

The ankle joint is a large joint that connects the lower end of the leg bones, the fibula and tibia, with the talus bone of the foot. In the ankle joint, as in any joint, the ends of the bones are covered by articular cartilage.

Ankle arthritis is a joint condition which results from damage and loss of the articular cartilage. The surrounding soft tissue and bones are also affected. It can cause pain, stiffness, deformity and limited mobility of the joint. Total ankle replacement, also called Total ankle arthroplasty, may be indicated in selected cases, especially when the non-operative treatment has failed.

SURGICAL PROCEDURE

The main goals of ankle replacement surgery are to relieve pain and improve ankle function. The surgery involves soft tissue and bone procedures. The surgeon will replace the damaged parts of your tibia and talus bones with artificial components (prosthetic components). Additional procedures may be necessary to ensure proper foot and ankle alignment, and sometimes to improve range of motion.

During the ankle replacement surgery, your surgeon will approach the ankle from the front or the side, depending on the implant used. A single incision is usually made, but smaller incisions may be needed. The surgeon will then access the joint, remove the damaged bone and cartilage, and place prosthetic components made of metal and plastic. The surgeon tests the new joint mobility, and the position of the prosthesis is checked through an x-ray. The incision will be closed with stitches (or surgical staples) and a sterile bandage or dressing will be applied. You will be placed in a splint at the end of the operation.

The surgical procedure usually takes 2-3 hours. It can be done under regional or general anesthesia. Additionally, you may receive a nerve block. This will be decided between you and the anesthesiologist before surgery.



Fig.1 and 2 - Two patients with two types of ankle prostheses

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RECOVERY - TOTAL ANKLE REPLACEMENT

Patients who have had surgery usually experience significant pain relief and can have a more normal gait. You will be non-weight-bearing for the first 2 to 4 weeks. After this, you will gradually transition to full weight bearing using a walking boot and an assistive device like crutches or a walker.

If additional procedures were required during your surgery, such as an osteotomy (bone cut), foot arthrodesis (joint fusion) or soft tissue procedures (tendons and ligaments), your recovery may take longer.

Patients usually return to their usual activities around 3-4 months after surgery. After proper rehabilitation, patients are encouraged to engage in low-impact activities such as swimming, dancing, walking, cycling, etc. However, it might take up to 12-18 months before you find it comfortable to do.

POSTOPERATIVE CARE - TOTAL ANKLE REPLACEMENT

HOSPITAL STAY

After recovering from the anesthetic which takes about an hour, you will be taken to the orthopaedic ward. You will notice a large dressing over the foot, and you will be wearing a splint. Medical staff will monitor your vital signs, pain level, and the need for medications. You will be given antibiotics and pain medication. It also may be prescribed medicine to prevent blood clots.

The procedure is usually performed in an inpatient setting, with the patient spending 1 or 2 nights at the hospital in most cases.

The physiotherapist will help you use the walking aid of your preference and once you can walk safely and your pain is under control (without the need for intravenous medication) you will be discharged.

AT HOME

SWELLING CONTROL

- First and foremost, it is important to keep swelling down during the first few weeks after surgery. Plan on doing nothing more than resting and elevating your limb. This will also help you manage your pain and improve wound healing.
- Elevate the foot/ankle above the level of the heart. Elevation is achieved by placing several pillows under the entire lower limb from the heel to the thigh.
- Swelling in your foot/ankle can last for several months after surgery. You will be encouraged to elevate your foot. When out of the splint, move your ankle as directed by your physiotherapist and apply ice to reduce swelling.



ACTIVITY/SELF-CARE

• Right after the surgery, you should only walk short distances, such as going to the bathroom and back to your bedroom or living room.

- The splint (if used) will be removed on the first post-operative visit and you will be wearing a walking boot.
- Wiggle your toes several times an hour to maintain circulation.
- Getting dressed first, put clothes on the operative side.
- Undressing first, remove clothes from the non-operative side.

WEIGHT BEARING

- You will be non-weight bearing for 2-4 weeks, and you must use a walking aid (crutches, walker, wheelchair, knee scooter) for your comfort.
- After this initial period, you might need the walking aid for a few weeks to transition from non-weight bearing to full-weight bearing with a walking boot.
- You should start by taking short walks. This will prevent further swelling and pain.

