

Lec 10

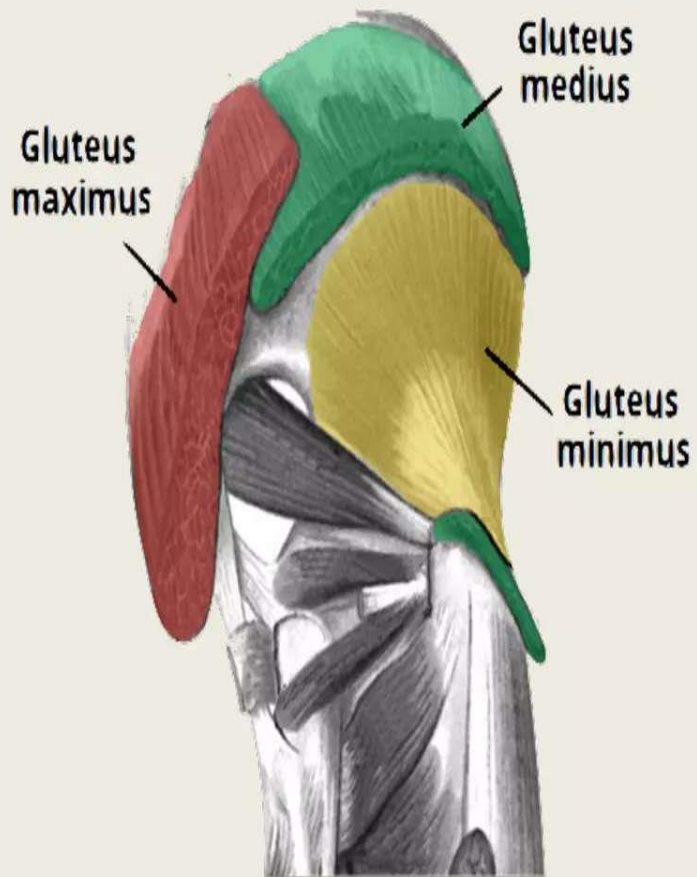
Muscles of lower limb

Muscles of gluteal (SUPERFICIAL) region

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Gluteus Maximus	Back of sacrum, coccyx & Sacrotuberous ligament	iliotibial tract & Gluteal tuberosity	-Extension & Lateral rotation of hip joint -Stabilizing femur on tibia through iliotibial tract	Inf. Gluteal nerve
Gluteus Medius	Mid. Part of Gluteal surface of ileum	Lateral greater trochanter	-Abduction & medial rotation of hip joint -Prevent tilt of pelvis	Sup. Gluteal nerve
Gluteus Minimus	Ant. Part of Gluteal surface of ileum	Ant. Part of greater trochanter		



Muscles of gluteal (SUPERFICIAL) region

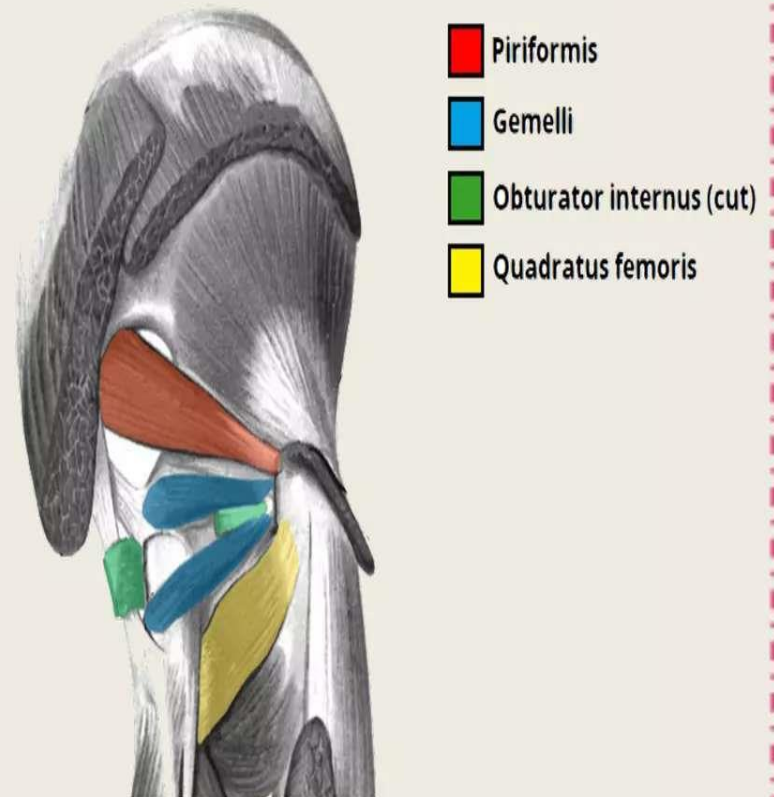
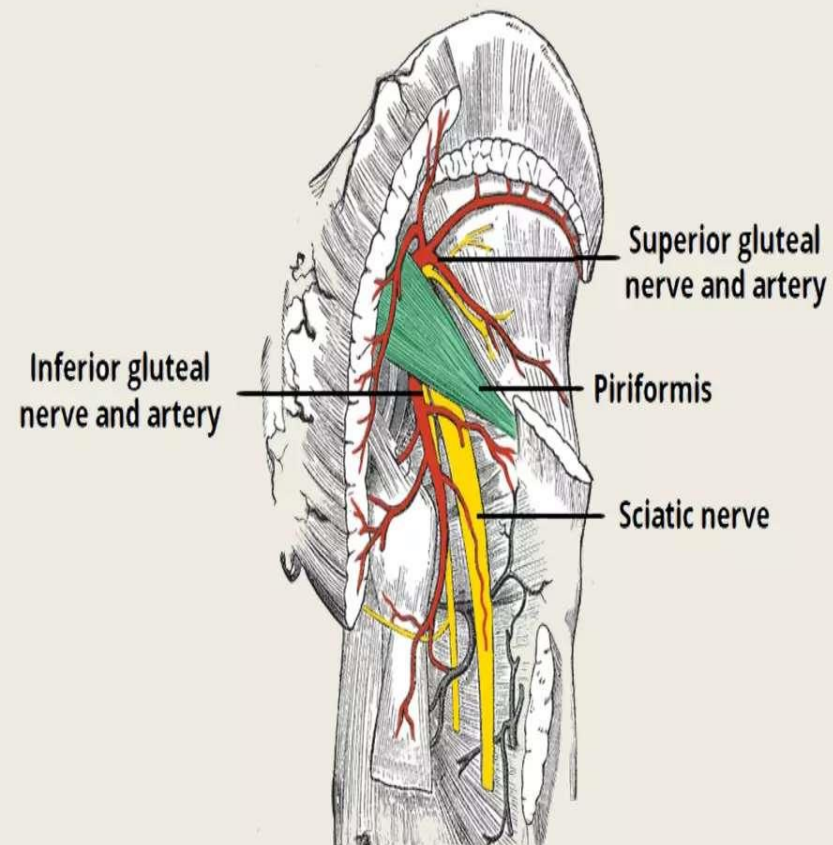


