Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Ankle Fusion

Version number: **1.0**
Last modified date: **12th November 2026**

Ankle Fusion

Patient Information

Orthopaedics

- Author ID: ML
- Leaflet ref: Phy 030
- Version: 9
- Leaflet title: Ankle Fusion
- Last review: June 2023
- Expiry Date: June 2025

Introduction

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

Ankle Fusion (Arthrodesis)

This procedure involves the permanent joining of the ankle joint to relieve pain from arthritis.

Two bones known as the talus and the tibia are fused together. The joint surfaces at the end of the bones are removed to reveal healthy bone. The bone ends are then compressed together and held in place with screws. New bone grows across the ends of the bone across the joint space ‘fusing’ the joint.



Benefits of surgery

The current research suggests that, provided post-operative instructions are followed, approximately 90% of patients undergoing ankle fusion surgery can expect a significant improvement in quality of life, a reduction in pain and improved mobility.

This procedure will leave you with a stiff ankle joint.

You will be in a below knee plaster cast or walking boot for a minimum of 12 weeks following surgery

Risks/complications of the procedure

All surgery and anaesthetics carry some risks, particularly if you have other medical problems, smoke or are overweight. The healthcare team looking after you have been trained to make sure that these are minimised and your treatment is carried out safely.

The risks are:

Infection & wound healing problems

Sometimes, despite the strictest precautions, infections can occur which may require antibiotic therapy:

- Superficial infection may occur at your wound site.
- Deep infection may occur early after the operation or much later.
- Problems can occur with wound healing particularly if patients are suffering from chronic illness such as diabetes or rheumatoid disease or are taking certain medications which affect the immune system.

Non-Union of Fusion

5 - 10% of patients may require further surgery with bone grafting in cases of non-union at the fusion site; where the two bones do not knit together. **Smoking has a significant damaging effect on the healing process and must be stopped entirely at least 3 months before surgery and ideally until full fusion has occurred (around 6-12 months post-surgery).**

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

Despite taking precautions to try and prevent a blood clot, this can occur in the veins of the legs after this type of surgery (deep vein thrombosis). Occasionally these clots can dislodge and travel through the heart to the lungs. This is known as a pulmonary embolism (PE). In some rare cases this can be life threatening.

Persistent Pain

The operation may not relieve all of your pain and you may continue to experience some mild discomfort. Complex regional pain syndrome, while uncommon, can develop causing pain, swelling and skin changes. This will normally settle over time but may need specialist input from a Pain Management service

Nerve Damage

Very occasionally nerves can be damaged or stretched during your operation. This can lead to nerve pain, numbness and pins and needles; however this usually recovers over time.

Other recognised risks of surgery include bruising, urinary retention and the risks associated with anaesthesia and blood transfusion.

The nearby joints of the hind and mid foot can take more strain following ankle fusion and this can lead to the onset of symptoms elsewhere in the foot (such as pain and stiffness).

Pre-operative assessment

In preparation for surgery you will be asked to attend a pre-operative assessment clinic where a check of your general health will be performed by the health care team. If you have a long term illness, heart, lung or a metabolic (diabetes, thyroid) condition, an anaesthetist will examine you to make sure you are medically fit for an anaesthetic.

The anaesthetist or nurse will discuss with you the different types of anaesthesia and pain management methods available to you. It may be necessary for you to be seen by a specialist if you have a more serious health problem.

If you are not considered fit for anaesthetic and surgery your operation will be cancelled and you will receive an outpatient department appointment with your consultant who will discuss

alternative treatment options. It is important that you inform the nursing staff if you take any form of medication. If you are on blood thinning tablets e.g. Aspirin, Warfarin, Clopidogrel or Dipyridamole please inform the nursing staff as you may have to stop taking this medication before the operation. This would only be under the direction of a doctor.

If you wish to speak to a member of the pain team before your operation please inform the nurse at the pre-operative assessment clinic. It is important to let the staff know if you take painkillers normally at home, if you have experienced any problems such as allergies or stomach upsets or if you have any worries about pain management.

It is usual for you to be admitted on the day of your surgery. You will be sent further information regarding the time to come into hospital and which ward to attend closer to the date of your operation.

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. You must report any rashes or breaks in your skin to the pre-operative clinic staff.

Smoking will delay the healing process and can cause ‘non-union’ of the fusion. Your surgeon may not proceed with the surgery if you are still smoking. If you do smoke please contact your GP for information and support to stop smoking.

On the morning of your operation please take a shower/bath before coming in to hospital.

When you are admitted to hospital members of the health care team will prepare you for theatre. The limb to be operated on will be marked before the operation. A member of the health care team will escort you to the operating theatre.

