

Sports Massage – Myology

Lower Limb

Myology

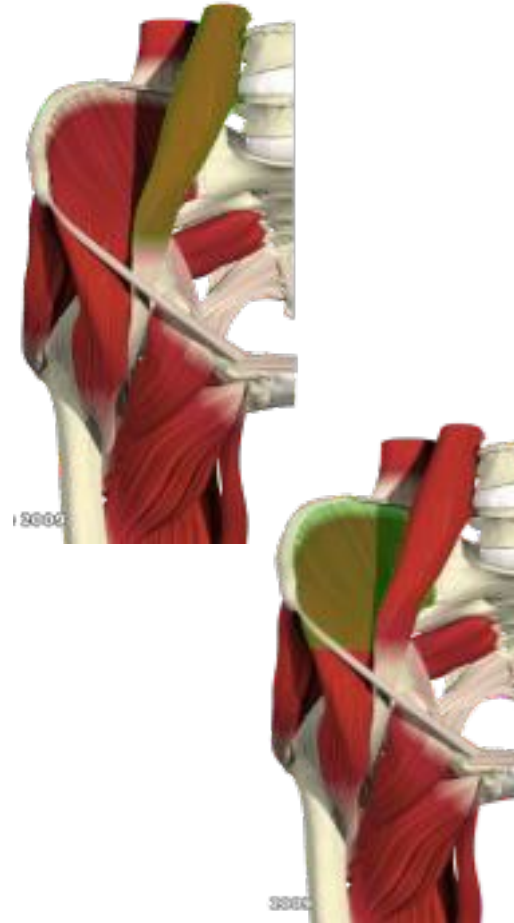
- **Iliopsoas**

- Psoas Major

- O: bodies of T12-L5 and anterior aspect of all Lx Transverse processes
 - I: lesser trochanter of femur
 - A: flexes hip and flexes/laterally flexes trunk

- **Iliacus**

- O: iliac fossa, sacrum and anterior sacroiliac ligament
 - I: lesser trochanter
 - A: Hip Flexion



Myology

- **Adductor Magnus**
 - O: femoral surface of ischiopubic ramus and inferior surface of ischial tuberosity
 - I: linea aspera and medial supracondylar ridge, and adductor tubercle
 - A: Adducts and Extends Hip



Myology

- **Adductor Longus**
 - O: anterior aspect body of pubis
 - I: Middle half of linea aspera of femur
 - A: Adducts Hip



Myology

- **Adductor Brevis**
 - O: body and inferior ramus of pubis
 - I: upper half of linea aspera of femur
 - A: Adducts Hip



Myology

- **Gluteus Medius and Minimus**
 - Glute Med
 - O: gluteal surface of ilium and covering fascia
 - I: superolateral surface of greater trochanter
 - A: Abducts and Medially Rotates Hip
 - Glute Min
 - O: Deep to gluteus medius
 - I: Anterosuperior aspect of greater trochanter
 - A: Abducts and Medially Rotates Hip



Manual Muscle Testing

- **Tensor Fascia Latae**
 - O: ASIS to iliac crest
 - I: iliotibial band (ITB) to lateral tibial condyle (Gerdy's)
 - A: Abducts and Medially Rotates Femur (weak extensions of knee)



Myology

- **Gluteus Maximus**
 - O: gluteal surface and border of ilium, iliac crest, posterior aspect of sacrum, coccyx, sacrotuberous ligament, and erector spinae fascia
 - I: gluteal tuberosity (roughened ridge) of femur and Iliotibial Tract
 - A: Extends, Laterally Rotates Hip, assists in abduction of hip.



Myology

- **Semimembranous**

- Origin

- Superio-lateral aspect of ischial tuberosity

- Insertion

- Posterior aspect of medial tibial condyle

- Action

- Knee flexion and assists hip extension



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Myology

- **Semitendinosus**
 - Origin
 - Superio-medial aspect of ischial tuberosity
 - Insertion
 - Upper part of medial aspect of tibial shaft (Pes anserinus)
 - Action
 - Knee flexion and assists hip extension



