East Kent Hospitals University NHS Foundation Trust

Femoropopliteal bypass graft

Information for patients from the Vascular Surgery Service

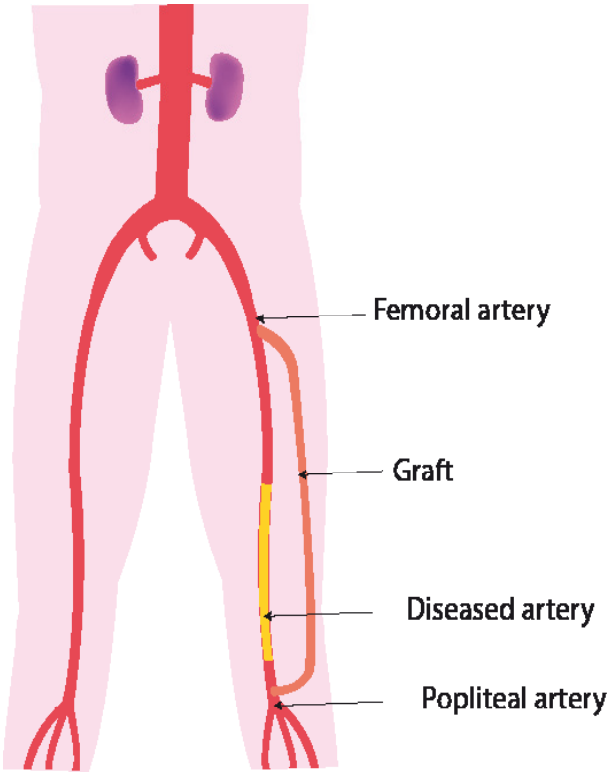
This leaflet tells you about the operation known as **femoropopliteal bypass**; it explains what is involved before, during, and after the operation. It also explains what possible risks there are and how you can make your operation a success. We would particularly ask you to read the sections headed **Is the treatment safe?, What do I do if I feel unwell at home?,** and **What should I do before I come into hospital?**.

This leaflet is not meant to replace the information discussed between you and your doctor but can act as the starting point for such a discussion or as a useful reminder of the key points.

What is femoropopliteal bypass graft?

This is the bypassing of a diseased artery in your leg. The bypass is performed either using a long vein from your leg or using a synthetic (artificial) graft. Incisions (cuts) are made in the groin of your affected leg, inside the thigh and just above the knee on your affected leg.

The graft is joined from the femoral artery in your upper leg by a tunnel through the muscle layer or under your skin.



How will this operation help?

The aim is to improve the blood supply to your diseased leg and to relieve your symptoms. By doing this it is hoped to prevent and save your foot from progressive ulcers or gangrene leading to amputation. It may also increase the distance at which you can walk before experiencing a feeling of cramp in your leg muscles.

We care

Are there alternatives?

Your doctor will discuss alternative treatments with you in clinic, which may include endovascular techniques (inside the arteries) either alone or in combination with a bypass operation. Without a bypass you could continue as you are or consider an amputation operation. Your doctor will explain these options to you.

Is the treatment safe?

Although this is a major operation, more than 19 out of 20 people will 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).

As with any major operation such as this, there is a risk of you having medical complications such as:

- deep vein thrombosis (blood clots in the leg veins)
- heart attack (one in 20)
- stroke
- kidney failure (one in 40)
- chest problems
- the loss of circulation to your legs
- infection in the synthetic graft (if used in your operation).

Each of these is rare, but overall it does mean that some patients may have a fatal complication from their operation. For most the risk is about 5%, in other words, 95 in every 100 patients will make a full recovery from their operation. The doctors and nurses will try to prevent these complications and to deal with them quickly if they happen.

You should discuss the following important complications with your consultant.

