Femorofemoral crossover bypass graft

Information for patients from the Vascular Surgery Service

This leaflet tells you about the operation known as femorofemoral crossover bypass graft; it explains what is involved before, during, and after the operation. It also explains what possible risks there are and how you can help to 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 this or as a useful reminder of the key points.

What is a femorofemoral crossover bypass graft?
This is the insertion of a synthetic artificial artery between the femoral arteries in each groin. The graft is placed via incisions in both groins and is passed from side to side buried beneath the skin in the lower abdomen (tummy).

How will this operation help?
The aim is to improve the blood supply to your leg and to relieve your symptoms. By doing this it is hoped to prevent and save a foot from progressive ulcers, gangrene, or amputation and to increase the distance that you walk before experiencing a feeling of cramp to the muscles of your legs.

Are there alternatives?
The blood supply to your leg has become compromised by a blockage of the main artery and needs to be corrected to maintain the health of your leg and foot and to help you walk more comfortably. You could carry on as you are or have the leg amputated. There are sometimes alternative bypass operations (such as, aortobifemoral, iliofemoral, or axillofemoral) that you could have but these will depend on the extent and position of the blockage in your leg artery and your surgeon feels that this is the best option.
Is the treatment safe?
Although this is a major operation, better 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; and
• whether you have any medical problems (especially heart disease).

As with any major operation such as this, there is a risk of you having 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 with clots (embolism) or infection.

None of these is common, but overall it does mean that some patients may have a fatal complication from their operation. For most this risk is about 2%, in other words 98 in every 100 patients will survive the operation. The doctors and nurses will try to prevent these complications and to deal with them rapidly if they do occur.

The other important surgical complications that you should have discussed with your consultant are:

• Infection of the artificial artery - this is rare (about one in 100) but is a serious complication, and its treatment usually involves removal of the graft. To try to prevent this happening you are given antibiotics during your operation.
• Bleeding, infection, or swelling of the groin wounds.
• Blockage of the bypass graft where the blood clots within the bypass graft causing it to block. If this occurs it may be necessary and possible to perform another operation to clear the bypass though not always.
• Limb loss (amputation) - when the bypass blocks and the circulation cannot be restored, and if the circulation to the foot is so badly affected, then an amputation may be required to save or improve the quality of life.
• The circulation to your ‘good’ leg may be reduced and cause similar symptoms to those in your ‘bad’ leg, this is called a ‘steal syndrome’.

Discomfort from the wound area is normal for several weeks after the operation. You may have patches of numbness around the wound or lower down the leg which is due to the unavoidable cutting of nerves in the skin. It is quite common for the feet to swell due to the improved blood supply, raising the legs when sitting or resting will help this.

Before you come into hospital
How do I decide whether to have the operation?
Everyone varies in the risks they are willing to take. The 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 will be invited to an anaesthetic pre-assessment clinic before your operation, where you will be seen 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 also arrange for you to be assessed by the anaesthetist at this clinic if they have concerns about your health following the special 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 the 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 the operation.

Gum: please note any patients about to undergo an operative procedure must not chew gum/nicotine gum prior to 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 dehydration and confusion or delirium.

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 require 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 get you fitter for the 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 from your own GP. In particular, so 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 kent ward team and introduced to your named nurse. They will discuss with you the care that 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 before you sign a consent form for your operation.

Final preparations will be completed on your admission to the ward. These may include having blood tests, 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. Your agreement to having the operation will need yours and the surgeon’s signature on a special legal consent form.
You will meet an anaesthetist, who is a doctor with specialist training in anaesthesia, the treatment of pain, and the care of patients in intensive care. They visit you before your operation to discuss 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 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 questions and discuss any anaesthetic 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 the anaesthetic, it can get into and 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 the 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-assessment 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 the operation that will aid your circulation whilst lying in bed and of deep breathing exercises that will help keep your lungs clear, together with the movements of your legs and feet to prevent blood clots in your leg veins (DVT). It is very important that you can breathe deeply and cough effectively, to help you avoid a chest infection or pneumonia.

The operation will take place in the main theatre suite at Kent and Canterbury Hospital.

Will I have an anaesthetic?
The operation is performed under a general or spinal anaesthetic. 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 these further.

What happens in the anaesthetic room?
There is a period of preparation before your anaesthetic begins. In this period the anaesthetist’s assistant will attach monitoring machines which measure your heart rate (sticky pads on your chest), blood pressure (an inflatable cuff on your arm), and oxygen levels (small peg on your finger or ear lobe).

The anaesthetist will numb your skin with local anaesthetic before using larger needles to insert thin plastic tubes (cannulas) into a vein on the back of your hand or forearm (usually known as a drip and used to keep you well-hydrated and to give anaesthetic drugs) and into the artery at your wrist (arterial line used to monitor blood pressure). These are attached to a bag of fluid.

