NHS

Royal National Orthopaedic Hospital

NHS Trust

A Patient's guide to

Total Ankle Replacement

The Foot and Ankle unit at the Royal National Orthopaedic Hospital (RNOH) is a multi-disciplinary team. The team consists of three specialised orthopaedic foot and ankle consultant surgeons (Mr Singh, Mr Cullen and Mr Welck), specialist doctors in training, a physician assistant, clinical nurse specialists, orthotists, physiotherapists and occupational therapists. All team members are specialised in foot and ankle care and work together to provide and deliver a quality service.

Arthritis

Arthritis is a disease which can affect any joint in the body, although some joints are affected more than others. There are several types of arthritis but the most common are:

- Osteoarthritis (wear and tear) The cartilage of the joint wears away leaving the bone exposed, causing pain, stiffness and inflammation
- Rheumatoid arthritis This is an inflammatory disease affecting the linings of the joints, which causes the joints to swell and become deformed.

There are many ways to treat arthritis before considering surgery. These include physiotherapy, injections and therapeutic shoes or insoles. If these are unsuccessful the surgeon will discuss what operation may be best for you.

The decision to have surgery is based on the degree to which everyday activities are limited by pain.

Surgical treatments

- Ankle arthroscopy (viewing the joint by way of a small incision and special camera)
- Ankle arthrotomy and debridement (opening the joint and removing bone spurs)
- Ankle fusion (removing the joint surfaces and making the joint completely fixed)
- Total ankle arthroplasty (removal of the ankle joint and replacing it with a metal-and-plastic substitute)

An ankle replacement will usually be advised for patients who, due to their age or health, will be somewhat restricted in the level of physical activity in which they engage after surgery.

Ankle fusion is preferable for active patients whose only limitation is the painful ankle and once that is resolved will return to vigorous exercise. Fusion is also a better option for patients whose ankles have become virtually immobile or alternatively severely tilted or distorted due to arthritis or a previous fracture.

Reasons for a total ankle replacement

- Pain and/or decreased function that has not responded to conservative treatment
- Ankle replacements are usually recommended for people who are not trying to get back to vigorous exercise after surgery

Ankle replacement

The original ankle replacement designs used in the 1970s and 1980s were successful in the short term but their use was discontinued due to a high long-term failure rate due to complications such as infection, loosening and collapse, leading to additional extensive surgical procedures. Currently, new-generation designs are being tested, and ankle replacements with these designs are being performed by surgeons in Europe, North America and Japan. While early results are encouraging, the procedure should be considered as yet unproven because there is very little information about the long-term success or failure. More extensive experience is needed to determine for whom replacement is a sensible choice and for whom fusion remains the best option.

Advantages of ankle replacement

The attraction of ankle replacement is that it preserves a useful amount of movement whilst effectively relieving pain. This is of particular advantage to patients who have arthritis in other joints of the leg because the ability of the ankle to move will lessen the strain upon those joints. Recovery in all cases takes several months and during this time swelling of the foot and altered sensation due to 'bruising' to nerves in the skin are a feature. Regaining movement requires considerable effort from the patient and even so some patients never obtain the ability to pull the foot up so that it is at ninety degrees to the leg and this can make it awkward to walk in bare feet.

Concerns about ankle replacements

The main concerns around ankle replacements are the serious nature of complications. Should they arise and the certainty that at some time in the future the replacement will loosen and fail due to wear of the components causing pain and disability once more.

How soon this happens depends upon the amount of vigorous activity the patient engages in over future years. For an elderly patient or one whose activity is restricted by rheumatoid arthritis, it is believed that the ankle will perform satisfactorily for many years.

