Information for patients

Supra-Inguinal Arterial Reconstruction

• Aorta Bi-Femoral bypass
• Femoro-Femoral Bypass
• Axillo Bi-Femoral bypass

Sheffield Vascular Institute

Northern General Hospital
You have been diagnosed with arterial disease and need an operation called Supra-Inguinal Arterial Reconstruction (an artery bypass operation above the groin level). This leaflet explains more about Supra-Inguinal Arterial Reconstruction and answers some of the most frequently asked questions. If, after reading it, you have any more questions or concerns, you should write them down and discuss them at your next appointment.

**Where will my hospital appointments take place?**

Your appointments will be at the Sheffield Vascular Institute at the Northern General Hospital.

Consultants from the Sheffield Vascular Institute also visit Rotherham and Barnsley District hospitals, and some patients are seen at these hospitals.

The Sheffield Vascular Institute is one of the largest vascular centres in Europe. We specialise in the treatment of all circulatory conditions affecting the arteries, veins and lymphatics. If you wish to find out more about the Sheffield Vascular Institute then look under the Guide to Services of the Sheffield Teaching Hospitals NHS Foundation Trust website (http://www.sth.nhs.uk)

**Why do I need the operation?**

You need the operation because you have a blockage of the main arteries in your abdomen (tummy) that supply blood to your legs. This operation will bypass the blocked arteries so that the blood supply is improved.
Is it safe?

These operations have been done for many years. However, as with any major operation, there is a risk of you having a medical complication such as a heart attack or stroke and there is a 1 in 50 risk (2%) of death. Your doctors and nurses will try to prevent all these complications and to deal with them rapidly if they occur.

Long-term problems include graft occlusion (1 in 10 risk (10%) within 5 years) and graft infection (1 in 20 risk (5%) within 5 years). These complications may require further surgery to replace the graft and rarely an amputation (1 in 50 risk (2%) ). If you are male, you may find that your sexual activity is affected. If this happens, it is because the nerves or arteries in your abdomen have been affected by the operation.

Will I need any tests first?

Yes, a scan usually Magnetic Resonance Angiography (MRA) of the arteries will confirm where the blockages are located. We may also need to do a scan of your heart, lung function tests and an exercise test, to check that you are fit enough for the operation. We normally send you for these tests before we make the decision to operate. You will then be seen in the Pre-admission Clinic 1 or 2 weeks prior to surgery when you will have a number of further pre-operative tests if these have not already been performed. These may include blood tests, an electrocardiogram (ECG) and a chest X-ray (CXR).
How long will I need to be in hospital?
You will need to be in hospital for about 7 to 10 days, and the operation will usually be carried out on the day after you come in.

Do I need to bring anything in particular with me?
Please bring all the medicines that you are taking in to hospital with you. You will also need to bring toiletries, nightwear, and glasses or hearing aid, if you wear them. We do ask that you bring a supply of your own clothing in to hospital, as you will need to have physiotherapy and occupational therapy after your operation. However, we do advise that you leave valuables and cash at home, with the exception of a small amount of cash for you to purchase newspapers and other items or to pay to use the patient-line system.
Before your operation

Before your operation, one of the surgeons will see you to check that you are happy to go ahead with the operation and the anaesthetist will see you to double-check that you are fit for the operation.

We must seek your consent for any procedure beforehand. Staff will explain the risks, benefits and alternatives where relevant, before they ask for your consent. If you are unsure about any aspect of the procedure or treatment proposed, please do not hesitate to ask for more information.

Your nurse will explain the ward routines and will answer any other questions that you may have. You will be asked to eat or drink absolutely nothing for 6 - 12 hours before the operation. Shortly before the operation, you may be given a sedative to relax you.

How is it done?

In the operating theatre, you will usually have a general anaesthetic. You may also have a tube inserted into your back through which pain killers can be given to numb the lower half of your body after the operation (epidural). This is performed by an anaesthetist who looks after you during your operation. You will also have a plastic tube inserted into a vein in your arm to give you fluids, and a tube in your bladder, to avoid the need for you to pass water during the operation.
Aorta Bi-Femoral bypass graft

If both legs are affected, you will usually have a long cut down or across your abdomen (tummy) and also two smaller cuts, one in each groin. An artificial blood vessel (graft) made of plastic will be inserted to carry blood from the main blood vessel in your abdomen (aorta) to the arteries in your groins, bypassing the blocked arteries. This is called an **aorto-bifemoral graft** (see picture below).
Axillo bi-femoral bypass graft

If there are particular problems with your chest or heart, your surgeon may decide to avoid a cut in your abdomen (tummy). In this case you will have a cut below one of your collar bones, and a cut in each groin. A graft, shaped like an upside down Y, will be tunnelling under the skin between these incisions. The graft will divert blood from the main blood vessel supplying your arm to the main blood vessels supplying your legs. This is called an **axillo-bifemoral graft**.
Femoro-Femoral bypass graft

If only one leg is affected, then a graft can be used to divert blood from the good leg in one groin to the other side. This is called a **femoro-femoral graft** and it is usually tunnelled under the skin of your lower abdomen (tummy). Your good leg can easily spare the blood required by your other leg through this bypass. This operation avoids a cut in your abdomen and also avoids damage to the nerves in your abdomen that are responsible for sexual activity (see picture below).
What happens after the operation?

