
# Ankle and Foot Examination

## Objective:

To be able to perform examination of the foot and ankle and to distinguish and identify an abnormal finding that suggests pathology.

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**References:** Department handout, Notes(by moath baeshen), Browse's, 433 OSCE Team.

## **Look** (weight bearing and non weight bearing) while standing and supine

- Proper bilateral exposure, at least mid leg, compares Rt and Lt, front , side and back.

- Alignment.
- Deformity (hindfoot: varus or valgus, midfoot: cavus High arch, flat foot. Forefoot: HV hallux valgus) (The normal for hindfoot is: straight or 5 degrees valgus/physiological valgus)
- Skin changes (callosities, sinuses)
- Swelling or mass
- Muscle wasting (leg)
- Gait (Antalgic gait, Trendelenburg's gait, waddling gait...)

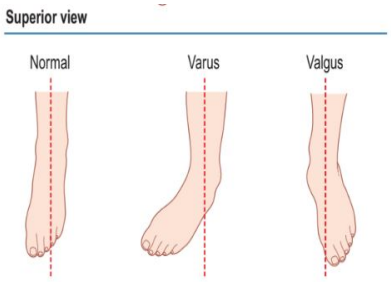
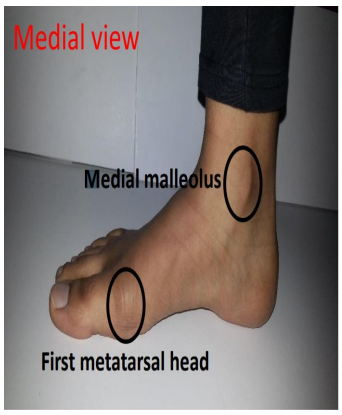


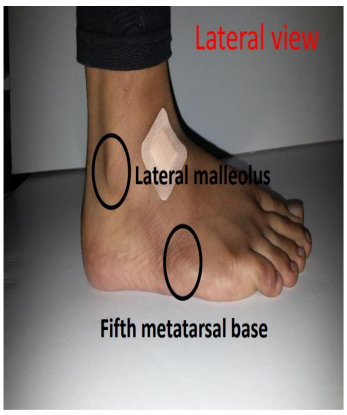

Fig. 8.39 Bilateral hallux valgus.

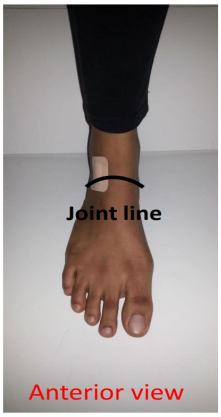

## **Feel** (supine)

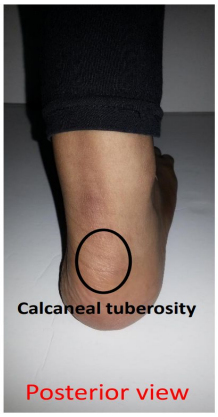
1. **Before touching the patient ask if he has any pain**
2. **Always compare to the other side**
   (Look at the patients face to assess pain)

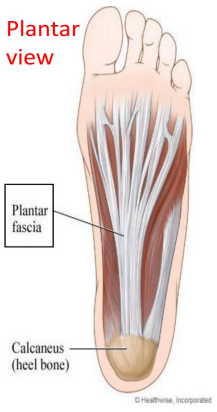
- Soft tissue: skin temperature, tenderness, Achilles tendon and plantar fascia, medial (Deltoid ligament) and lateral collateral ligaments.
- Bony prominences: first metatarsal head (OA. Bunion), fifth metatarsal base (tenderness-avulsion fracture), medial and lateral malleoli, navicular tuberosity, and calcaneal tuberosity.
- Joint line anteriorly

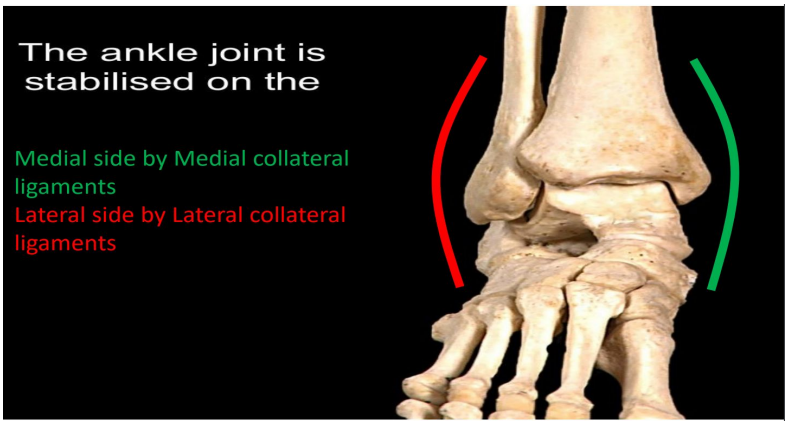





- ❖ You should know surface anatomy to localize the site of abnormality, in the exam the SP may points to an area that hurts you should be able to identify it
- ❖ Based on Dr. Zamzami's session: tibialis anterior, tibialis posterior, peroneus brevis and extensor hallucis longus tendons should also be assessed.

