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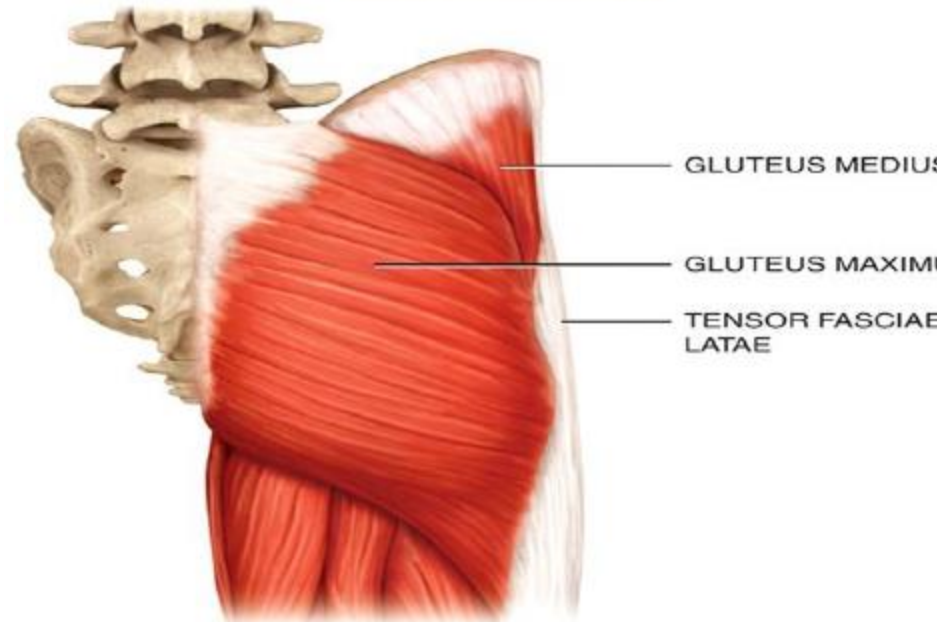
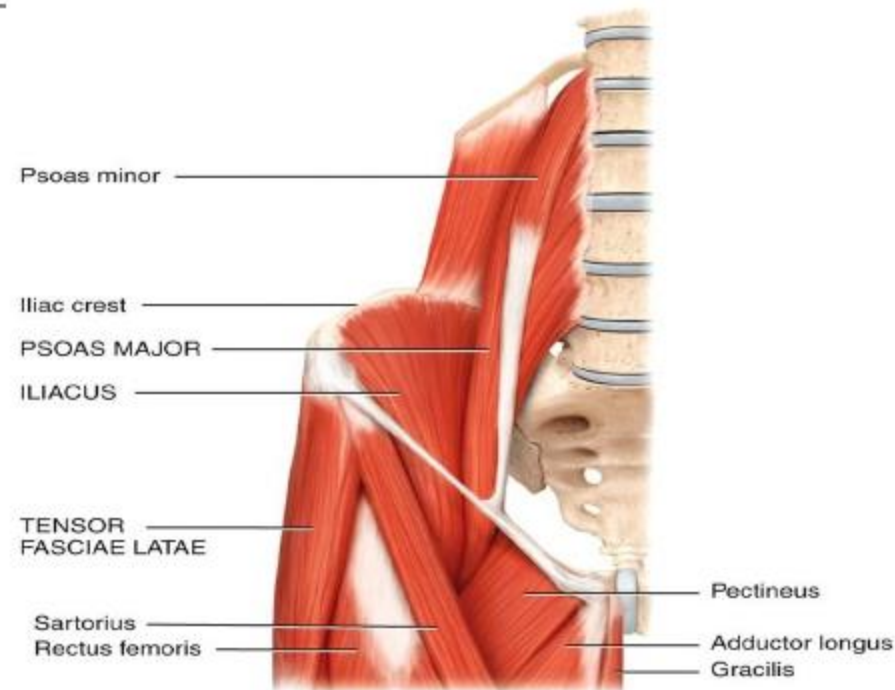
# Muscular system (4)