Muscles of gluteal (DEEP) region

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Piriformis	Pelvic surface of Mid. 3 sacral vertebrae	Upper border of the greater trochanter	Lateral Rotation of Hip joint	Anterior rami of S1, S2
Obturator Internus	Inner surface of the sidewall of the pelvis	Mid. surface of the greater trochanter		Nerve to obturator internus
Superior Gemelli	Upper part of lesser sciatic notch	Upper & lower parts into tendon of obturator internus		
Quadratus Femoris	Lateral border of the ischial tuberosity	Quadratus tubercle & intertrochanteric crest		Nerve to Quadratus Femoris
Inferior Gemelli	Lesser part of lesser sciatic notch	Upper & lower parts into tendon of obturator internus		

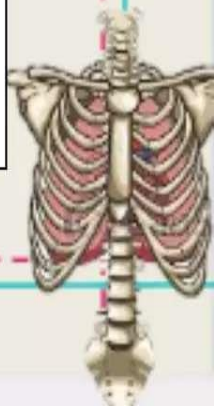


Muscles of gluteal (DEEP) region

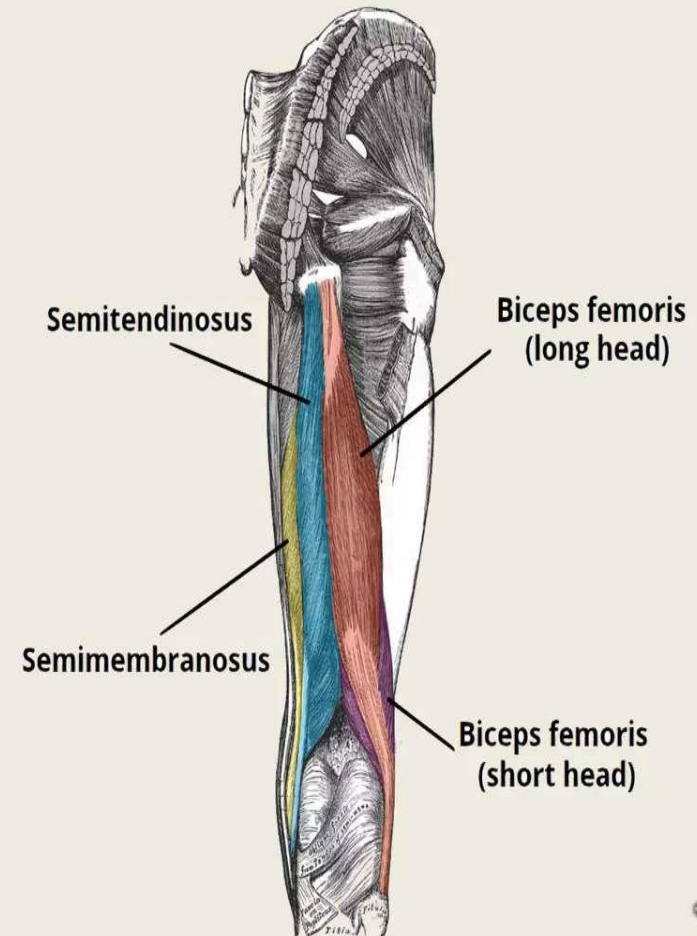
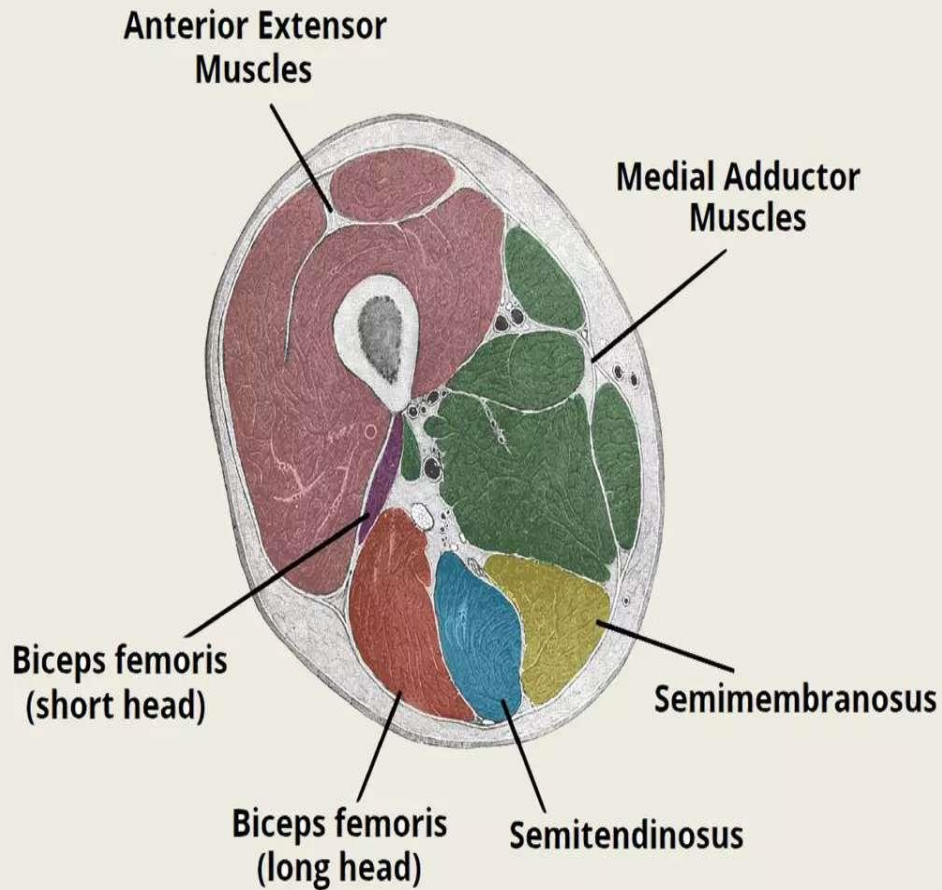


