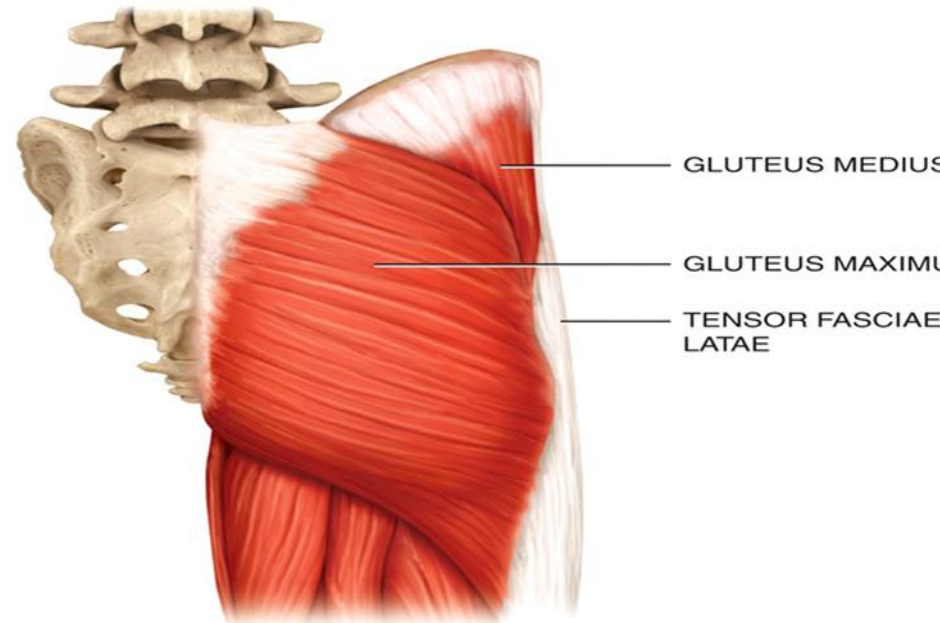
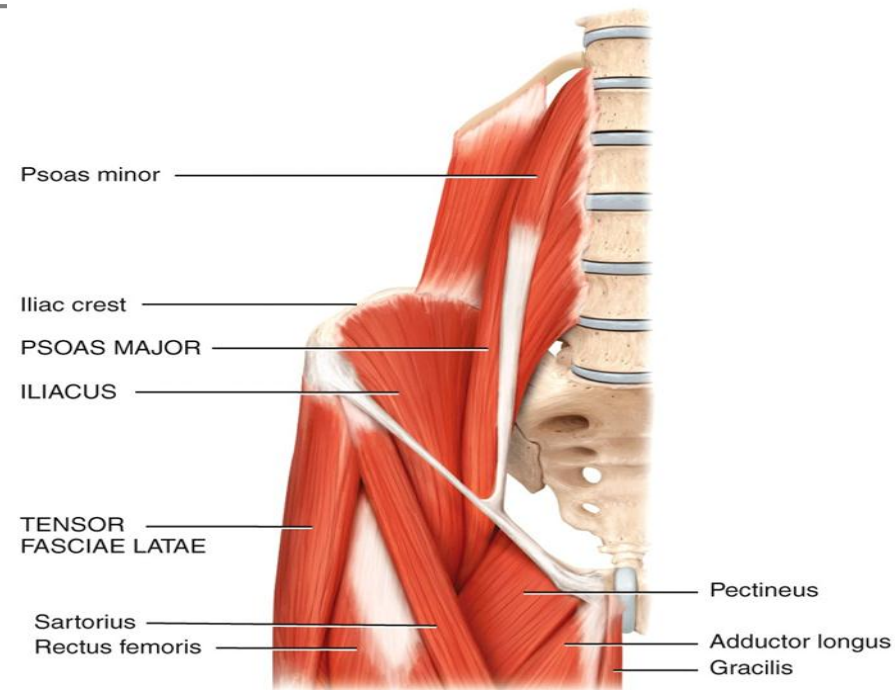

Muscular system (3)

DR. WAFAA SHUNNAQ

Muscles of the Gluteal Region That Move the Femur

- Iliopsoas Muscle
- Gluteus muscles



(b) Posterior superficial view

Muscles of the Gluteal Region That Move the Femur

Iliopsoas Muscle:

iliacus:

Origin: iliac fossa

Insertion: lesser trochanter of femur.

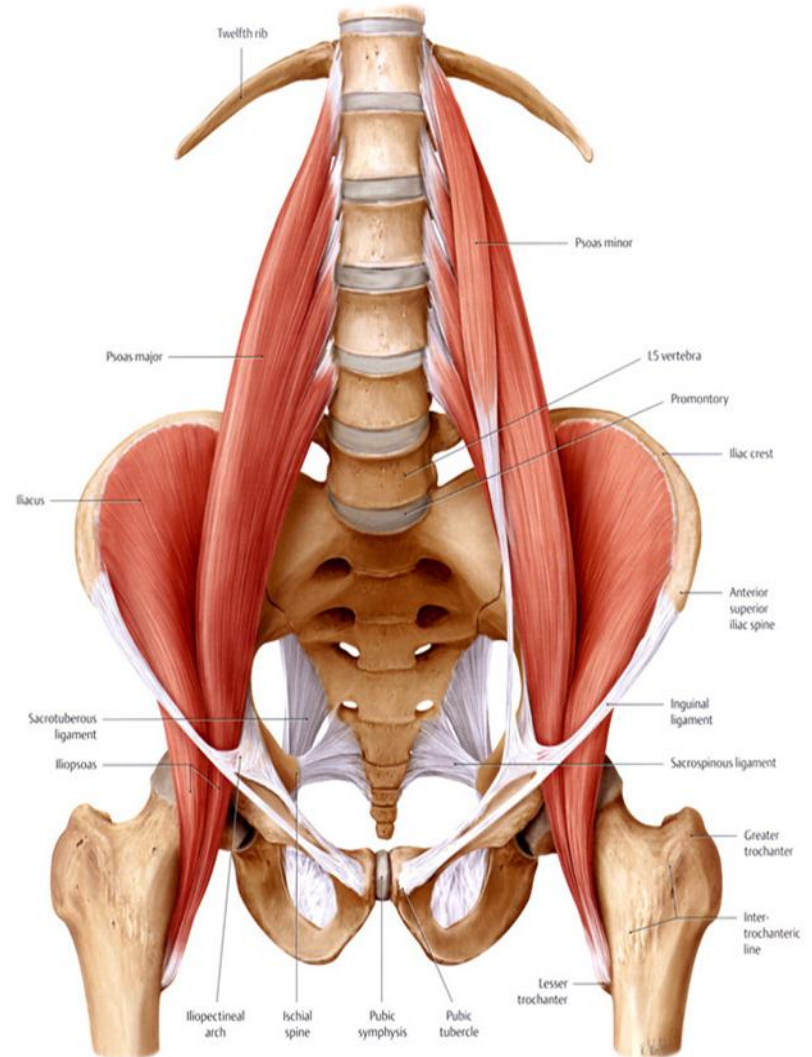
Function: flexes thigh at hip joint

Psoas major Muscle:

Origin: lumbar vertebrae

Insertion: lesser trochanter of femur.

