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# Femoropopliteal and Femorodistal Bypass

This leaflet is to help answer some of the questions you may have about your procedure. It explains the benefits and risks, as well as what you can expect when you come into hospital.

This information has been put together by clinical representatives from across the acute hospital trusts in West Yorkshire and will be reviewed in September 2025. If you require this information in a different format, please contact your treatment team through the details provided on your appointment letter.

# Femoropopliteal and Femorodistal Bypass

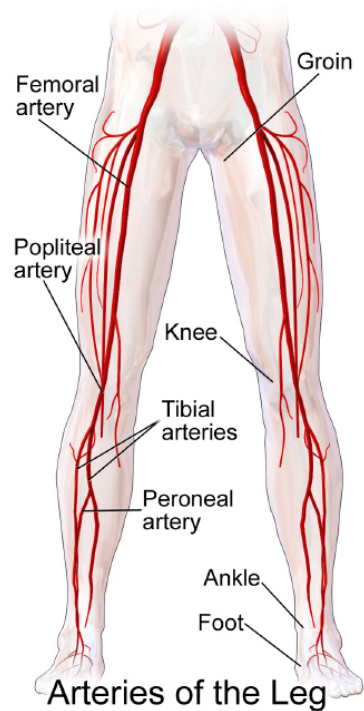
## What is the femoral artery?

The femoral artery runs down from your groin and into both thighs. This artery delivers blood and oxygen to your legs. When the femoral artery reaches the back of the knee, it becomes the popliteal artery and continues into the distal arteries which run below the calf and into the foot.

## What is femoropopliteal or femorodistal bypass?

When there is a narrowing or a blockage in the femoral artery, the circulation of blood to your leg is reduced, which may cause you to have pain in your calf when you walk or undertake more physical activity. This is known as intermittent claudication.

A femoropopliteal or femorodistal bypass is an operation to get around the blocked portion of the artery using a piece of another blood vessel or an artificial graft. Your surgeon will have discussed this with you and believe that one of these procedures is the most appropriate treatment to improve your current symptoms.



## What causes arteries to narrow?

Healthy arteries are flexible and smooth on the inside, meaning blood can easily flow through them. As a person gets older, fatty deposits (plaque) can start to build up, hardening the arteries and making them narrower. This process is called atherosclerosis.

As well as aging, there are several other factors that contribute to the build-up of plaque. These include:

- An unhealthy diet that is high in fat
- High blood pressure
- Smoking
- Diabetes

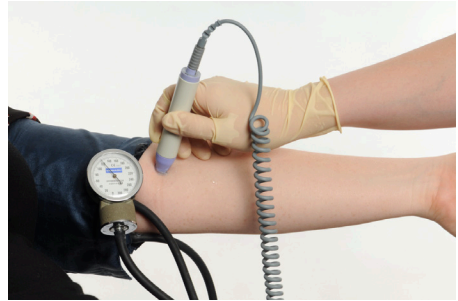
## How will I be diagnosed?

A vascular specialist will talk with you about the types of pain you have been feeling, to ensure your symptoms are consistent with claudication (pain in the legs due to a lack of blood flow). They may examine the pulses in your leg, groin, back of the knee and foot, as most people with claudication will have completely lost one or more pulses from the leg. This means the blood is still making its way down your leg but is doing so through smaller arteries.

Your specialist may undertake a number of tests in order to diagnose claudication. These can include measuring the blood pressure in your foot using a handheld ultrasound device called a Doppler.

This is then compared with the blood pressure in your arm in a ratio measurement called an ABPI (Ankle Brachial Pressure Index).

An angiogram, or arteriogram as it is also known, may be undertaken. This is a type of x-ray where a dye is injected into the main artery which can then be monitored as it flows through your leg highlighting



Pictures courtesy of The Mid Yorkshire Hospitals NHS Trust

any narrowing or blockages. A CT or MRI scan may also be considered by your specialist. The choice of any diagnostic imaging procedure will be discussed with you.

Symptoms associated with claudication include:

- Cramp or pain in the legs when moving
- Increased pain with increased physical activity
- Pain lessens when resting

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## Pre-admission

Before being admitted for surgery, you will have a preoperative assessment. This will usually be carried out at a few days to a week before you are due to have the procedure and is to confirm your fitness for surgery and provide you with further information about your stay in hospital.

Following a physical examination, which may include blood tests and an ECG (electrical tracing of the heart), you will be asked about your medical history and any medication you are taking. It is a good idea to bring any medication with you so the details can be noted.

If you are taking any antiplatelet medicines (such as aspirin or clopidogrel) or any medicines that thin the blood (like warfarin), then you may need to stop them temporarily before the procedure. If you are taking any medicines for diabetes (for example, metformin) or using insulin, then these may also need to be stopped temporarily or the dose altered near the time of the procedure.

You will also be given specific instructions relating to washing and fasting (when to stop eating and drinking) prior to your procedure.

The pre-admission assessment is also a good opportunity for you to ask the treatment team any questions you may have about the procedure, although you can discuss any concerns you have at any time.

## The anaesthetic

The first part of the operation involves giving you an anaesthetic. The operation can be carried out with a general anaesthetic, where you will be asleep throughout the procedure, or a more localised anaesthetic to numb the area being operated on but you remain awake. The choice will be made by you, your surgeon and your anaesthetist.

- If you have a general anaesthetic, a small needle is placed in the back of your hand and you will be asleep within a few seconds
- If you have more localised anaesthetic, a small tube will be placed in your back. This may be a spinal or an epidural anaesthetic

A spinal anaesthetic stops you from feeling anything from waist downward. This anaesthetic lasts for about 2-2½ hours.