Muscles of thigh (HAMSTRING) region

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Biceps Femoris	- The long head from the ischial tuberosity - The short head from the linea aspera	Head of the fibula	-Flexion of the knee -Lateral Rotation of flexed leg *Long Head: Extension of hip	-The long head is supplied by the tibial part of the sciatic -The short head is supplied by the common peroneal part of the sciatic
Semitendinosus	Ischial tuberosity	Medial surface of tibia > SGS	-Flexion&medial rotation of the leg at knee joint -Exten. Of hip joint	Tibial portion of sciatic nerve
Semimembranosus		Medial condyle of tibia	-It forms the Oblique Popliteal ligament -Flexion & medial rotation of the leg at knee joint -Exten. Of hip joint	
Ischial part of Adductor Magnus		Adductor tubercle of the medial condyle of the femur	Exten. Of hip joint	

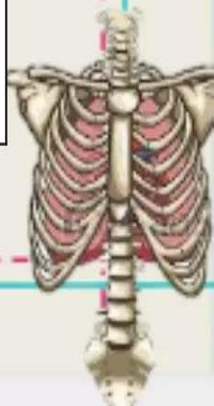


Muscles of thigh (HAMSTRING) region

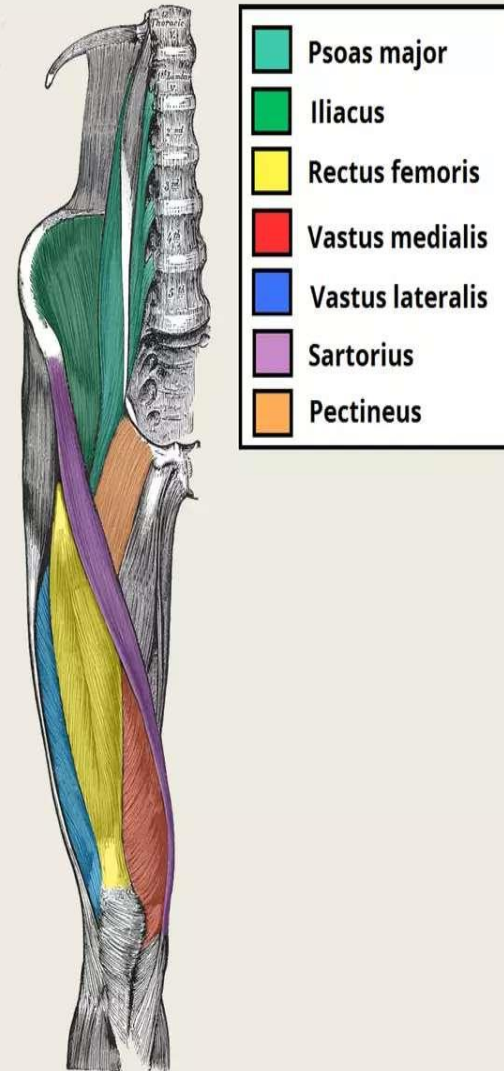
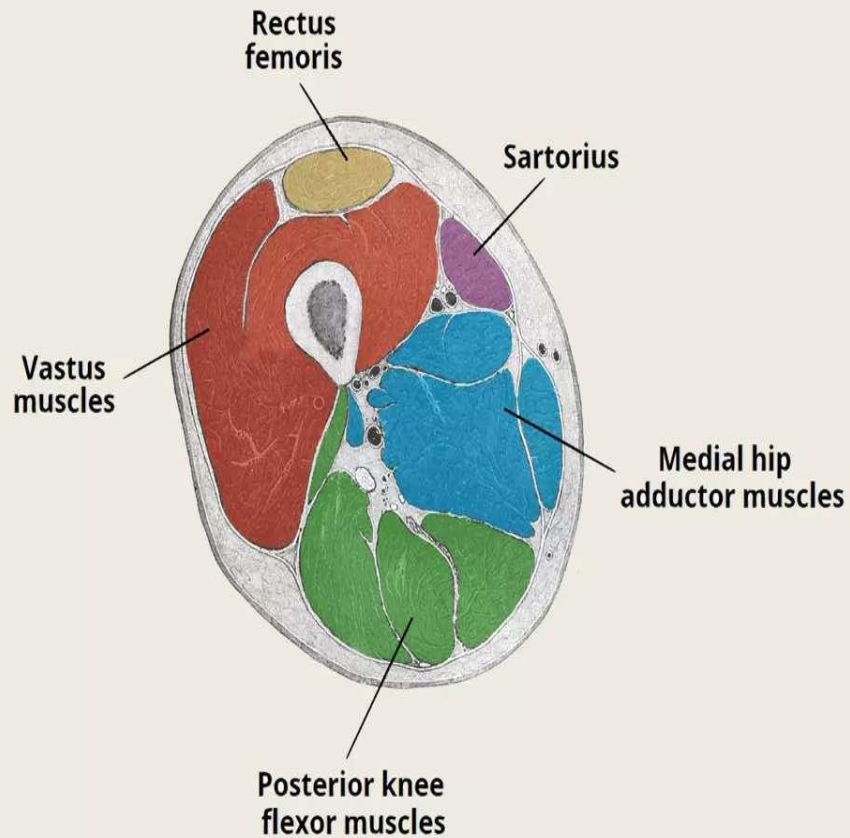