Function: flexes thigh at hip joint



Function of Iliopsoas Muscle: flexes thigh at hip joint



Muscles of the Gluteal Region That

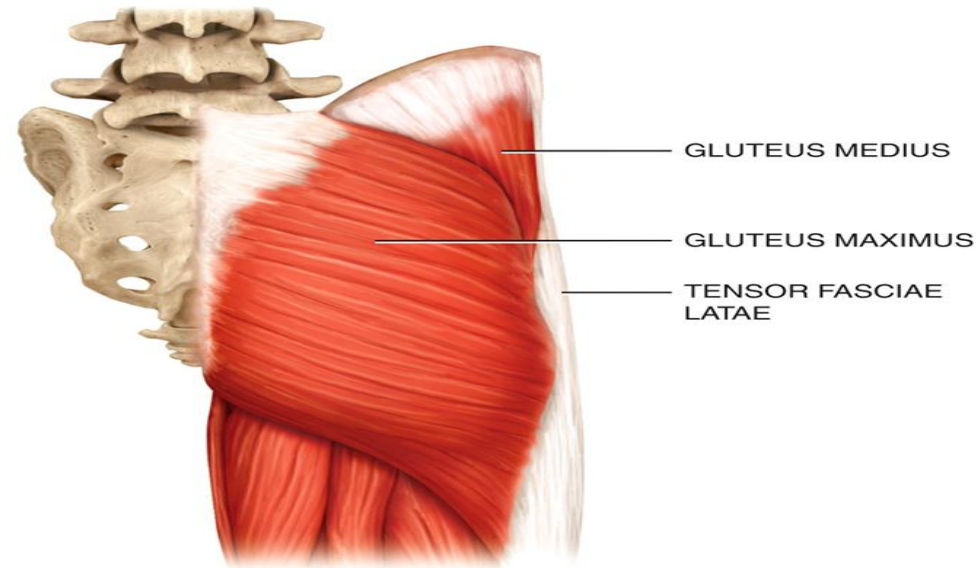
Move the Femur

■ Gluteus muscles:

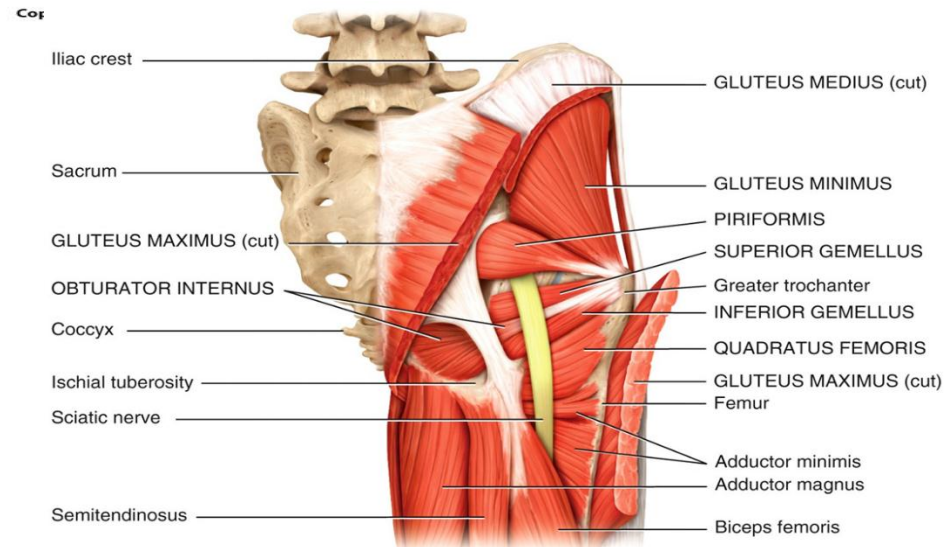
1. Gluteus Maximus
2. Gluteus Medius
3. Gluteus Minimus

■ maximus **extends** thigh at hip joint & **laterally** rotates thigh.

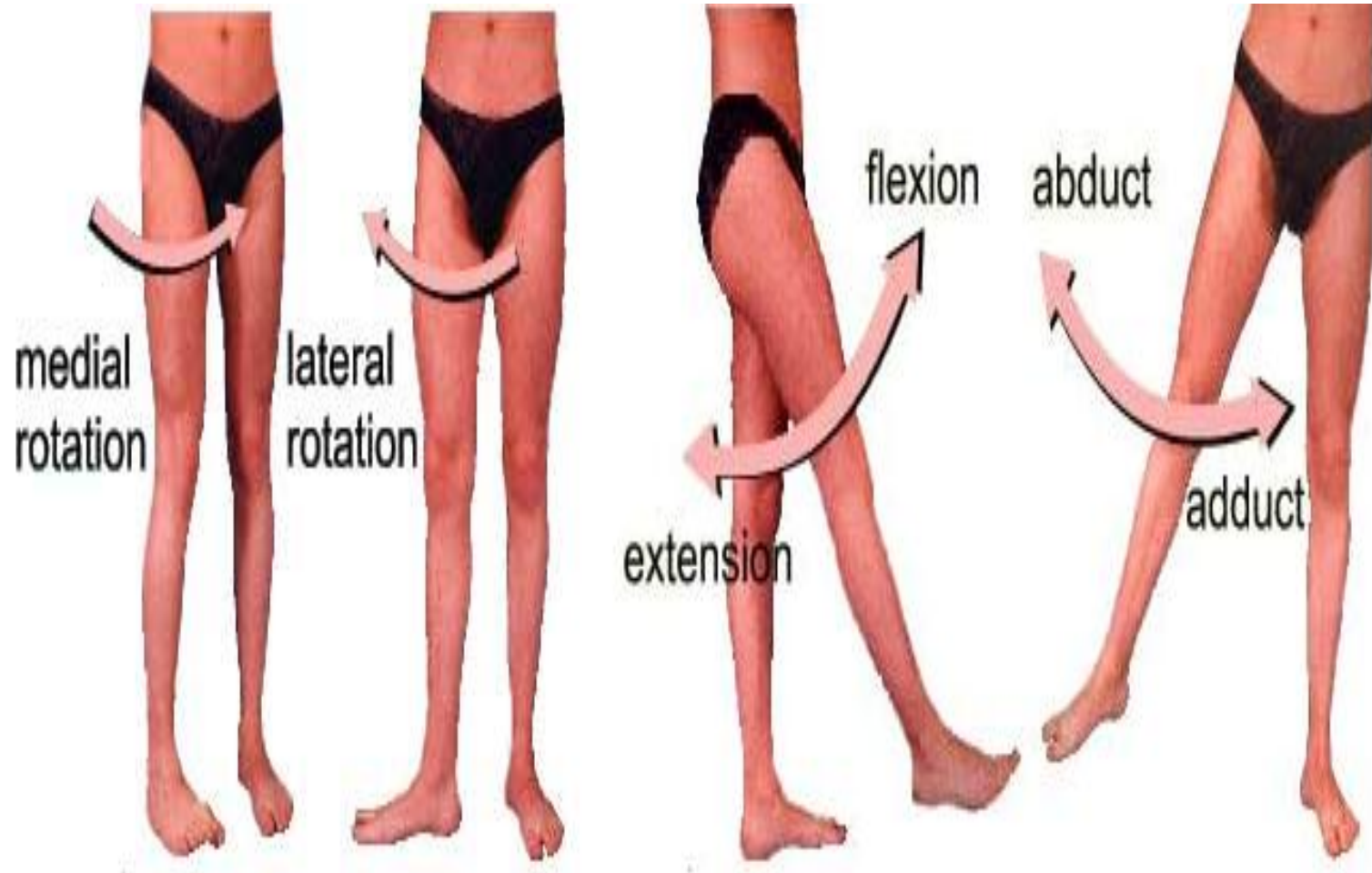
■ medius & minimus **abduct** thigh at hip joint & **medially** rotate thigh.



