Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Midfoot and Hindfoot Fusion Surgery

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Patient Information

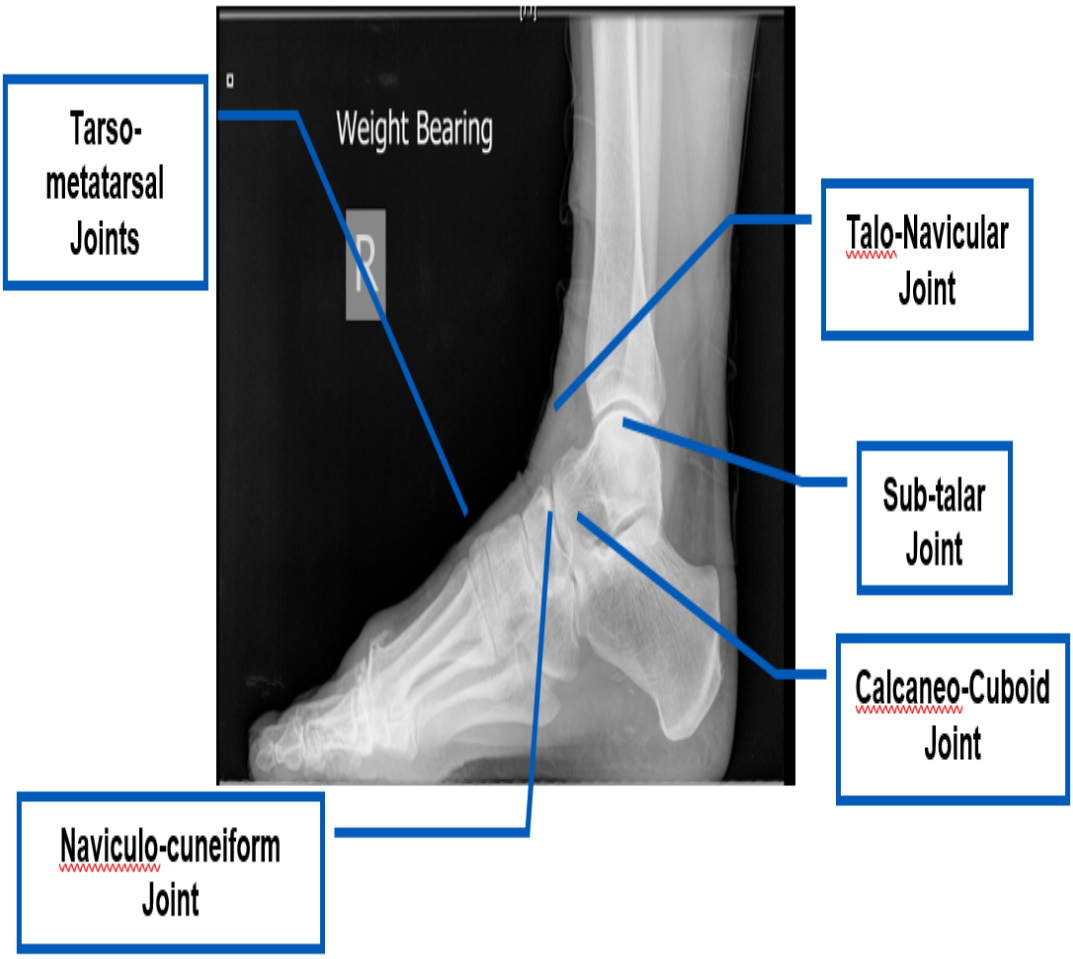
Trauma & Orthopaedics Department

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This leaflet has been written to support the advice and instructions given to you by your Consultant, Practitioner and Physiotherapist.

Midfoot and Hindfoot Fusion Surgery (Arthrodesis)

This procedure can include the following joints:



Principles of Fusion Surgery

This procedure involves permanently joining some of the joints within the midfoot or hindfoot. It is performed to help relieve pain caused by arthritis and can sometimes be done to help improve the position of the foot and ankle.

