

# Lower Limb Endarterectomy

An information guide



# Lower Limb Endarterectomy

## Introduction

This leaflet describes an endarterectomy, a surgical procedure used to treat blocked arteries in the lower limb. It explains what is involved and what the possible risks are.

It is not a substitute for the advice which the doctor or specialist may give you, but can act as a starting point for discussion. Prior to any procedure, you should have a full explanation of the procedure and the risks and benefits involved before signing the consent form.

## Consent to store your personal information

Vascular surgeons record information about surgical interventions, including lower limb bypass surgery, on the National Vascular Register (NVR).

This is a secure database that is used to help monitor and improve vascular services throughout the country. Therefore, you (or your nearest relative) may be asked to give permission for your personal information to be stored on the NVR. Although the database is a national system, strict data governance means personal details on the NVR can only be accessed by staff directly involved in an individual's treatment.

Patient information is confidential and is not passed on to third parties other than healthcare professionals directly involved in an individual's care. You need to confirm with your vascular surgeon whether you are happy for them to store your personal information on the NVR.

## **What is an Endarterectomy?**

Endarterectomy is the general term used to describe the surgical removal of plaque (a build-up of fatty tissue) from an artery that has become narrowed or blocked.

In certain situations endarterectomy may be used instead of a bypass operation where the blockage is generally shorter in length. A patch, usually bovine collagen, may be used to keep the artery open.

## **What are the benefits of this operation?**

When there is a blockage in this artery the circulation of blood to your legs is reduced, which may cause you to have pain in your calf when you walk. This is known as intermittent claudication.

This operation should allow you to walk further without pain. This surgery is also recommended when the circulation is so poor that your foot is painful at rest or at night.

Another symptom indicating a possible blockage in the artery may be leg ulcers or black areas of dead skin. In such cases, this operation can be used to prevent the amputation of your leg below or above the knee.

## **Alternatives**

You may prefer not to have this operation, in which case your doctor may then treat you with 'best medical management'. This might include taking Aspirin or equivalent daily, good control of your blood pressure/cholesterol/diabetes, and stopping smoking.

However you must be aware that your symptoms may get worse in the future.

## Is there anything I can do while waiting for the operation?

There are things that you can do to make yourself fitter for this operation, and also reduce the risk of developing further disease caused by atherosclerosis (hardening of the arteries):

- If you smoke - **STOP!** For further information please see page 13.
- If you have high blood pressure it is important that it is well controlled before the operation.
- If you are **diabetic** keep your blood sugars well controlled.
- Have your **cholesterol** (fat in your blood) measured. You may need to take a tablet to lower it.
- Try to eat a healthy, low fat, low salt diet. Aim for 5 portions of fruit and vegetables a day, and fish twice a week (make one an oily fish such as salmon, mackerel, sardines or tuna).

## Possible risks/complications

As with any surgery there are some risks associated with this procedure.

**Major complications:** As with any major operation there is a small risk of you having a medical complication such as a heart attack, stroke, kidney failure, chest problems, loss of circulation in the legs or bowel, or infection in the artificial artery. Each of these is rare, but overall it does mean that some patients may have a fatal complication from their operation. For most patients this risk is about 5% – in other words 95 in every 100 patients will make a full recovery from the operation.

**Wound infection:** Wounds sometimes become infected and this may need treatment with antibiotics and dressings. Severe infections are rare. Occasionally, the wound may need to be cleaned out under anaesthetic.

**Graft infection:** Very rarely (about 1 in 500), the artificial graft may become infected. This is a serious complication, and usually treatment involves removal of the graft.

**Fluid leak from wound:** Occasionally the wound may leak fluid. This may be clear but can be blood stained. It normally settles in time, and does not usually indicate a problem with the bypass itself.

**Limb swelling:** It is normal for the leg to swell after this operation and therefore it is important to rest with your leg up on a stool when sitting. The swelling usually lasts for about 2-3 months. It normally goes virtually completely, but may occasionally persist indefinitely.

**Skin sensation:** You may have patches of numbness around the wound or lower down the leg which is due to the inevitable cutting small nerves to the skin. This can be permanent but usually gets better within a few months.

**Pain:** The incision (cut) on your leg is likely to be uncomfortable at first. The nurses will monitor your level of pain and pain killers will be given as needed. The pain will slowly improve, but you may get twinges and aches for between 3-4 weeks. It is important that your pain is controlled so that you can move about.

**Chest infection:** These can occur following this type of surgery, particularly in smokers, and may require treatment with antibiotics and physiotherapy.

**Pressure ulcers (bed sores):** can occur in 4-10 out of 100 patients admitted to hospital. Certain parts of the body which are at higher risk of damage include heels, buttocks and sacrum. Preventative measures will be discussed with you.

**Deep vein thrombosis (blood clot in the legs):** can occur following surgery. Preventative measures such as keeping hydrated, moving around as much as possible and daily injections of a blood thinning medicine can help reduce the risk of clots performing.

