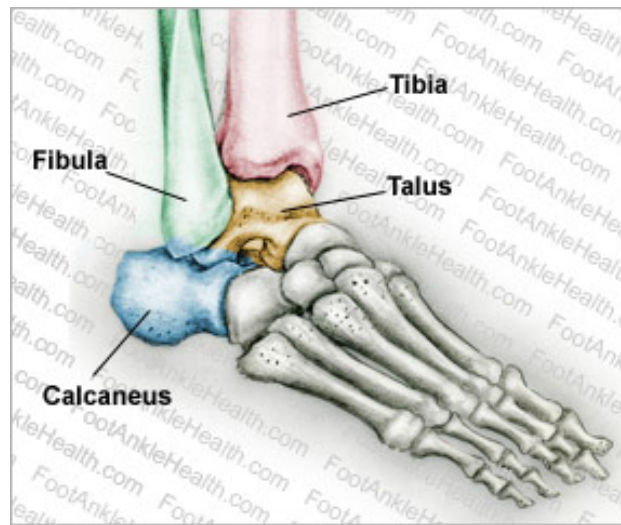
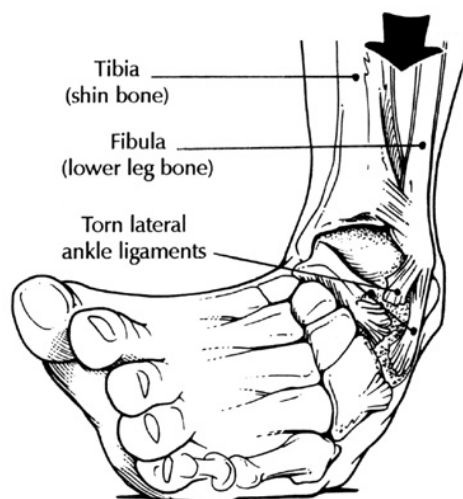


# Ankle Sprains

## Anatomy of the ankle

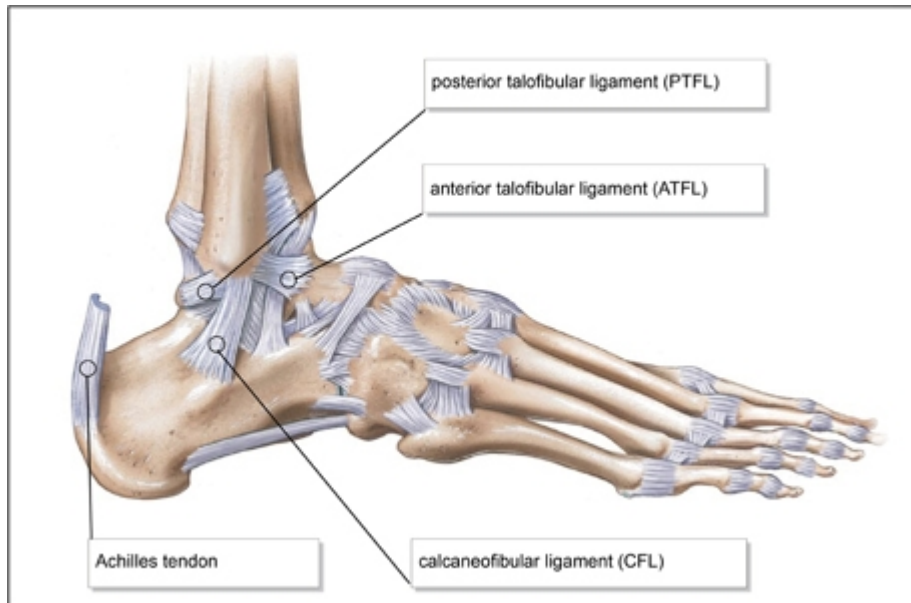


The ankle is a hinge joint that allows the foot to move up and down. The bones of the lower leg (tibia and fibula) form an opening into which the talus bone of the foot fits. Strong ligaments hold the ankle joint in position and protect against abnormal or excessive movements. A sudden movement or twist, often when the foot rolls in, can overstretch the supporting ligaments, causing ligament tears and bleeding around the joint. This is known as an ankle sprain and is a common injury in activities requiring running, jumping and change of direction. Some people are particularly prone to recurring ankle sprains.



The ligament on the outside of the ankle (lateral ligament) is made up of three separate bands: one at the front (anterior talo-fibular ligament), one in the middle (calcaneo-fibular ligament) and one at the back (posterior talo-fibular ligament). When the ankle rolls inwards the anterior talofibular ligament is the first and often the

only ligament to sustain injury. A total rupture of the ligaments involves the calcaneofibular ligament and the posterior talofibular ligament.



### **Grades of ankle sprains**

- **Grade 1 – mild**

Minor tearing and stretching of the ligaments with minimal or no swelling, full range of movement, full weight bearing and no instability. These sprains can take 3 days to 3 weeks to recover.

- **Grade 2 - moderate**

Partial tearing of one or more of the ligaments with moderate swelling and bruising, reduced range of motion, difficulty weight bearing and instability in the joint. These can take 3-6 weeks to recover.

