

Foot and Ankle Update

T. Jay Kleeman, MD



Total Ankle Replacement



“Advanced ankle arthritis? What are my options?”

There are many forms of arthritis with the most common type being osteoarthritis. Regardless of the form, these are progressive diseases for which we have yet to find cures.

Joint degeneration involves changes in the cartilage surface of the joint, the underlying bone, and the integrity of the surrounding soft tissues, leading to pain, stiffness, and sometimes instability, if wear of the joint occurs in an uneven pattern. These changes can have a devastating effect on a patient’s lifestyle and ability to work. Furthermore, by decreasing the patient’s ability to exercise, arthritis can secondarily have a major impact on the cardiovascular system and on overall health.

Non-operative treatment of osteoarthritis focuses on decreasing symptoms. Mechanical measures such as braces and orthotics help relieve pain through improved alignment and by limiting painful joint motion. Oral and injectable intra-articular medications can reduce inflammation and pain but do not reverse the disease. Exercise and physical therapy are aimed at maintaining flexibility, strength, and stability and at preventing deconditioning.

Continued on page 2



Healthy Ankle



Arthritic Ankle





Continued from page 1

Joint Replacement vs. Fusion

- When non-operative treatment for ankle arthritis fails, an attempt is made to preserve the joint, if the arthritis is not severe. Minimally invasive arthroscopic procedures can be used to remove loose bodies and bone spurs. Localized bone and cartilage (osteochondral) lesions can be removed or repaired. Loose ligaments can be tightened or replaced to gain stability, and bone cuts (osteotomies) can help restore alignment.
- With advanced arthritis, the surgical options are arthrodesis (fusion) or arthroplasty (total ankle replacement).
- Fusion of the ankle has been performed for centuries in the treatment of ankle arthritis. The goal is to join the talus to the tibia and fibula, in a functional position. Although, prior motion is lost, many patients are already quite stiff and are happy to have reduced pain at the expense of some motion. Function is typically improved significantly and patients who have previously used braces may return to standard shoe wear.
- The downside of fusion is that elimination of ankle motion, which normally provides over 80% of the sagittal motion of the foot and ankle, creates stress on the many neighboring joints. This added stress puts these other joints at risk for progressive degeneration.
- The benefit of ankle replacement is that by improving alignment and by providing more natural motion, function of the foot and ankle is better restored and stress on other joints is reduced.
- Ankle replacements have been performed since the 1970's, however, earlier designs had high failure rates and poor longevity, and salvage procedures were extremely difficult.
- Although ankle replacement is not recommended for all patients, newer designs are showing great promise for patients suffering from painful arthritis. MRI and CT guided pre-operative templating can shorten surgical time and provide more reproducible surgical results.



Arthroscopy



Fusion



Joint Replacement

