We have developed this booklet to give you some information about lower limb bypass and what to expect when you decide to have this operation. We have outlined some of the benefits, risks and alternatives, if any, to the operation. We hope that this information will help you in making your decision. Please ask your surgeon about anything you do not fully understand or you wish to be explained in more detail.

**Why do I need an operation?**
Blocked or narrowed arteries in the leg can produce different symptoms depending how seriously the blood flow is affected. The least serious kind of symptom is pain in the leg muscles when walking a certain distance. Bypasses are only performed if your symptoms are so bad that they affect your quality of life.

If the blood flow is more seriously reduced then the toes or foot may become painful, particularly at night. Painful ulcers or cracks may develop on the foot. When the blood flow becomes worse areas of gangrene may develop. When things get this bad there is a risk of amputation of the part of the leg if blood flow cannot be improved.

**What is a bypass graft?**
An arterial bypass graft is a tube which is inserted into the leg to get blood past the blocked artery. This tube is joined at the top end to the artery above the blockage and to the lower end of the artery below the blockage, to improve the blood supply to the muscles.

The bypass graft can either be a prosthetic (manmade) tube or one of your own veins. The veins that are used are the ones just under your skin and people can manage without them.
What are the benefits of surgery?
It is hoped that the bypass surgery will be successful and the blood supply to your leg greatly improved. In return any symptoms such as pains on walking should decrease and your quality of life improve.

What are the risks of surgery?
Bypass grafting can be followed by any of the serious complications of major surgery, including heart problems, chest problems and risk to your life from thrombosis or stroke. These are uncommon but are possible complications.

Sometimes problems develop with the bypass graft. The graft could become blocked causing the bypass to fail. This can happen during the operation or in the future. If the bypass graft blocks it is likely your symptoms will return. Occasionally they may be worse and this increases the chance that you may require an amputation if the blood supply is so insufficient.

It is important that patients understand the risk of amputation before embarking on bypass grafts.

Sometimes problems develop with the wounds. Infection can develop especially in the groin. Very occasionally infection can involve the bypass graft this is particularly serious if we have used a manmade graft. If the infection does not respond to antibiotics it may mean that the bypass graft may have to be removed and serious infection can lead to amputation.

What are the alternatives?
Your consultant will discuss your options but there may be no alternatives to bypass surgery if your blood supply is severely impaired. However, if your symptoms are less critical you may be advised to try to take more exercise and modify your risk factors such as:-

- Smoking
- High blood pressure
- High cholesterol
- Diabetes and obesity
What happens when I come into hospital?
You will usually come into hospital the day before the operation. If we are considering using one of your own veins you will have your leg scanned and marked with a felt pen to show exactly where the vein is.

You will meet your surgical team who will inform you when the operation will be performed. You will be advised when to stop eating and drinking.

Before your operation you will meet your anaesthetist. This will give you the opportunity to discuss the type of anaesthetic and pain relief after your operation.

How long does the operation take?
The operation may take several hours depending on how difficult it is to insert the bypass graft and restore blood supply. Each case is different so estimate about 2 – 4 hours for surgery.

Will I have any drips or tubes?
After the operation you will usually have a drip in one arm and a catheter inserted into your bladder. These usually remain for 1– 2 days. You will also have pain relief either via an epidural or patient controlled pump (PCA). You may also have one/two drains which remove blood/fluid from the areas of the operation. These are removed when the drainage is minimal.

What can I do after the operation?
You will do no harm by starting to move your foot and leg in bed as soon as the operation is over. We encourage your to become mobile as soon as possible. You will usually get out of bed the day after the operation. It does no harm to try to walk as soon as you are able. It will be uncomfortable to start with but we will give you painkillers to reduce your discomfort.

How long will I be in hospital?
You will stay in hospital until you are sufficiently confident about walking. Once we are sure that you can manage at home and your wounds have sufficiently healed we will advise you to prepare for discharge. In some cases it can be as short as 4-5 days but some patients may need longer.
When do the stitches/clips come out?
Between 10-14 days after the operation providing the wounds are healed the stitches will be removed either by the district nurse/practise nurse your nurse will advise you.

What happens when I go home?
Try to be active when you get home. It is important to try to walk fairly frequently during the day. You are likely to become tired quickly at first but rest and give yourself time to recover. You can bath and shower when the wounds are healed.

Will there be any after effects?
The wounds are likely to be uncomfortable for several weeks. You should take painkillers as required. Your leg will be quite stiff but this will improve gradually with moving. Your bypass leg is likely to be more swollen but do not worry. Over the next few months this will decrease.

There is often a fair amount of bruising and sometimes a large collection of blood (haematoma) can form beneath the wound. This will settle gradually.

Damage to small nerves under the skin can lead to numbness of areas of the skin of the leg. Most commonly this affects the skin over the inner side of the lower leg, ankle or foot. This may be permanent.

How will I know if my graft blocks?
There will usually be fairly sudden and obvious signs of reduced blood flow – a cold pale often numb leg/foot. If the reduced blood flow is less serious then you may get a sudden return of calf pain on walking.

What should I do if I think I have problems?
Do not delay. If your foot is cold and pale return to hospital immediately. If you have simply developed calf pain we advise you to be seen soon, phone your GP who will assess you.

What can I do to protect my bypass graft?
If it essential you do not/or stop smoking. You will require tablets to thin your blood (usually aspirin). If you are able to take these. Try to exercise regularly. Monitor your blood pressure and diabetes and control them with normal limits. Reduce weight if you are obese, and ensure your cholesterol is within normal limits.
How long will it take for me to recover?
Everyone is different but it will probably take several weeks to recover. If you work you can return to work when you feel comfortable and are fully mobile.

You can drive when you can perform an emergency stop, usually 2-3 weeks. Check with your motor insurance company.

What follow up will I receive?
You will be seen six weeks after discharge and then at regular intervals. If you are worried about anything you can contact your GP/or the hospital/vascular nurse.

Personal Notes

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