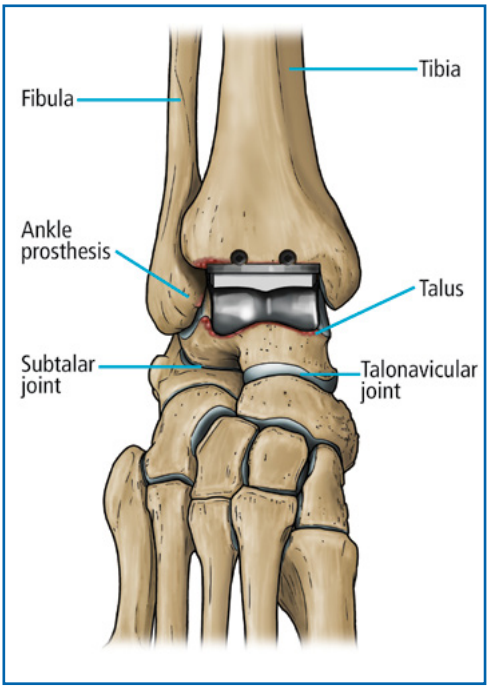
Not all replacements are satisfactory even in the short term and sometimes failure occurs within the first few years. This is due either to infection, early aseptic loosening, dislocation of the components or other occasional causes. Early failure affects approximately 1 in 50 patients. The further surgery may be required to try to rectify the situation.

All of our patients who are about to undergo ankle replacement will be asked to attend yearly for review and allow information about their operation to be used to prepare reports for publication in orthopaedic journals. This in time will contribute to progress to being made in improving the technique of the surgery and the design of the prosthesis.

The Operation

A cut is made over the front of the ankle. The damaged joint surfaces are cleared away and if necessary re-shaped to correct any deformity. The joint is placed into the correct position and metal surfaces with a plastic insert are used to become the replaced "joint". Sometimes additional surgery may be required to correct the alignment of the foot.

The operation usually takes one and a half hours and is usually done under a general anaesthetic (asleep). A lower leg block anaesthesia is used to provide pain relief following the procedure. The anaesthetist will discuss the most suitable method of anaesthesia for you.



Expected Outcome

- Improved function / mobility
- Improved pain relief
- Increased walking tolerance with decreased walking aid requirement
- Return to no-impact / low-impact sports may be possible but strenuous sport unlikely
- Maintenance of range of movement but this is unlikely to significantly improve
- Full recovery may take up to twelve months

Before the operation (pre-operatively)

You will be seen by a pre admission nurse to check you are medically well enough for surgery. It is important to mention any medicines that you are taking, either prescribed or non-prescribed, including over the counter medications, herbal remedies or aspirin, warfarin, hormone replacement therapy (HRT), the contraceptive pill or medication for high blood pressure.

Prior to admission for your surgery there are a number of issues that need to be considered; for example can someone help you carry out basic every day tasks such as prepare and shop for food? If you have stairs, how will you get up and down them? Do you have sturdy hand rails? If your toilet is downstairs, would it be easier to have your bed downstairs until you have sufficiently recovered to be able to safely negotiate the stairs?

The pre admission nurse will discuss these with you and if they have any concerns about you coping at home after your operation, they may refer you to a physiotherapist and/or an occupational therapist. The therapist will telephone you to discuss your needs and it may be necessary to attend for a more in-depth assessment. This will ensure that we plan for your discharge home safely and shorten your stay in hospital.

What to bring with you?

Please ensure that you have a flat sturdy shoe to wear on the non-operated foot following surgery.

If you use a walking stick or crutches please ensure you bring these with you too.

What to expect after the operation (post-operatively)

When you arrive back on the ward from theatre your leg will be in a back-slab (half plaster cast) from toe to knee. You need to make sure that you do not get the plaster wet. You will either have stitches or staples with a dressing covering the wounds. The dressing and back slab must remain intact until your outpatient visit.

It is important that you keep your leg up for at least 55 minutes in every hour for the first 2 weeks after your operation. This helps to decrease swelling. It is then important that you continue to do this regularly over the next few weeks/months depending on how much swelling you have.

A physiotherapist will see you on the ward and show you how to walk using a walking aid. If you have to use stairs at home you will be taught the safest way to do this.

