

Post-Traumatic Arthritis



Trauma, most commonly fractures, not only affects the bones, but can affect the joints as well. The joints are the connection between the two bones that allows the smooth motion that allows motion. Arthritis is when the cartilage is damaged or worn away and no longer provides the cushion to allow the smooth motion between the bones. Cartilage is unique in that there is no blood flow that provides nutrition, so that when injured it does not have the ability to repair itself very well, unlike bone. This inability to repair itself is why scientists and surgeons have a very difficult time in trying to restore large cartilage defects in the setting of arthritis. This results in pain, stiffness, and swelling in the affected joints that can severely limit the function of a patient

Diagnosing arthritis begins with a thorough history, focusing on the location of the pain and what causes aggravation. “Start up” pain occurs in the morning or when a patient has been in one position for a prolonged time such as sitting in a car. The joint becomes stiff and can hurt for the first few steps while the joint “loosens” up the joint. Although there is no perfect answer for this, some of the reason is felt to be that the joint lining called the synovium begins to produce joint fluid more when you are moving and this helps to minimize the pain after a few minutes. This may be why many patients with arthritis prefer a little walking

to standing in one place. Additionally, walking on flat surfaces is generally more comfortable than uneven ground. The physical exam is particularly focused on how the location of the pain - determining the affected joints. Additionally any deformity, such as a high arched foot or flatfoot is noted as this can impact the nonoperative and operative options. Xrays are taken to confirm the presence of arthritis and evaluate the biomechanical alignment of your foot and ankle. Additional testing such as a CT scan and MRI may be considered.

Treatment of arthritis is focused on your needs based on your pain and desired level of activity. Non-surgical treatment focuses on minimizing the strain and stress across the foot with the use of semi-rigid or rigid ankle braces. The braces cannot improve the lack of cartilage, however, can help to minimize your pain. Injections can help in many patients and provide relief, however, rarely are they able to provide a long-term solution in isolation. Injections can include steroid and in some cases PRP (platelet rich plasma) depending on the severity of the arthritis. Shoewear and activity modification can also help to minimize the stress across the joint and help to provide symptom relief and avoid surgery. In patients that do not obtain relief or the restrictions are not amenable or acceptable to their desired lifestyle or work demands, surgical options can be considered. In severe cases of arthritis of the foot and ankle the only operation that is effective is a fusion for most joints. At this time, only the ankle joint can be replaced reliably with metal and plastic as is done for the hip and knee joints. Fusion allows us to realign the joints of the foot to correct any deformity and once the bones are fused (the bones grow together after the surgery) - then there is no joint and the pain improves. In most cases of arthritis of the foot, the motion is severely limited already, and most patients note a functional improvement with a better aligned foot and decrease in pain.