
Ankle Surgery

Summary

Did you know the average person walks 177,000 kilometres in their lifetime? That is the equivalent to walking around the world four times.

When walking normally, the ankle joint bears a force of approximately five times our body weight, and up to thirteen times our body weight during activities such as running. Therefore, the ankle and foot are at risk of injury, particularly when undertaking sporting activities.

Open reduction and internal fixation (ORIF)



The most common reason for ankle surgery is to repair bones that have been fractured. A fracture is a partial or complete break in a bone. Ankle fractures are common injuries, most often caused by the rolling of the ankle inward or outward. Fractures in the ankle can range from less serious avulsion fractures where small pieces of bone have been pulled off, to severe shattering breaks of the tibia, fibula or both. Simply put, the more bones that are broken, the more unstable the ankle becomes.

The treatment required depends on the severity of the injury. Non surgical treatment will include rest, ice, compression and elevation. Immobilisation may also be required for certain fractures, restricting movement using a cast or a splint, to allow the bone to heal.

If during the fracture, bone fragments move out of alignment, open reduction and internal fixation (ORIF) may be required to bring the bones back into place and help them heal. During the open reduction stage of the procedure, the surgeon will reposition the bone pieces so that they are in proper alignment. The internal fixation part of the procedure then requires the surgeon to physically reconnect the bones. This may involve special screws, plates, rods, wires or nails that are placed inside the bones to fix them in place.



Arthrodesis

Arthritis is common in the ankle and leads to inflammation and swelling around the joint causing pain. There is no cure for arthritis and treatment is usually aimed at minimising the symptoms. However, if the symptoms cannot be controlled with conservative treatment, ankle arthrodesis can be considered.

Ankle arthrodesis is a type of surgery to fuse the bones of the ankle joint into one piece. To do this, the two joint surfaces which generate the pain are removed and the



joints are then fused together with screws, plates and bone grafts. The fusion helps stop pain and swelling however, whilst patients may be able to return to walking, climbing up ladders et cetera, activities such as running and jumping are likely to be limited due to the ankle no longer being able to move up or down, or side to side. Ankle fusion also results in an abnormal gait and increases the long term risk of arthritis developing in the adjacent hind foot joints.

Total Ankle Replacement

Although the procedure is far less common than hip or knee replacement, replacing a damaged ankle may be an option when arthritis interferes with joint function and causes pain that is not relieved by medication. For many years ankle arthrodesis was the only treatment available for patients with end stage arthritis but now total ankle replacement surgery is becoming more popular.

The procedure, also known as arthroplasty replaces the arthritic ankle joint with a metal and plastic prosthesis. During procedure, the surgeon makes an incision in the front of the ankle, removes the damaged bone and joint cartilage, reshapes the involved bones and then attaches the parts of the artificial joint, often with a special glue. The surgeon then creates a bone graft between the ends of the fibula and places screws through the two bones to support and stabilize the ankle.



The recovery period following a total ankle replacement is shorter than the recovery period following ankle fusion, and people regain a much wider range of motion with most returning to active lifestyles.

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References:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4994968/>

<https://orthoinfo.aaos.org/en/diseases--conditions/ankle-fractures-broken-ankle>

<https://www.foothealthfacts.org/conditions/ankle-fractures>

<https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/ankle-fracture-open-reduction-and-internal-fixation>

<https://www.ouh.nhs.uk/footandankle/information/ankle/ankle-fusion.aspx>

<https://www.hopkinsmedicine.org/health/treatment-tests-and-therapies/ankle-fusion>

<https://www.dukehealth.org/blog/ankle-fusion-or-ankle-replacement>

<https://www.arthritis.org/about-arthritis/where-it-hurts/ankle-pain/treatment/ankle-surgery.php>