(b) Posterior superficial view



(c) Posterior deep view



Muscles of the Thigh That Move the Femur, Tibia, and Fibula

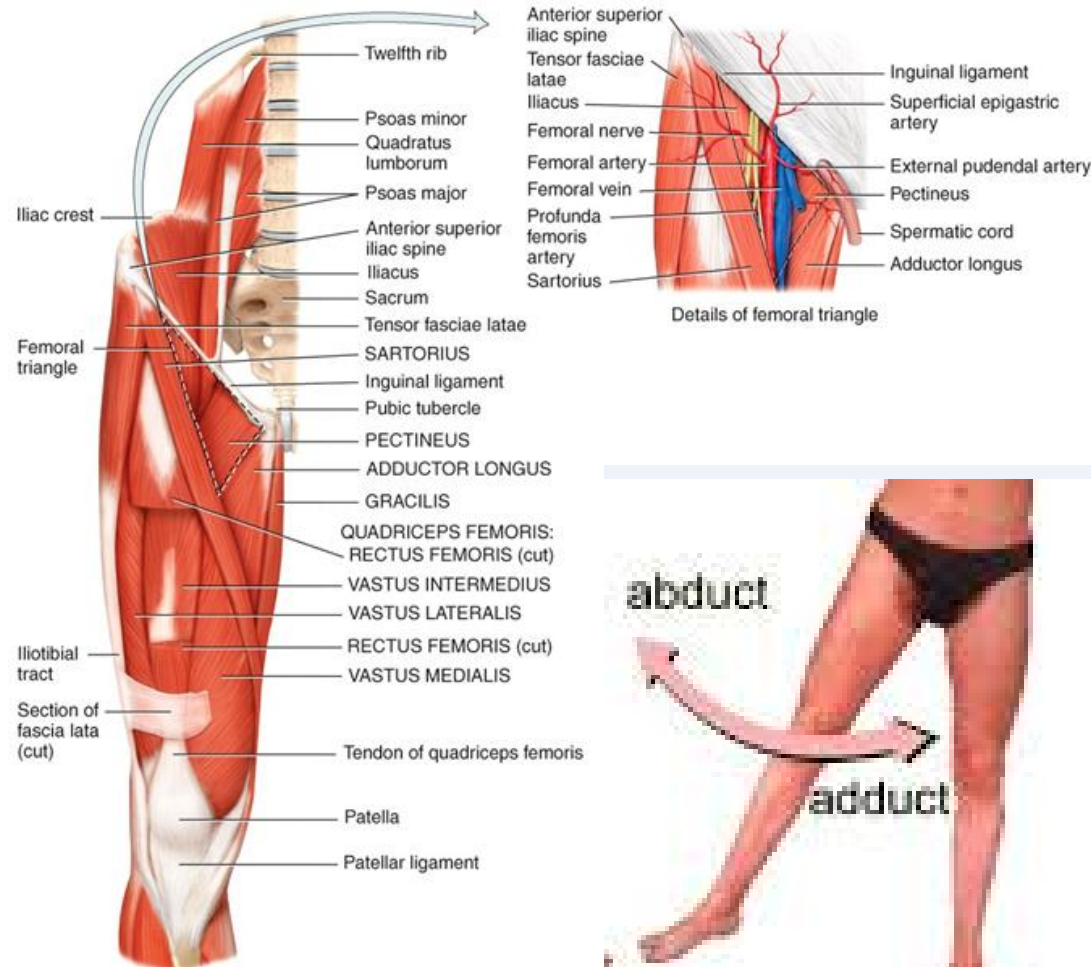
- Medial (adductor) compartment of thigh.
 - Anterior (extensor) compartment of thigh.
 - Posterior (flexor) compartment of thigh.
-

Muscles of the Thigh That Move the Femur, Tibia, and Fibula

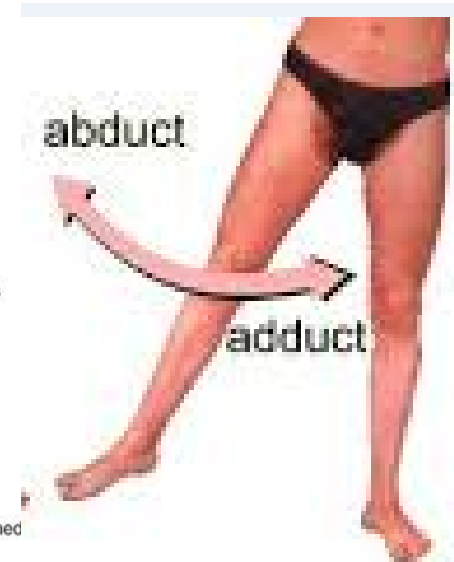
Medial (adductor) compartment of thigh:

- Adductor longus
- Adductor magnus
- Gracilis

adduct thigh at hip joint



(a) Anterior superficial view (the femoral triangle is indicated by a dashed line).
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Muscles of the Thigh That Move the Femur, Tibia, and Fibula

Anterior (extensor) compartment of thigh.