*DR. Hanan Malkawi*

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# Muscles of the Gluteal Region That Move the Femur

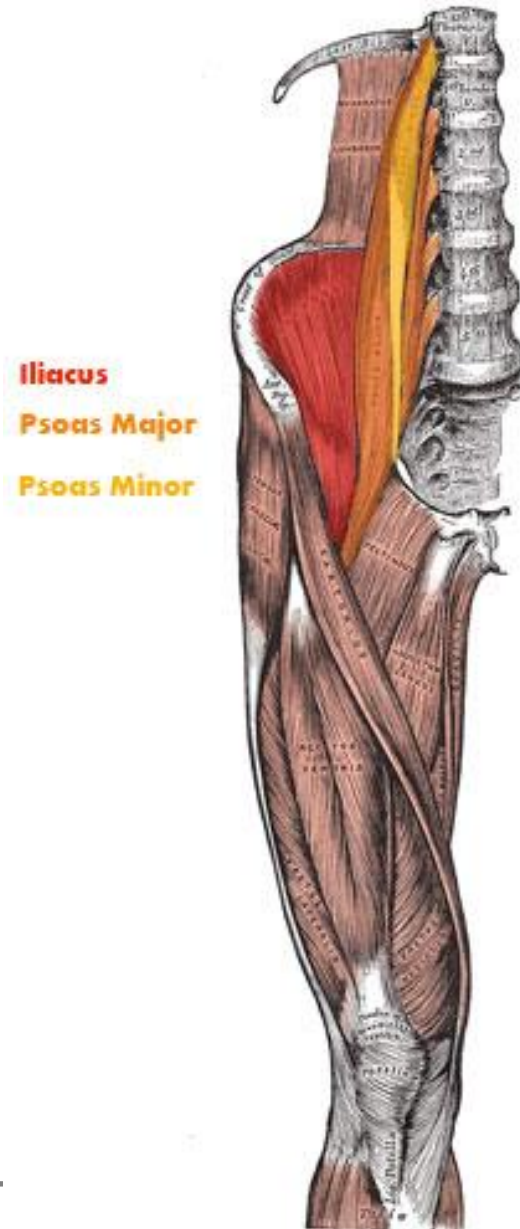
- ❑ Iliopsoas Muscle
- ❑ Gluteus muscles



(b) Posterior superficial view

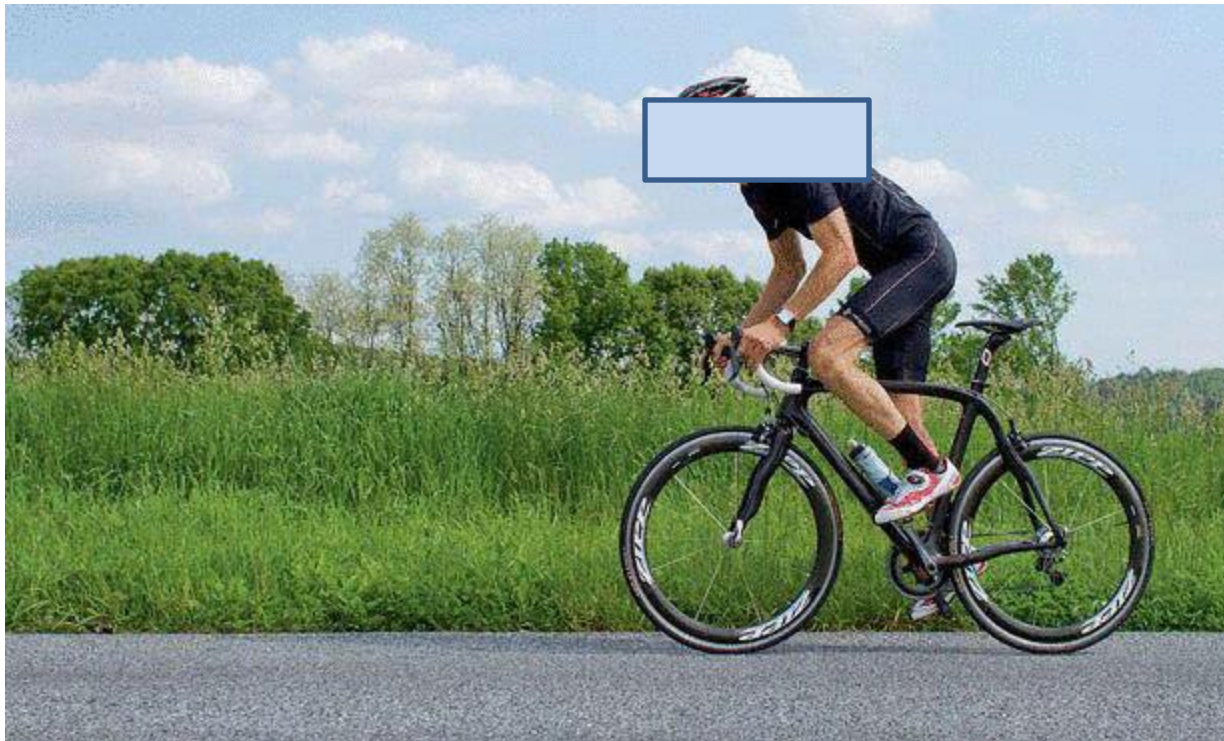
# Muscles of the Gluteal Region That Move the Femur