- **Infection of the synthetic graft** (if used in your operation). This is rare (about one in 500) but is a serious complication, and usually leads to removal of the graft. To try to prevent this happening, you are given antibiotics during your operation.
- **Bleeding**.
- **Blockage of the bypass graft** in the first month. This is a specific complication of this operation where the blood clots within the bypass graft causing it to block. If this happens it will be necessary to perform another operation to clear the bypass.
- **Limb loss (amputation)** occurs sometimes if the bypass blocks and the circulation cannot be restored. The circulation to the foot may be so badly affected that amputation is needed.
- **Chest infections** can occur following this type of surgery, particularly in smokers, and may need treatment with antibiotics and physiotherapy.

Discomfort from the wound area is normal for several weeks after your operation. You may have patches of numbness around your wound or lower down your leg which is due to the cutting of nerves to the skin. Your wound can sometimes become infected and this is usually treated with antibiotics. Your groin wounds can swell with fluid called lymph that may leak between the stitches; this usually settles down with time. It is usual for the ankle and foot to swell due to the improved blood supply, raising your leg when sitting down will help to reduce this but it may last up to six months or more.

Before you come into hospital

How do I decide whether to have the operation?

Everyone varies in the risks they are willing to take. Your doctors will explain about what they think the risks of the operation are for you and what the risks are of not having the operation. Only you can decide whether you go ahead and have the operation. Nothing will happen to you until you understand and agree what has been planned for you. You have the right to refuse if you do not want the operation.

What should I do before I come into hospital?

You may be asked to attend a pre-admission clinic a week before your operation. You will be seen in the clinic by one of the vascular nurse specialists to confirm your fitness for surgery and to give you further information about the procedure and your stay in hospital. Your consultant may arrange for you to be assessed by the anaesthetist at this clinic if they have concerns about your heart following the specialist heart tests that you have undergone as part of your work up for this operation or because of any problems that you may have had with previous anaesthetics.

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

Smoking – if you smoke, you should try to give up. The longer you can give up for the better. Your arteries and your bypass graft are more likely to stop working if you continue to smoke.

- 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 six weeks before you come into hospital you are less likely to get a chest infection after your operation.

Gum - please note any patients about to have an operation must not chew gum/nicotine gum immediately before their surgery.

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 may also cause mild dehydration.

Losing weight – if you are overweight, some of the risks of the anaesthetic and the operation are increased. Losing weight will reduce these risks. You should consider a change to your diet by reducing the amount of fat that you eat. If you need any advice about this an appointment can be made to see the hospital dietician.

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 and improve your fitness for your operation.

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 with your own GP. In particular to make sure that your blood pressure and these other conditions are as well controlled as possible.

Coming into hospital

What will happen when I arrive at hospital?

On admission you will be greeted by a member of the ward team and introduced to your named nurse. They will discuss with you the care you will receive while you are in hospital. You will also be seen by your consultant or one of their team to explain anything you may be unsure about.

Whilst you are in hospital, as part of your care every effort is made to make sure you are seen by the same hospital doctor who will be part of the vascular and interventional radiology team.

You will be admitted on the day of your operation and final preparations may include having a chest x-ray and/or tracing of your heart (ECG).

Please **do not shave any hair** from your stomach or legs as this will be done for you in theatre before your operation. Your consent for this will have been discussed when you attended the pre-admission clinic.

You will meet the **anaesthetist**, who is a doctor with specialist training in anaesthesia, the treatment of pain, and the care of patients in the intensive care unit (ICU). They will visit you before your operation to talk to you about the anaesthetic and methods of pain relief, taking into consideration any other medical conditions that you have and also any previous anaesthetics you may have had. They may ask you about your health, look at all your test results, listen to your heart and breathing, and look at your neck, jaw, mouth, and teeth. They will be happy to answer your anaesthetic questions and discuss any worries that you have.

You will be given clear instructions about **when to stop eating and drinking**. It is important to follow this advice. If there is food or liquid in your stomach during the anaesthetic, it can get into and seriously damage your lungs. Usually, you should have no food for six hours but non-milky drinks are allowed until two hours before your operation.