Quadriceps femoris has 4 heads

1. **Rectus femoris**. Originates from Anterior inferior iliac spine

2. **Vastus medialis**

3. **Vastus intermedius**

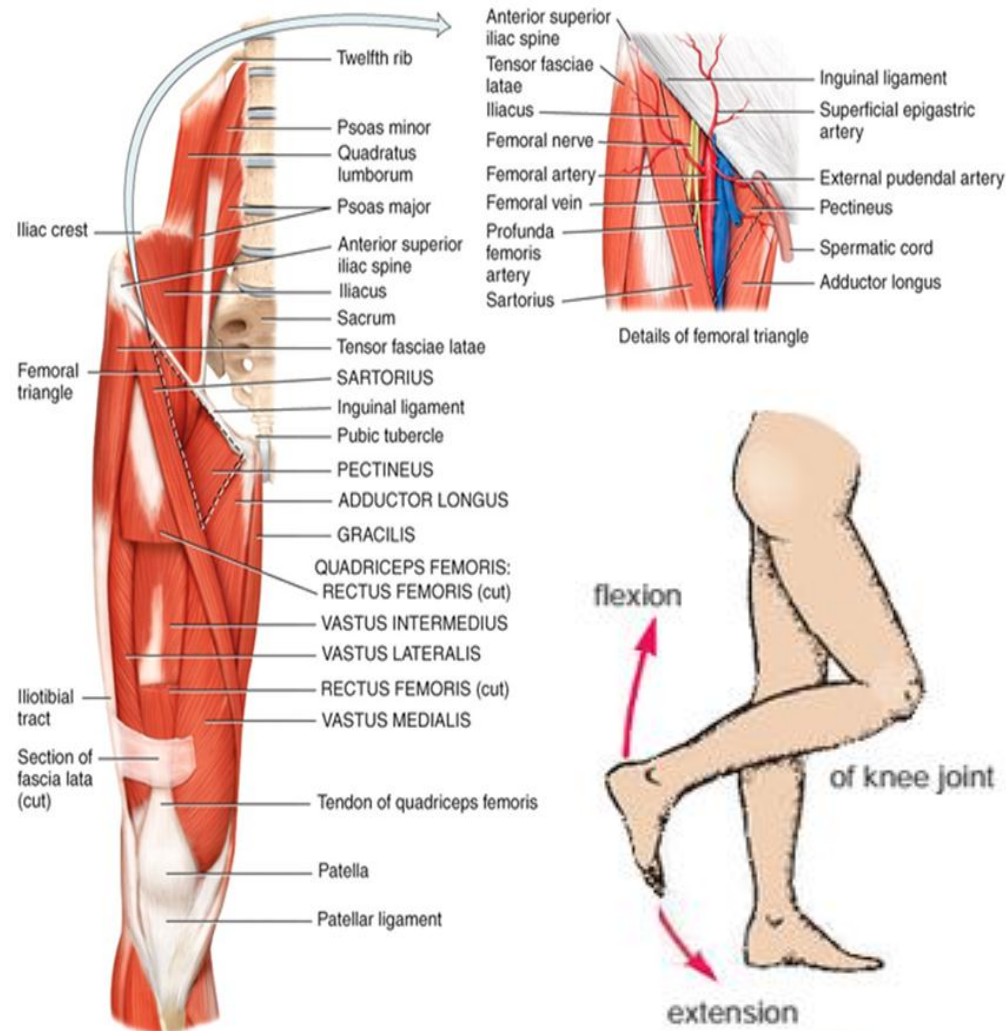
4. **Vastus lateralis**

Originate from femur

■ Rectus femoris crosses hip

■ 3 heads arise from femur

■ all act to **extend** the leg at knee joint



(a) Anterior superficial view (the femoral triangle is indicated by a dashed line)

Muscles of the Thigh That Move the Femur, Tibia, and Fibula

Posterior (flexor) compartment of thigh:

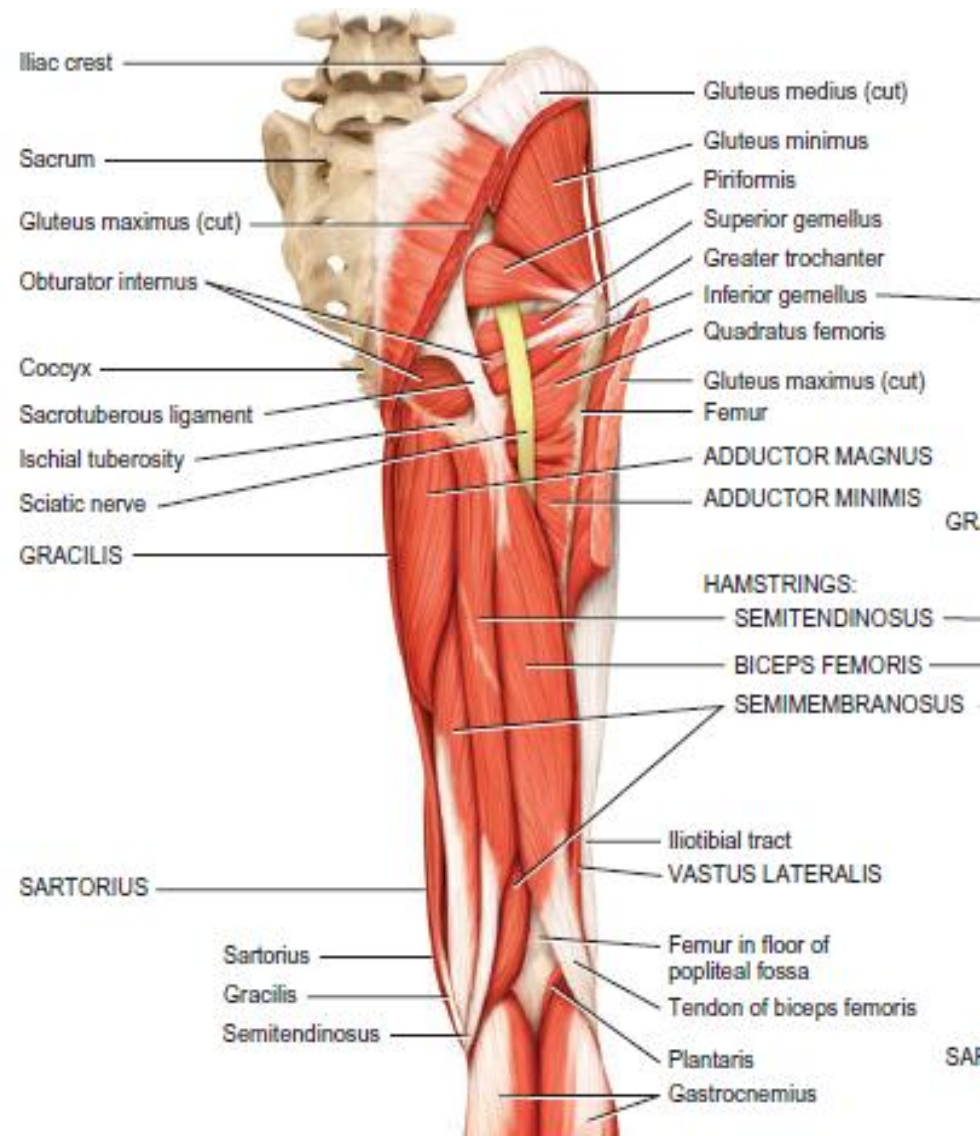
■ Hamstring muscles

1. **semimembranosus** (medial)