- **Iliopsoas Muscle:**
- **iliacus:**
- Origin: iliac fassa
- 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



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# Function of Iliopsoas Muscle: flexes thigh at hip joint

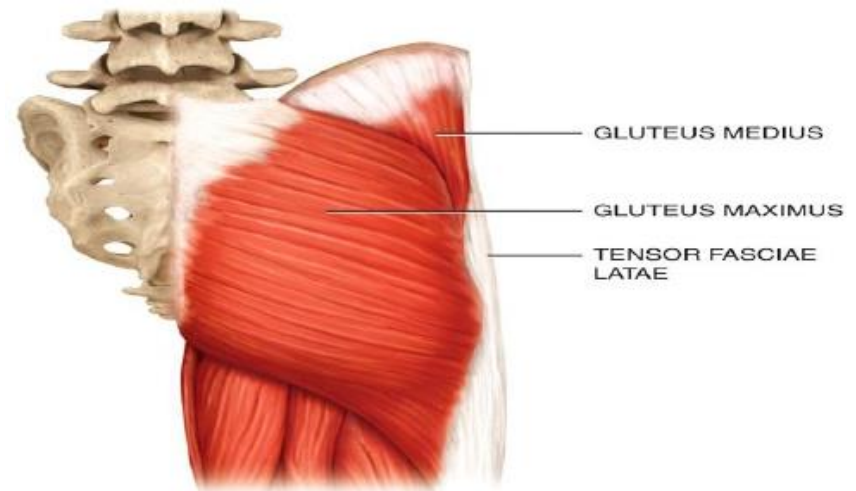


# Muscles of the Gluteal Region That Move the Femur

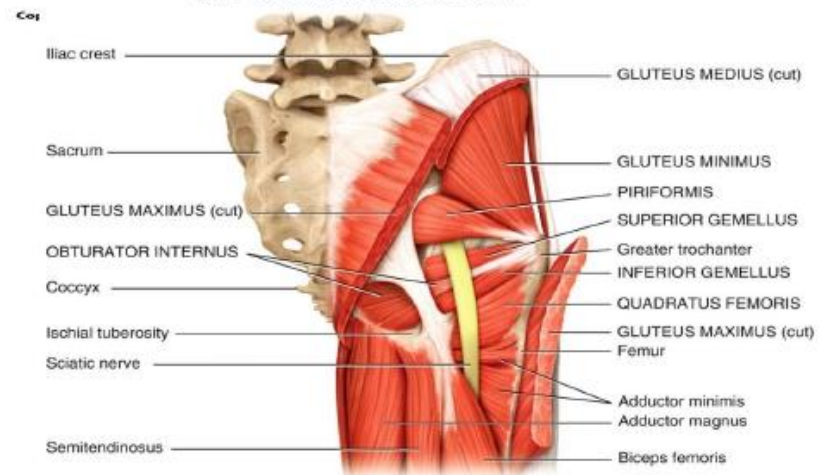
## Gluteus muscles:

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.

