in 1 in 100 patients. This may lead to medical treatment especially if the heart is weakened (heart failure).

Disturbance of bowel habit may be caused by the procedure or by painkiller medications.

Some patients develop abdominal adhesions inside the abdomen that can lead to obstruction (blockage) of the small intestine.

Retrograde ejaculation and erectile impotence can occur in men as a result of any bypass involving the aorta.

Less common, rare risks (less than 1 in 100) include superficial nerve injury to the leg causing an area of permanent numbness or weakness/paralysis of the leg.

Swelling of a leg may occur with the possibility of deep vein thrombosis or pulmonary embolism.

Internal bleeding from damage to an internal artery is possible – this may require further open surgery.

Ischaemia (lack of blood supply) to the bowel is a very serious complication that may result in a colostomy or even be fatal is fortunately very rare.

Paraplegia (spinal paralysis) is another rare complication of any abdominal aortic surgery.



Risks of stroke, transient ischaemic attack (stroke symptoms lasting less than 24 hours) and kidney failure requiring dialysis are small risks but may be fatal.

The immediate fatal risk of open abdominal aortic surgery is 5 in 100.

### **Are there any alternatives available?**

The main alternative to open bypass surgery is balloon angioplasty or stenting of the aorta and iliac arteries. This is a radiological keyhole procedure and has fewer risks and complications than open aortic surgery. Unfortunately not every case is suitable for this easier procedure.

It may be necessary to avoid major abdominal surgery if you are unfit or have other medical conditions – in this case a bypass operation can still be an option – using the main artery to an arm and tunnelling the graft to the legs. This is called axillo-bifemoral bypass.

### **What happens if I decide not to have treatment?**

If you have a walking disability you may be suitable for balloon angioplasty or conservative treatment with exercise therapy.

If you have critical limb ischaemia it may be suitable to reopen the circulation with angioplasty but the consequences of not having the treatment will increase your risk of major amputation of a leg.

### **What sort of anaesthetic will be given to me?**

You will be given a general anaesthetic. General anaesthesia is drug-induced unconsciousness: it is always provided by an anaesthetist, who is a doctor with specialist training.

Unfortunately, general anaesthesia can cause side effects and complications. Side effects are common, but are usually short-lived: they include nausea, confusion and pain.

Complications are very rare, but can cause lasting injury: they include awareness, paralysis and death.

There is a risk of damage to teeth, particularly caps or crowns and veneers. Your anaesthetist will take every care, but occasionally damage can occur.

The risks of anaesthesia and surgery are lower for those who are undergoing minor surgery, and who are young, fit, active and well.

For more information, please ask for a copy of the leaflet **“You and Your Anaesthetic”** (PIF 344).

You will be given an opportunity to discuss anaesthetic options and risks with your anaesthetist before your surgery.

**If you are worried about any of these risks, please speak to your Consultant or a member of their team.**



## Getting ready for your operation

- You will usually be seen in the pre-operative clinic before you are admitted to hospital. Here you will have blood tests, and sometimes a heart trace or a chest X-ray. You will be assessed to see if you are fit for the anaesthetic.
- The staff will ask routine questions about your health, the medicine you take at the moment and any allergies you may have.
- You will be given instructions on eating and drinking before your operation.
- You will be able to discuss the operation with a doctor. You will be asked to sign a consent form to say that you understand the procedure, and what the operation involves.
- If you smoke, you should stop completely. The risks of stroke are greatly increased in smokers and there are additional risks of heart attack and lung disease with surgery. Advice and help is available via your physician, family doctor (GP) and through NHS 111.

## The day of your operation

- You will come into hospital on the day of your operation. Please make sure you contact the ward before you leave home to check bed availability.
- Please leave all cash and valuables at home. If you need to bring valuables into hospital, these can be sent to General Office for safekeeping. General Office is open between 8.30 and 4.30 Monday to Friday. Therefore, if you are discharged outside these times we will not be able to return your property until General Office is open. The Trust does not accept responsibility for items not handed in for safekeeping.
- Please bring any medication you take into hospital with you.
- Please bring in toiletries, nightwear and towels.
- You will be asked to remove jewellery - plain band rings can be worn but they will be taped.
- Please leave body piercings at home. False nails and nail polish will also need to be removed if worn.
- If you are on regular medication, you will be told to take this if necessary.
- You will be asked to put on a gown and disposable underwear.
- A bracelet with your personal details will be attached to your wrist.
- You may be prescribed some medication to take before your operation by the anaesthetist. A member of the nursing staff will give this to you.
- A nurse and porters will take you to the operating theatre.