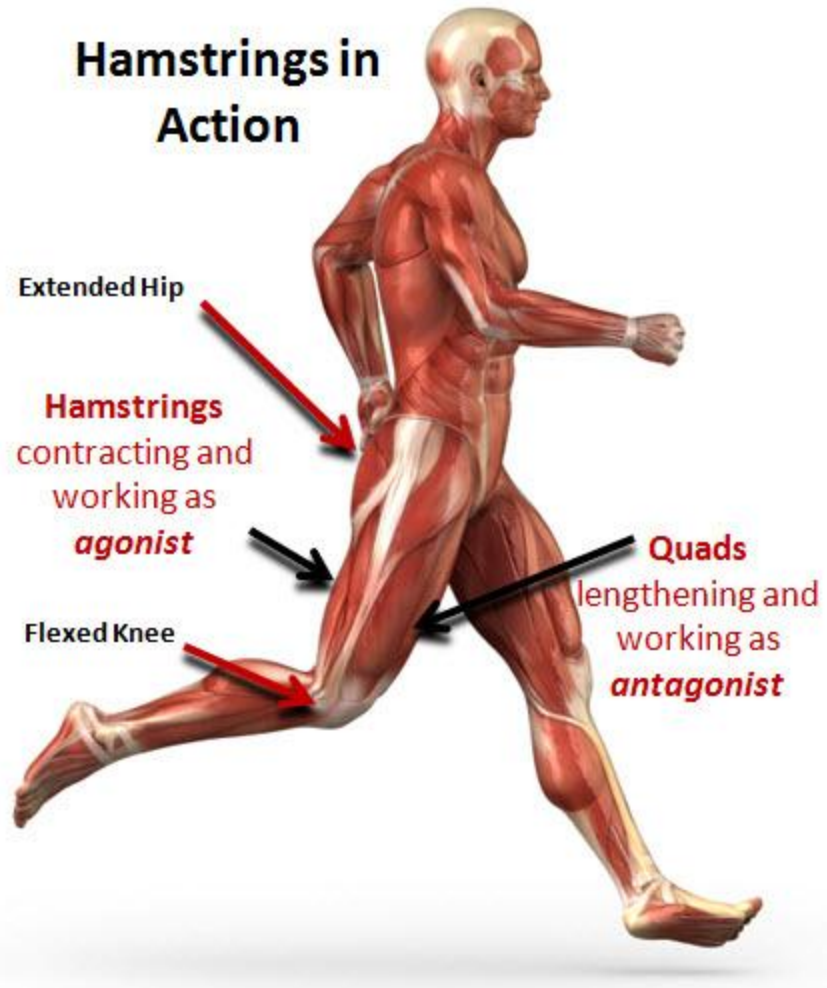
2. **semitendinosus** (medial)

3. **biceps femoris** (lateral)

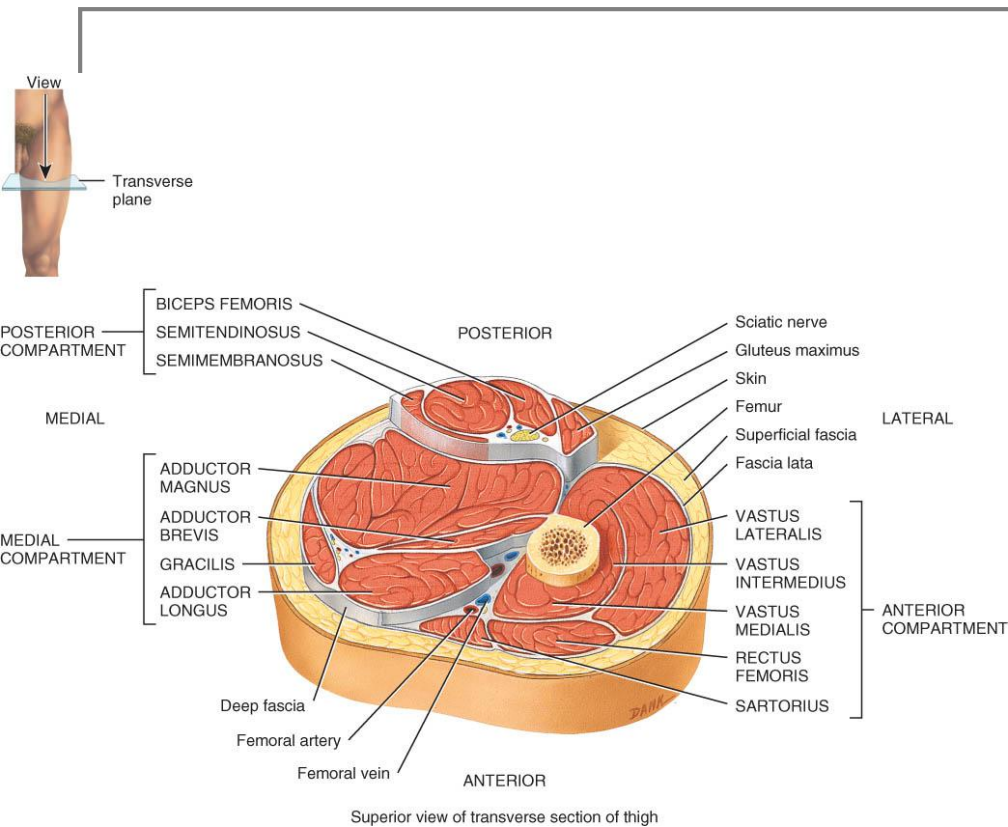
flex leg at knee joint & **extend** thigh at hip joint



Hamstrings in Action



Cross-Section through Thigh



■ 3 compartments of muscle with unique innervation

- **anterior compartment** is quadriceps femoris innervated by **femoral nerve**
- **medial compartment** is adductors innervated by **obturator nerve**
- **posterior compartment** is hamstrings innervated by **sciatic nerve**

Muscles of the Leg That Move the Foot and Toes

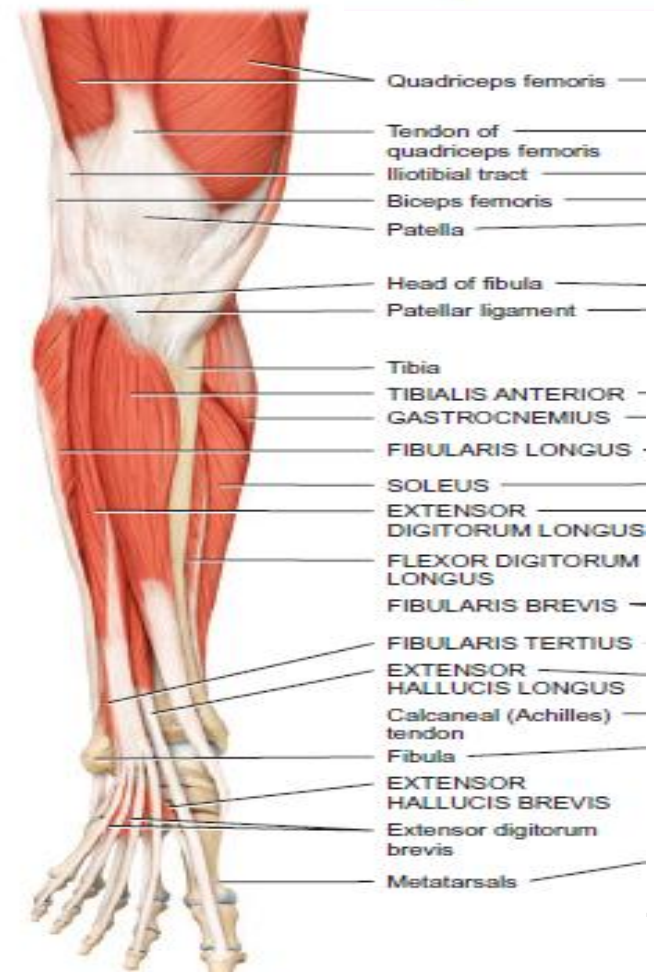
- Anterior compartment of the leg.
 - Lateral (fibular) compartment of the leg.
 - Superficial posterior compartment of the leg.
 - Deep posterior compartment of the leg.
-

