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Sports
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GOAT NOTES

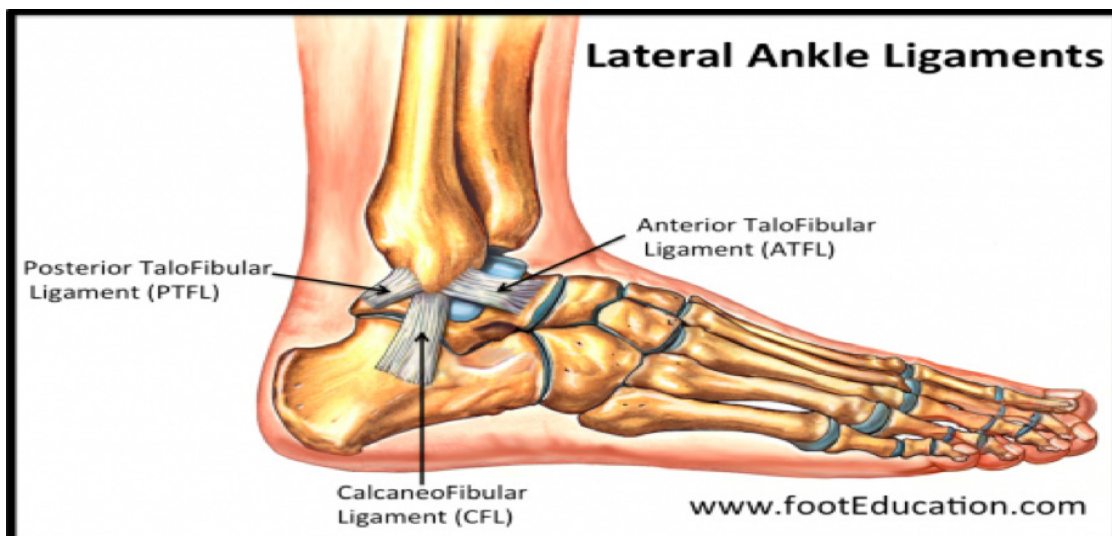
Combine Academy Sports Medicine Newsletter

LATERAL ANKLE SPRAINS NEWSLETTER

Students and Parents,

Ankle sprains are common among physically active individuals, particularly those who participate in court and team sports. Ankle injuries were found to account for 14% of all sports-related orthopedic emergency visits, with a lateral ankle sprain being the most common of these injuries. Majority of ankle injuries do not seek medical attention. Proper diagnosis and identification of affected structures must be obtained through history and objective assessment for a successful outcome.

ANATOMY



Understanding the anatomy of an ankle is important if you want to know how to treat it. The ankle region consists of three major articulations: talocrural, subtalar, and distal tibiofibular syndesmosis. The lateral ligaments of the talocrural joint consist of the anterior talofibular ligament (ATFL), the calcaneofibular ligament (CFL), and the posterior talofibular ligament. The Most common injured ligament is the Anterior talofibular ligament (ATFL). Lateral ankle sprain is caused by forefoot adduction, hindfoot inversion, and tibial external rotation with the ankle in plantar flexion. In addition to lateral ankle sprains, we must rule out ankle fractures, OCD lesions and ankle impingements.

Diagnoses

After understanding the underlying structures around the ankle, specific special tests are necessary to get the correct diagnoses. Other, evaluations that should be included in your assessment is point of tenderness, range of motion, ligamentous laxity and strength. Ankle sprains are classified into three grades. Grade I no loss of function, no ligamentous laxity (ie, negative anterior drawer and talar tilt tests), little or no hemorrhaging, no point tenderness, decreased total ankle motion of $\leq 5^\circ$, and swelling of ≤ 0.5 cm. Grade II some loss of function, positive anterior drawer test (ATFL involvement), negative talar tilt test (no CFL involvement), hemorrhaging, point tenderness, decreased total ankle motion $>5^\circ$ but $>10^\circ$, and swelling >0.5 cm but <2.0 cm. Grade III near total loss of function, positive anterior drawer and talar tilt test hemorrhaging, extreme point tenderness, decreased total ankle motion $>10^\circ$, and swelling >2.0 cm.

Special Tests



This test detects excessive laxity to the calcaneofibular ligament

- To access this ligament the ankle must be in a neutral position, then you gently force the ankle into inversion. You must compare the injured ankle to the non-injured ankle for confirmation.



This test detects excessive laxity to the anterior talofibular ligament

- Patient's foot is placed in neutral position (slightly plantar flexed). The Tibia is then stabilized by one hand, while your other hand grasps the heel and an anterior force is gently applied. You must compare the injured ankle to the non-injured ankle for confirmation.

Treatment

Immediate Treatment:

The PRICE (Protection, Rest, Ice, Compression, Elevation) treatment protocol for acute ankle injury is commonly used. Ice is necessary for the first 48 hours to reduce pain and inflammation.

WEEK 0-2 (Treatment is specific to each athletes' needs)

- Ankle pumps
- Milking massage (if edema is present)
- Stationary Bike
- Calf stretch/Soleus stretch
- 4-way ankle exercise w/band
- **GOALS FOR TREATMENT-Reduce pain, inflammation, improve ROM, Ability to weight bear**

Week 2-5 (Treatment is specific to each athletes' needs)

- Improve on proprioception
- Progress to full active and passive ROM
- Improve muscular strength (Calf raises, Step-ups, 4-way ankle exercises w/band)
- Can start Jogging in a straight line if there's no pain
- **GOALS FOR TREATMENT-Pain free with ambulation, no swelling, Full PROM/AROM**

Week 4-8 (Treatment is specific to each athletes' needs)

- Lateral movement
- Plyometrics (Jump up to box 2 feet then progress to 1 foot)
- Strengthening (Continue with progression)
- Advanced neuromuscular training with exercises beginning slow in single direction and progressively becoming quicker, intense and dynamic
- Return to routine strength training
- Return to sport

References

1. Beynnon BD, Renstrom PA, Alosa DM, Baumhauer JF, Vacek PM. Ankle ligament injury risk factors: a prospective study of college athletes. J Orthop Res. 2001;19:213-20....
2. Wolfe MW, Uhl TL, Mattacola CG, McCluskey LC. Management of ankle sprains [Published correction appears in Am Fam Physician 2001;64:386]. Am Fam Physician. 2001;63:93-104.



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