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Myology

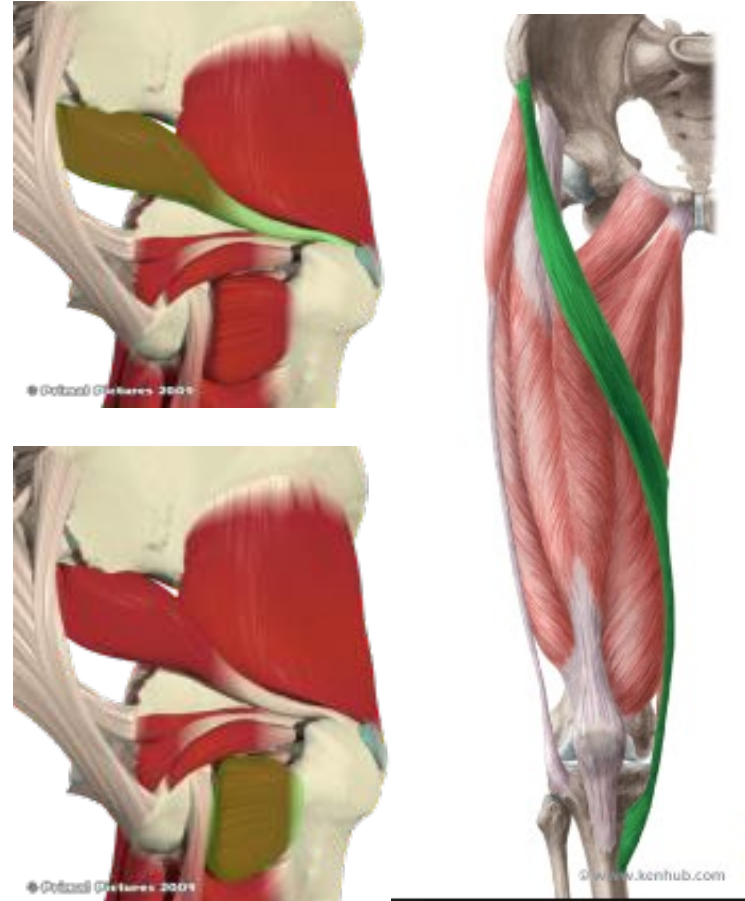
- **Biceps Femoris**
 - Origin
 - Long head - superio-medial aspect of ischial tuberosity
 - Short head – Lateral lip of linea aspera
 - Insertion
 - Upper part of fibular head
 - Action
 - Knee flexion and assists hip extension



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Myology

- Other muscles worth a mention (though tough to isolate and test)
 - Piriformis
 - Sacrum, gluteal surface of ilium and sacrotuberous lig TO superiomedial aspect of greater trochanter.
 - Lateral Rotator and Abductor of Hip (Sciatic nerve)
 - Quadratus Femoris
 - Ischial tuberosity TO quadrate tubercle on intertrochanteric crest.
 - Lateral Rotator
 - Sartorius
 - Obturators (internus and externus)
 - Gemelli (superior and inferior)
 - Pectineus & Gracilis



Myology

- **Vastus Lateralis**
 - O: Femur – Greater trochanter and posterior and lateral aspects of the upper part of shaft
 - I: Tibial tuberosity via Quadriceps tendon and ligamentum patella
 - A: Knee extension



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Myology

- **Vastus Intermedius**
 - O: Femur – From upper 2/3rds anterior and lateral aspects of the upper part of the shaft
 - I: Tibial tuberosity via Quadriceps tendon and ligamentum patella
 - A: Knee extension

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Myology

- **Vastus Medialis**
 - O: Femur – From postero-medial aspect of the upper part of shaft, distally along the medial aspect and the tendon of adductor magnus
 - I: Tibial tuberosity via Quadriceps tendon and ligamentum patella
 - A: Knee extension



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Myology

- **Rectus Femoris**
 - O: Anterior inferior iliac spine of pelvis
 - I: Tibial tuberosity via Quadriceps tendon and ligamentum patella
 - A: Knee extension AND hip flexion



Tensor Fascia Latae

- **Origin**
 - It arises from the anterior part of the outer lip of the iliac crest; from the outer surface of the anterior superior iliac spine, and part of the outer border of the notch below it, between the gluteus medius and sartorius
- **Insertion**
 - Gerdy's tubercle (lateral tubercle on the tibia) and lateral retinaculum of patella



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Hamstrings - Semimembranosus

- Origin
 - Superio-lateral aspect of ischial tuberosity
- Insertion
 - Posterior aspect of medial tibial condyle
- Action
 - Knee flexion and assists hip extension



