

## Dealing with Ankle Arthritis – Specialized Treatments for Mild to Severe Conditions

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New Mexico's beautiful weather offers our population four seasons of change in temperatures and foliage that are inviting to those who enjoy playing outdoors. Sporting activities, however, often are accompanied by ankle injuries. Depending on their severity, such injuries can lead to ankle arthritis, which is often the post-traumatic result of leg and ankle fractures.



Other etiologies of ankle arthritis include chronic ankle sprains with ligamentous laxity, rheumatoid arthritis, Charcot deformity, and primary osteoarthritis. Orthopaedic medicine is improving treatments to relieve a wide range of arthritic ankle conditions.

### Mild to Moderate Arthritis

Treatment of ankle arthritis is based on the degree and severity of articular cartilage loss. Mild to moderate forms of ankle arthritis often respond well to conservative combination treatment plans. The use of physical therapy and modalities in conjunction with oral anti-inflammatories and bracing usually are sufficient treatment options.



Patients who have moderate forms of ankle arthritis often require combination treatments as well as less invasive surgical intervention. Ankle arthroscopy and arthrotomy allow the physician to provide simple repairs to damaged cartilage. Often, patients who suffer from chronic ankle sprains that lead to arthritis may require soft-tissue balancing procedures and stabilization.

Patients with severe ankle arthritis require more advanced surgical treatments. A more recent advancement is arthrodiastasis. This technique involves a clean-up of the ankle joint with an open incision or arthroscopy. A circular ring external fixation device is applied, and the ankle is distracted to inhibit any weight bearing on the articular cartilage while allowing the patient to be ambulatory. The mechanically applied tension and stress produce reliable regeneration of bone and soft tissue during distraction, which includes regeneration of articular cartilage through microangiogenesis and hypervascularity. This

increase in vascularity stimulates a reparative process by enhancing nutrient synthesis and distribution to the articular cartilage of the ankle joint.

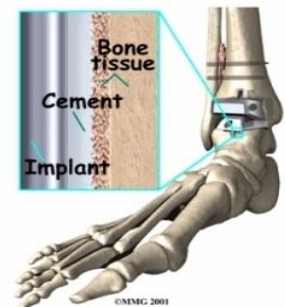
## Arthrodiastasis

Arthrodiastasis is performed in conjunction with joint fluid replacement therapy by injection of hyaluronan. Distraction across the ankle joint is carried out for three months, and a series of six hyaluronan injections are performed. Joint fluid replacement therapy involves injecting the joint with a synovial fluid-like solution containing hyaluronan. Hyaluronan is secreted by cells in the cartilage of joints and is one of the major molecular components of joint fluid and articular cartilage.

## More Advanced Procedures

Patients who suffer from moderate and severe arthritis of the ankle joint typically undergo more advanced procedures. These treatments range from ankle fusion, which is the gold standard for treatment of advanced arthritis, to ankle arthroplasty with total ankle joint replacement. More recent advances in ankle joint implants are providing the ability to preserve motion and function for patients.

Ankle replacement surgery continues to advance and is currently showing better results in long-term studies. This type of surgery is reserved for a select group of patients. The surgery involves removal of the articular cartilage and removal of bone for placement of an implant. Adjunct procedures include lengthening of the gastrocnemius muscle, fusion of the syndesmosis, fusion of the subtalar joint, and tendon-balancing procedures for correction of angular deformity.



Complications of total ankle joint replacement can include infection, prosthesis loosening, stress fracture, and deep venous thrombosis. Prosthetic loosening and wearing often require revision surgery and component replacement. Ankle injury can be more than just a nuisance that slows your game on the playing field. Careful attention to the injury and proper diagnosis of any damage can help avoid arthritic complications. Those who have developed arthritis of the ankle may benefit from various improved treatments available to relieve or lessen their conditions.