**Pulmonary embolism (blood clot in the lungs):** can occur following surgery. Preventative measures such as daily injections of a blood thinning medicine can help reduce the risk of clots performing.

If you are worried about any of the aspects of surgery please ask one of the medical or nursing staff. You will be helped to make the decision about whether to have surgery, but the final decision will be yours.

### **Before your Operation**

Before you come into hospital, you will be asked to attend the preoperative assessment clinic. You will be seen by a nurse and doctor, so that your medical information can be written down, any tests completed and blood tests taken. It will also be an opportunity for the operation to be explained, and for you to ask questions.

Your tablets will be reviewed, and you may be asked to stop some of them before your surgery. We will also take swabs to check for any bugs that could lead to an infection.

You may need to have an appointment with our vascular anaesthetist for tests that will show how fit you are for both the surgery and the anaesthetic.

There are a number of tests that needs to be done, prior to the operation which include:

- An ultrasound scan of the blocked artery
- An ultrasound assessment of the vein which will normally be used to perform the bypass
- Blood tests
- ECG (heart tracing)
- Chest x ray.

## **The Anaesthetic**

The first part of the operation involves giving you an anaesthetic. The operation can be done with you asleep (general anaesthetic) or awake with the following anaesthetics.

A spinal anaesthetic makes it so that you can feel nothing from the waist downward. The legs will be paralysed. This anaesthetic lasts for about 4 hours.

An epidural again makes it so that you can feel nothing from waist downwards, and affects both legs. There is no paralysis however. The epidural is like a drip and can stay in for several days to provide post-operative pain relief.

## **The Operation**

The details of the procedure depend on the location of the artery to be treated. A cut is made over the site of the blockage. The artery is cut and the plaque removed. Once the artery is clean, the artery wall may be widened with a graft (manmade material, one of your veins or a bovine patch, sewn in place to widen the artery. NB Bovine patches are made from animals such as cows pericardium. If you have any religious or personal objections to this, please discuss this with your consultant and an alternative prosthetic material can be used.

## **What will happen after the operation?**

From the recovery area of the operating theatre you will go to back to the ward.

You will have a number of special tubes.

**A drip** - After your operation you will be given fluids by a drip in one of your veins until you are well enough to sit up and take fluids and food by mouth.

**Wound drain** - Sometimes these are used. This is a tube into your leg which allows blood or bruising to drain away. It is removed when the drainage has stopped.

**Urinary catheter** - This is a tube in your bladder to drain urine. The drainage is measured closely by the staff.

**Oxygen mask** - You may be given oxygen via a mask or nasal tubes.

**Observations** - Your pulse, blood pressure, temperature, breathing rate and heart rhythm will be very closely monitored, alongside checking the colour, warmth, movement, sensation and pulses in your feet.

**Wound** - Your wound will have a dressing on it and will be regularly checked.

**Mobilising** - You will become gradually more mobile until you are fit enough to go home. You may be visited by the physiotherapists after your operation. They will help you with your breathing to prevent you developing a chest infection and with your mobilisation to get you walking again.

**Pain** - The nurses and doctors will try and keep you free of pain by giving pain killers. It is likely that you will experience bruising around the area operated on.

### **Preparing for discharge**

Most patients go home 3-5 days after their surgery, although this may be longer if complications occur.

Preparing for home should start as early as possible. It is a good idea to have someone to help look after you for a while, or some patients choose to live with a member of their family for a short time.

Think about the tasks, or activities you do which may be difficult, especially if you have a caring role for someone else. Stocking up on



frozen or tinned items means you don't need to go shopping immediately.

If there are complications with your recovery you may need to stay in hospital a little longer.

### **Going Home and Aftercare**

Recovery times vary, and it can take several weeks to feel 'back to normal'. It also depends on your age, health and activity before surgery.

### **Wound**

If your stitches or clips are of the type that needs removing, which are not removed whilst in hospital, then we will arrange for your GP's practice or district nurse to removed them and check your wound.

Your wound will be red at first but will gradually fade over six months or more. Once your wound is dry you may bathe or wash normally with mild soap and water. If your wound becomes red, sore or is oozing please let your GP know, as this could be a sign of an infection.

Protecting your scar from exposure to sunlight during the first year after having surgery will prevent the scar becoming darker.

### **Mobility, hobbies and activity- start slowly!**

It is normal to feel tired for at least 2-4 weeks after your operation.

Taking regular exercise, such as a short walk, combined with rest is recommended for the first few weeks and you can gradually increase this. Taking on light household chores, and walking around your house is a good starting point.

## **Working**

When to return to work will depend on the type of job that you do.

Most people need to wait 6 weeks before returning to work, and may work shorter hours for a few weeks to build back up to their normal hours.

Please ask staff if you require a sick certificate for work and this will be given to you before you leave hospital. If you require longer time off work that is indicated on the certificate your GP can provide you with an additional certificate.