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Hamstrings - Semitendinosus

- Origin
 - Superio-medial aspect of ischial tuberosity
- Insertion
 - Upper part of medial aspect of tibial shaft (pes anserinus)
- Action
 - Knee flexion and assists hip extension



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Hamstrings – Biceps Femoris

- Origin
 - Long head – superio-medial aspect of ischial tuberosity
 - Short head – Lateral tip of linea aspera
- Insertion
 - Upper part of fibular head
- Action
 - Knee flexion and assists hip extension



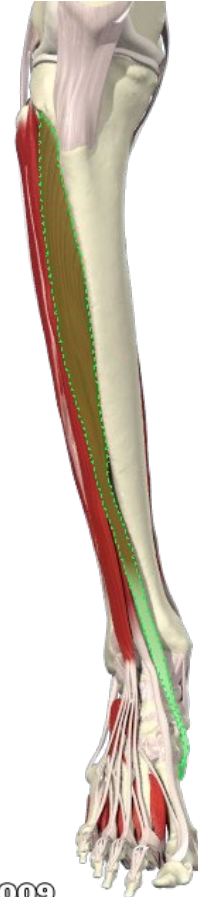
Popliteus

- Posterior to the knee
- Flexes the knee (weak) and **MEDIALY ROTATES** tibia on femur
 - Un-locks the **SCREW HOME MECHANISM**
- O: outer surface of lateral condyle of femur
- I: posterior surface of tibia above the soleal line
- Also has attachment to lateral meniscus drawing it posteriorly to prevent bony impingement