During the operation, the joint surfaces are removed to reveal healthy bone. The bone ends are then compressed together and held in place with various types of metalwork such as screws and plates.

New bone gradually grows across the ends of the bone and across the joint space

eventually joining the bones together and ‘fusing’ the joint.

You will need to wear a below knee plaster cast or walking boot for a minimum of 12 weeks following surgery.

Benefits of Surgery

Current evidence shows that, when post-operative instructions are followed, around 90% of patients who have fusion surgery experience a significant improvement in their quality of life, with reduced pain and better mobility.

Risks and Complications of Surgery

All surgery and anaesthesia carry some risks. These risks can be higher if you have other medical problems, if you smoke, or if you are overweight. The healthcare team looking after you have been trained to keep these risks as low as possible and make sure your treatment is carried out safely. The possible risks and complications include:

1) Infection and wound healing problems

Sometimes, even with the strictest precautions, infections can occur which may require treatment with antibiotics:

- Superficial infection may occur at your wound site

- Deep infection may occur early after the operation or much later

- Problems with wound healing especially in patients with long-term health conditions such as diabetes or rheumatoid arthritis, or those taking some medications which affect the immune system

2) Non-union of fusion

In 5 - 10% of patients, the bones do not fully fuse, and further surgery with bone grafting may be needed. **Smoking significantly slows the healing process and must be stopped entirely at least 3 months before surgery and ideally until the bones have fully fused (around 6-12 months after surgery).**

3) Mal-union (the bones heal in the wrong position)

Very rarely, the bones may heal in a less favourable position after surgery. This can happen if the corrected position of the foot moves before the fusion has fully healed. If this occurs, it may affect the position of your foot and could require further treatment.

4) Deep Vein Thrombosis (DVT) and Pulmonary Embolism (PE)

Despite taking precautions to try and prevent a blood clot, this can form in the veins of the legs after this type of surgery (DVT. Sometimes a clot can dislodge and travel through the heart to the lungs, causing a PE, which can be life threatening in rare cases.

5) Persistent pain and swelling

The surgery may not relieve all of your pain, and some mild discomfort may continue. Complex regional pain syndrome, while rare, can also develop, causing pain, swelling and skin changes. This will normally improve over time but may need specialist input from a Pain Management Team.

6) Nerve damage

Very occasionally, nerves can be damaged or stretched during surgery. This can cause nerve pain, numbness or pins and needles; but these symptoms often improve as the nerve recovers.

7) Other recognised risks of surgery include:

- Bruising,
- Difficulty passing urine (urinary retention)
- Risks associated with anaesthesia and blood transfusion

8) After the joint is fused, the joints next to it can take more strain, and overtime this may cause symptoms such as pain and stiffness in other parts of the foot and ankle.

Preoperative Assessment

In preparation for your surgery you will be asked to attend a preoperative assessment clinic.

At this appointment, the healthcare team will check your general health. If you have a long-term medical condition, heart problems, lung disease or a metabolic condition (e.g. diabetes or a thyroid disorder), an Anaesthetist will examine you to make sure you are medically fit for an anaesthetic. In some cases, you may also be referred to a specialist if you have a more complex health issue.

The Anaesthetist or nurse will discuss the different types of anaesthesia and pain management methods available to you.

If the healthcare team decides that you are not medically fit to have an anaesthetic and surgery, your operation may be postponed or cancelled for safety reasons. You will then receive an outpatient appointment with your Consultant to discuss alternative treatment options.

It is important that you inform the nursing staff about all medications you are currently taking. If you take blood-thinning medicines such as Aspirin, Warfarin, Clopidogrel or Dipyridamole, you will need to stop these before your operation. This should only be done on the advice of a doctor.

If you would like to speak to a member of the Pain Management Team before your operation, please inform the nurse at the Preoperative Assessment Clinic.