Muscles of thigh (ANTERIOR) region

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Sartorius	Anterior superior iliac spine	Medial surface of tibia	-Flexion, abduction & lateral rotation of hip joint -Flexion of knee joint	Femoral nerve
Pectineus	Sup. Pubic ramus	Back of femur	Flexion & Adduction of hip joint	
Iliacus	Iliac fossa	Lesser trochanter	Flexion of hip joint	
Psoas major	T12 & lumbar vertebrae			
Quadriceps Femoris	-Rectus Femoris: Ant. Inf. Iliac spine -Vastus Medialis + Vastus Lateralis: Posterior border of femur -Vastus intermedialis: Front shaft of femur	-Patella -From patella to tibial tuberosity through ligamentum patellae	Extension of knee joint	



Muscles of thigh (ANTERIOR) region



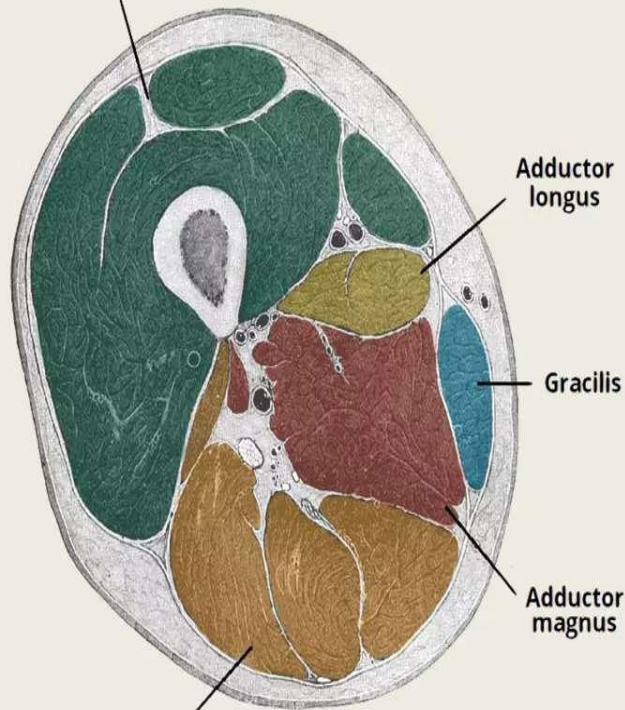
Muscles of thigh (ADDUCTOR) region

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Adductor Longus	Body of pubis	Linea aspera	Adduction of hip joint	Obturator nerve
Adductor Brevis	Body of pubis & inferior ramus			
Adductor Magnus	Inferior pubic ramus & ischial ramus			
Gracilis		Mid. Surface of tibia	Adduction of hip joint & flexion of knee joint	

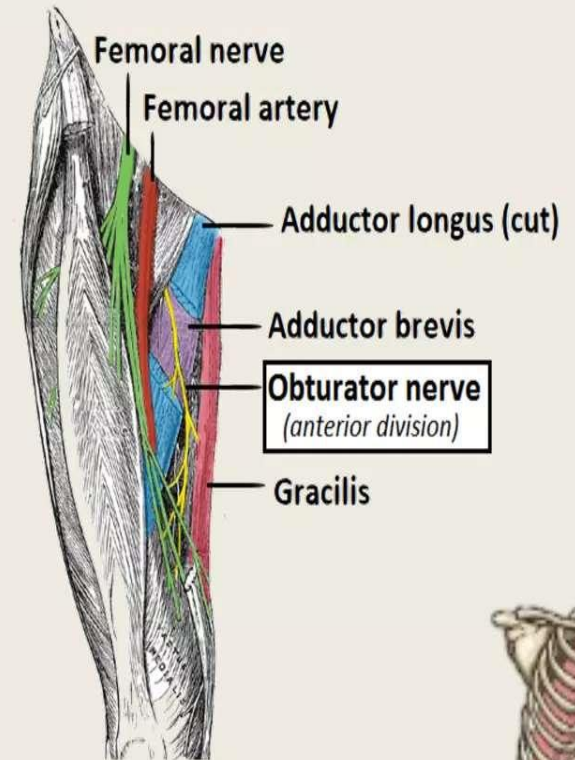
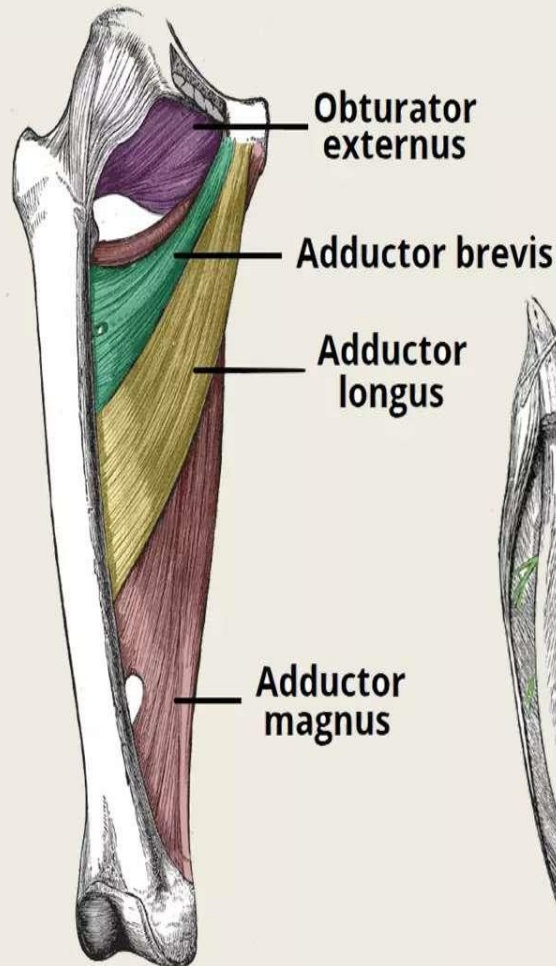