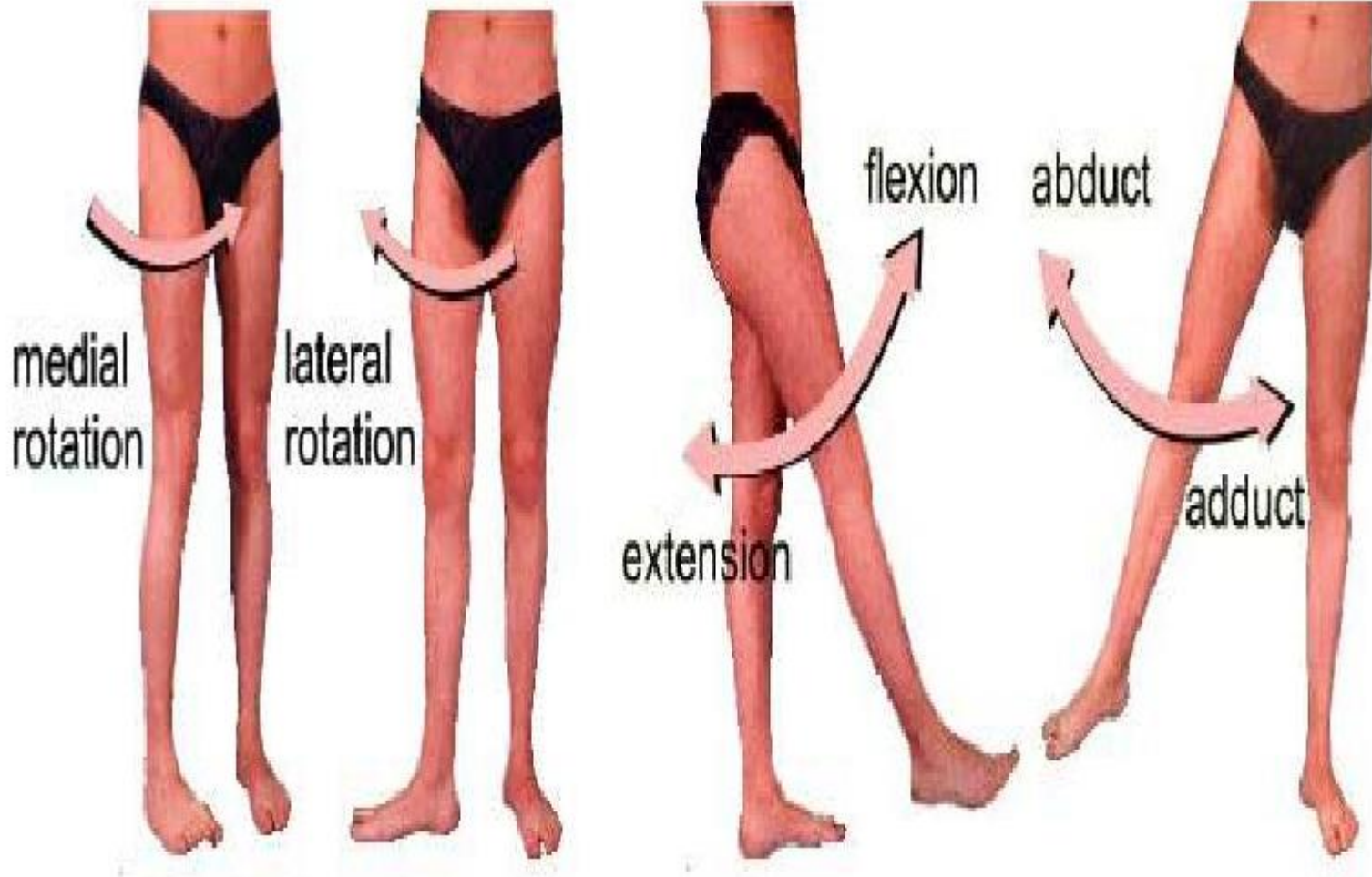


(b) Posterior superficial view



(c) Posterior deep view

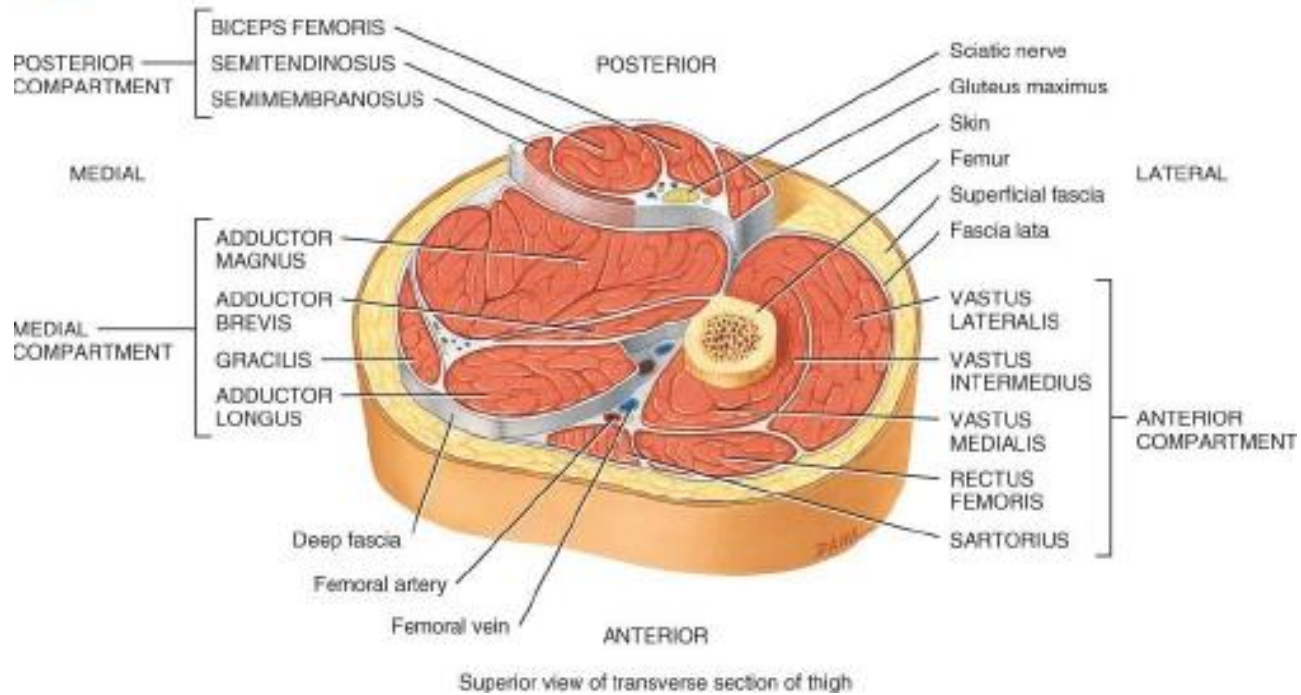
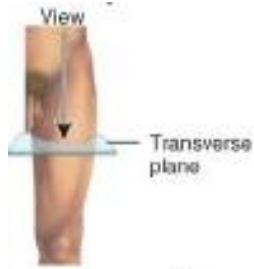




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# Muscles of the Thigh That Move the Femur, Tibia, and Fibula