It is important to tell the staff if you:

- Regularly take pain relief medication at home
- Have experienced any problems such as allergies or stomach upsets from pain medicines
- Have any worries about pain management after your operation

Most patients are admitted to hospital on the day of their surgery. You will be sent further information closer to the time with:

- The time you should arrive at the hospital
- Which ward you should attend

Preparing Yourself for Surgery

It is important to look after yourself before you come in for surgery. This includes:

- Keeping your skin clean and dry
- Reporting any rashes, cuts or breaks in your skin to the preoperative clinic staff

Smoking slows the healing process and increases the risks of the bones not healing ('non-union'). Your surgeon may decide not to proceed with the surgery if you are continue to smoke. If you smoke, please contact your General Practitioner (GP) for information and support to stop smoking.

On the morning of your operation:

- Please have a shower / bath before coming into hospital
- When you arrive on the ward, the healthcare team will help to prepare you for theatre
- The limb being operated on will be clearly marked before surgery
- A member of staff will then escort you to the operating theatre

If you feel you may struggle to manage at home after your operation, please tell a member of the preoperative or surgical team **before your admission. This will allow appropriate support and discharge planning arrangements to be considered.**

After the Operation

Following your operation, you will spend a short time in the Recovery Area before returning to the ward. Nursing staff will continue to monitor you until you are ready to go home. The average hospital stay after ankle fusion surgery is 2 – 3 days, although this may vary depending on your individual circumstances and recovery.

Some discomfort is expected after the operation. You will be given pain-relief medication to help ease the discomfort.

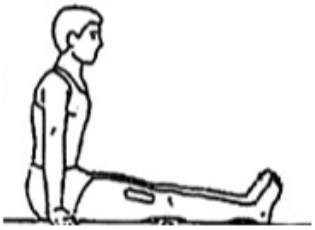
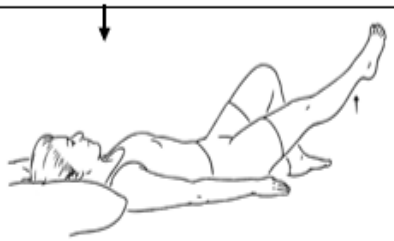
Exercises

The following exercises should be carried out every hour, unless otherwise instructed by your Physiotherapist. Perform each exercise on both legs if able.

If you experience any unexpected or significant pain while carrying out the exercises, stop immediately and inform your Physiotherapist and nurse.

Deep Breathing Exercises

Ensure you are sitting upright in bed or in a chair. Take three or four deep breaths (no more as you may feel lightheaded). Breathe as deeply as possible, forcing the air out on your fourth breath. This may stimulate a cough.

Foot exercises	
	1. Gently paddle your **non-operated** ankles up and down. Repeat this five times.
	2. With both feet, try to gently wriggle your toes.
Leg exercises (perform on both legs)	
	1. With your legs straight in the bed, press the back of your knees into the bed. Your thigh muscles should tighten up. Hold for five seconds then gently release. Repeat this ten times. 2. Clench the muscles in your bottom together. Hold for five seconds then gently release. Repeat this ten times.
	3. Lying in bed, keeping your knee straight, lift your leg approximately ten inches from the bed. Hold for five seconds then gently release. Repeat this five times, with each leg.
	4. If you are sitting in the chair or on the edge of the bed, straighten your knee out in front of you. Hold for five seconds then gently release. Repeat this ten times.

Walking

Your Physiotherapist will provide you with personalised instructions after your operation, including how much weight you are allowed to put on your operated leg. It is important that you do not try to walk until your Physiotherapist has assessed you on the ward.

Most people start to walk one day after surgery, dependent on:

- Your Consultant’s instructions
- Your level of pain
- The amount of swelling present
- How well your wound is healing

Most patients are allowed to ‘touch-weight bear’ on the operated leg, meaning you may rest your foot lightly on the floor for balance. However, in some cases, your surgeon may instruct you to remain non-weight bearing, meaning you must not put your foot on the floor at all.

At the time of your operation, you will usually be fitted with a below-knee ‘backslab’ plaster cast. In some cases your surgeon may decide that a walking boot is more appropriate, which may be fitted once you return to the ward.

