Fusion of tarso-metatarsal joint(s) (midfoot fusion)

Introduction

This leaflet will explain what will happen when you come to the hospital for an operation to fuse a midfoot joint and is intended as a guide only. The vast majority of patients who have fusion of the tarso-metatarsal joints have very good results. Occasionally, complications occur which alter the normal post-operative recovery outlined in this leaflet. These will be identified and discussed at your follow-up appointments.

Why do I need this surgery?

This type of surgery is undertaken where there is painful arthritis in the tarso-metatarsal joint(s) which are in the middle of your foot. The operation involves removal of cartilage from either side of the arthritic joint, the ends of these bones are held together by a metal plate / screws / staples while the bone fuses (grows across the gap). This means you will no longer have the painful arthritic joint but instead a pain-free fused area.

Picture showing metal plate across joints which have had cartilage removed, to hold them together while the bone fuses.

The benefit of this operation is reduced pain and improved comfort during walking. The main disadvantage is the long period of time it takes for the bone to fuse.

What does surgery involve?

The procedure is routinely performed under general anaesthetic (you are asleep) and frequently combined with an anaesthetic block for pain relief. You will usually stay in hospital for a night following surgery.

The affected joint is accessed via an incision on the top of your foot. The damaged cartilage is then removed and the bones held together with a metal plate / screws / staples while the bone knits together (fuses).

Occasionally, a piece of bone will need to be inserted into the gap formed by removing the joint. This piece of bone will be taken from the heel and requires another incision around the heel.

After surgery you will be placed into a below-knee plaster cast. You will be protected in plaster or boot for up to 9 weeks. You will need to be non-weight bearing for the first six weeks and then in a partial weight bearing boot for another 2-3 weeks.

How will I feel afterwards?

Although long-acting local anaesthetic, administered before and during the procedure, should control most of the pain for about 8 to 10 hours. Pain can be moderate to severe to the scale of 6-8 out of 10. Painkillers will be discussed with you prior to your operation.

You should not drive until the plaster / boot is off, you can wear a shoe, are able to fully weight bear or until told you by your surgeon that you may do so safely. Drive short distances before long ones. If you cannot safely make an emergency stop your motor insurance will not cover you in the event of an accident.

Recovering from surgery

You will not be able to weight bear after the operation and will be provided with appropriate walking aids – either crutches or a frame. You will need to rest with your leg elevated at all times other than when going to the bathroom. Continue taking your painkillers at regular intervals. Do not leave the house or get the foot wet.

You will be seen in clinic roughly two weeks after surgery for your stitches to be removed or trimmed and to be fitted with a new below knee plaster / boot. You may rest your foot on the ground for balance but not take any weight through it for another four weeks.

Your next appointment will be roughly six weeks following surgery when x-rays will be taken and you will start weight-bearing (usually in a boot) for two to three weeks.

You should be back to normal activities by about four months but the foot will continue to improve over a 12 month period.

Preparing for your surgery:

In order to protect the fusion you will need to be non-weight bearing. This means putting no weight through the foot. Hopping is very energy-consuming and tiring. If you are young and fit hopping with crutches and hopping up stairs will be possible. However, if you are older, frail or have other medical conditions that affect your balance or ability to hop on one leg, mobilising non-weight bearing will be very difficult, if not impossible. If you struggle to mobilise even a short distance with a frame you will be unable to manage the stairs.

Mobilising on one leg severely affects normal activities such as cooking, making hot drinks, washing and dressing.

Prior to coming into hospital you should arrange where possible to have someone stay with you during your recovery period or to stay with friends or relatives. **Bear in mind that it maybe three months before you are allowed to fully weight bear through the foot.**

If you live in a house and you suspect stairs are going to be difficult you should arrange for a bed to be brought downstairs (this cannot be done by the hospital). If you have more than one step at the front or back door you may find that it is difficult for you to access your house and you may wish to consider staying elsewhere.