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



## Cross-Section through Thigh

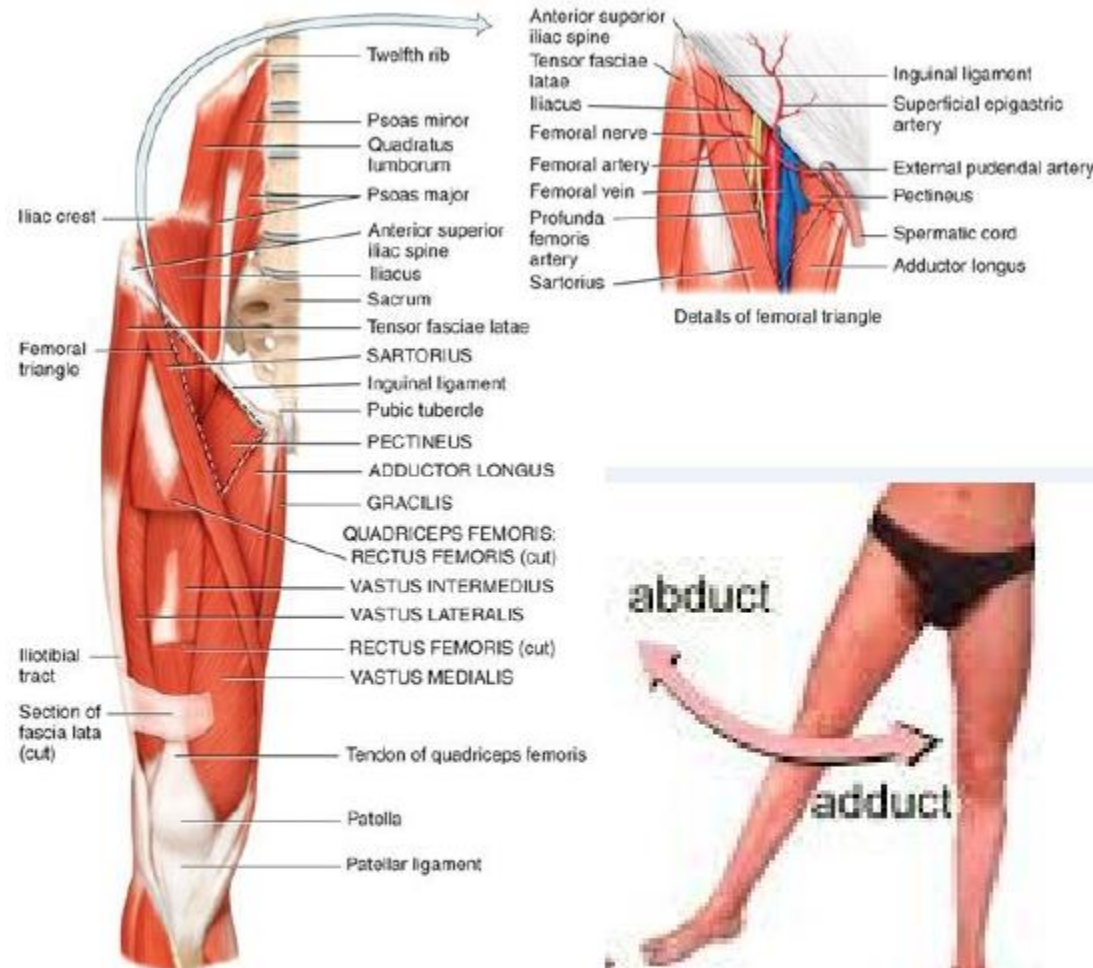


# Muscles of the Thigh That Move the Femur, Tibia, and Fibula

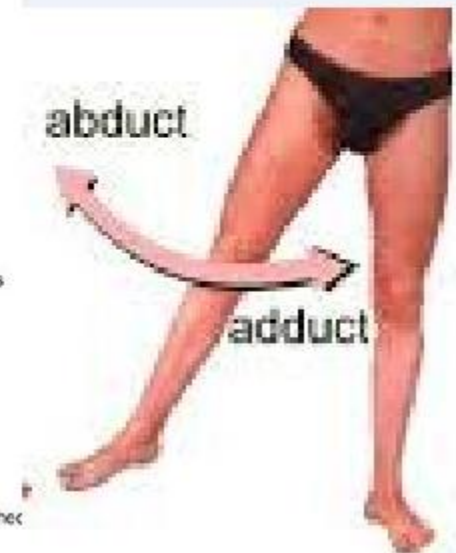
Medial (adductor) compartment of thigh:

