

Ankle Sprains

Ankle sprains are very common injuries. They occur when the foot is rolled inward, usually on another player's foot when landing from a jump or stepping on an unlevelled surface. When the sprain occurs, damage can be done to the ligaments on the outside of the ankle. Ligament injuries are graded as type I- III.

Grade I injuries microscopically tear the ligament tissue but do not cause any significant laxity. Grade II injuries partially tear the ligaments and produce moderate laxity. Grade III injuries are complete tears of the ligaments and result in significant laxity. Each of these injuries produce swelling and bruising with increasing severity as the injury grade increases from Grade I to III.

Initial Treatment

Immediately after an ankle sprain the ankle should be **R**ested, **I**ced, **C**ompressed, and **E**levated (**RICE**). Ice should be applied by placing ice cubes into a zip-lock freezer bag and wrapping the bag around the ankle. Ice should be on for 30 minutes then off for 30 minutes. Blue ice should **never** be used as it can freeze the skin resulting in "freezer burn" which can be serious. Compression can be applied through the use of an ACE bandage. Elevation of the ankle should be above the heart. If there is significant difficulty walking then a physician should evaluate the injury and x-rays should be obtained to rule out a fracture.

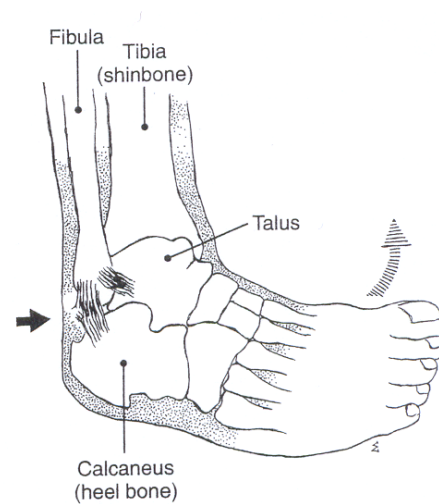


Figure 1: Lateral Ankle Ligaments (Safran et al, 2003.)

Follow-Up Treatment

Follow-up treatment of ankle sprains involves range-of-motion exercises, strengthening exercises, balancing exercises and progression of activities. All activities should be **pain-free** and should be performed at least three times a day. For exercises see Figure 2- 9.

Anti-inflammatory medications (Advil, Aleve, or prescription anti-inflammatories) can be used to reduce pain with inflammation as long as there are no contraindications.

Weight bearing can usually be progressed as pain allows. Sometimes a walking boot or crutches are used temporarily. Often an air-cast is used after the walking boot is discontinued. A functional ankle brace can then be used to transition back to sports.

Pain free exercises including range of motion movements and strength training will accelerate recovery.



Figure 2: Dorsiflexion and Plantarflexion range of motion (Safran et al, 2003.)

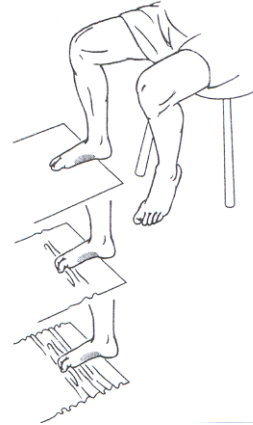


Figure 5: Towel Curls. Place your foot on a towel and curls your toes and foot to grip the towel.

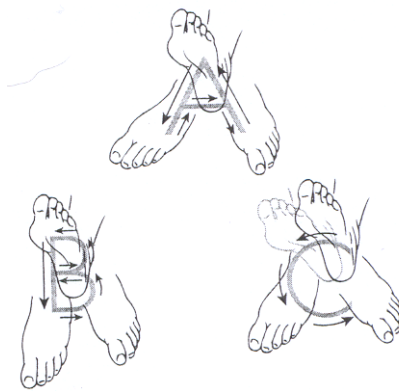


Figure 3: Alphabet Range of Motion- Using the big toe to draw the alphabet. (Safran et al, 2003.)

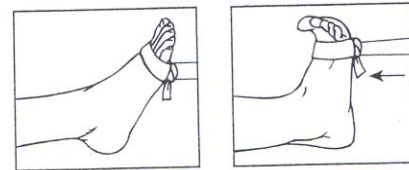
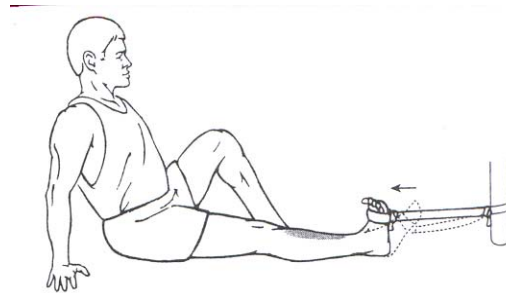


Figure 6: Dorsiflexors. Using rubber tubing for resistance pull the foot towards you.

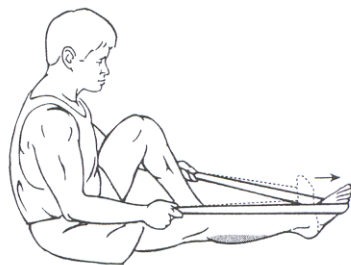


Figure 4: Plantarflexors. Using a towel or rubber tubing for resistance push against or away from your body.

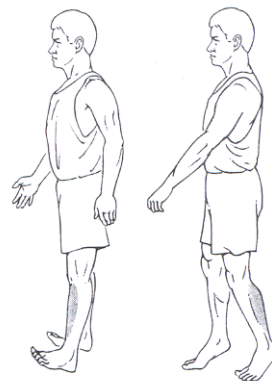


Figure 7: Walk on heel and toes, then inner and outer foot.