Muscles of thigh (ADDUCTOR) region

Muscles in the Anterior Compartment



Muscles in the Posterior Compartment

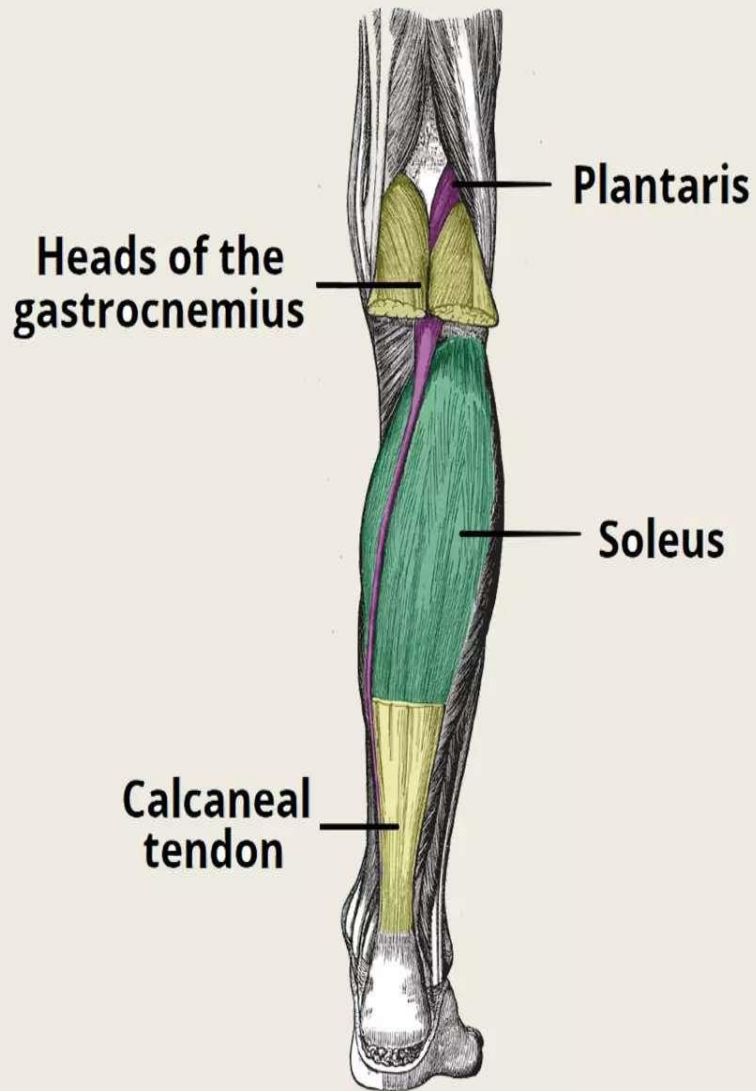


Muscles of Posterior Compartment of the leg (SUPERFICIAL)

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Gastrocnemius	-Lateral head lateral condyle of femur -Medial head above medial condyle	Post. Surface of calcaneus via. Tendocalcaneus	Plantar flexion at ankle joint Flexion knee joint	Tibial portion of sciatic nerve
Soleus	Shaft of tibia & fibula		Powerful plantar flexor of ankle joint; provides main propulsive force in walking and running	
Plantaris	Lateral ridge of femur	Posterior surface of calcaneus	Plantar flexes foot at ankle joint; flexes knee joint	

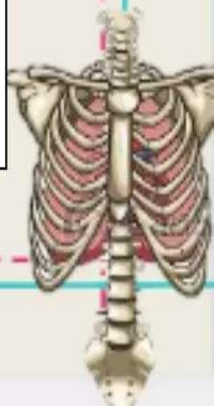


Muscles of Posterior Compartment of the leg (SUPERFICIAL)

