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Focus on

Common Ankle Injuries

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Ankle sprains and fractures are two of the most common injuries seen by both primary care physicians and orthopedists. Given that they are so common it would seem they should be easy to diagnose and treat, however that is not always the case.

ANKLE SPRAINS

Twisting injuries can happen just about anywhere anytime and usually catch people off-guard. Adults often assume that they will heal in a few days like they did when they were children and are frequently surprised when they find themselves sore and stiff weeks later.

The ligaments injured in all sprains are the *anterior talofibular ligament*, followed by the *calcaneofibular ligament*. (Figure 1)



Figure 1

The patient will have tenderness around the distal fibula, swelling and ecchymosis. Guarding can make an anterior drawer test difficult to perform.

Controversy exists over whether or not to get x-rays at the initial visit. Ankle sprains and fractures can mimic each other, especially in the older population, so the threshold for getting x-rays (two views of the ankle, weight-bearing if possible) should be low.

Ankle sprains have several classification systems but multiple studies have shown that they are not good for predicting outcomes. Ninety-eight percent (98%) of ankle sprains (any grade) involving the lateral ankle ligaments will heal with proper bracing and therapy. The key to recovery is early motion and appropriate physical therapy. Patients who do not undergo early treatment have a much higher incidence of re-injury, which can lead to chronic instability that often requires surgery.

Syndesmosis injuries ("high-ankle sprains") can be much more difficult to diagnose and treat. (Figure 2) The patient commonly has a positive "squeeze test", difficulty with any weight-bearing and significant swelling. It is important to check for proximal fibular fractures. Stability and the need for surgery can be determined using x-rays (both standing and stress views) that will show signs of syndesmosis instability. Untreated, these injuries can be devastating for the patient.



Figure 2

In patients with more severe pain and swelling, it is also important to rule out injuries that can mimic sprains. The most frequent are fractures of the *anterior process of the calcaneus* and *lateral process of the talus*.

Both can lead to long term dysfunction of the ankle if not accurately diagnosed.

ANKLE FRACTURES

Not all ankle fractures are created equal. Fractures that involve more than the lateral malleolus (meaning the medial and/or the posterior malleoli) all require surgery to stabilize. Isolated fractures of the lateral malleolus require the most complex analysis to determine if they are stable enough to be treated without surgery. The two most important factors to consider are the degree of displacement and injury to the syndesmosis. More than 1-2 millimeters of displacement will lead to post-traumatic arthritis of the ankle in 15-20 years. We frequently recommend surgery to prevent this outcome, especially in younger patients. The second major consideration is injury to the syndesmosis. Any fracture at the level of the ankle joint or above can have an associated syndesmosis injury. The higher the fracture, the more likely the patient has an injury to the syndesmosis. If left untreated, the patient will quickly lose stability of the ankle and has a high risk of post-traumatic arthritis.

In summary, ankle injuries are common yet commonly misunderstood. Careful analysis of clinical symptoms and review of x-rays is needed to protect your patients from future complications.

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THE BOTTOM-LINE

Ankle sprains and fractures are complex injuries that require careful evaluation and treatment to provide your patient with the best long-term outcome.

- Low threshold for getting x-rays, especially with ecchymosis and/or an older patient
- 98% of ankle sprains will heal well with proper bracing and therapy
- Early motion and directed physical therapy are important

- Syndesmosis injuries can be difficult to diagnose
- Standing weight-bearing x-rays with stress views can help to identify instability of the syndesmosis
- Be sure to check the proximal fibula with x-rays to make sure there is not a fracture (“Masionneuve fracture”)
- Commonly missed ankle injuries are fractures of the *lateral process of the talus* and *anterior process of the calcaneus*.
- Evaluate lateral malleolus displacement on x-rays (more than 1-2mm can lead to posttraumatic arthritis)
- Fractures involving more than the lateral malleolus are unstable and require surgery
- Syndesmosis injury can occur with any fracture above the level of the ankle joint

Visit www.edmondsortho.com to see a video demonstrating the “squeeze test”

About Dr. Foral

- Board-certified in Orthopedic Surgery and fellowship trained in Surgery of the Foot and Ankle
- Cares for patients with common foot problems like hammertoes, corns, calluses, plantar fasciitis and ingrown toenails.
- Works in partnership with the Wound Center at Swedish-Edmonds treating diabetic foot and ankle conditions and providing patient education.
- Cares for patients with both simple and complex trauma and deformities of the foot and ankle, ranging from bunions to calcaneus fractures.
- Provides cutting-edge Total Ankle Arthroplasty, in appropriate patients when needed.
- Cares for a wide variety of sports injuries affecting the foot and ankle.