PAIN MANAGEMENT

- Medication, limb elevation, ice therapy and rest are essential in pain management.
- The usual regimen we use is a combination of acetaminophen and narcotics.
- Taking your pain medicine as prescribed by your surgeon regularly will help you manage your pain more effectively, even if you are in mild pain.
- Strong painkiller (hydromorphone, morphine, oxycodone, etc) has been prescribed, so don't wait until the pain is severe. Use strictly as prescribed by your doctor. Do not take an extra dose.
- In case of remaining pills, you should return them to the pharmacy. If it is not possible to do that, it is recommended to take medications out of the container, mix them with unpalatable substances, such as used coffee grounds, dirt or kitty litter, sealing in a plastic bag, and throwing in the trash.

• **IF HAVING A NERVE BLOCK**: it is important to start taking regular pain medication before the nerve block wears off (see the Nerve Block HANDOUT for more information).

WOUND CARE/ SHOWER

- If a splint (or boot) was applied, it should remain in place until your follow-up appointment at Footbridge Clinic.
- You can shower, but you must keep your splint dry and covered. You may place a large plastic bag over the leg and secure it with tape. You may also purchase a waterproof leg cast cover.
- If non-absorbable sutures or staples are used, they will be removed at the 2-week postoperative visit.



BLOOD THINNERS

• During your hospital stay may be given to you oral or injectable blood thinners but you may not need them after hospital discharge. Follow your doctor's prescription.

COLD THERAPY (ICE)

- **DO NOT** use cold therapy if your nerve block is still in effect. You should wait until your function and normal sensation have returned (**IF HAVING A NERVE BLOCK**).
- The ice pack must be large enough to cover the front area of the foot/ankle.
- You could apply ice for up to 15-20 minutes, remove it for an hour and repeat the application 6 to 8 times a day, always with one-hour intervals. Remember that you must put a thin towel between the ice/ice pack and your skin.
- If you are using a CRYO THERAPY UNIT please follow the manufacturer's directions.
- DO NOT SLEEP WITH ICE.

PHYSIOTHERAPY

The goals of physiotherapy are:

- Gait instruction with the use of the walking aid.
- Helping you return to the hobbies and activities that you enjoy.
- Gait training to ensure safety and to normalize pattern as weight bearing is allowed.
- Maintain range of motion of foot and ankle.
- Strengthen leg and thigh muscles.

Our **Physiotherapists at Footbridge** work closely with your **Surgeon** and are very familiar with the post-op rehabilitation process. Typically, formal Physiotherapy will begin after your first postoperative visit; if you'd like to do your **Physiotherapy at Footbridge** it can be booked at that time.

There is often benefit to doing one or two **preoperative Physiotherapy sessions** to prepare for your surgery; if you'd like to schedule an appointment you can do so online or by calling **Footbridge**.

NERVE BLOCK

- A nerve block can last anywhere from a few hours to over 36 hours, but usually this is between 12-24hours. Patient will generally be in hospital during this time.
- Once the nerve block begins to wear off the weakness starts to improve and you may experience pain or a tingling sensation. At that time consider taking your pain medicine. Do not wait until the pain gets strong to take the medication.
- If you still feel numb at bedtime on the night of surgery, your nerve block could wear off in the middle of the night. It is recommended to take your pain medication before going to sleep, even if you have no pain or discomfort so that you won't wake up in severe pain.
- Do not use cold therapy if your nerve block is still in effect. You should wait until your function and normal sensation have returned.

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DRIVING

- You should not drive until you have normal function of the foot/ankle and you are cleared by your doctor. Likely that will be around 2-3 months.
- Avoid driving if you still need to wear a walking boot.

RISKS and COMPLICATIONS

Despite having a high success rate, complications can occur. Some complications may require follow-up operations.

- Risks associated with anesthesia
- Fracture of the bone adjacent to the prosthesis
- Infection
- Wound-healing problems such as scabbing and slow healing
- Failure of the bones to heal to the prosthesis
- Permanent numbness
- Nerve, blood vessel damage
- Loosening or wearing out of the artificial components
- Blood clots
- Persistent pain

It is common to have swelling and bruising around the wounds. The bruising changes colour over time from red to yellow or green.

Contact Footbridge Wound Care Resource line: 778-945-6756, Ext 8 if:

- Pain on your CALF, BACK OF KNEE, THIGH or GROIN.
- Increased swelling on the operated thigh, knee or leg.
- Body temperature above 38 Celsius/101 Fahrenheit.
- Increased warmth, redness, and swelling around the wound.
- Increased fluid leaking from the wound.

CALL 911 if:

- You have trouble breathing.
- You have chest pain.
- Anyone noticed that you lost consciousness.

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