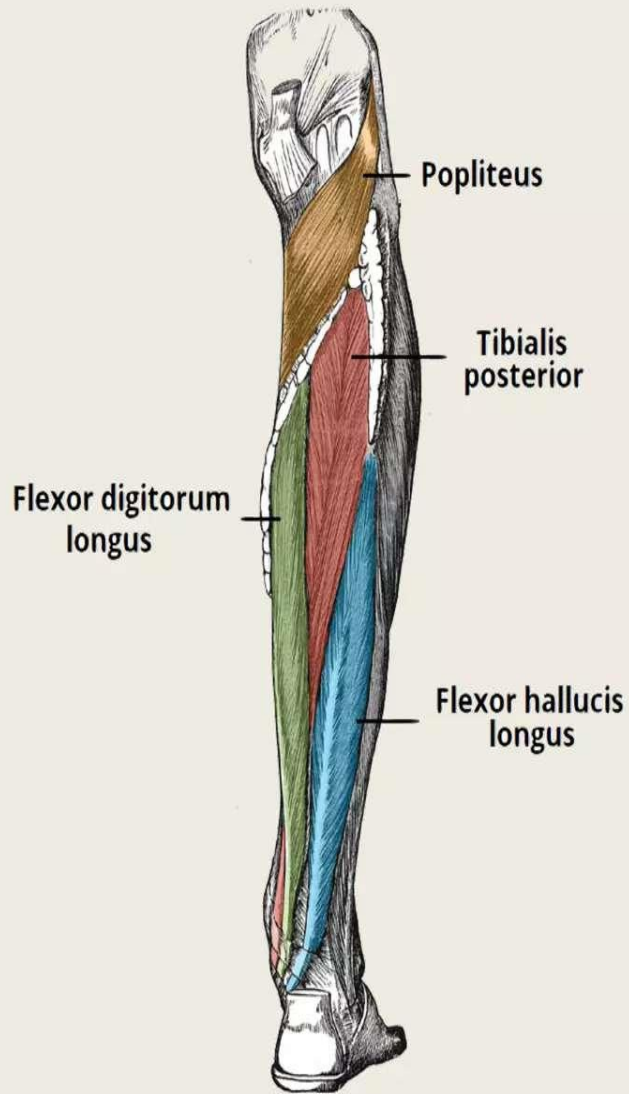


Muscles of Posterior Compartment of the leg (DEEP)

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Popliteus	Lateral surface of lateral condyle of femur (intracapsular)	Post. Surface of shaft of tibia (above soleal line)	Flexion of leg at knee joint & unlocking the joint by lateral rotation of femur on tibia	Tibial portion of sciatic nerve
Flexor digi. longus	Post. Surface of shaft of tibia	Base of distal phalanx of lateral 4 toes	-Flexes distal phalanges of lateral four toes; -plantar Flexes foot at ankle joint; -Supports medial and lateral longitudinal arches	
Flexor hallucis longus	Post. Surface of shaft of fibula	Base of distal phalanx of big toe	-Flexion of big toe -Plantar flexion at ankle joint -Support medial longitudinal arch	
Tibialis post.	Post. Surface of tibia & fibula & interosseous memb	Navicular tuberosity and neighboring bones	-Plantar flexion at ankle joint -Invert foot at subtalar & transverse tarsal joints -Support medial longitudinal arch	



Muscles of Posterior Compartment of the leg (DEEP)

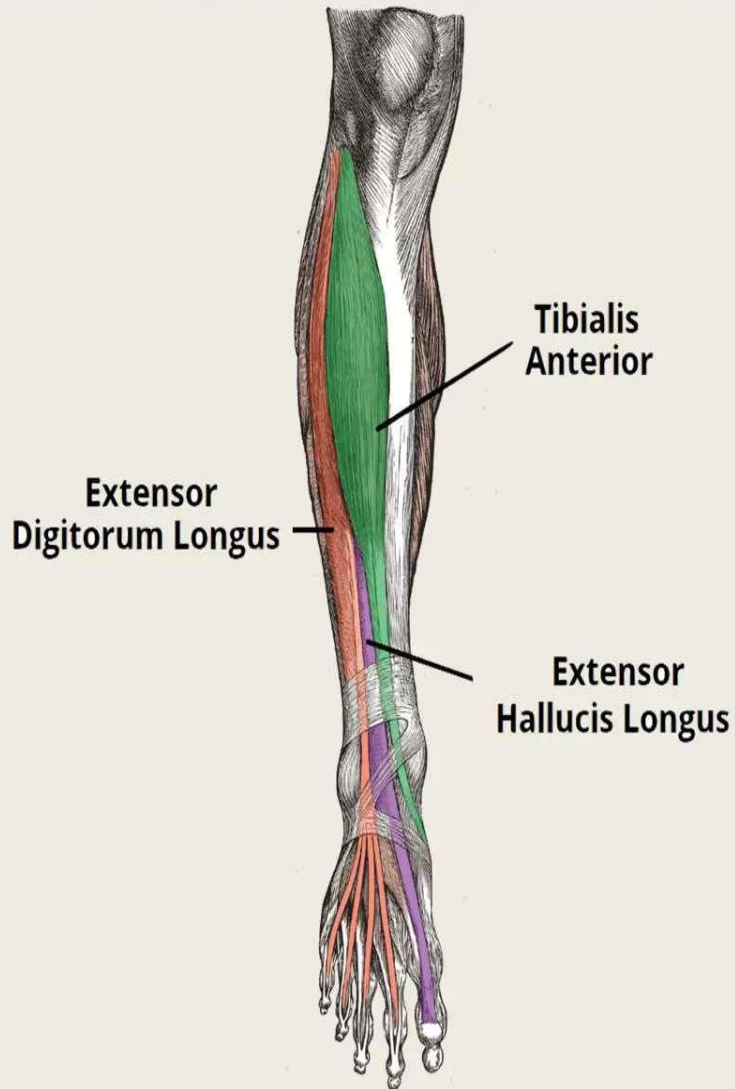


Muscles of Anterior Compartment of the leg

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Tibialis Ant.	Lateral surface of shaft of tibia & interosseous membrane	Medial cuneiform & base of 1st metatarsal	-Extension at ankle joint -Inverts foot -Holds medial long. Arch	Deep peroneal nerve
Extensor digi. longus	Ant. Surface of shaft of fibula	Extensor expansion of 4 lateral toes	-Extension of toes -Dorsi flexion at ankle joint	
Peroneus Tertius		Base of 5th metatarsal	-Dorsi flexion at ankle joint -Everts foot	
Extensor hallucis long.		Base of distal phalanx of big toe	-Dorsi flexion of ankle -Extends big toe -Inverts foot	



