



ANKLE ARTHROPLASTY

What is Ankle Arthroplasty?

Many patients suffer from ankle arthritis, a condition in which the ankle joint cartilage wears out. Patients experience pain, loss of motion, swelling, and disability. Ankle arthroplasty is a surgical procedure in which the joint surface of the ankle is replaced, similar to arthroplasty of the hip and knee. The worn out joint surface is removed and replaced with a combination of metal and medical grade plastic (polyethylene). This surgery may provide pain relief, restore some motion, and allow patients to return to some of their normal activities.



Symptoms or Clinical Presentations

Patients with ankle arthritis have ankle pain, swelling, and loss of motion. Patients may be unable to perform many activities, such as walking long distances, running, or low impact sports such as golf or swimming. Even simple activities such as getting up from a chair and walking may become difficult.





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Cause (include risk factors)

There are several causes of ankle arthritis. The most common cause is prior ankle trauma or fracture (“broken ankle”). This may cause permanent cartilage damage and may start the wearing away of the remaining cartilage. Other causes of ankle arthritis include ankle instability, rheumatoid arthritis, psoriatic arthritis, family history of arthritis, gout, and hemophilia. Sometimes the reason for the arthritis is unknown (“idiopathic” arthritis).

Anatomy

The ankle joint is a complex structure that includes three bones: the tibia (the major leg bone), the fibula (the smaller leg bone), and the talus. These bones interact to allow for motion at the ankle joint. The ankle moves in all planes of motion, providing mostly up (dorsiflexion) and down (plantarflexion) motion of the ankle, but also some outward (eversion) and inward (inversion) motion.



Diagnosis

Ankle arthritis often can be diagnosed by radiographs alone. Three views of the ankle, with the patient standing, can show the joint space narrowing, bone spurs, and alignment issues. Furthermore, bone cysts can be seen. If the arthritis is mild, a CT scan may be needed to evaluate the joint changes.





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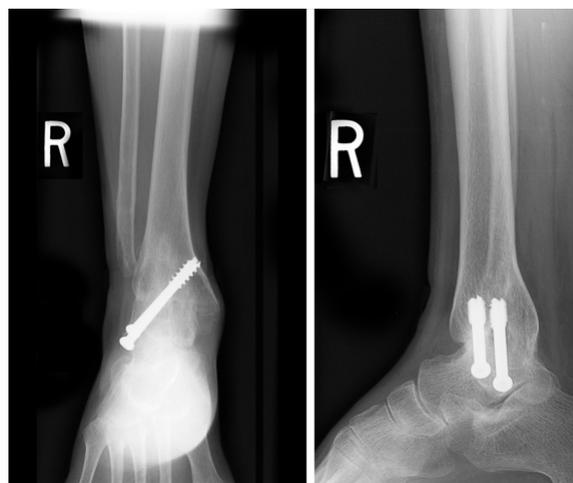
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Treatment Options

Nonoperative: Patients with ankle arthritis can be treated with over-the-counter or prescription anti-inflammatory medications, glucosamine supplements, steroid injections, hyaluronic acid injections, bracing, and physical therapy. As the arthritis progresses, these treatment options may become less successful.

Surgical: Surgical options depend on the severity of the pain, amount of cartilage damage, and patient's occupation, age, body habitus, and activity level. Surgical options include arthroscopic surgery for debridement or cleaning of the ankle, ankle fusions (where the ankle is locked into position), and ankle replacements. During the ankle replacement the two sides of the ankle joint are removed and replaced with metal and polyethylene.





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Recovery

The patient is discharged from the hospital 1 to 2 days after total ankle replacement. The ankle usually is placed in a cast or splint to hold the ankle still and allow for the bone to start growing into the implant. At week 3, the ankle may be placed in a removable boot, the stitches are removed, and the patient is allowed to start moving the ankle. At week 6, the patient starts to walk on the ankle in the boot and begins formal physical therapy. Physical therapy lasts for 6 to 12 weeks, depending on the progress of the patient. In therapy, range of motion and strength are the main focus. The boot or ankle brace is worn until week 10. The patient typically will continue to improve for up to a year after the surgery, but most of the improvement occurs in the first 6 months.

The timelines and protocol outlined above serve as an approximate guideline. These times may vary depending on other procedures performed on the patient and surgeon preference.

Outcome

The latest generation of total ankle replacements has had improved survivorship. Current data suggest a 70% to 80% survivorship of these implants after 10 years.

Complications

Infection, nerve injury, and blood vessel injury can occur. In addition, the implant can loosen with time. Breakage of a total ankle replacement may occur. Wound healing issues are common, which may require local wound care or oral antibiotics. Occasionally, the wound will break down or get infected, requiring additional surgeries or, rarely, amputation.

FAQ

What activities can I perform after a total ankle replacement?

Typically, non-impact activities only are recommended. Running and jumping on the total ankle replacement are not recommended. Non-impact or minimal impact activities are allowed including biking, swimming, walking, the elliptical machine, golf, light tennis, and hiking.

When will the swelling go away?

Swelling can persist up to a year after surgery. With physical therapy and compression stockings, much of the swelling can be improved. However, swelling that remains after one year may be permanent.

How much motion will I have?

The motion after an ankle replacement usually is not normal. The motion achieved after ankle replacement may be similar to the preoperative ankle motion.