If you feel you may struggle to cope at home after your surgery, you must inform a member of the pre-operative or surgical team **prior to the day of admission.**

After the operation

You will spend a short time in the recovery area of the operating theatre. You will then be taken back to the ward where your care will continue until you are fit to be discharged. Average length of hospital stay is around 2 – 3 days.

Some discomfort will be experienced following the operation so painkilling medication will be given to help ease the discomfort.

Exercises

The following exercises should be practised hourly unless otherwise instructed by your physiotherapist. Perform each exercise on both legs if able.

If unexpected pain develops you must stop exercising and inform your physiotherapist and nurse.

Deep breathing exercises

Ensure you are sitting upright in bed. 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** ankle up and down.

Repeat this five times



2. With both feet, try to gently ‘wiggle’ your toes.

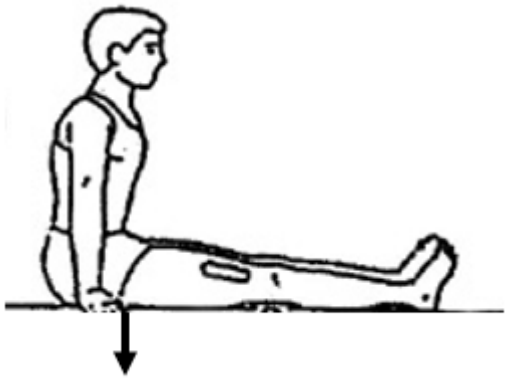


Leg exercises (perform on both legs)

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 ten 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 discuss your individual post-operative instructions with you including how much weight you are permitted to put on your operated leg. It is important that you do not attempt to walk until seen by your physiotherapist after your operation.

Most people start to walk one day after this operation, dependent on the consultant's instructions, pain, swelling and wound healing.

Most patients are allowed to 'touch weight bear' through the operated leg although there are occasions where you will be 'Non-Weight Bearing' (not allowed to put your foot on the floor).

You will likely be put into a below knee 'backslab' plaster cast at the time of your operation or a walking boot on the ward at the discretion of the Surgeon.

Once you have been given your post-operative information, your physiotherapist will assess and provide you with an appropriate walking aid, and you will practise mobilising initially under supervision. You must use the walking aids until you return to clinic for your review.

At your 2-3 week clinic review for removal of stitches 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 review, it will be removed and you will be fitted with a walking boot at this point. The boot must be used for a further 6 weeks (12 weeks in total).

Walking Boot

If you require a boot your physiotherapist will teach you how to apply/remove and manage your boot. The boot is normally applied one to two days after your operation depending on the amount of swelling.

When wearing the boot, it is important that your heel is back in the boot and your foot is flat. It may be removed for hygiene and wound inspection purposes, and when dressing/undressing. Take time while the boot is off to check the skin around your ankle for pressure sores. If you are concerned please contact the nursing staff.

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

The boot can be wiped clean with a damp cloth. The soft inner liner can be washed in a mild soap solution ensuring it is thoroughly dried before use.

If you have any problems or queries regarding the boot, please contact the Physiotherapy department or Foot & Ankle Practitioner.

For the first six weeks after your operation, unless advised otherwise, the boot must be worn for 23 hours per day, including through the night.

Do not walk without the boot.

From week 6 to 12 the boot must be worn when weight bearing but can be taken off at rest and at night at the discretion of your consultant

Do not walk without the boot.

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

Stairs / Steps

Always take one step at a time.

Going up

With the banister on one side, and the crutch in the other, step your non operated foot onto the step, followed by your operation foot, and the crutch last onto the same step.

Going down

The crutch goes first onto the step, followed by your operation foot, then your non operated foot last onto the same step.

On Discharge

Once you are safely mobile, and can safely manage the stairs or step, further physiotherapy is not necessary. It is recommended that initially you keep any walking to a minimum; you may walk outside 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 the foot raised for comfort and to manage swelling.

Driving

You will not be able to drive while you are in the boot / plaster, routinely for 12 weeks or possibly longer. Once the boot has been removed you must be confident that you can control your vehicle, this is entirely at your own discretion.

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 team should you have any queries or concerns after discharge

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	01257 256372 (Monday to Friday 9:00 am to 4:00 pm)
Outpatient Department (not for appointments)	01257 256299
Admissions	01257 256256
Appointments (Outpatients)	01257 256295
Occupational Therapy	01257 256306

Monday to Friday 9:00 am to 5:00 pm

Pain Team	01257 773139 (Secretary)
Wrightington Office	01257 256384
RAEI office	01257 252365
Physiotherapy	01257 256307
Pre-operative Clinic	01257 256340

Ward D	01257 256269
Ward A	01257 256276
Ward B	01257 256277
John Charnley Ward	01257 256265/7



Version number: **1.0**
Last modified date: **12th November 2026**

All rights reserved © 2026
WWL Teaching Hospitals NHS Foundation Trust