An epidural stops you from feeling anything from waist downwards and affects both legs. The epidural is like a drip and can stay in for several days to provide post-operative pain relief.

A tube called a catheter may be inserted into your bladder to drain the urine away while you have your operation and for the day after, as you will not be as mobile as normal.

For all three options, a drip is placed into a vein in your forearm to give you some fluids during and following surgery.

## Femoropopliteal and femorodistal bypass

The blocked artery must be exposed both above and below the blockage. A cut is made in the groin to expose the femoral artery. This is the main artery supplying the leg and is usually the point from which the bypass starts.

A second cut is made to expose the artery below the blockage. This may be just above or below the knee and is on the inner side of the leg. Occasionally, this can be lower in the calf and may then be on either side.

The tube used to perform the bypass will normally be your own repositioned vein from your leg. It is called the long saphenous vein and it runs up the inner side of the leg from ankle to groin. If this vein is not long enough or of sufficient quality, the same vein from the other leg or a vein from your arm can be used. If no vein is suitable, an artificial tube will be used. This is made of plastic and may be one of several types. The bypass tube is joined to the artery at groin level and again to the artery below the blockage with very fine permanent stitches.

At the end of the operation, the incisions are closed either with dissolving stitches, which do not need to be removed, or with a non-dissolving stitch or metal clips, which will normally be removed after about ten days.

The procedure normally takes between 2-4 hours.

## Recovery

Following the operation, you will be transferred to the recovery room where you will be monitored until you are awake enough to be transferred to the ward. You will continue to be given fluids by a drip in one of your veins until you feel well enough to sit up and take fluids and food on your own. Within the first two days the epidural, drip (which is inserted during the operation to make sure you get enough fluids) and catheter (used to drain the bladder) will be removed.

You will be visited by the physiotherapists in hospital after your operation. They will help you with your breathing to prevent you developing a chest infection and help to get you walking again. The wounds on your groin and leg will make moving painful 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. You should progress to walking after 48 hours following your operation. This will encourage blood flow, help your wound to heal, and prevent complications in recovery.

As a safety measure, you will receive injections of a blood-thinning medication to help prevent blood clots from forming. You will also be encouraged to continue the leg and deep breathing exercises demonstrated to you by the physiotherapist when you are in bed or a chair.

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You will gradually become more mobile until you are fit enough to go home. You can expect to be in hospital for 5-7 days. It is common for your leg to be swollen after the surgery and this can take a few months to reduce.

## Returning home

Before you are discharged, your clinician will advise you on what pain relief may be required when you leave hospital.

If your stitches or clips are of the types that need removing, this can be done whilst you are still in hospital. If not, arrangements will be made with your GP practice or district nurse to remove them and check your wound while you are at home. You may feel tired for some weeks after the operation, but this should gradually improve as time goes by.

Resting for 2-3 weeks after leaving hospital is advised. This time should be spent building up your energy by resting more than usual, such as having a sleep in the afternoon. After this period you can gradually return to more normal activities, taking care not to put too much strain on your operative wounds. It is advisable to gradually increase the amounts of exercise you undertake, like slowly lengthening the distance you walk.

How much you can move around will depend in part in how severe your leg problem was and your response to the operation, and so varies from patient to patient.

## Aftercare

- Exercise – regular light exercise is recommended. Your surgeon will advise you about how much you can do and within what time period following your procedure
- Driving – you may resume driving once you are able to perform an emergency stop safely. This will normally be 2-4 weeks after your operation
- Bathing – once your wound is dry you may shower and bathe as normal
- Heavy lifting – this should be avoided for at least six weeks following the procedure
- Employment – you should speak to your GP prior to any return to work. In most cases you should be able to do this between 6-12 weeks following your procedure
- Medications – you will be advised about this prior to your discharge. You may be prescribed aspirin, if you are not already taking it. This is to make the blood less sticky. If you are unable to tolerate aspirin, an alternative drug may be prescribed

An appointment will be made for you to see your consultant as an outpatient to check on your progress and discuss any findings and subsequent treatment.

## Complications

All major operations carry a small risk of serious medical complication. Following a femoropopliteal or femorodistal bypass, these can include:

- Heart attack
- Stroke
- Kidney failure
- Loss of circulation in the legs or bowel
- Graft infection

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.

Other complications may include:

- **Chest infections** - these can occur following this type of surgery, particularly in smokers, and may require treatment with antibiotics and physiotherapy
- **Wound infection** - this may need treatment with antibiotics
- **Fluid leak from wound** - at times the wound may leak fluid. This may be clear but is usually blood-stained. It normally settles in time and does not usually indicate a problem with the bypass itself
- **Bowel problems** - occasionally, the bowel is slow to start working again after the operation. This requires patience and fluids will be provided in a drip until your bowels get back to normal

## What can I do to help myself?

If you are a smoker, you should make every effort to stop. Smoking will continue to damage your arteries, increase the risk of heart attack and stroke, and will lengthen your recovery time. You should also try to eat a healthy diet and take regular exercise. All our hospital grounds are smoke-free.

## Contact us

- If you have any questions or concerns, please do not hesitate to contact a member of the medical team caring for you.

The West Yorkshire  
Vascular Service (WYVaS)  
is an overarching single,  
shared regional vascular  
service to ensure that  
patients, regardless of  
where they live within  
West Yorkshire, have access  
to the same high-quality  
treatment.

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