

AthletiHINTS



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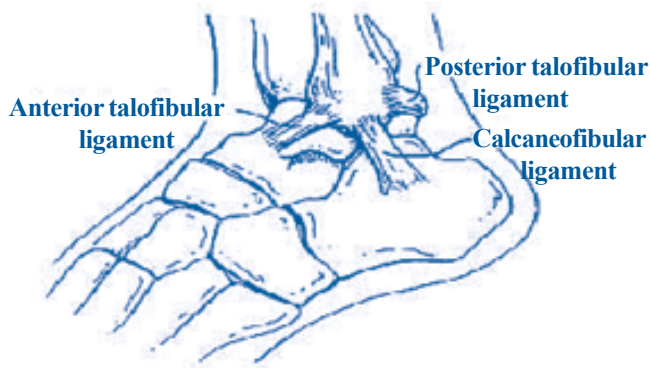


Ankle sprains

Introduction

Ankle sprains are one of the most common musculoskeletal injuries. Acute ankle trauma is responsible for 10 percent to 30 percent of sports-related injuries to young athletes.

Three major ligament groups stabilize the ankle: medial, lateral and syndesmotic ligaments. The medial, also called the deltoid ligament, is a very strong structure that attaches the tibia to the talus and calcaneus bones in the foot. It stabilizes the medial aspect of the ankle. The lateral ligaments are a group of three ligaments: the anterior and posterior talofibular ligaments and the calcaneofibular ligaments. They connect the fibula to the bones in the foot and stabilize the lateral aspect of the ankle. These are the ligaments that are the most often damaged. The syndesmotic ligaments hold the tibia and fibula together.



Mechanism of Injury

An inversion injury is the most common cause of an ankle sprain. The classic example is that of a

volleyball or basketball player landing on another player's foot, causing their foot to roll inward. It is also common in football, soccer and running due to uneven surfaces. An eversion injury, when the foot rolls outward, damages the deltoid ligament, which is the major weight-bearing ligament. This injury is much rarer but much more serious. If twisting is involved, either with the inversion or eversion injury, or by itself, the ligaments that hold the tibia and fibula together can be damaged as well.

Ankle sprains are classified into three categories. Grade I is a partial tear of a ligament complex with mild tenderness and swelling but the athlete is still able to bear weight and move with only minimal pain. Grade II is an incomplete tear of the ligament complex with moderate pain and swelling along with some bruising. The athlete experiences some loss of motion and has more difficulty bearing weight. Grade III is a complete tear of a ligament complex that results in severe swelling and bruising. The athlete is unable to put weight on that ankle and is mechanically unstable.

Diagnosis

Pain is the primary symptom with a history of "rolling" or "turning" the ankle. The physician or trainer will do a thorough history and physical to assess the degree of swelling and stability of the ankle. Tests will be done to establish which particular ligaments have been damaged. An X-ray may be done to rule out possible fractures but is not necessary to make the diagnosis.

Over

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Treatment

Early management should include ice to reduce swelling. It should be applied for 20 minutes at least four times a day for the first 48 hours. The foot should be elevated to help excess fluid drain. Aspirin or ibuprofen can be used for pain. The ankle can be taped or braced. If the athlete is unable to bear weight, crutches may be used.

Rehabilitation

The importance of rehabilitation after an ankle injury cannot be overemphasized. It aids in a quick return to activity as well as preventing chronic and

frequent recurrence of the injury. Early rehabilitation starts with range of motion exercises. These include stretching the Achilles tendon using a towel to pull the foot toward the face and “alphabet” exercises by drawing the alphabet by moving the ankle.

Strengthening begins by pushing against a wall and progresses to using weights or resistance bands. Continued rehabilitation includes balance training, such as standing on the ankle with eyes closed and finally training for return to activity. A brace may be recommended during the early periods of activity-specific training.