# Talocrural Joint

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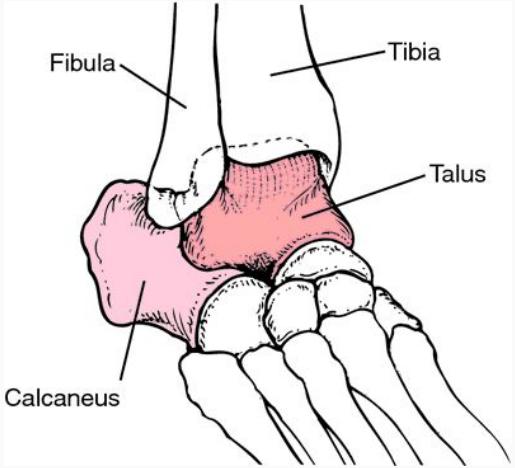
Module 2 Kinesiology Project

# What Is It and What Does It Do?

- The talocrural joint (“the ankle joint”) is a synovial hinge joint formed by the bones of the tibia, fibula and talus.
- It permits dorsiflexion and plantarflexion of the foot in the sagittal plane.
    - Plantarflexion is produced by posterior muscles of the cru including the gastrocnemius, soleus, plantaris and posterior tibialis.
    - Dorsiflexion is produced by the anterior muscles of the cru including the tibialis anterior, extensor hallucis longus and extensor digitorum longus.



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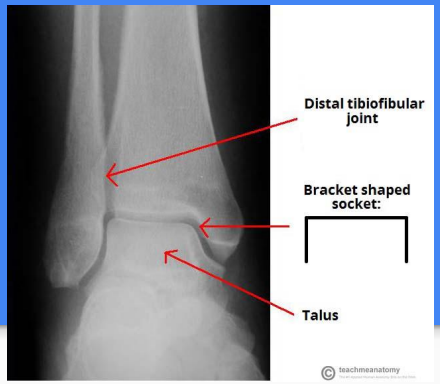


- The tibia and fibula are bound together by the interosseous membrane and strong tibiofibular ligaments, producing a bracket shaped socket called the mortise.
- The body of the talus fits snugly into the mortise and is stabilized by two sets of supporting ligaments of the medial and lateral malleoli.
    - The medial (or deltoid) ligament originates from the medial malleolus and consists of four separate ligaments which “fan out” and attach to the talus, calcaneus and navicular bones.
    - The lateral ligament originates from the lateral malleolus and consists of three separate ligaments which span between the lateral and posterior aspects of the talus and the calcaneus. **The lateral ligament is weaker than the medial ligament.**

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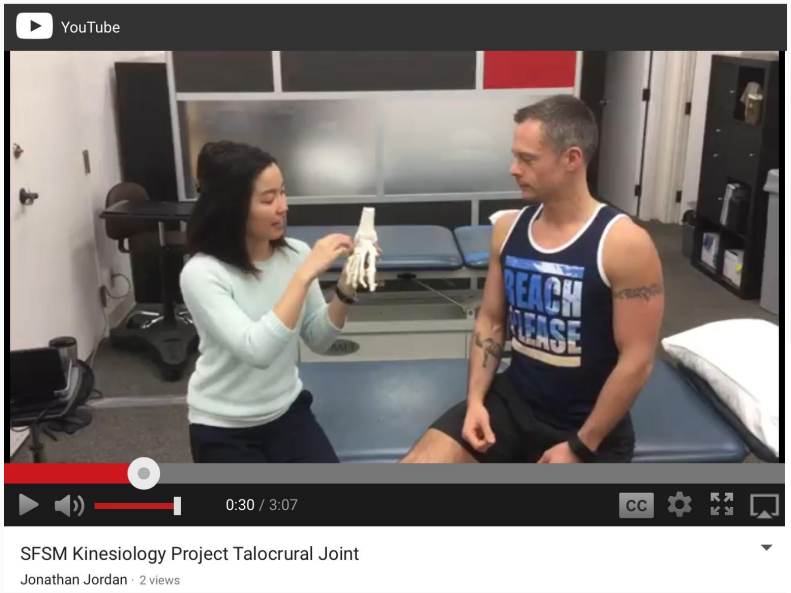


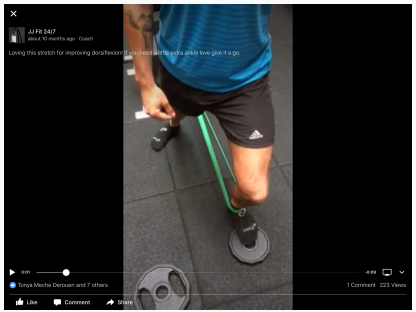


# Why I Chose the Talocrural Joint

- The ankle is required for running, walking, squatting, lunging, climbing, etc.
- The ankle provides key proprioceptive input to the brain
- Even without a traumatic injury poor ankle mobility can affect other joints
- Personal experience with PT and rehab of my issue
- Overhead squatting demonstration

# Three Common Injuries

1. Sprain - Refers to partial or complete tears in the ligaments supporting the ankle and is often the result of changing directions quickly or on uneven surfaces. Lateral ligament sprains are more common than medial sprains.
2. Pott’s fracture - Describes a bimalleolar (medial and lateral malleoli) or trimalleolar (medial and lateral malleoli and distal tibia) fracture. This is typically produced by forced eversion of the foot.
3. Calcaneal Tendinitis - Inflammation of the “Achilles” most commonly from overuse, repetitive stress or improper conditions.

# Working with Non-Acute Tendonitis

- PT treatment may include ankle gliding, e-stim and soft tissue work
- Ankle mobility drills (“ankle letters”) and calf stretches may be prescribed
- If cleared for bodywork consider:
  - Ankle mobilization and assisted stretching techniques
  - Myofascial and detail work on plantarflexion muscles including gastrocnemius, soleus, plantaris and posterior tibialis
  - Detail work around tarsals, malleoli and plantar fascia