After you receive your post-operative instructions:

- Your Physiotherapist will assess you
- You will be given an appropriate walking aid (for example, crutches or a walking frame)
- You will practise walking initially under supervision until it is safe for you to mobilise independently

You must continue to use your walking aids until your follow-up clinic appointment.

At your first follow-up clinic review (2-3 weeks after surgery), when your stitches are removed, you will either be placed back into a plaster cast or given a walking boot.

If you are still in a plaster cast at your 6-week follow-up appointment, it will be removed. You will then be fitted with a walking boot, which you must continue to use for a further 6 weeks (making 12 weeks in total).

Walking Boot

If you need a walking boot, your Physiotherapist will show you how to put it on, take it off and look after it properly. The boot is usually fitted 1-2 days after your operation, depending on how much swelling you have.

When you are wearing the boot, it is important that your heel is right back in the boot and your foot is flat. It may be removed for personal hygiene, wound checks, and when dressing or undressing.

Whenever the boot is removed, take time to check the skin around your ankle for any signs of pressure damage, such as redness, discolouration, blistering, or sore areas. If you are worried, please contact the nursing staff.

Always ensure that the air pockets in the boot are inflated when you are walking and deflated when you are resting.

The outside of the boot can be wiped clean using a damp cloth. The soft inner liner can be washed in a mild soap solution; make sure it is fully dry before you use it again.

If you have any concerns or questions about your boot, please contact the Physiotherapy Department or Foot and Ankle Practitioner.

For the first six weeks after your operation, unless advised otherwise, the boot must be worn for 23 hours per day, including overnight. **Do not walk without the boot.**

From weeks 6 to 12 after your operation, the boot must be worn whenever you are weight bearing (standing or walking). You may take it off when resting, and at night, if your Consultant agrees. **Do not walk without the boot.**

At 12 weeks after your operation, depending on your Consultant's instructions, the boot may be discontinued, and you may walk in a pair of supportive shoes.

Stairs / Steps

When using stairs, always take one step at a time and use a handrail where available.

Going up

With the handrail on one side, and the crutch in the other, step up on your non-operated foot onto the step, followed by your operated foot, bring the crutch onto the same step.

Going down

Place the crutch onto the step first, followed by your operated foot, then your non-operated foot last onto the same step.

On Discharge

Once you are able to walk safely and manage stairs or steps, further physiotherapy is not necessary.

It is recommended that initially you keep any walking to a minimum. You may go outside for short walks as soon as you feel confident to do so.

Continue to walk and move with your walking aids, until you are further instructed by your Consultant at your clinic review.

When resting, keep your foot raised to help reduce swelling and improve comfort.

Driving

You will not be able to drive while you are in a plaster cast or walking boot – this is usually for around 12 weeks and sometimes longer depending on how your ankle is healing.

Before returning to driving, you should ensure that:

- You are no longer required to wear a cast or walking boot
- You can walk comfortably and safely
- You can safely perform an emergency stop

Routine Post-Operative Appointments

Nurse Led Clinic Appointment

2-3 weeks for removal of stitches.

Consultant Clinic

6 weeks and 12 weeks.

Do not hesitate to contact the Foot and Ankle Practitioner should you have any queries or concerns after discharge or if you have not received an appointment for

the allotted time period.

Contact Information

If your call is connected to an answering machine, please clearly leave your name, date of birth, telephone number and a brief description of your enquiry.

Foot and Ankle Practitioner	0300 707 6372 (Monday to Friday 9am until 4pm)
Outpatient Department (not for appointments)	0300 707 6295
Admissions	0300 707 6256
Appointments (Outpatients)	0121 299 9787
Occupational Therapy Monday to Friday 9am until 5pm	0300 707 6306
Pain Team	0300 707 3139 (Secretary)
Wrightington Office	0300 707 6348
RAEI office	0300 707 2365

Physiotherapy	0300 707 6307
Pre-operative Clinic	0300 707 6340
Ward D	0300 707 6269
Ward A	0300 707 6267
Ward B	0300 707 6229
John Charnley Ward	0300 707 6265



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