The spinal or epidural is usually inserted after all these have been done. For a general anaesthetic 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. Whilst you are anaesthetised, you will have a breathing tube placed in your mouth.

A catheter tube will also be passed into your bladder which is used to measure the amount of urine that your kidneys produce and to relieve you of the need to pass urine.

As part of your care whilst in hospital, every effort is made to ensure you are seen by the same doctors who will be part of the vascular and interventional radiology team.
After the operation

How will I feel afterwards?
Following your operation you may be transferred to the high dependency unit (HDU) for close monitoring overnight or you will be returned to the ward if you are well enough and free of pain. You will still have a drip (tube) into one of your veins which is used to give you fluids until you are able to eat and drink normally. You will also still have the catheter tube in your bladder with a bag on the end of it to collect your urine. This is removed once the epidural is removed and you are more mobile and able to move around more easily. You may need to use a bed pan or commode at first.

You will experience varying degrees of pain but you will receive regular painkillers to help make you feel more comfortable. Please alert the staff if and when you have pain. The anaesthetist will discuss alternative ways in which pain relief can be administered. One way is in the form of patient controlled analgesia. This is by a machine called a PCA that you are able to control yourself by pressing a button to aid pain relief. You may also experience some nausea or sickness. Once again, please alert the staff and they can give you treatment to help this. The position of the groin wounds will make moving uncomfortable at first. You will be encouraged to get up for a short while on the first day after your operation, the nurses and physiotherapists will assist you with this. If your feet are healthy and strength good, you will progress to walking two to three days after your operation. This will encourage blood flow and aid healing of your wounds, and reduce some complications in your recovery. As a safety measure, you will receive daily injections of a blood-thinning substance (clexane) to prevent blood clots from forming. When sitting out in a chair you will be encouraged to elevate your legs. When lying in bed or sitting out, it is advisable to continue doing the leg and deep breathing exercises shown to you by the physiotherapist.

The wounds are usually closed with dissolvable buried sutures that do not need to be removed. You usually have a simple adhesive dressing on the wounds. You may also have a plastic tube to drain fluid from the wounds; these are usually removed after a day or two.

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, or 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 may help you feel better.

How long will I be in hospital?
You can expect to be in hospital for around three days or more after your operation. The surgeon and the nursing team will advise when you are ready to go home. Please do not leave until you have been given instructions, your medication, and discharge letter for your GP.
What should I do when I go home?
A period of convalescence of 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 to begin with. It is advisable to gradually increase the amounts of exercise that you undertake, lengthening the distance that you walk. Mobility is dictated in part by the severity of your leg problem and your response to the operation and therefore it will vary 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 policy details or contact your insurance company.

It is important you keep your wound areas clean. This can be done with a daily bath or shower, gently patting the areas dry with a clean towel and replacing the dressings. If a wound becomes red and there is a discharge, you should seek advice from your GP 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 should be taking a statin, a drug to lower cholesterol, together with any other of 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 the leg that does not get better within a couple of hours, then contact the vascular team immediately. Likewise, if you experience any pain or swelling in your calves, any shortness of breath or pains in your chest, you must seek medical attention.

Will I have to come back to hospital?
The vascular team usually review you two to six weeks after discharge in outpatients to observe 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 light work or jobs at home after two weeks and heavier jobs after a month. 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 operation before you sign the consent form agreeing to the procedure.

Source of information
The information within this leaflet is based on current practice undertaken by your consultant and national guidelines. If you have any comments regarding this leaflet we would appreciate your feedback.
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 Insall, Kent and Canterbury Hospital
  Telephone: 01227 864259
• Mr Rix and Mr Senaratne, Kent and Canterbury Hospital
  Telephone: 01227 783196
• Mr Wilson, 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
Any complaints, comments, concerns, or compliments
If you have other concerns please talk to your doctor or nurse. Alternatively please contact our Patient Advice and Liaison Service (PALS) on 01227 783145 or 01227 864314, or email ekh-tr.pals@nhs.net

Further patient information leaflets
In addition to this leaflet, East Kent Hospitals has a wide range of other patient information leaflets covering conditions, services, and clinical procedures carried out by the Trust. For a full listing please go to www.ekhft.nhs.uk/patientinformation or contact a member of staff.

After reading this information, do you have any further questions or comments? If so, please list below and bring to the attention of your nurse or consultant.

Would you like the information in this leaflet in another format or language?
We value equality of access to our information and services and are therefore happy to provide the information in this leaflet in Braille, large print, or audio - upon request.

If you would like a copy of this document in your language, please contact the ward or department responsible for your care.

We have allocated parking spaces for disabled people, automatic doors, induction loops, and can provide interpretation. For assistance, please contact a member of staff.

This leaflet has been produced with and for patients