Vascular Surgery
Lower Limb Bypass Surgery

Why do I need a bypass operation?

A bypass operation is normally performed when there is a significant narrowing or blockage of the arteries to your leg. In the least severe form, this causes cramp-like pain in the calf, thigh or buttock when walking. Most people with this symptom do not need an operation. If the blockage is more extensive, patients may be unable to walk more than a few yards or may get continuous severe pain in their toes and feet. This is often worse at night and many find that this can only be relieved by hanging their legs out of the bed. Pain occurs because not enough blood is getting to the feet. In the most severe form, patients may develop ulcers or black areas (gangrene) on their toes, heels or feet. Without treatment, this might lead to a leg amputation. The aim of bypass surgery is to improve the blood flow to the leg and relieve the symptoms.

Before your operation

You will already have had either a magnetic resonance angiogram or a CT angiogram at Bedford Hospital or Luton & Dunstable Hospital. Both provide a 'road map' of your arteries and enable us to plan your operation carefully. The operation itself will be carried out at Bedford Hospital. You will be asked to attend the surgical pre-assessment clinic at Bedford Hospital prior to your operation. The pre-assessment nurse will ensure that you are taking the correct tablets and will arrange blood tests, an ECG (heart tracing) and an echocardiogram (ultrasound scan of the heart). You will usually be seen by a junior doctor and may see the anaesthetist. You will then be admitted on the day of your planned operation or sometimes the day before. I will see you on the ward to discuss the operation in detail and you will be introduced to the other members of the surgical team. If you have any questions please do not hesitate to ask either the nursing staff or any member of the team. The anaesthetist will also visit you to discuss the anaesthetic in detail. You will be given a daily injection under the skin (Tinzaparin), which minimises the risk of deep vein thrombosis.

The operation

The operation may be carried out either under general anaesthetic or under an epidural. The latter involves a fine catheter (tube) that is inserted into your back and delivers pain-killing medication, which causes the legs to become numb. The advantage of an epidural is that it can help deal with pain after the operation as well as increasing blood flow through your bypass graft. Both general and epidural anaesthetics may be used for your operation. You are likely to have several other tubes connected: a catheter in your bladder, a drip in your arm and/or neck and a smaller drip in the artery at your wrist. This helps us get a very accurate blood pressure reading during the operation.

A bypass operation is normally performed using the vein from the inside of your own leg. This will leave a series of small incisions from the groin down to below the knee. If you have no suitable vein in the leg, it may be possible to use a vein from your arm. If this is possible/ desirable then we will discuss this with you. If this is not possible then we use a graft made from waterproof plastic (PTFE). In this case, you will have one incision in the groin and a further incision above or below the knee.

After your operation

You will initially have fluid given to you through a drip but by the evening of the operation should be able to start drinking slowly. You should anticipate getting out of bed at 24 hours and the epidural (if used) will be removed at 72 hours. The

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various tubes and catheters can then be removed which will help your mobility. The physiotherapist will help you with your walking. You should also be taking a tablet to try and make the blood less sticky and therefore less likely to cause the bypass to clot. Aspirin (normal dose 75 mg each day) is the usual blood-thinning treatment, unless you have had problems with stomach ulcers, indigestion or allergies to aspirin. There are alternatives in this situation, such as clopidogrel (Plavix) which is increasingly being used instead of aspirin. Some patients may need warfarin tablets which needs careful monitoring with a blood test to ensure that you have the correct dose.

I would normally expect you to be fit enough to go home between five and seven days after the operation. You will either have absorbable stitches which do not need removing or staples, half of which will be removed at seven days and the other half removed by the district nurse after discharge.

Follow up

You should avoid driving for at least three weeks, until you are safe to do an emergency stop. Depending on your circumstances, we will advise you when it is safe for you to return to work. You will be able to take a shower once you are discharged but should avoid bathing until the wound has completely healed. It is important to take regular exercise.

Complications may occur with this type of operation. The main worry is clotting of the bypass graft, which would need an urgent operation to clear the graft. If this fails, there is a risk of an amputation. Clotting of a graft is much more likely in those patients who continue to smoke. Wound infections are not uncommon and are easily treated. A swelling may develop in the groin due to damage to the microscopic lymphatic vessels. This might leak straw-coloured fluid but usually resolves without any specific treatment.

Once you are discharged, should you have any problems, such as increased pain in the leg, numbness, loss of movement or any major bleeding from the wound, then it is important that your GP is informed as soon as possible. Otherwise, you will be reviewed in the outpatient clinic either in Bedford Hospital or Luton & Dunstable Hospital at six weeks.

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