**Sex** - You can resume your sex life when you feel comfortable. If you experience problems sustaining an erection, your GP or consultant will be able to refer you to a specialist.

**Driving** - For safety and insurance reasons patients are unable to drive for 4 weeks after their operation. If you are in doubt, you should check with your GP and insurance company.

**Constipation** - Many pain killers can cause constipation, therefore ensure you drink plenty of fluids and ask your doctor about laxatives if this causes a problem.

## What can I do to help myself?

**Smoking - STOP SMOKING!** If you are a smoker the single most important thing you can do to help yourself is to give up smoking. Stopping smoking will also help to protect all of your arteries, making it less likely that you will suffer from heart attacks or strokes. Giving up is not easy but there is a stop smoking service and support groups that can help please see page 13.

**Inactivity** - Gentle exercise such as walking and cycling are recommended to help to improve your overall level of fitness. Exercise helps your body to produce healthy cholesterol and this helps to protect your arteries against bad cholesterol.

**High blood pressure** - It is very important that you have your blood pressure checked regularly, at least every 6 months. If you have been prescribed medication for high blood pressure you must make sure that you take it according to the instructions given.

**Diabetes** - If you have diabetes it is important that your blood sugar levels are well controlled.

**High blood cholesterol levels (fatty substance) in your blood** - You should eat a healthy balanced diet and try to reduce any excess weight. It is important to reduce the level of cholesterol in your blood: you will be given advice on how to do this. Your vascular nurse can refer you to a dietician if needed.

**Medication.** You may be prescribed a statin drug to lower your cholesterol level and low-dose Aspirin (or in some cases Warfarin) to help prevent blood clots from forming and your bypass blocking. This will usually be continued indefinitely.

## **Complications and what to look out for**

If you think that there is something wrong with your wound once you get home, you should contact your GP, or the ward from which you were discharged.

**The things to keep a look out for and to tell the vascular team about are:**

Pain, redness or swelling or a discharge around the wound.

If you develop sudden pain or numbness in your legs that does not get better within a few hours then contact the hospital immediately.

If you have other concerns or questions during your recovery at home, write them down in this booklet to ask at your follow-up appointment.

You may be asked to attend the hospital at intervals after the operation (usually 3 monthly at the start) to ensure that the bypass is working well, and that there is no narrowing of the bypass which might lead on to bypass blockage.

## **Contact numbers**

If you have any questions or queries you can contact your GP or at the Vascular Team.

**Hospital switchboard** - Telephone: 0161 624 0420

**Vascular Consultant Secretaries** - Telephone:

0161 627 8698 / 0161 627 8981 / 0161 627 8826

**Vascular Nurses** - 0161 778 5090

**Ward T3** - Telephone: 0161 627 8850

## **Smoking Cessation**

Smoking cessation services are available locally for people who want to quit smoking or who have already decided to stop.

**Bury Lifestyle Service** contact the team on 0161 253 7554 or by email at: [LifestyleService@bury.gov.uk](mailto:LifestyleService@bury.gov.uk)

### **Heywood, Middleton & Rochdale Stop Smoking Support Clinics**

Living Well contact the team on 01706 751190

### **Oldham**

Positive steps contact the team on 0800 288 9008 Stop smoking advice and information is also available from the following:

- Your GP
- Your local pharmacy
- NHS Stop Smoking Helpline on: 0300 123 1044
- NHS Smokefree website: [www.nhs.uk/smokefree](http://www.nhs.uk/smokefree)

You may like to look at the following websites for further information. However, as we are not responsible for these websites we cannot endorse them.

### **Circulation foundation**

<https://www.circulationfoundation.org.uk/>

### **Vascular services quality improvement programme**

<https://www.vsqip.org.uk/>

The National Vascular Registry (NVR) is a clinical audit that vascular specialists use to monitor their practice. Hospitals send data to the NVR and the NVR analyses this to provide information on their standard of clinical care and patient outcomes. This allows hospitals to know where they are doing well, as well as highlight areas that they can improve.

Publishes a number of patient information leaflets to help identify and treat vascular illness. It also funds research into the prevention of vascular disease.



**If English is not your first language and you need help, please contact the Interpretation and Translation Service**

Jeśli angielski nie jest twoim pierwszym językiem i potrzebujesz pomocy, skontaktuj się z działem tłumaczeń ustnych i pisemnych

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For advice on stopping smoking contact the Specialist Stop Smoking Service on 01706 517 522

**For general enquiries please contact the Patient Advice and Liaison Service (PALS) on 0161 604 5897**


**For enquiries regarding clinic appointments, clinical care and treatment please contact 0161 624 0420 and the Switchboard Operator will put you through to the correct department / service**

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The NCA brings together Salford Royal NHS Foundation Trust and the hospitals and community services of The Royal Oldham Hospital, Fairfield General Hospital in Bury, and Rochdale Infirmary (currently part of The Pennine Acute Hospitals NHS Trust).

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