Muscles of Anterior Compartment of the leg

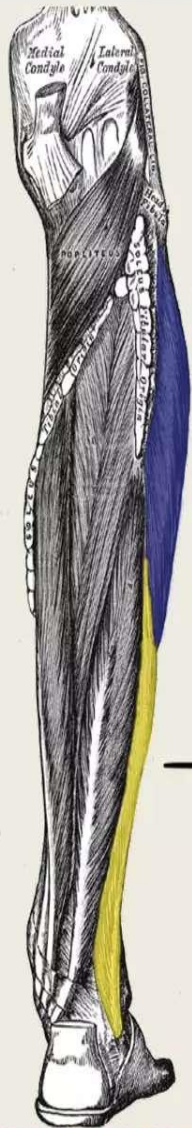


Muscles of Lateral Compartment of the leg

Muscle	ORIGIN	INSERTION	ACTION	NERVE
Peroneus Long.	Lateral surface of shaft of fibula	Medial cuneiform & base of 1 st metatarsal	-Plantar flexion -Everts foot -Support lateral long. & Transverse arches	Superficial peroneal nerve
Peroneus Brevis		Base of 5 th metatarsal	-Plantar flexion -Everts foot -Support lateral long arch	



Muscles of Lateral Compartment of the leg



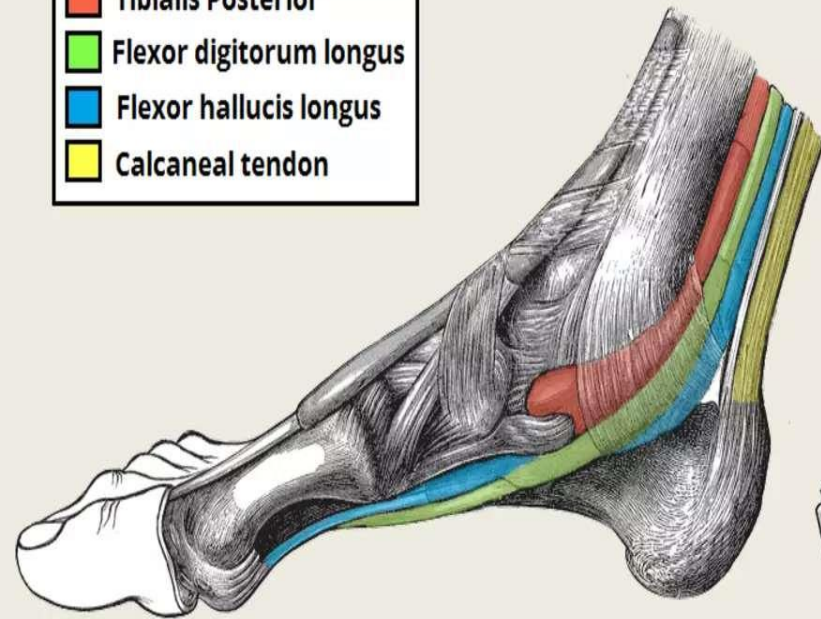
— Fibularis (Peroneus Longus)
longus

— Fibularis (Peroneus Brevis)
brevis

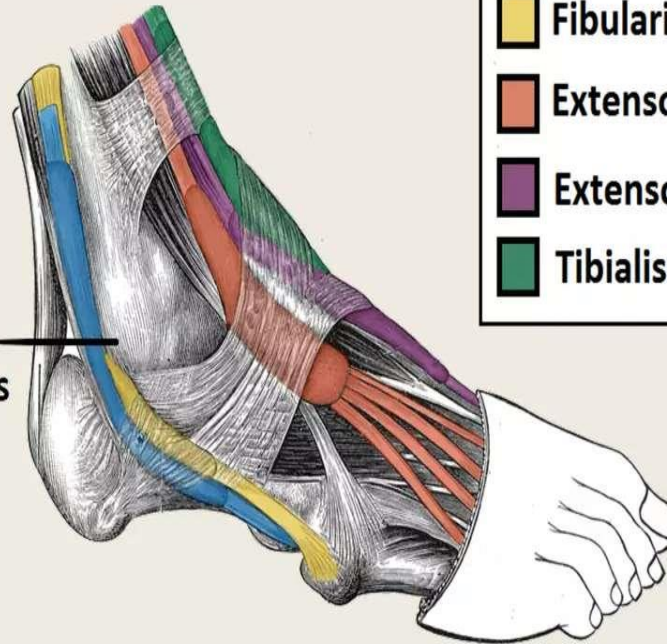


Continuation of the Tendons of Leg Muscles

-  Tibialis Posterior
-  Flexor digitorum longus
-  Flexor hallucis longus
-  Calcaneal tendon



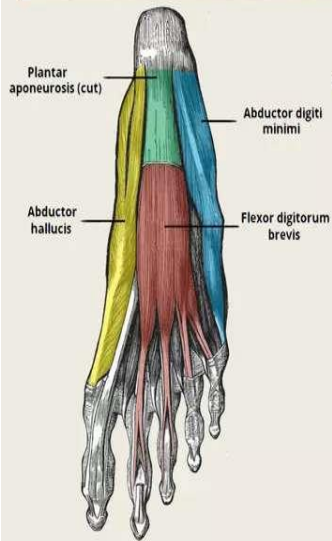
Lateral
malleolus



-  Fibularis longus (Peroneus Longus)
-  Fibularis brevis (Peroneus Brevis)
-  Extensor digitorum longus
-  Extensor hallucis longus
-  Tibialis anterior