You will not be allowed to put any weight through your operated leg for two weeks after the operation. You will have the back-slab removed two weeks after the operation and if the wounds are sufficiently healed then a full lightweight plaster cast will be applied. Once you have a full plaster cast you are usually then allowed to put weight through your operated ankle.

You will usually remain in hospital for approximately 2 days after your operation. A check x-ray will be taken before you leave.

Outpatient Review

An appointment to attend the outpatient department two weeks following your procedure will be arranged. The backslab will be removed and your wound site inspected.

You will be reviewed again 4 - 6 weeks after the operation and, if everything is progressing satisfactorily, you will be referred for physiotherapy to reduce swelling, encourage movement, regain strength and maintain balance.

Getting back to normal

- Returning to work If your job is mostly sitting, you may be allowed back to work at 4 weeks, provided you can keep the leg up. However, if your job is more physical and involves long periods on your feet then it may take longer.
- Walking Most people aim to be walking independently by 3 months after the operation. However, this depends on many different things and sometimes it may take longer.
- Footwear It can take several months for ankle swelling to go down but most people can wear normal footwear by three months. However, this will depend on whether the surgeon has placed any specific restrictions on you, and sometimes it may take longer.
- Driving If you have a replacement on the left ankle and an automatic car, you can usually drive by two weeks after your operation. Otherwise, it can take about 3 months to drive with your replaced ankle. In order to be safe to drive, you must be able to perform an emergency stop. You must inform your insurance company regarding the type of operation that you have undergone to ensure that your cover is valid.
- Sport Resuming sports depends on your operation and will be discussed with you. Generally you can return to low impact sports at approximately 6 months.

Things to look out for

- Swelling You should expect some swelling after your operation. If swelling persists or worsens and you are concerned, seek advice from a member of the Foot and Ankle team or from your GP.
- Infection This can occasionally occur in a small percentage of patients. However, if this is severe it is possible that further surgery may be required to remove infected tissue and administer a prolonged course of antibiotics. In very rare cases, the joint replacement may have to be removed completely. Minor infections are slightly more common and normally settle after a short course of antibiotics.
- Blood clots Deep vein thrombosis (DVT) or Pulmonary Embolus (PE) are rare. Please inform the team if you have had a DVT or PE in the past or if you have a family history of clotting disorders. You will be given an anti embolic stocking to wear on your other leg and blood thinning injections while your leg is in plaster.
- Numbness or tingling can occur at the surgical site(s) if fine, hair-like nerves are cut or more major nerves are stretched. This is normally temporary; however patchy numbness or sensitised areas may be permanent. In rare circumstances the nerves can become hypersensitive, in a condition called Complex Regional Pain Syndrome. This can lead to severe pain as well as colour and temperature changes in the foot. If this happens your Consultant will discuss treatment with you.
- Wound healing If blood supply to the area is not so good, wounds may be slow to heal. If this is the case more frequent wound dressings may be required to ensure that the wound does not become infected.

- Scarring Any type of surgery will leave a scar. Occasionally this can cause pain and irritation. If this happens please discuss this with your Consultant. Some people are prone to worse scarring than others. Please inform the team if you have had a previous scar that has been described as a 'keloid' or 'hypertrophic' scar.

REPORT SEVERE PAIN, MASSIVE SWELLING, CHEST PAIN, EXCESSIVE NUMBNESS OR PINS AND NEEDLES TO YOUR GP OR TO US AS SOON AS POSSIBLE.

Notes

If you would like this leaflet translated into another language/large print, please contact the Quality Team on 020 8909 5439.

Royal National Orthopaedic Hospital NHS Trust
Brockley Hill
Stanmore
Middlesex
HA7 4LP

Email: rnoh.footandankle@nhs.net

Telephone: 020 3947 0050

www.rnoh.nhs.uk

Twitter: @RNOHnhs

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Author: Karen Alligan