- Your dentures, glasses or hearing aid can stay with you on your journey to the operating theatre.
- When you arrive in the theatre area, the ward nurse will leave you, and you will be asked to put on a disposable hat.
- You will then be taken to the anaesthetic room and a member of theatre staff will check your details with you.

### **What should I expect after my operation?**

- After your operation you will be kept in the theatre recovery room before being transferred to the ITU or HDU (critical care unit), enhanced recovery unit or the vascular ward.
- A nurse will check your pulse, blood pressure, breathing rate and urine output regularly. We will also carefully monitor your wound for any bleeding or swelling.
- The colour, temperature and pulses in the limbs will be checked regularly after the operation.
- **It is important that if you feel any pain you must tell the nursing staff, who can give you painkillers to help.**
- The nursing staff will also advise you when you can start taking sips of water. Anaesthetics can make some people sick. If you feel sick we advise you not to drink until this feeling has passed. The nursing staff may offer you an injection to help this sick feeling go away.
- After a few days, you will be allowed to sit out, drink and eat. Return to mobility can take a few more days.

### **Going Home**

You will normally be allowed home after seven to ten days depending on the extent of the operation. This may be longer if you have had surgery to remove areas of gangrene.

### **Discharge Information**

#### **Pain relief and medication**

The nursing staff will advise you about painkillers before you leave the hospital. Please tell the nurses what painkilling tablets you have at home.

#### **Your wound**

The surgeon usually uses a dissolvable suture in which case you may not require the District Nurse. Staple clips (if used) are usually removed on the 8<sup>th</sup> day.



## **Getting back to normal**

You will probably feel tired for several weeks after the operation. Build up your activity level slowly and ensure you get enough rest. You should avoid strenuous activity for about six weeks.

You will be safe to drive when you can do an emergency stop and drive without discomfort. This will normally be at about two to four weeks but if in doubt, check with your doctor. Avoid long distances and motorway driving at first.

## **Returning to work**

Depending on your job, you will be able to resume in one to three months. If in doubt, please ask your doctor. Avoid any heavy exercise or lifting for six weeks.

## **Further Appointments**

You will have a follow up appointment in outpatients about six weeks after the operation.

## **Feedback**

Your feedback is important to us and helps us influence care in the future.

Following your discharge from hospital or attendance at your outpatient appointment you will receive a text asking if you would recommend our service to others. Please take the time to text back, you will not be charged for the text and can opt out at any point. Your co-operation is greatly appreciated.

## **Further information**

### **LiVES Contact Numbers**

**During your contact with us, it is important that you are happy with your care and treatment. Please speak to a member of staff and/or the ward/department Sister/Charge Nurse if you have any questions or concerns.**

**Vascular Ward**

**Ward 3**

**Aintree University Hospital**

**Tel: 0151 529 2028/2262**

**Vascular Nurses:**

**Aintree via switchboard**

**Tel: 0151 525 5980 Bleep 5609/5594 or extensions 4691/4692**



**Royal Liverpool Hospital via switchboard**  
**Tel: 0151 706 2000 Bleep 4212 or extension 4675**  
**Text phone number: 18001 0151 706 2000 Bleep 4212**

**Southport via switchboard**  
**Tel: 01704 705124**

**Whiston Hospital**  
**0151 290 4508/ 430 4199**

**Secretaries:**

**Aintree University Hospital**  
**Tel: 0151 706 3691/ 3523/3524/3481/3457/11813**  
**0151 529 4950/4953**

**Southport/Ormskirk Tel: 01704 704665**

**Whiston Hospital**  
**St. Helens and Knowsley NHS Trust**  
**Tel: 0151 430 1499**

**NHS 111**  
**Tel: 111**

**Circulation Foundation:**  
**[www.circulationfoundation.org.uk/vascularisease/](http://www.circulationfoundation.org.uk/vascularisease/)**

**Smoking cessation:**

<b>Liverpool</b>	<b>Tel: 0800 061 4212/ 0151 374 2535</b>
<b>Sefton</b>	<b>Tel: 0300 100 1000</b>
<b>West Lancashire</b>	<b>Tel: 0800 328 6297</b>

**Liverpool Vascular and Endovascular Service**  
**Aintree University Hospital**  
**Lower Lane**  
**Liverpool**  
**L9 7AL**  
**Tel: 0151 525 5980**  
**[vascsecs@liverpoolft.nhs.uk](mailto:vascsecs@liverpoolft.nhs.uk)**



## Participating Hospitals in LiVES are:

- Liverpool University Hospitals NHS Foundation Trust
- Southport District General Hospital
- Ormskirk District General Hospital
- Whiston and St Helens Hospitals

**Author: Vascular Department**

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All Trust approved information is available on request in alternative formats, including other languages, easy read, large print, audio, Braille, moon and electronically.

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