

Introduction to Clinical Assessment

Practical – Ankle MMTs

Recap – AROM/ PROM

- Plantar Flexion
(Talocrural)
 - 0 to 30°
- Dorsi Flexion
(Talocrural)
 - 0 to 15°
- Inversion
(MidTarsal/SubTalar)
 - 10-20°
- Eversion
(MidTarsal/SubTalar)
 - 20-30°

Learning Outcomes

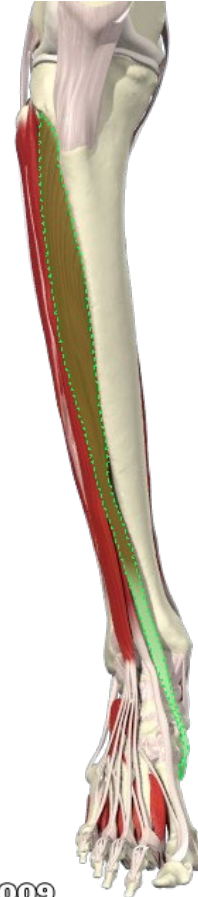
- To know the Manual Muscle Tests for the foot and ankle region
- Perform and demonstrate these tests on fellow teammates

Manual Muscle Testing (7+2)

- Tibialis Anterior
- Extensor Digitorum
- Extensor Hallucis Longus
- The Peroneals (as a group)
- Tibialis Posterior
- Flexor Digitorum
- Flexor Hallucis Longus
- Soleus
- Gastrocnemius

Anterior Compartment

- **Tibialis Anterior**
- O: Upper 2/3rds lateral surface tibia and Interosseus membrane
- I: Medial side of medial cuneiform and base of 1st MT
- A: Dorsiflexor and inverter of foot

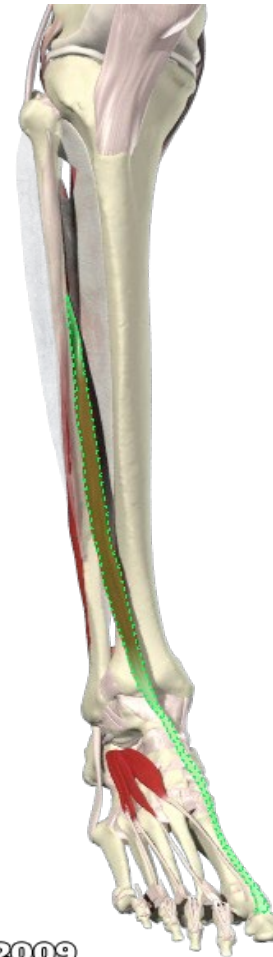


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Anterior Compartment

- **Extensor Hallucis Longus**
- O: Middle $\frac{1}{4}$ Anterior surface of FIBULA and Interosseus membrane
- I: Base dorsal surface distal phalanx of Hallux
- A: Dorsiflexor of Hallux and talocrural joint

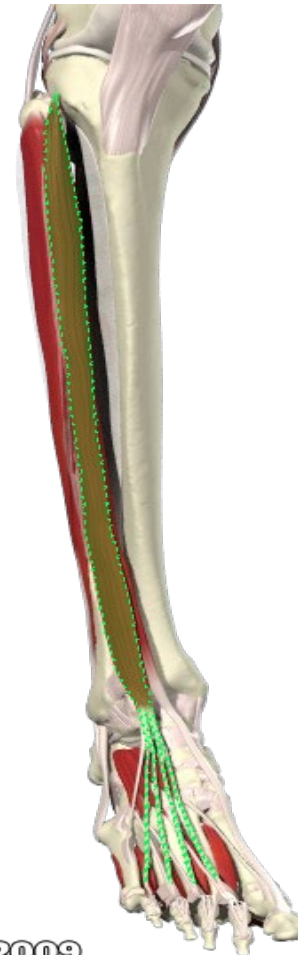


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Anterior Compartment

- **Extensor Digitorum Longus**
- O: Upper 2/3rds ant surface fibula, interosseous membrane and lateral tibial condyle
- I: Distal and middle phalanx of lateral 4 toes on dorsal surface
- A: Dorsiflexes in turn, interphalangeal and metatarsophalangeal joints

