

muscles of the Lower Limb

Study Park

The thigh is divided into 3 compartments



1. Anterior
2. medial
3. posterior



1. Anterior Compartments of the thigh

* innervation

Iliopsoas
Quadriceps femoris
Sartorius

all innervated
by femoral nerve

Except Psoas major
by L1, 2, 3

a. Iliopsoas

origin

- Iliacus: iliac fossa
- Psoas major: T12-L5 vertebrae

insertion

- Lesser trochanter of the femur

action

- Flexes the thigh psoas major
- Flexes trunk on thigh if thigh is fixed.

b. Sartorius

origin: anterior superior iliac spine

insertion: upper medial surface of shaft of tibia (ses)

action: lateral position

- Flexes
- Abducts
- Laterally rotates → the knee
- Flexes & medially rotates the knee

b. Quadriceps:

innervation: all innervated with different origin & same insertion

1. Rectus femoris
2. Vastus intermedius
3. Vastus lateralis
4. Vastus medialis

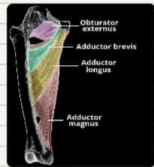
insertion: patella & tibia tuberosity

Via the patellar ligament

action: extends knees "rectus femoris"
+ flexes the thigh also

2 medial compartment of the thigh "Adductors"

- Adductor Longus
 - Adductor brevis
 - Adductor magnus "pubic head"
 - Gracilis
- all are innervated by the Obturator nerve



Action: adducts thigh. Gracilis adducts thigh, flexes & medial rotates the leg



3 posterior compartment of the thigh "Hamstrings"

- Biceps femoris "Long & short heads"
 - Semitendinosus
 - Semimembranosus
 - Adductor magnus "Ischial head"
- all are innervated by Tibial branch of the sciatic nerve. Except short head of the biceps femoris innervated by the common peroneal branch of the sciatic nerve.

Action: All are extend the hip. Except short head of the biceps & flexes the knee

lateral muscles: rotate the knee laterally
medial muscles: rotate the knee medially

REMINDER

	ANTERIOR COMPARTMENT	MEDIAL COMPARTMENT	POSTERIOR COMPARTMENT
MUSCLES	Quadriceps + Iliopsoas + Sartorius	Adductors + Gracilis	Hamstrings
MOVEMENT (Mainly)	Flexion of thigh Extension of leg	Adduction of thigh	Extension of thigh Flexion of leg
Motor NERVE Supply	Femoral n	Obturator N	Sciatic n

Gluteal Region

gluteus maximus
gluteus medius
gluteus minimus

all are innervated by the
Superior gluteal nerve [except gluteus maximus
by inferior gluteal nerve]

gluteus maximus

↳ **innervation**: Inferior gluteal nerve

action: Extends & lateral rotation of the thigh

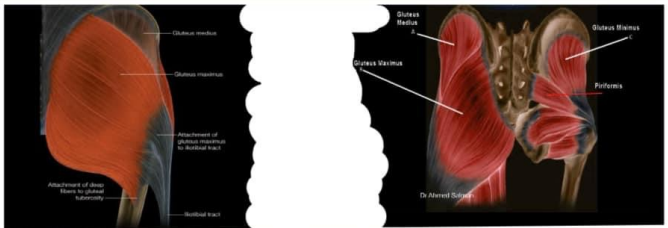
Gluteus medius
& gluteus minimus

↳ **innervation**: Superior gluteal nerve

action: Abduction
Prevent tilting of the pelvis when the opposite limb is raised

Intramuscular Injection

↳ upper lateral quadrant
↳ sciatic nerve



The leg is divided into

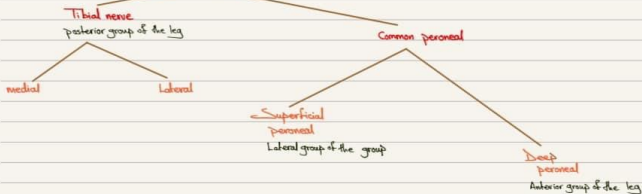


- 1 Anterior → dorsiflexion & foot extension
- 2 Lateral → Eversion of the foot & plantar flexion
- 3 Posterior → mainly plantar flexion & foot flexion

peroneus → Extension

Tibialis → Inversion

↳ Sciatic nerve



1 Anterior Compartment

muscles:

- Tibialis anterior
- Extensor hallucis longus
- Extensor digitorum longus
- peroneus tertius

all are innervated by
Deep fibular nerve

all dorsiflexion of the foot

Hallucis	extends big toe
digitorum	extends four toes
Tibialis	Inversion of the foot
peroneus	Eversion of the foot



2 Lateral Compartment

Fibularis (peroneus) longus
 Fibularis (peroneus) brevis

all are innervated by the Superficial Fibular nerve



plantarflexion & Eversion of the foot

3 Posterior Compartment:

Superficial
 gastrocnemius
 Soleus
 Plantaris

Deep
 Popliteus
 Tibialis Posterior
 Flexor digitorum longus
 Flexor hallucis longus

all are innervated by the Tibial nerve

Superficial group

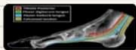
gastrocnemius - "2 heads"
 Soleus
 Plantaris

Acro Calcaneus
 into of calcaneus bone of the foot
 plantarflex foot
 weak knee flexion



Deep

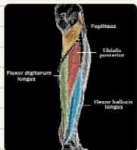
Popliteus



flex and unlock the knee

Flexor digitorum longus — flexes toes
 Flexor hallucis longus — flexes the big toe
 Tibialis posterior — Inversion of the foot

all plantarflexion of the foot



DONE!