Muscles of the Leg That Move the Foot and Toes

Anterior compartment of the leg:

1. **tibialis anterior**
2. **extensor digitorum longus: extends toes**
3. **extensor hallucis longus: extends big toe.**

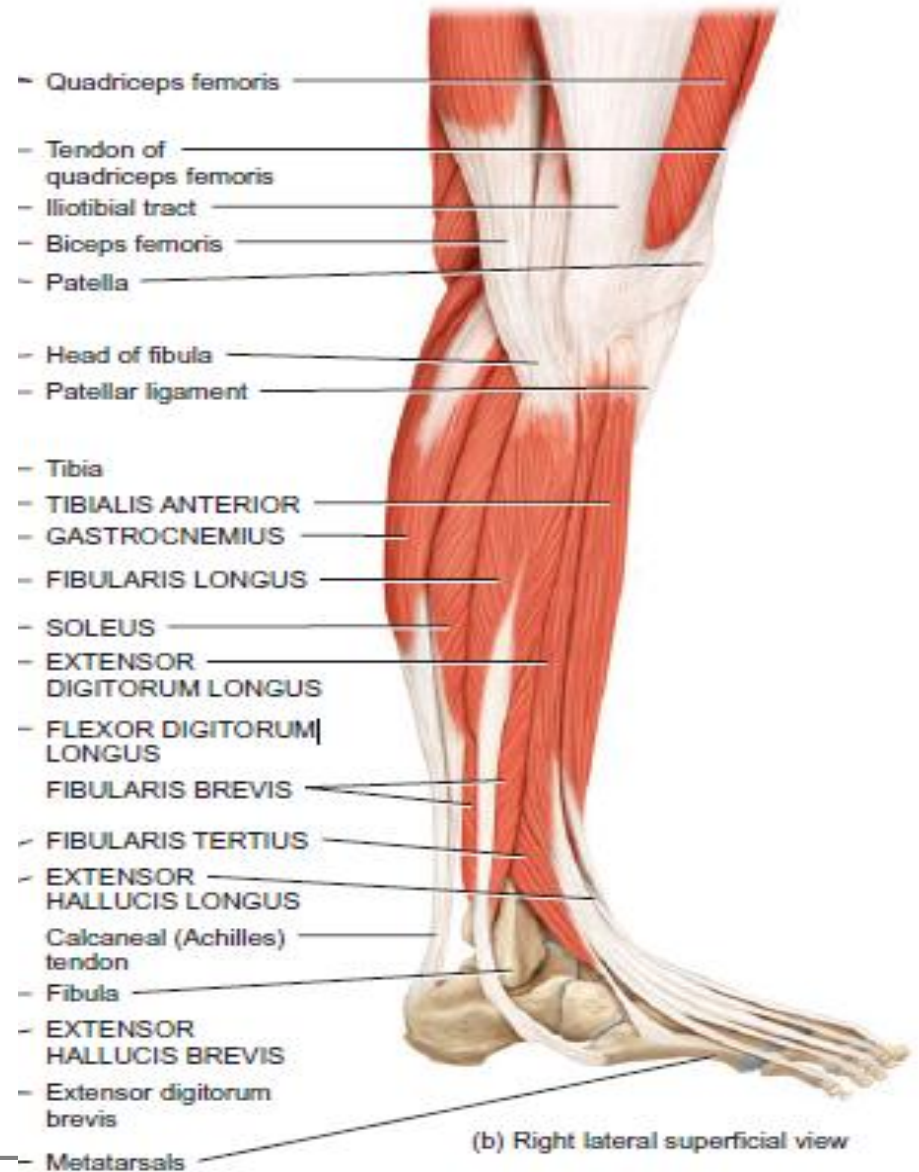
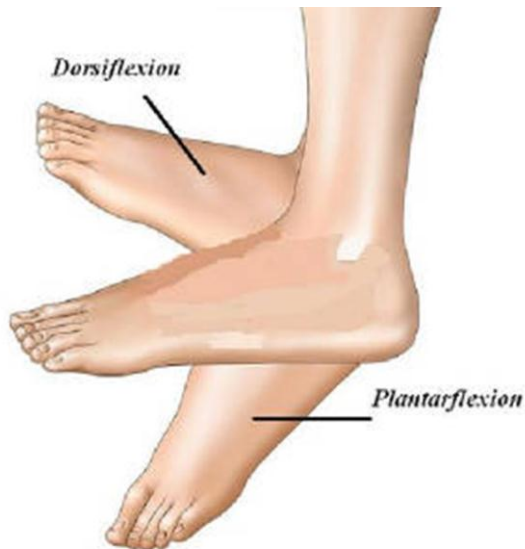
All **extend (dorsiflexion)** foot at ankle joint.



Muscles of the Leg That Move the Foot and Toes

Lateral (fibular) compartment of the leg.

1. Peroneus longus
 2. Peroneus brevis.
- **plantar flex** the foot at ankle joint.



Muscles of the Leg That Move the

Foot and Toes

Superficial posterior compartment of the leg.

