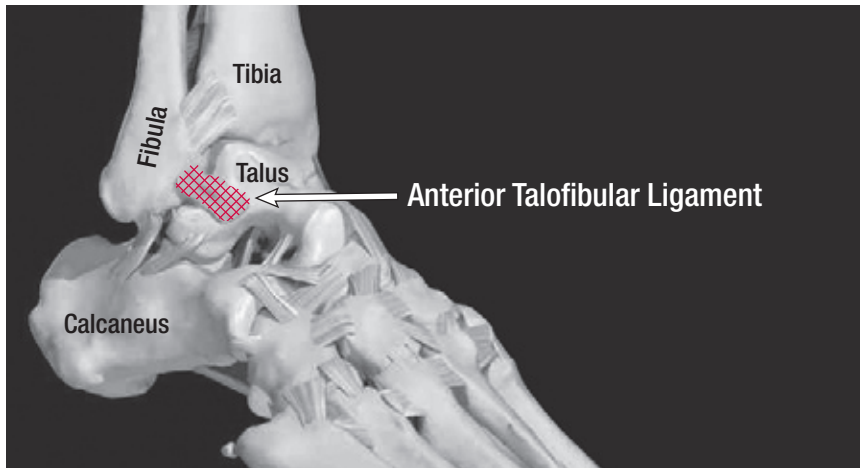
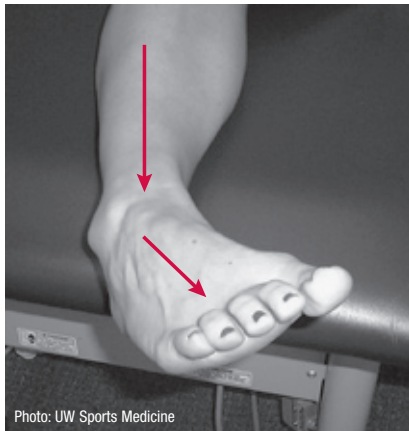


## Ankle Sprain

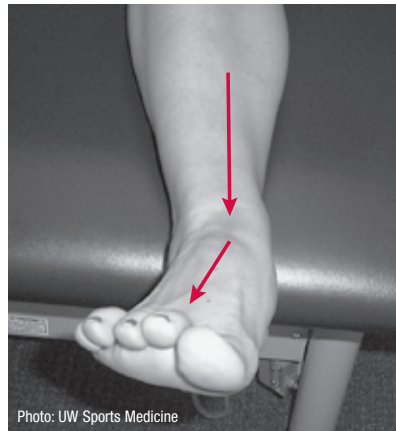


### Lateral Ankle Anatomy

The anterior talofibular ligament is the most commonly injured ligament of the ankle. It is one of the lateral ankle ligaments that is usually injured during an inversion mechanism.



Inversion mechanism (right foot)



Eversion mechanism (right foot)

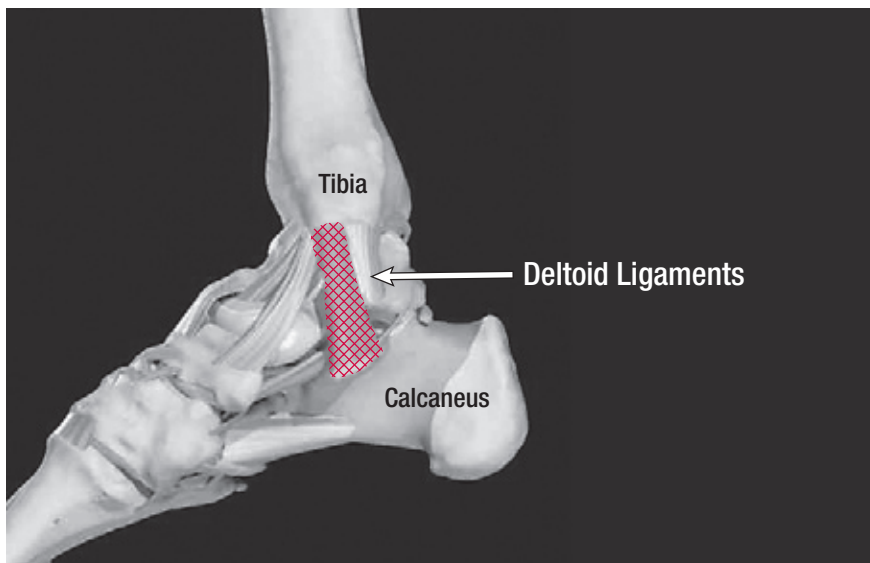
An ankle sprain occurs when fibers of the ligaments, which support the ankle, are stretched or torn. In a first-degree sprain the fibers are stretched. A second-degree ankle sprain is one in which portions of the ligament(s) are torn. A third degree sprain is defined as a complete tearing of the ligament(s) supporting the ankle. Ligaments on the lateral, or outside aspect of the ankle are more frequently sprained than the inside, or medial ligaments.

The severity of injury will determine the amount of time lost from activity, the type of treatment and rehabilitation. Although there is a wide range of injury severity, some general treatment and rehabilitation guidelines are appropriate for all ankle sprains.

### Immediate treatment

Immediately after the injury occurs, ice should be applied to the ankle and the leg should be elevated for 15–20 minutes. After icing, an elastic bandage should be applied to provide compression to prevent or limit swelling. The combination of rest, ice, compression and elevation (R.I.C.E.) should continue for a minimum of 48–72 hours.

*continued*



### Medial Ankle Anatomy

*The medial ankle ligaments are often identified as the deltoid ligaments. Medial ligament injuries are usually sustained with an eversion mechanism and are less common than lateral/inversion injuries.*

Rest—Decrease, modify or eliminate weight-bearing activities

Ice—Apply ice for 15–20 minutes several times a day

Compression—Wrap the injured ankle with an elastic bandage

Elevation—It is difficult for the leg vessels (veins) to remove swelling from the lower extremity, therefore elevate the limb higher than the level of the heart.

X-rays should be obtained when there is tenderness over the ankle bones to rule out a fracture.

**After the initial inflammation phase is over,** (usually 48–72 hours), moist heat may be used to treat an ankle sprain. Heat should not be used when swelling is present. Compression

and elevation should continue as long as swelling is present.

**Return to activity** may be attempted once there is minimal pain and swelling. The athlete should be able to perform a series of functional testing before returning to activity or sports:

- Single leg toe raises with one's weight on the injured ankle
- Jumping up and down on the injured ankle
- Jogging, running and sprinting both straight ahead and with cutting

### Rehabilitation of ankle sprains

consists of strengthening muscles surrounding the ankle joint, balance and coordination exercises. Strengthening exercises such as toe raises, calf press and the use of rubber tubing or a towel to resist side-to-side ankle movements

should be performed. Balance exercises should not be overlooked. Activities such as tilt board exercises, one legged standing and jumping rope also improve coordination and balance after injury.

**Prevention of ankle sprains** includes the use of ankle braces and/or ankle taping.

A consistent program of lower leg stretching and strengthening, as well as agility drills, will help decrease the incidence of ankle sprains.