Axillobifemoral bypass graft

Information for patients from the Vascular Surgery Service

This leaflet tells you about the operation known as axillobifemoral bypass; it explains what is involved before, during, and after the operation. It also explains what the possible risks are and how you can help 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 doctors but can act as the starting point for such a discussion or as a useful reminder of the key points.

What is axillobifemoral bypass?
This is the insertion of a synthetic artery graft beneath the skin at your shoulder from the main artery in your arm (axillary artery) to the femoral arteries in the groin(s). It can be done on either side and to one or both groins; the diagram shows a graft from left arm to both groins.

How will this operation help?
The aim is to improve the blood supply to your leg(s) as the main artery(ies) in your abdomen or pelvis has/have become blocked. It is an operation that can also be performed after aortic graft infection or a failed cross-over graft. Its aim is to relieve your leg symptoms, to increase the distance that you walk before experiencing a feeling of cramp to the muscles of your legs, and to help prevent or save a foot from progressive ulcers, gangrene, or amputation.
**Are there alternatives?**
There is no surgical alternative due to the position of the occlusion (blockage) within your aorta, the main artery in your body, or iliac arteries. The blood supply to your leg(s) is compromised and needs to be corrected to maintain the health of your leg and foot to prevent ulceration and gangrene. The only alternatives are to carry on as you are or to have your leg(s) amputated.

**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, 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 50)
- stroke
- kidney failure (one in 40)
- chest problems
- the loss of circulation to your leg(s), or
- infection in your artificial artery.

Each of these is rare, but overall it does mean that some patients may have a fatal complication as a result of their operation. For most the risk is about 2%, in other words 98 in every 100 patients will make it through the operation. The doctors and nurses will try to prevent these complications and to deal with them quickly if they happen.

The following are important complications that you should have discussed with your consultant.

- **Infection of the artificial artery graft**, which is a rare (about one in 100) but serious complication and often needs removal of the graft if you are fit enough. To try to prevent this happening, you are given antibiotics during your operation.

- **Blockage of the bypass graft** is a specific complication of this operation, where blood clots within the bypass graft, due to low flow, causing it to block. If this happens, it may be necessary to perform another operation to clear the bypass or try again from the other arm.

- **Limb loss (amputation)**, happens very occasionally when the bypass blocks and circulation cannot be restored. The circulation to the foot is so badly affected that amputation of the leg or part of the foot is needed.

- **Bleeding.**

- **Chest infections** can happen after this type of surgery, particularly in smokers, and may need treatment with antibiotics and physiotherapy.

Discomfort from the wound areas is normal for several weeks after the operation. You may have numbness around the wounds or lower down the leg which is due to the unavoidable cutting of nerves in the skin. The wound(s) can sometimes become infected and the usual treatment is antibiotics. The groin wound can swell with fluid called lymph that may discharge between the stitches this usually settles down with time. It is quite common for the feet to swell due to the improved blood supply, raising the legs when sitting will help to reduce this. This swelling can 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 to 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 preassessment clinic before your operation. You will be seen by one of the vascular nurse specialists to confirm your fitness for the 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 an anaesthetist at this clinic if they have concerns about your fitness following the specialist 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 your operation.

**Gum** - please note that any patients about to undergo an operation must not chew gum/nicotine gum before 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 for you 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 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.

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

For patients having planned surgery, you will be admitted early on the day of your operation so final preparations can be completed. These 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 just before your operation. This is usually discussed with you at the preadmission clinic.

You will meet the anaesthetist, who is a doctor with specialist training in anaesthesia, the treatment of pain and in the care of patients in the intensive care unit. They will visit you before the 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 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 food and drink; it is important to follow this advice. If there is food or liquid in your stomach during the anaesthetic, it could come up into the back of your throat and seriously damage your lungs. Usually, you should have no food for six hours but non-milky and non-sugary drinks are allowed until two hours before your operation. You should take your normal medications even on the morning of your operation, except for anticoagulants, for example warfarin, or clopidogrel if in combination with aspirin.

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 of deep breathing exercises that 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 Hospital (K&C).

Will I have an anaesthetic?

The operation is always performed under a general anaesthetic (you will be asleep). You may have an epidural anaesthetic as well to provide pain relief for the lower (groin) part of the operation. This is where a small tube is inserted into your back through which painkillers can be given during the operation and for some 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. In this period, the anaesthetist’s assistant will attach 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 will numb your skin with local anaesthetic before using larger needles to insert thin plastic tubes (cannula) into a vein on the back of your hand or arm (usually known as a drip) and into the artery at your wrist (arterial line). These are attached to a bag of fluid.

If used, 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. Whilst you are anaesthetised, you will 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 to relieve you of the need to pass urine.

After the operation

How will I feel afterwards?

You will wake up in the recovery area of the theatre suite and will return to the ward once you are awake enough and are free of pain. Some patients go to ITU/HDU instead, before returning to the ward. You will still 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 also still have the catheter in your bladder with a bag on the end of it to collect urine. This is removed once you are able to move around more easily (and after the epidural is removed). The epidural will be continued until your pain can be controlled by tablets, but no longer than five days.

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 administered. One way is by patient-controlled analgesia (PCA) which is by a machine that you are able to control yourself by pressing a button to deliver pain relief. You may also experience some sickness but, once again, please tell nursing staff and they can give you medicines to help stop this.

The position of your wounds will make moving uncomfortable 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, and you should progress to walking after 48 hours. This will encourage blood flow, help with the healing of your wounds, and help to prevent complications during your 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 elevate your legs. When lying in bed or sitting out, it is advisable to continue the leg and deep breathing exercises taught to you by your physiotherapist.

Your wounds are usually closed with dissolvable, buried sutures that do not need to be removed. If external stitches or staples are used, 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, 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 to feel better.
How long will I be in hospital?
You can expect to be in hospital for around two or more days after your operation, depending on your condition before surgery. Your surgeon and nursing team will advise when you are ready to go home. Please do not leave until you have been given instructions, medications, and discharge letters 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 rest 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, increasing the distance that you walk. Mobility depends, in part, on how serious your original leg problem was and your response to the operation, so it varies from patient to patient.

It is important you keep your wound areas clean. After 48 hours 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 discharge, you should contact your GP.

You will be sent home on a small dose of aspirin if you were not already taking it. This is to make your 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 (anticoagulant) instead. Also, you will be taking a statin, a drug to lower cholesterol, together with your other normal medications.

When can I start driving again?
You should be safe to drive when you are able to perform an emergency stop comfortably, this will normally be up to 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.

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(s) that does not get better within a few hours, then contact the hospital immediately. If you experience any pain or swelling in your calves, any shortness of breath or pains in your chest, you must go to accident and emergency (A&E) immediately.

Will I have to come back to hospital?
Around six weeks after discharge, the vascular team will review you in outpatients to check on 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 procedure, before you sign the consent form giving us your permission to operate.

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 Rix, Kent and Canterbury Hospital
  Telephone: 01227 864259
- Mr Senaratne, Kent and Canterbury Hospital
  Telephone: 01227 783196
- 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
- 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 01227 864314, or email ekh-tr.pals@nhs.net

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