You should continue to take all your **regular medications,** even on the morning of your operation. Except, if you are taking clopidrogel in combination with aspirin, you would have been advised to stop this if and when you attended the pre-admission clinic. You must also temporarily stop anticoagulants, for example warfarin.

A **physiotherapist** may see you before your operation. They will advise you of exercises to perform after your operation, which will help your circulation whilst lying in bed, and deep breathing exercises, which will help keep your lungs clear, together with the movements of your legs and feet to help prevent blood clots in your leg veins. It is very important that you can breathe deeply and cough effectively, to help you avoid a chest infection or pneumonia.

You will be asked to have a bath or shower and put on a theatre gown on the day of your operation before you go to theatre. The procedure will take place in the main theatre suite at Kent and Canterbury (K&C) Hospital.

Will I have an anaesthetic?

The operation is usually performed under a general anaesthetic (you will be asleep) or spinal anaesthetic (you are awake but the area will be numbed).

You will usually have an epidural anaesthetic as well to provide pain relief after your surgery. This is where a small tube is inserted into your back through which painkillers can be given to numb the lower half of your body during the operation and for several days after. The anaesthetist will explain this further.

What happens in the anaesthetic room?

There is a period of 30 to 40 minutes preparation before the anaesthetic begins. During this time the anaesthetist's assistant will attach monitoring machines which measure your heart rate (sticky pads on your chest), blood pressure (inflatable cuff on your arm), and oxygen levels (small peg on your finger or ear lobe).

The anaesthetist may numb your skin with local anaesthetic before using a larger needle to insert a thin plastic tube (cannula) into the vein on the back of your hand or forearm. This is attached to a bag of fluid (usually known as a drip). You may also have a cannula in the artery at your wrist for monitoring your blood pressure.

The epidural is usually inserted after all these lines have been placed. You will be asked to breathe oxygen through a mask whilst the anaesthetist injects drugs into your 'drip'. You will not be aware of anything else until after the operation is finished. Under a general anaesthetic, you will also have a breathing tube placed in your mouth. A tube will also be passed into your bladder (catheter) which is used to measure the amount of urine that your kidneys produce and relieve you of the need to pass urine.

After my operation

How will I feel afterwards?

You will wake up in the recovery area of the theatre and will return to the ward once you are awake enough and sufficiently free of pain. You will have a drip (tube) into one of the veins in your arm, which is used to give you fluids until you are able to eat and drink normally. You will have a tube in your bladder, with a bag on the end of it to collect urine (catheter). This is removed once the epidural is removed and you are more mobile and able to move around more easily.

You will experience varying degrees of pain but you will receive regular painkillers to help make you feel more comfortable. Please tell staff when you have pain. The anaesthetist will discuss alternative ways in which pain relief can be given. One way is in the form of patient-controlled analgesia (PCA). This is by a machine that you are able to control yourself by pressing a button to help with pain relief. You may also experience some sickness; once again please tell the nursing staff and they can give you an injection to stop this.

The wounds on your groin and leg will make moving painful at first. You will be encouraged to get up on the first day after your operation for a short while. The nurses and physiotherapists will help you with this. You should progress to walking after 48 hours following your operation. This will encourage blood flow, help your wound to heal, and prevent complications in recovery.

As a safety measure you will receive injections of a blood-thinning substance (clexane) to help prevent blood clots from forming. When sitting out in a chair, you will be encouraged to raise your legs. When lying in bed or sitting out, it is advisable to continue the leg and deep breathing exercises taught to you by the physiotherapist.

Wounds are usually closed with dissolvable buried sutures that do not need to be removed or with staples that are removed seven to 10 days after the operation. You can be discharged with the staples in place and arrangements are made for their removal with either the district nurse or at your GP's surgery. You will be advised as necessary.