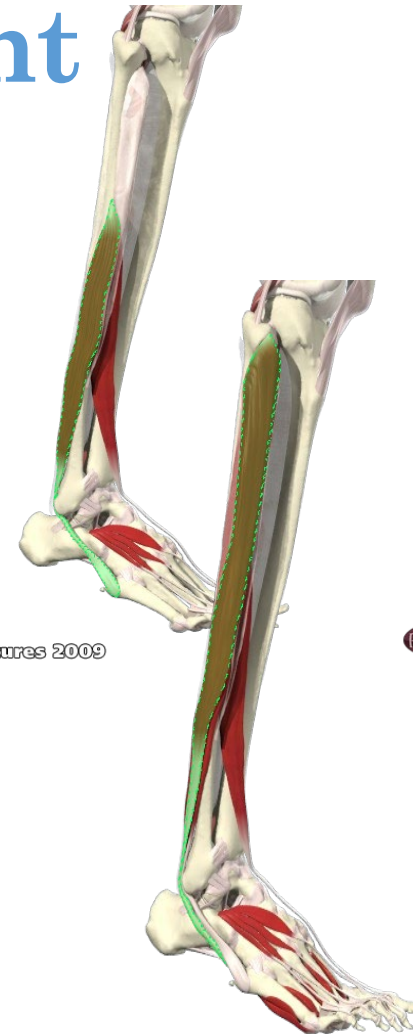


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Lateral Compartment

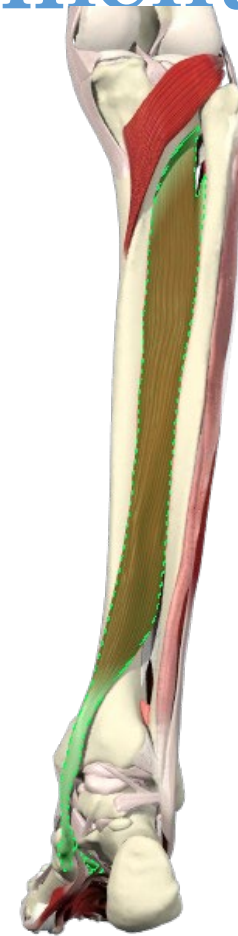
- **Peroneus longus**
 - O: Upper 2/3rds lateral surface to head of fibula
 - I: Plantar surface of medial cuneiform and base of 1st MT
 - A: Everts and plantarflexes the foot.
- **Peroneus tertius**
 - lower . anterior surface of fib to dorsal aspect of base of 5th MT. Same action but not always present (absent 5-17% white population)
- **Peroneus brevis**
 - O: Lower 2/3rds lateral surface of fibula
 - I: Tubercle on lateral base of 5th MT
 - A: Everts and plantar flexes foot lateral 4 toes on dorsal surface Dorsiflexes in turn, interphalangeal and metatarsophalangeal joints



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Deep posterior Compartment

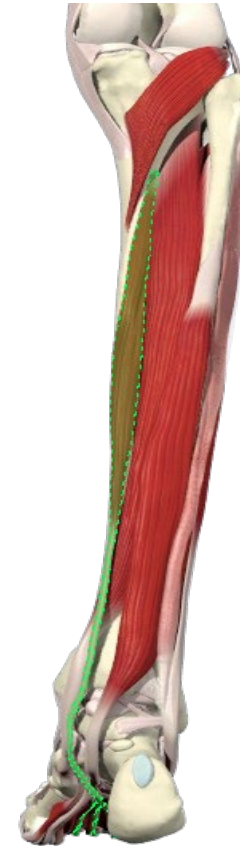
- **Tibialis posterior**
- O: Upper part of the posterior surface of tibia, posterior surface of fibula and Interosseus membrane I: Plantar surface of medial cuneiform and base of 1st MT
- Navicular tuberosity, medial cuneiform, with expansions to all tarsal bones except talus
- A: Inverts and plantarflexes the foot



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Deep posterior Compartment

- **Flexor digitorum longus**
- Origin: Medial part of posterior surface of tibia
- Insertion: Plantar surface base of distal phalanx of lateral 4 toes
- Action: Plantarflexes distal, proximal Interphalangeal joints, metatarsophalangeal joints and the Talocrural joint

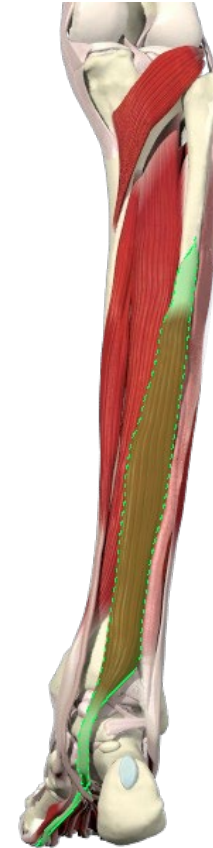


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Deep posterior Compartment

- **Flexor hallucis longus**
- Origin: Lower 2/3rds of the posterior surface of the fibula
- Insertion: Plantar surface base of distal hallux
- Action: Plantarflexes distal, proximal 1st Interphalangeal joint, metatarsophalangeal joint and the Talocrural joint



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Superficial posterior compartment

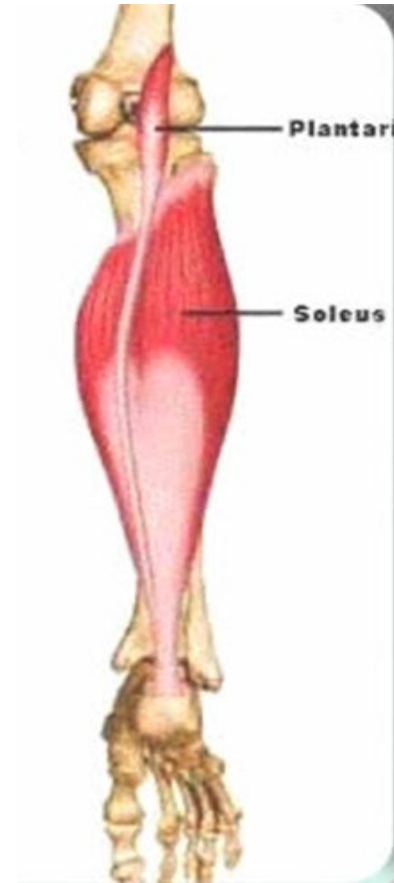
- **Soleus**
- **Origin:** Soleal line on posterior surface of tibia, upper 1/3rd of posterior surface of fibula
- **Insertion:** Via achilles tendon to posterior surface of calcaneus
- **Action:** Plantarflexes the foot



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Superficial posterior compartment

- **Plantaris**
- **Origin:** Lateral supracondylar ridge of femur above lateral head of gastroc (and posterior oblique ligament of knee).
- **Insertion:** Via achilles tendon to posterior surface of calcaneus
- **Action:** Plantarflexes foot and flexes knee
- • Check RROM DF



Superficial posterior compartment

- **Gastrocnemius**
- **Origin**
 - Medial head
 - Medial supracondylar ridge and adductor tubercle of femur
 - Lateral head
 - Outer surface lateral condyle of femur
- **Insertion**
 - Via Achilles tendon to calcaneus
- **Action**
 - Plantarflexion of ankle and assists knee flexion