- **Grade 3 – severe**

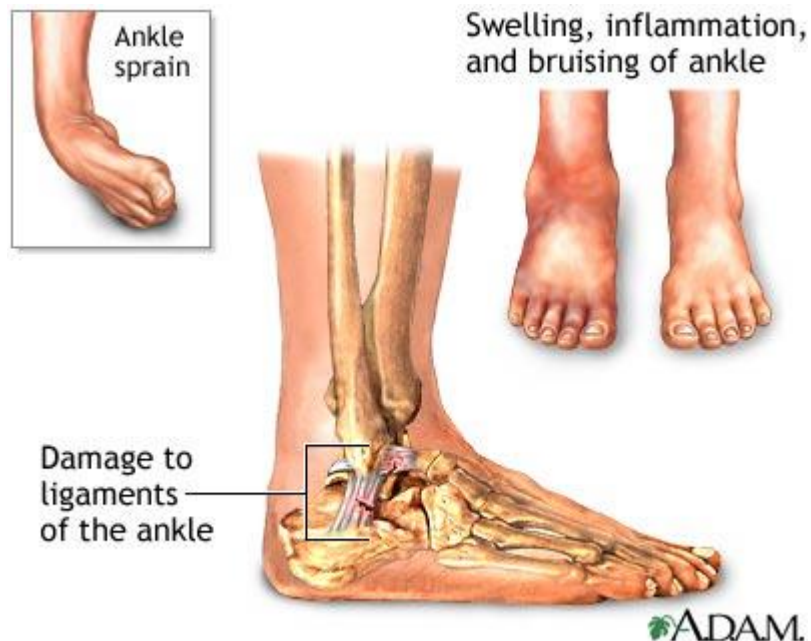
Complete rupture of one or more of the ligaments with major swelling/bruising, severe pain, limited range of motion, inability to weight bear and the possibility of a fracture. These strains can take 3 -6 months to rehabilitate.

## Lateral ankle sprain

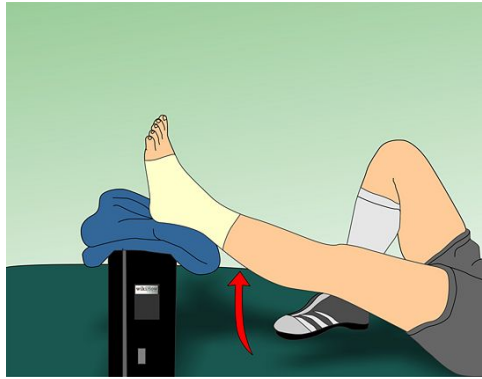


### Presentation

- Swelling which can occur immediately or over several hours
- Pain in the ankle joint when trying to move it or put weight through it
- There is often bruising over the area of injury which will move down the foot towards the toes in the days after the ankle sprain as gravity pulls the blood downwards.



## Treatment



- **R.I.C.E.R**
- Stop your activity.
- **REST:** and take the weight off the injured ankle as much as possible for the first 2 days
- **ICE:** Use cold packs every two hours, applied for 15 minutes.
- **COMPRESSION:** Bandage the joint firmly to help reduce inflammation
- **ELEVATION:** the ankle above the heart to allow swelling to drain away into the bloodstream.
- Avoid exercise, heat, alcohol and massage in the first 48 hours, as these can all exacerbate swelling.
- **REHABILITATION:** Start taking some weight on the injured ankle reasonably soon after injury, usually within 2-3days
- Begin a stretching and strengthening program as advised by your physiotherapist. Normally a sprained ankle will recover within 6-8 weeks, although it may tend to swell for a few months longer.
- If you are unable to take any weight through the foot or have ongoing pain you should seek the advice of a doctor or physiotherapist.



## **Recurring ankle sprains**

Some people get recurring ankle sprains. This can be caused by ligament scarring and excess looseness as a result of previous ankle sprains. Insufficient rehabilitation from previous strains can lead to weak muscles around the ankle joint and reduced ability to judge where your foot is in relation to your leg (proprioception). a number of factors working in combination, including:

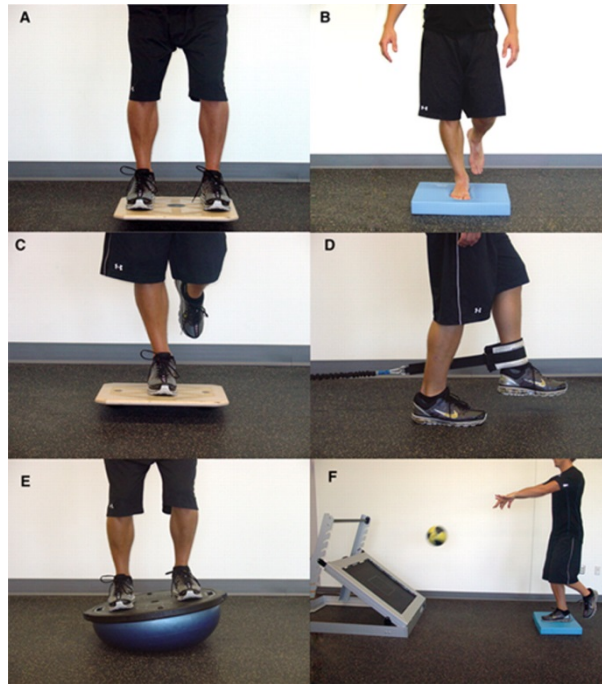
### **Physiotherapy**

Physiotherapy treatments may include:

- Exercises to improve joint mobility.
- Exercises to strengthen the muscles surrounding the ankle
- Advice on taping and ankle braces for use during activity
- The use of a wobble board or trampoline to encourage balance and improve the proprioception.



There is strong evidence that starting a rehabilitation program in the first week after ankle sprain improves ankle function and early return to weight bearing activity such as walking. If persistent instability does not respond to treatment, surgery may be considered.



### Prevention

- Warm up before exercise including sport specific movements.
- Wear supportive shoes appropriate to the sport.
- Consider ankle braces or tape, as directed by your physiotherapist.
- Take care when exercising on uneven or wet ground, especially in the first few weeks after a sprain.