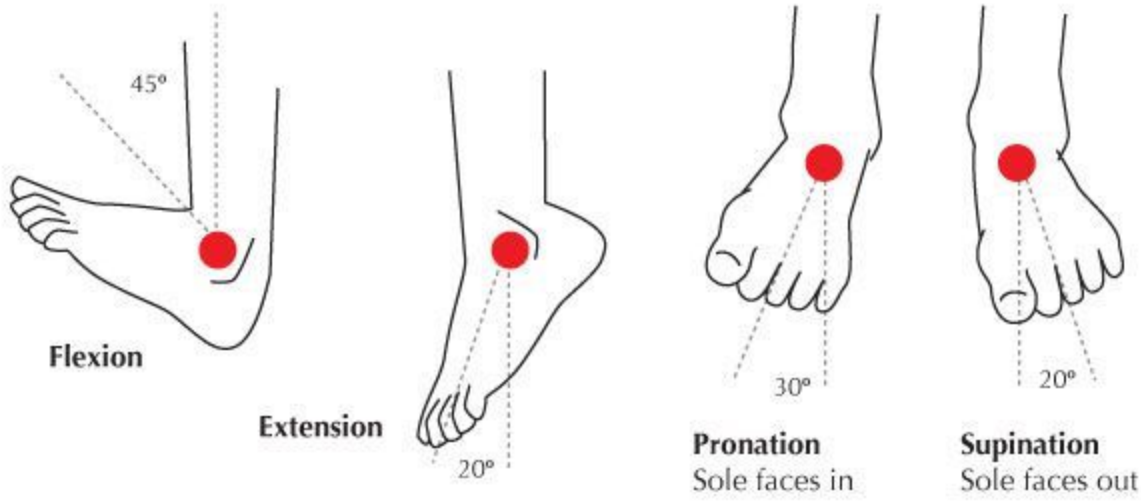
## Move

- ➢ Active and passive ankle ROM (dorsiflexion and plantarflexion). Start at neutral (0 degrees).
- ➢ Passive subtalar ROM (ankle to neutral, and stabilized then apply inversion and eversion to assess subtalar ROM).
- ➢ N.B: note if painful or painless
  Active (**video**)
  Passive (**Video**)

Assess toes plantar and dorsiflexion.
Dr. Zamzami said that you should mention the ROM in degrees.

(a) Ankle dorsiflexion.

(b) Ankle plantar flexion.




## Special tests:

A. Anterior drawer test (video)
The patient is supine with the ankle at the edge of the bed. Hold the lower end of the leg above the ankle with one hand and the calcaneus with other. Perform opposite motion to check if there is laxity with ankle in plantar flexion (10-15 degrees) to evaluate anterior talofibular ligament (8mm diff).

B. Rigid flat foot
If pt has flat foot: you will ask the pt to tip toe to check if it is flexible or rigid flatfoot, you have to observe if the heel will correct from valgus to varus or not as well as mid foot arch reconstitution. If it didn't correct ⇒ rigid flat foot

(a) The heel is in valgus when viewed from behind.

(b) As the patient goes onto tip toes, the heel swings inwards into varus.

Fig. 8.29 ANKLE INSPECTION

C. Achilles tendon test: Thompson test. (Video)

While the patient is prone ask him to flex his knee. Press his calf muscles will cause plantar flexion which is normal

D. How to differentiate between Achilles tightness or only gastrocnemius. Video, Video

Tightness, by dorsiflexion of ankle while the knee extended then flexed will help for spine session but not for ankle and foot itself)

Limitation of dorsiflexion due to achilles tendon tightness or gastrocnemius tightness can be differentiated with this test:

If the gastrocnemius is tight dorsiflexion will be limited with knee extension only(because gastrocnemius origin is above knee joint) but not flexion.

If the achilles tendon is tight dorsiflexion will be limited with knee extension and flexion.

We need to differentiate because the lengthening site will be different.

When doing the test make sure the ankle is at neutral position at the subtalar

- Neurovascular examination
- Examination of joint above and below


callosities
Heel Bone
Plantar Fasciitis
Plantar Fascia Ligament
Bunion
Avulsion fracture