Aorto-bifemoral and axillo-bifemoral bypass

The aim of this leaflet is to help answer some of the questions you may have about having an aorto-bifemoral or axillo-bifemoral bypass. It explains the benefits and risks of the procedures as well as what you can expect when you come to hospital. If you have any further questions or concerns, please speak to a doctor or nurse caring for you.

What is an aorto-bifemoral bypass?
Arteries carry blood away from your heart to the rest of your body. When the main arteries in your stomach (the aorta and iliac arteries) are significantly narrowed, this affects the blood supply to your legs.

The aorto-bifemoral operation is used to bypass the blocked or narrowed main blood vessels (aorta and iliac arteries). A synthetic, fabric graft is used to recreate the normal shape of your aorta and iliac arteries, in order to restore circulation and relieve symptoms.

The procedure involves making an incision (cut) in the abdomen to reach the aorta, and also in each groin to reach the femoral arteries (the arteries below the blockage). The fabric tube graft, which is shaped like a pair of trousers, is tunnelled under the skin and then sewn onto the existing blood vessels, creating the bypass.

The wounds are closed either with stitches under the skin (subcutaneous) that dissolve over time, or with metal clips that will need to be removed approximately 10 days after the surgery.

An aorto-bifemoral graft
What is an axillo-bifemoral bypass?
The axillo-bifemoral operation is also used to bypass blocked or narrowed arteries. A synthetic, fabric graft is sewn into your axillary artery (left or right), located under the collar bone, in front of the shoulder, and connected to your femoral arteries, located in the top of your legs. This bypasses the blocked or narrowed arteries and restores blood flow to your legs.

The procedure involves an incision on your chest, just by your shoulder, and into both of your groins. The graft is tunnelled under the skin, down the side of your chest and abdomen to your groin. As the graft is tunnelled under the skin, it may be easily visible or felt in thin patients.

The wounds are closed either with stitches under the skin that dissolve, or with metal clips that will need to be removed approximately 10 days after the surgery.

The axillo-bifemoral operation is used in people who are considered high risk for aorto-bifemoral surgery, as it creates less stress on the heart and it avoids opening the abdomen. However, an axillo-bifemoral operation is more prone to complications, such as blockages and infection, as the graft used is narrower and is not as well buried in the tissues.

Why should I have a bypass?
Both operations are performed to help relieve your symptoms by increasing the blood supply to your legs. You may have been experiencing muscle aching related to exercise, which is known as claudication. Some people may also get a constant burning pain in their feet, which is known as rest pain or critical limb ischaemia. You may have also developed ulcers or gangrene due to lack of blood supply. Restoring the blood flow should relieve the pain and allow ulcers and areas of damaged skin to heal.

What are the risks?
As with any major operation, there is a risk of you having a medical complication. You may wish to read our leaflet, Having an anaesthetic for more information.
Your doctor will go through all the risks with you before you sign your consent form. The more common surgical risks include:

- deep vein thrombosis (blood clot in the leg)
- heart attack
- acute kidney injury (AKI)
- wound haematomas (collection of blood around the incision site)
- chest infections.

The risk of these will depend on your age, general fitness and any other medical problems you may have, such as heart disease.

Complications specific to this procedure include:

- Graft thrombosis (blockage in the graft) leading to lack of blood supply to your legs, which may require further intervention to restore the blood flow.
- Limb loss, if the blood supply cannot be restored.
- Graft infection, which may require replacement of the graft or long-term antibiotic treatment.
- Bleeding from where the graft has been sewn onto the artery, which may require further surgery.

These complications are rare and should be discussed with your consultant.

**Are there any alternatives?**

If the above operations have been suggested to you, it usually means the blockage or narrowing in your aorta or iliac arteries is severe and your blood supply is severely compromised. The only alternative is symptom control, such as pain relief and any wound management, if appropriate. You may be offered a major amputation for pain control or if your skin is very badly damaged.

**How can I prepare?**

There are a number of ways you can improve your health before coming into hospital.

**Smoking**

If you are a smoker the single most important thing you can do to help yourself is to give up smoking. Stopping smoking will also help to protect all of your arteries, making it less likely that you will suffer from heart attacks and strokes. Giving up is not easy but there is a smoking cessation service and support groups that can help. If you would like to give up smoking, you can call the Trust Stop Smoking Service on 020 7188 0995, or call the NHS Smoking Helpline on 0300 123 1044. Your GP may also be able to offer smoking cessation classes.

**Activity**

Gentle exercise, such as walking and cycling, is recommended to help improve your overall level of fitness. Exercise helps your body to produce healthy cholesterol and this helps to protect your arteries against bad cholesterol. Exercising may be difficult if you suffer with claudication, however it is important to keep as active as you can.
**Blood pressure**
High blood pressure is known to increase the risks associated with surgery and anaesthesia. It is very important that you have your blood pressure checked regularly, at least every six months. If you have been prescribed medication for high blood pressure, you must make sure that you take it according to the instructions given.

**Diabetes**
If you have diabetes, it is important that your blood sugar levels are well controlled.

**Blood cholesterol (fatty substance in your blood) levels**
You should eat a healthy, balanced diet and try to reduce any excess weight. It is important to reduce the level of cholesterol in your blood. Your vascular nurse can refer you to a dietician if needed. You may be prescribed medication to help lower your cholesterol (such as a statin) and low-dose aspirin to help prevent blood clots from forming.