3 muscles insert onto calcaneus

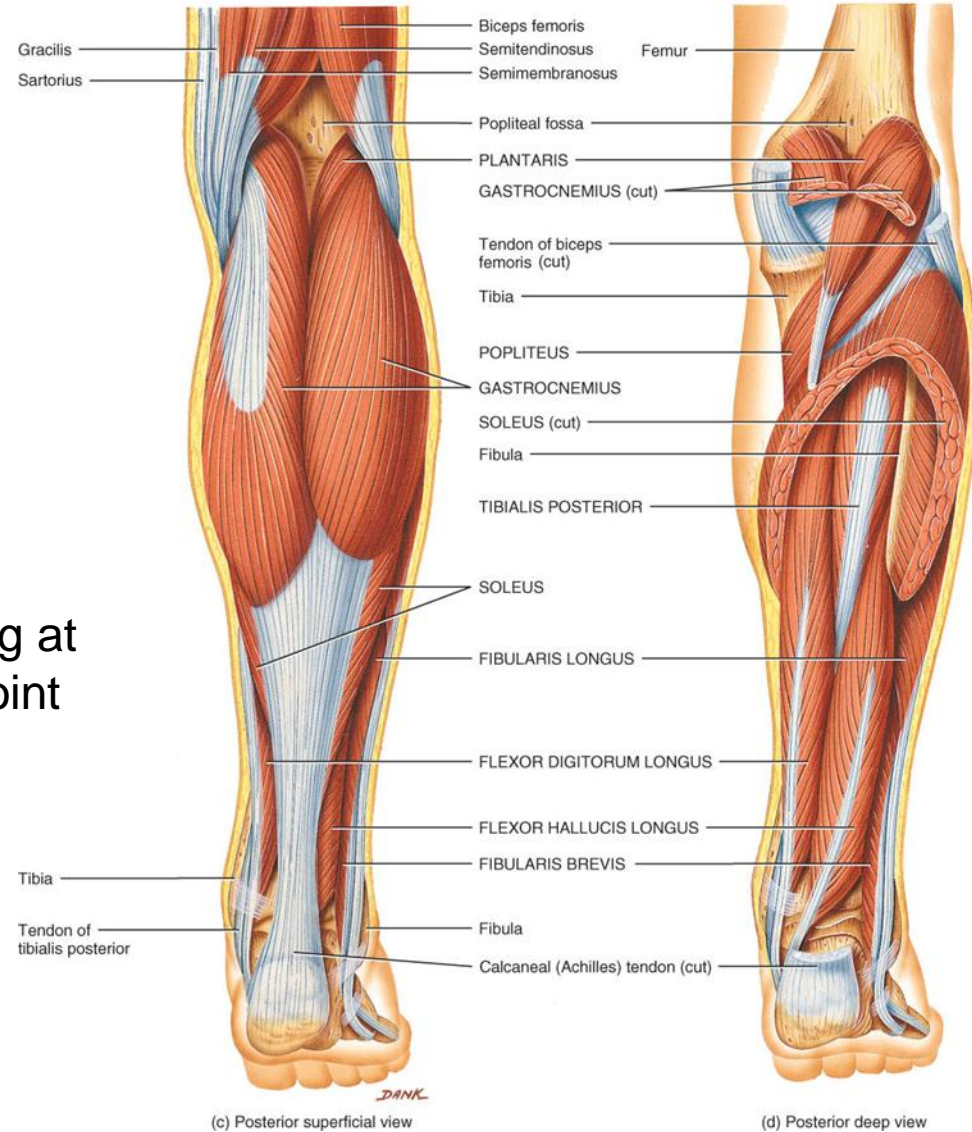
1. **gastrocnemius**

2. **Plantaris**

3. **Soleus.**

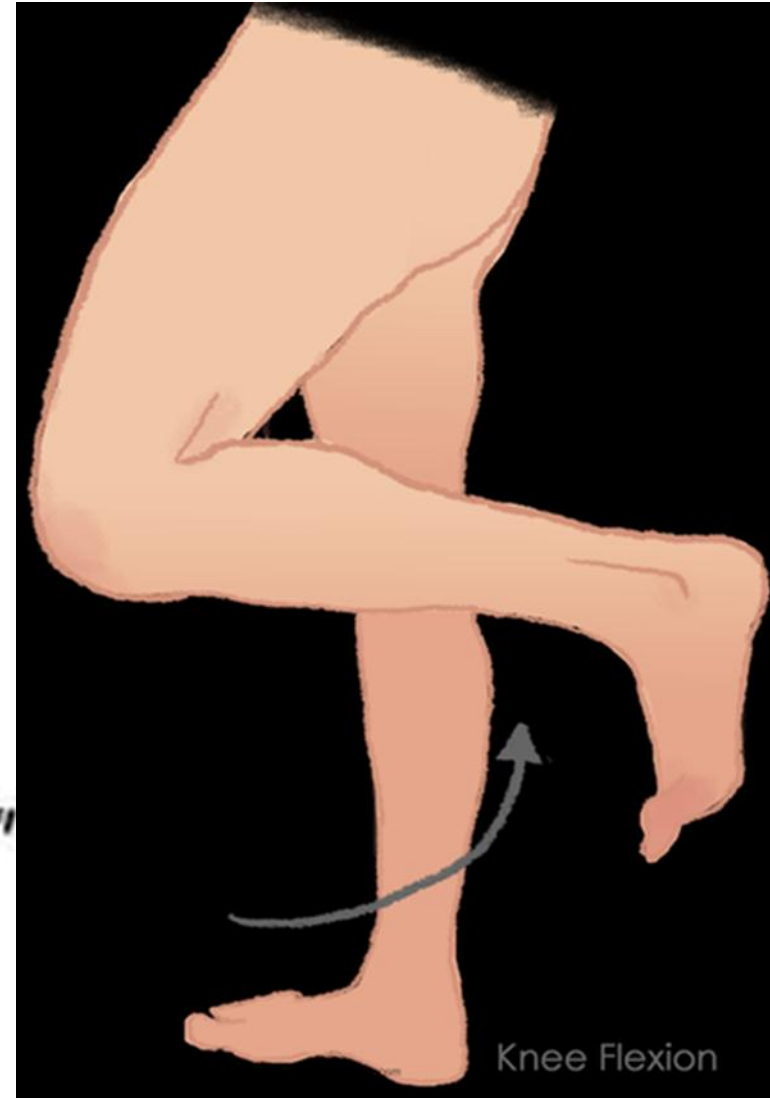
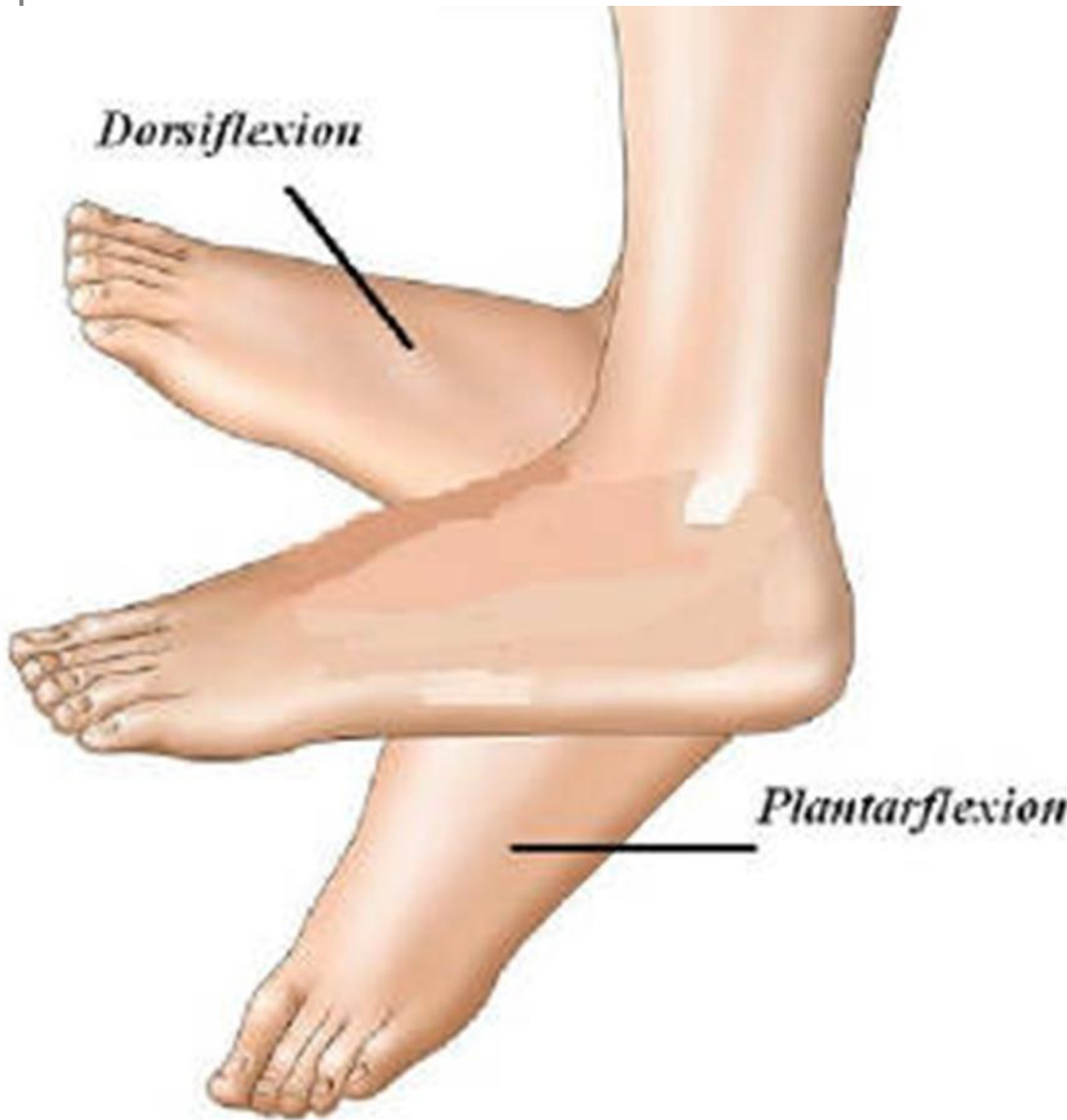
ALL Plantar flexe foot at ankle joint