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

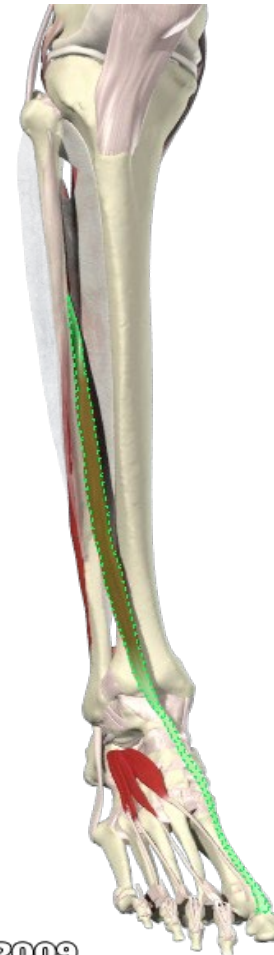


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Anterior Compartment

- **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

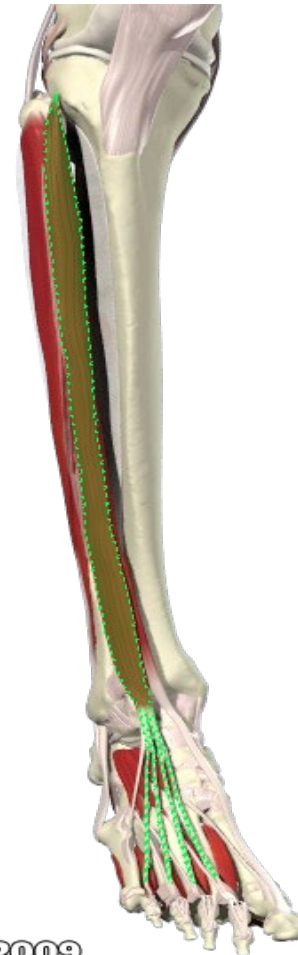


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Anterior Compartment

- **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

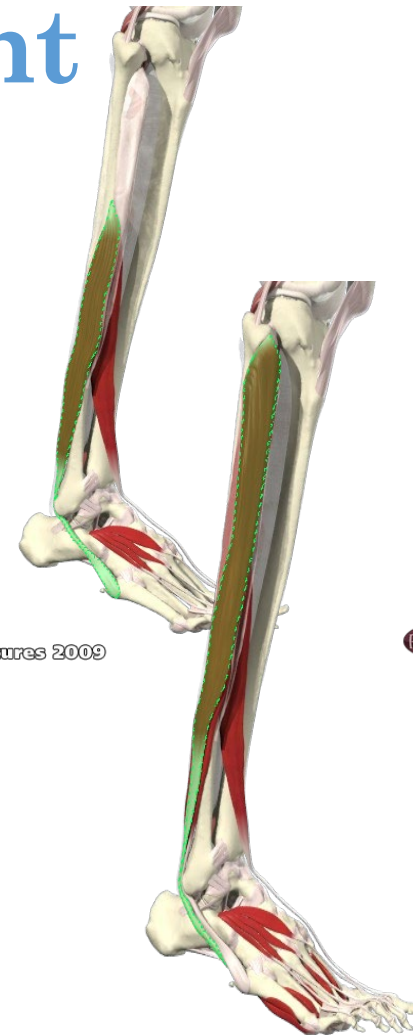


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Lateral Compartment

- **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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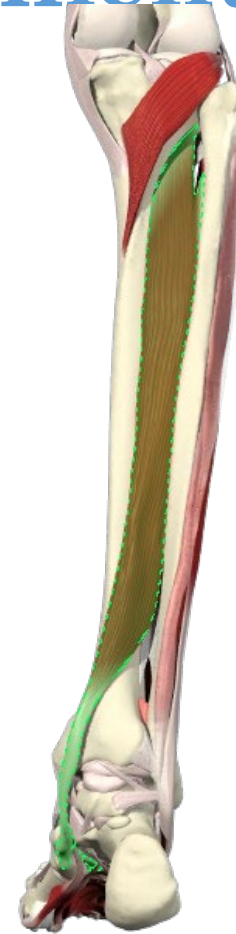
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Deep posterior Compartment

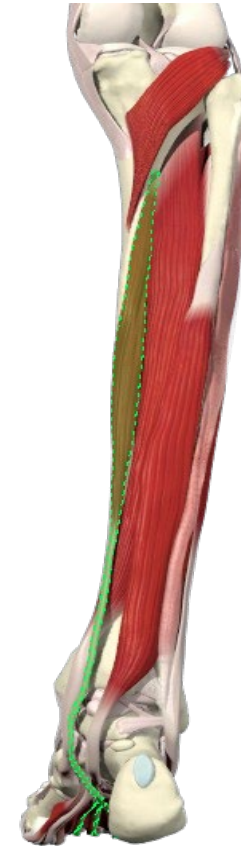
- **Tibialis posterior**
- O: Upper part of the posterior surface of tibia, posterior surface of fibula and Interosseus membrane I: Plantar surface of medial cuneiform and base of 1st MT
- Navicular tuberosity, medial cuneiform, with expansions to all tarsal bones except talus
- A: Inverts and plantarflexes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

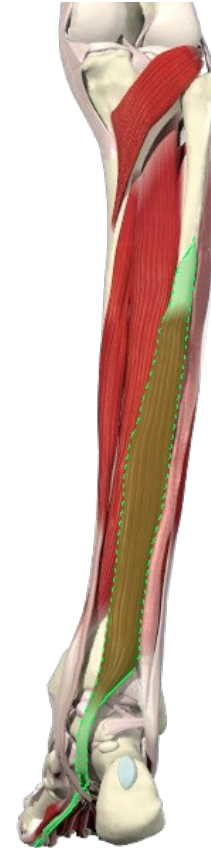


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Deep posterior Compartment

- **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

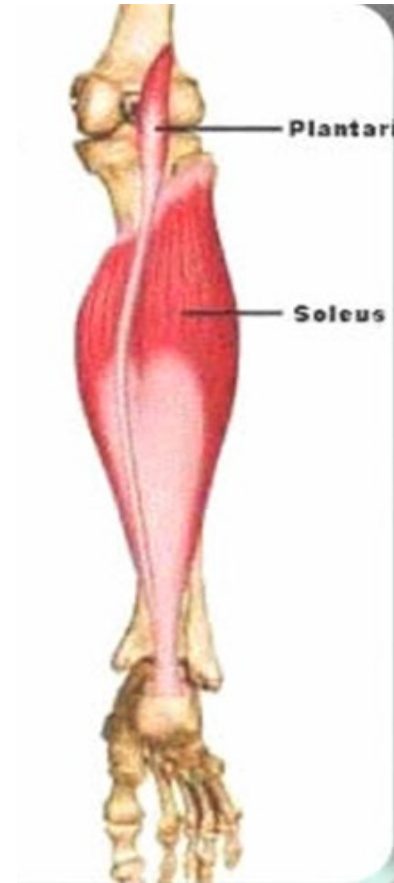
- **Soleus**
- **Origin:** Soleal line on posterior surface of tibia, upper 1/3rd of posterior surface of fibula
- **Insertion:** Via achilles tendon to posterior surface of calcaneus
- **Action:** Plantarflexes the foot



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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