Muscles of Foot Posterior Compartment

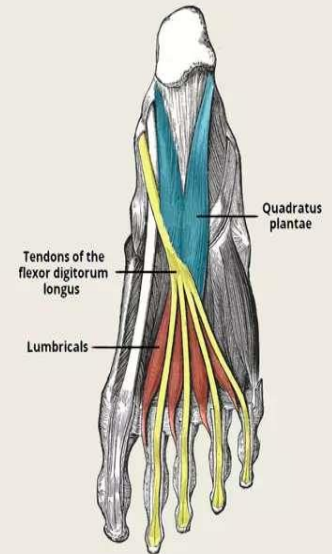


1st layer:

1. Abductor hallucis,
2. Flexor digitorum brevis,
3. Abductor digiti minimi

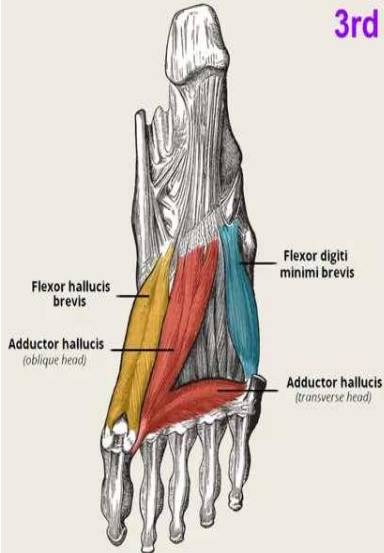
2nd layer:

1. Quadratus plantae
2. Lumbricals
3. Flexor digitorum longus tendon
4. Flexor hallucis longus tendon



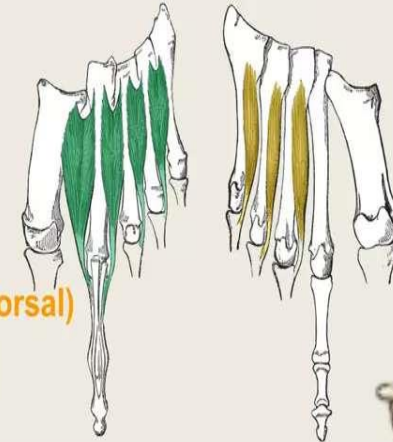
3rd layer:

1. Flexor hallucis brevis
2. Adductor hallucis
3. Flexor digiti minimi brevis



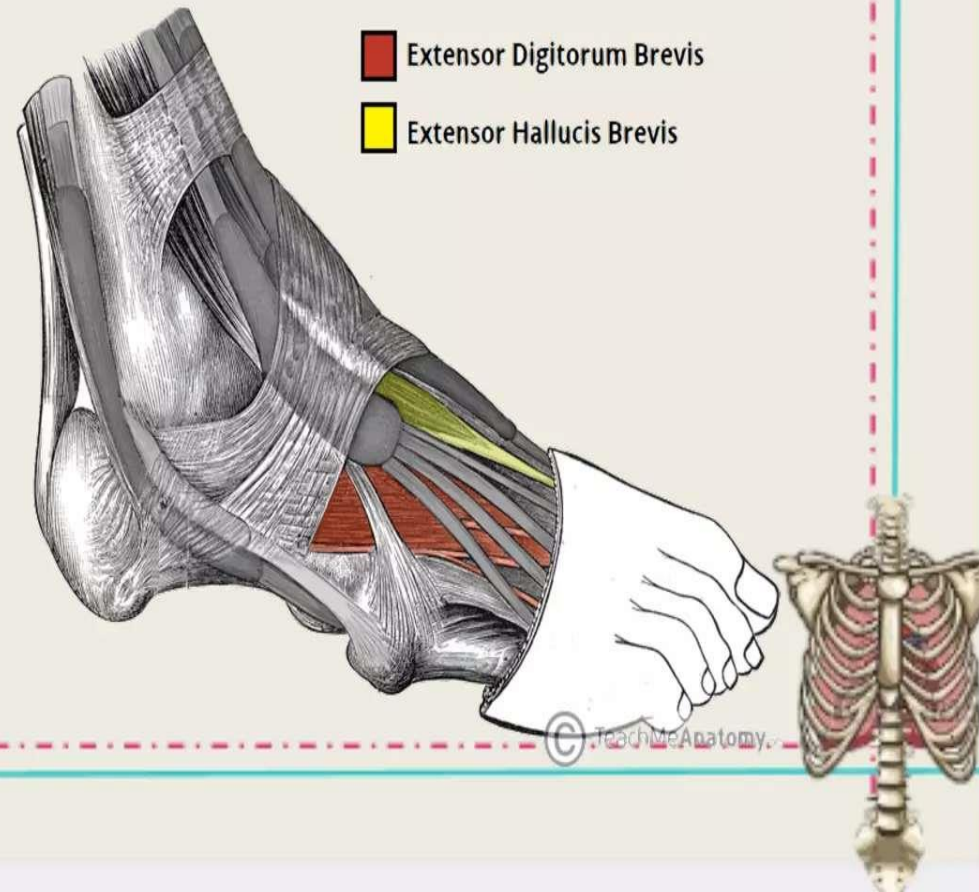
4th layer:

1. Interossei, (3 plantar + 4 dorsal)
2. Peroneus longus tendon,
3. Tibialis posterior tendon



Muscles of Foot Dorsal Aspect

Muscle	ORIGIN	INSERTION	ACTION	NERVE	BLOOD SUPPLY
Extensor Digitorum Brevis	Anterior Part of upper surface of the calcaneus and from inferior extensor retinaculum	By four tendons into the proximal phalanx of big toe and second, third, and fourth toes	Extension of toes	Deep & superficial peroneal nerve	Dorsalis Pedis



The End