} Flex leg at knee joint



(c) Posterior superficial view

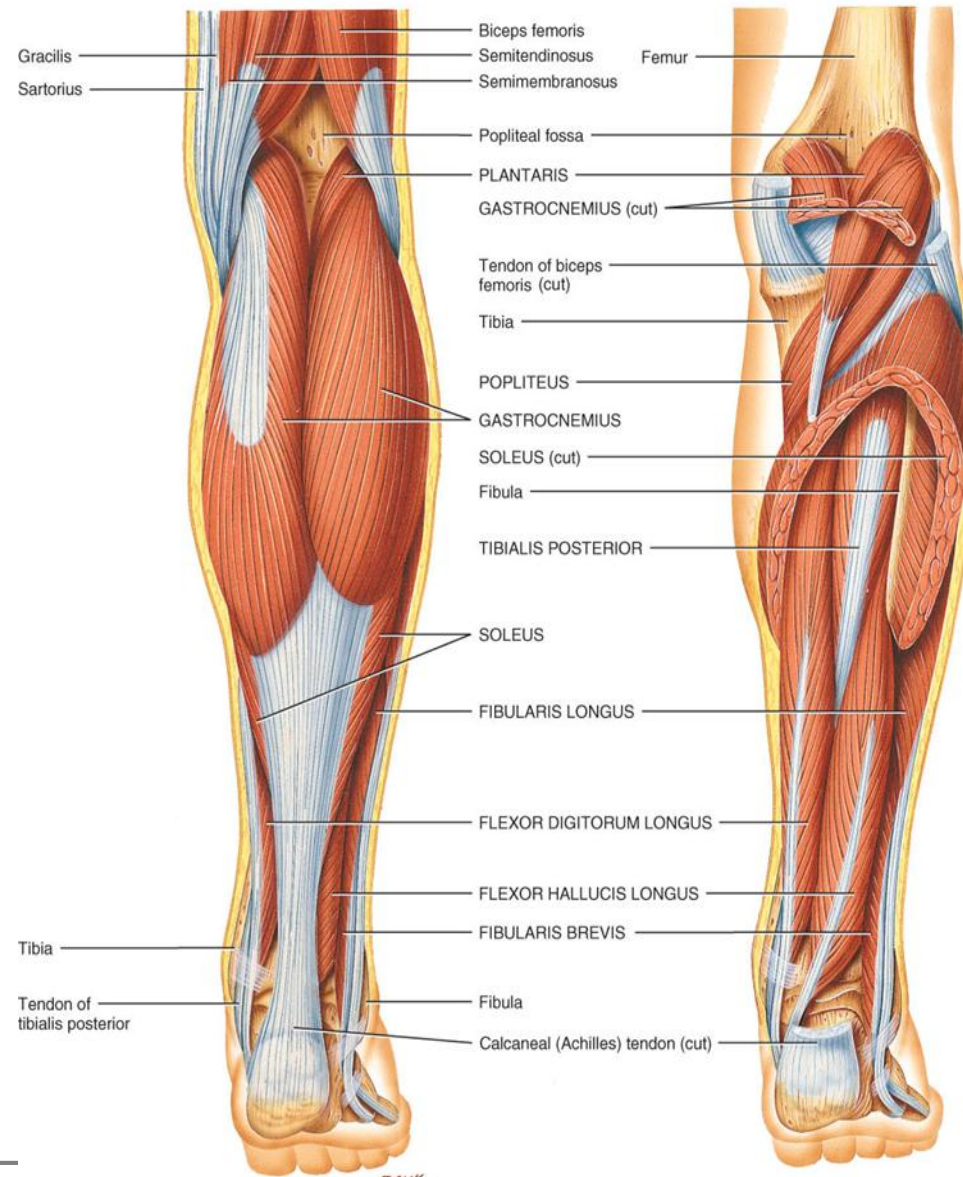
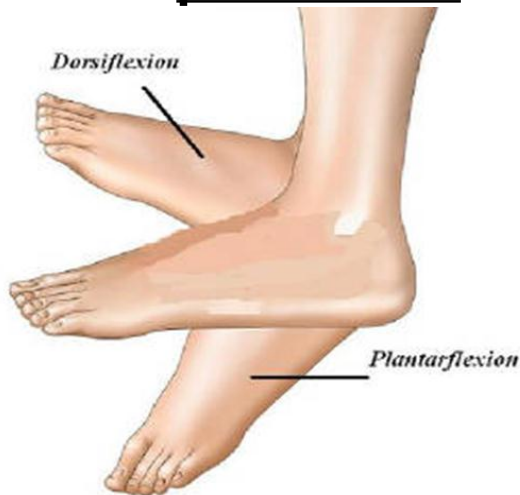
(d) Posterior deep view



Muscles of the Leg That Move the Foot and Toes

Deep posterior compartment of the leg.

1. **tibialis posterior**
 2. **flexor digitorum longus**, flexes toes
 3. **flexor hallucis longus**, flexes big toe.
- All **planter flex** foot at ankle joint



(c) Posterior superficial view

(d) Posterior deep view