It is quite common to feel a bit low after having an operation; this can be caused by a number of factors such as pain, feeling tired, and not sleeping well. The nurses can help you with this; please do not hesitate to let them know how you are feeling. It may be as simple as changing your painkillers or having a light sleeping tablet that will make you feel better.

How long will I be in hospital?

You can expect to be in hospital for at least three days and much longer if you have also needed surgery to your foot for gangrenous toes. The surgeon and the nursing team will decide when you are medically ready to go home. Please do not leave until you have been given instructions, your medication, and discharge letters for your GP.

What should I do when I go home?

Resting for two to three weeks is suggested after leaving hospital. This time is spent resting more than usual, such as having a sleep in the afternoon. After this period you can gradually return to normal activities taking care not to put too much strain on your operation wounds. It is advisable to gradually increase the amounts of exercise that you do, lengthening the distance that you walk. How much you can move around will depend in part in how severe your leg problem is and your response to the operation, and therefore it varies from patient to patient.

Driving: you will be safe to drive when you are able to perform an emergency stop comfortably. This will normally be four weeks after your surgery, if in doubt please check with your doctor. Driving too soon after an operation may affect your insurance so we advise you to check your insurance policy details or contact your insurance company before driving again.

It is important you keep your wound areas clean. This can be done with a daily bath or shower, patting the area dry with a clean towel. If your wound becomes red and there is a discharge you should contact your GP for advice, as you may need antibiotics.

You will be sent home on a small dose of aspirin if you were not already taking it. This is to make the blood less sticky. If you are unable to tolerate aspirin an alternative drug will be prescribed. In some cases you will be asked to take warfarin, a blood-thinning drug instead. Also, you will be taking a statin, a drug to lower cholesterol, together with your normal medications.

What do I do if I feel unwell at home?

In general, call your GP or the out of hours doctors' service. If you develop sudden pain or numbness in your leg that does not get better within a few hours then contact the hospital immediately. Likewise if you experience any pain or swelling in your calves, any shortness of breath or pains in your chest, you must contact the hospital.

Will I have to come back to hospital?

The vascular team may review you six weeks after your discharge from hospital in the outpatient clinic, to check your progress. This is not always necessary if you are completely well. You can contact the vascular team if you have a problem.

When can I return to work?

You should be able to return to work one to three months following your operation, depending on your original condition. If in doubt please ask your surgeon or GP.

Finally….

Most or all of your questions should have been answered by this leaflet but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure, before you sign the consent form agreeing to the operation.

Where can I get more information?

If you have any questions or concerns, please contact one of the following: during the working day, first try the vascular nurse or, if unable to get through or out of hours ask the hospital switchboard for the vascular registrar on call.

• Vascular Nurse Practitioners	Telephone: 01227 864137 Email: ekh-tr.vascular-nurse@nhs.net
• Kent and Canterbury Hospital (K&C)	Telephone: 01227 766877 (out of hours for Registrar on call)

or your consultant's secretary

• Mr Rix, Kent and Canterbury Hospital	Telephone: 01227 864259
• Mr Senaratne, Kent and Canterbury Hospital	Telephone: 01227 783196
• Mr Wilson & Mr Shirazi, Kent and Canterbury Hospital	Telephone: 01227 864255

Useful web addresses

- National Institute for Health and Care Excellence www.nice.org.uk
- Vascular Society of Great Britain and Ireland www.vascularsociety.org.uk
- Circulation Foundation www.circulationfoundation.org.uk

This leaflet has been produced with and for patients

If you would like this information in **another language, audio, Braille, Easy Read, or large print** please ask a member of staff.

Any complaints, comments, concerns, or compliments please speak to your doctor or nurse, or contact the Patient Advice and Liaison Service (PALS) on 01227 783145, or email ekh-tr.pals@nhs.net

Further patient leaflets are available via the East Kent Hospitals web site www.ekhuft.nhs.uk/patientinformation

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