Usually we take patients to the Post-Operative Surgical Unit (POSU) or the High Dependency Unit (HDU) after this operation. This allows us to monitor your progress closely. It is sometimes necessary for you to remain on a breathing machine for a period after the operation and in this case you will be nursed on the General Intensive Care Unit (GITU).

Following this sort of surgery, the bowel often stops working for a while. A small tube will be put into your stomach through your nose to stop you feeling sick. You will be given all the fluids you require in a drip until your bowel can cope with fluids by mouth. A blood transfusion may also be required. These things are more commonly required after an aorto-bifemoral bypass than after a femoro-femoral or axillo-bifemoral bypass.

The nurses and doctors will try and keep you free of pain by giving pain killers by injection, via a tube in your back (epidural), or by a machine that you are able to control yourself by pressing a button (PCA). As the days pass and you improve, the various tubes will be removed, and you will be returned to your original ward until you are fit enough to go home. Your physiotherapist will visit you both before and after your operation. They will work with you on exercises designed to help you with your breathing, and therefore reduce the risk of you developing a chest infection, and help you with your walking.

If dissolvable stitches have been used, these do not need to be removed. If your stitches or clips are the type that need removing, and this is not done whilst you are still in hospital, the practice or district nurse will remove them and check your wound.
Are there any risks?

Discomfort from your wound is normal for several weeks following surgery, especially when you cough. Wounds sometimes become infected and these can usually be successfully treated with antibiotics. The wounds in your groin can fill with a fluid called lymph, that may discharge between the stitches, but this usually settles down with time.

You may have patches of numbness around the wound which is due to the cutting of small nerves in the skin. This may be permanent but usually gets better after a few months.

Chest infections can occur following this type of surgery, particularly in smokers, and may require treatment with antibiotics and physiotherapy. The kidneys can also be affected by the operation especially if they were not working well before the operation. There is also a small risk of heart complications. Sometimes the bowel is slow to start working again. This requires patience and fluids and liquid food will be provided in a drip until your bowels get back to normal. Very occasionally the blood supply to the bowel or your legs can be damaged, and this may require further surgery.

How will I feel afterwards?

You may feel tired for several weeks after the operation but this should gradually improve as time goes by.
How long before I can resume normal activities?

It is important that you do regular exercise during the first few weeks following surgery. However, do not do much more than short walks combined with rest. Within 4 - 6 weeks, you should be able to start a gradual return to your normal levels of activity.

**Driving:** You will be safe to drive when you are able to perform an emergency stop. This will normally be at least 4 weeks after surgery, but if in doubt check with your own doctor. Do not fly for at least 4 weeks and it is sensible to avoid any long journeys during this time too.

**Bathing:** Once your wound is dry you may bathe or shower as normal.

**Work:** You should be able to return to work within 1-3 months following your operation. If in doubt please ask your doctor. You should avoid heavy lifting or straining for 6 weeks after the operation.

**Medication:** You will usually be sent home on a small dose of aspirin and a statin if you were not already taking them. This is to make the blood less sticky and to reduce your cholesterol level. These medications reduce the risk of further trouble from arterial disease. If you are unable to tolerate aspirin an alternative drug may be prescribed. It is important that your blood pressure is well controlled and this may need treating with medication. Good control of diabetes (if you are diabetic) is also important.
Is there any activity that I should avoid doing?

You should avoid lifting heavy items until your abdominal muscles have regained their strength. Regular exercise will help them to regain their strength.

Will I need to come back to hospital for a check-up?

You will usually receive an appointment to be seen in the outpatient clinic in about 6 - 8 weeks, to check that the wound has healed properly. If you have any complicated wounds we may wish to see you earlier than this, for instance if you have ulcers on your feet.

How can I help myself?

If you were previously a smoker you must make a determined effort to stop completely. Continued smoking will cause further damage to your arteries and your graft is more likely to stop working. Smoking cessation help is available from your GP or the hospital. General health measures, such as reducing weight and regular exercise, are also important.
What if I think there is something wrong when I get home?

If you think there is something wrong with your wound once you are at home, you should contact the ward from which you were discharged. This should be either:

Firth 2 - (0114) 2714602 / 2714695
Vascular Nurse Specialists - (0114) 2714688 / 2269311
Vascular Secretary - (0114) 2269412

Vascular society [www.vascularsociety.org.uk](http://www.vascularsociety.org.uk)
Circulation Foundation [www.circulationfoundation.org.uk](http://www.circulationfoundation.org.uk)
Sheffield Stop Smoking service 0800 068 4490 [www.sheffieldstopsmoking.org.uk](http://www.sheffieldstopsmoking.org.uk)
Smoke free 0800 022 4332 [www.smokefree.nhs.uk](http://www.smokefree.nhs.uk)