It might also be a good idea to stock the freezer with pre-prepared meals that can be reheated or microwaved. Bear in mind that you will not be able to carry anything while

mobilising non-weight bearing so preparing an area close to the microwave/cooker where you can eat you meals may be a good idea.

As this is planned surgery the hospital does not provide equipment except walking aids. If you don't have a downstairs toilet and you think you won't be able to manage the stairs then a commode is recommended. If you do have a downstairs toilet a glide-about commode (a commode on wheels) will allow a carer to push you to the toilet. A perching stool will also allow you to sit to have a strip wash, to clean your teeth, prepare and eat meals in the kitchen.

This equipment can be loaned from the Red Cross or other mobility agencies; ask your pre-op nurses for information or contact the occupational therapists on the number at the end of this booklet.

Please note: Community hospitals or community rehab teams do not accept patients who are non-weight bearing.

After your operation you will be discharged home. If a package of care is required to assist with personal care, i.e. washing and dressing, as you have no support at home this will be arranged prior to discharge. Depending on circumstances you may be expected to arrange and pay for this yourself.

Even once the boot is removed and you are allowed to fully weight bear on the leg it may be several weeks before you are comfortable. You should be back to normal activities by about four months but the foot will continue to improve over a 12 month period.

General complications of foot surgery

- Pain. There will be post-operative pain. For most people the pain passes after 24-48 hours and is tolerable with regular painkillers (following dosage recommendations).
- Swelling. This is a normal outcome of any operation. The extent of post-operative swelling varies and cannot be predicted. In some people the swelling reduces within a matter of weeks and in others could take many months. It is usual for there to be persistent swelling after a fusion procedure for up to nine months but the level varies. Application of an ice pack greatly reduces the swelling.
- Infection. There is a small risk of infection with all surgery. If this occurs it will be treated with relevant antibiotics. Look out for redness and discharge from the wound.
- Deep Vein Thrombosis. Also known as Venous Thromboembolism (VTE), this is a rare complication of foot surgery. If you have had a DVT in the past, please tell your surgeon. Most patients are routinely prescribed injections to thin your blood for up to six weeks following surgery to reduce the risk of developing a blood clot.
- Complex Regional Pain Syndrome (CRPS). This is a rare but difficult complication. This is an abnormal response of the nervous system to surgery but can happen after simple trauma. This can lead to a variety of painful sensations in the foot, which require medical and pain relieving techniques.

- Scarring: As a result of your surgery you will have a scar on your foot. To begin with the scar will be raised, red and sensitive but with time it will usually settle.
- Muscle wasting. This will occur as a result of not using the leg for several months after surgery. With exercises and normal walking, muscle power is usually restored to pre-surgical fitness.

Specific complications of the fracture repair

- Fusing the joint increases the stress across other joints of your foot and can increase the onset of arthritic changes. This could take many years to develop.
- Delayed union or non-union of the fusion site can occur in this operation. Different researchers report between 3 and 12% of operations do not fuse and require further treatment (revision). This means that the bones do not knit together firmly. In some cases prolonged immobilisation in a cast solves the problem and other people may need to have more surgery. The risk of non-union is increased if you smoke.
- Prolonged swelling of the foot can occur. In most people this is usually gone within nine months.
- Normally the screws used to hold your bones in the correct position can be left in place. However, in about 6-8% of people they cause some irritation and need to be removed. This is a much smaller operation than the fusion procedure.
- Wasting of leg muscles occurs and is noticeable on removal of the cast. Muscle power and strength should return once you are walking normally.
- There will be damage to the local tendons and nerves and this may result in numbness and pain around the surgical site that could take months to resolve. In some people numbness persists but this is not usually troublesome.

Useful contacts

Adult Day Surgery Unit:	0118 322 7622
Redlands Ward	0118 322 7484/7485
Occupational Therapy	0118 322 7560
Physiotherapy	0118 322 7817

For more information about the Trust visit www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

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