**Weight**
There are increased risks during anaesthesia and the operation if you are overweight, so losing weight and having a healthy diet will help reduce these risks. Your GP may be able to refer you to a dietician if you need help.

We will also send you information about how to prepare for your hospital stay with your admission letter. Please read this carefully.

**Consent – asking for your consent**
We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves.

If you would like more information about our consent process, please speak to a member of staff caring for you.

**Before going into hospital**
You will usually be seen in a pre-assessment clinic and they will perform a number of tests to help assess your general fitness for surgery.

Some people may also be assessed by the POPS (proactive care of the older person undergoing surgery) team, who will perform a comprehensive medical and social assessment.

The following tests are normally performed (but not all be required):

- blood tests
- electronic heart monitoring (ECG)
- echocardiogram (an ultrasound scan of the heart)
- breathing test – spirometry or peak flow
- chest X-ray
- MRSA swabs.

These are needed in order for your doctor to make a decision on whether or not to operate.
At your pre-assessment/POPS appointment, your regular medicines will be reviewed and advice given on which ones you may need to temporarily stop prior to surgery. These may include antiplatelet medicines (such as aspirin or clopidogrel) or any medicines that thin the blood (such as warfarin). If you are taking medicines for diabetes (for example metformin) or using insulin, the dose may need to be altered near the time of your procedure. Please ask us if you have any questions.

We will also send you information about fasting, which is usually for six hours before surgery. Fasting means that you cannot eat or drink anything (except water). We will give you clear instructions on whether you need to fast and when to start fasting. It is important to follow these instructions. If there is food or liquid in your stomach during the operation, it could come up to the back of your throat and damage your lungs. Please continue to take your regular medicines with a sip of water before 6am on the morning of the procedure, unless you have been told otherwise.

**Will I feel any pain?**
Just before your surgery you will be given a general anaesthetic, which means that you will be asleep during the operation. A tiny needle will be placed in the back of your hand. The anaesthetic is injected through the needle and you will be asleep within a few seconds. You may also have a small tube placed in your back called an epidural, which will help deliver pain relief after surgery. Alternatively, you may be given pain relief via a machine (pump) that delivers painkillers directly into your vein through a drip. The machine allows you to control the dosage yourself by pressing a button. This should be discussed with the anaesthetist. You may be tender in the areas of the incisions for a few days after the procedure, and you will be prescribed painkillers for as long as they are required.

**What happens after the procedure?**
If you need additional monitoring after the operation, you may spend the night in overnight intensive recovery (OIR) or a high dependency area. Alternatively, you will be cared for in V-Bay (vascular bay) on Luke Ward.

If you have had an axillo-bifemoral bypass, you will be given something to eat and drink after the operation. If you have had an aorto-bifemoral bypass, then you will be gradually reintroduced to food and drink over the next few days. Following this sort of surgery the bowel may stop working for a short while (this is called ileus), but you will be given all the fluids you need via a drip until your bowel can cope with fluids by mouth. You will have a tube in your bladder (a urinary catheter) for a day or so, until you are able to get up and go to the toilet or until you have opened your bowels.

You will be seen by the physiotherapist every day from the first day of your operation, possibly including the day of the operation itself, in order to regain your normal mobility. Early mobilisation is important in preventing muscle deconditioning and blood clots, and deep breathing is encouraged to prevent chest infections.

You can expect to be allowed home approximately five to seven days after your surgery.

**What do I need to do after I go home?**
If your stitches or clips are the type that need removing, you may need a practise nurse letter to have them removed, or a district nurse to visit if you are unable to attend your local GP practice. The ward nurses will arrange this prior to discharge.
Your dressing will usually be removed before you leave hospital. If you still need a dressing when you go home, we will arrange for a practice nurse at your GP surgery or a district nurse to change it regularly. It is fine to have a shower when you go home.

**Will I have a follow-up appointment?**

After you have left hospital, you will receive an appointment to see your surgeon approximately six weeks later. This will be organised in your local hospital where possible.

**Useful sources of information**

### Contact us

If you have any questions or concerns before or after you have left hospital, please contact the [vascular specialist nurses](#), **t: 07825 503902** (Monday to Friday, 8am–4pm).

You can also contact [Luke Ward](#), **t: 020 7188 3566** or [Sarah Swift Ward](#), **t: 020 7188 8842** (24 hours) and speak to the ward sister or nurse in charge.

The above contacts can put you in touch with a vascular consultant if needed.

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit [www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets)

### Pharmacy Medicines Helpline

If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline.  
**t: 020 7188 8748** 9am to 5pm, Monday to Friday

### Your comments and concerns

For advice, support or to raise a concern, contact our Patient Advice and Liaison Service (PALS). To make a complaint, contact the complaints department.  
**t: 020 7188 8801** (PALS)  e: pals@gstt.nhs.uk  
**t: 020 7188 3514** (complaints)  e: complaints2@gstt.nhs.uk

### Language and accessible support services

If you need an interpreter or information about your care in a different language or format, please get in touch.  
**t: 020 7188 8815**  e: languagesupport@gstt.nhs.uk

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Was this leaflet useful?  
We want to make sure the information you receive is helpful to you. If you have any comments about this leaflet, we would be happy to hear from you, fill in our simple online form, [w: www.guysandstthomas.nhs.uk/leaflets](http://www.guysandstthomas.nhs.uk/leaflets), or [e: patientinformationteam@gstt.nhs.uk](mailto:patientinformationteam@gstt.nhs.uk)