

Ankle Exam for WA ACP 2019 Case-Based Foot and Ankle Exam: **Bones, Ligaments, Tendons, Cartilage and Nerves (BLT CaN!)**

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- **Ankle and foot position, in stance and heel raise.**
  - Hindfoot valgus or varus? Normal arch or pes planus?
- **Gait** – pain provoked with stance or push-off?
- **Single leg heel raise** – balance, and pain provocation
- **Skin:**
  - Swelling – distribution (circumferential around ankle joint or around bone/ligament/tendon)
  - Bruising (color, location)
- **Sensation** – check L5 (common peroneal nerve, tibial nerve), S1 (sural nerve) terrains.
- **Pulses** – dorsalis pedis, posterior tibial
- **Ankle range of motion (ROM):** Dorsiflexion (DF) and plantarflexion
- **Strength:**
  - Dorsiflexion (DF) – tibialis anterior, extensor hallucis longus, extensor digitorum longus. or deep peroneal nerve, L4, L5,
  - Plantarflexion (PF) – gastrocnemius, soleus, Achilles, posterior tibial tendon, peroneus longus and brevis, flexor hallucis longus, flexor digitorum longus. L5, S1, S2
  - Inversion – posterior tibial tendon, tibialis anterior
  - Eversion – peroneal tendons

**Palpation**

- **Bones:**
  - Medial malleolus (posterior for Ottawa rules)
  - Lateral malleolus (posterior margin for Ottawa rules)
  - Tibiotalar joint
  - Calcaneus - calcaneal squeeze test useful for fractures (stress and traumatic)
  - Base of 5<sup>th</sup> metatarsal
  - Navicular

- Metatarsals
- Plantar fascia origin (plantar medial heel)
- **Tendons:**
  - Posterior tibial
  - Peroneal tendons
  - Achilles
    - Thompson test
- **Ligaments:**
  - Lateral (ATFL, CFL, PTFL)
  - Deltoid
  - Syndesmosis

#### **Stress testing**

- Anterior drawer – tests ATFL
- Talar tilt – tests ATFL and CFL
- Eversion stress test – tests deltoid
- Syndesmotic Squeeze test – tests syndesmosis and for fracture
- External rotation stress test – tests syndesmosis

#### **Xrays:**

- **Ankle:** Weightbearing (if tolerated) AP, mortise, lateral.
  - If concerned about unstable ankle (fibular fracture with deltoid injury): **medial gravity stress view**
- **Foot:** Weightbearing AP, lat, oblique
  - If concerned about **lisfranc injury**: **BILATERAL weightbearing AP view**. Allows side-to-side comparison.

**References:** Physical Examination of the Spine & Extremities, Stanley Hoppenfeld.