- 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

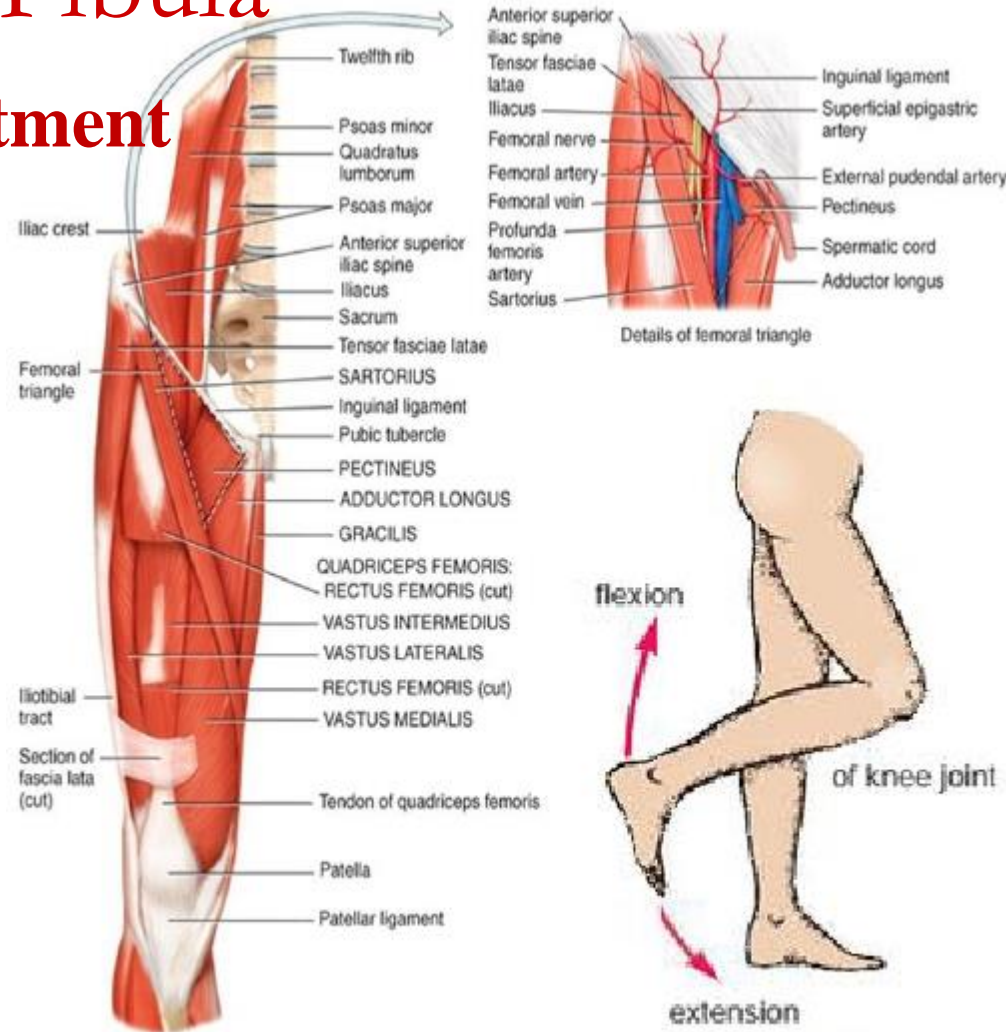
Quadriceps femoris has 4 heads

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)

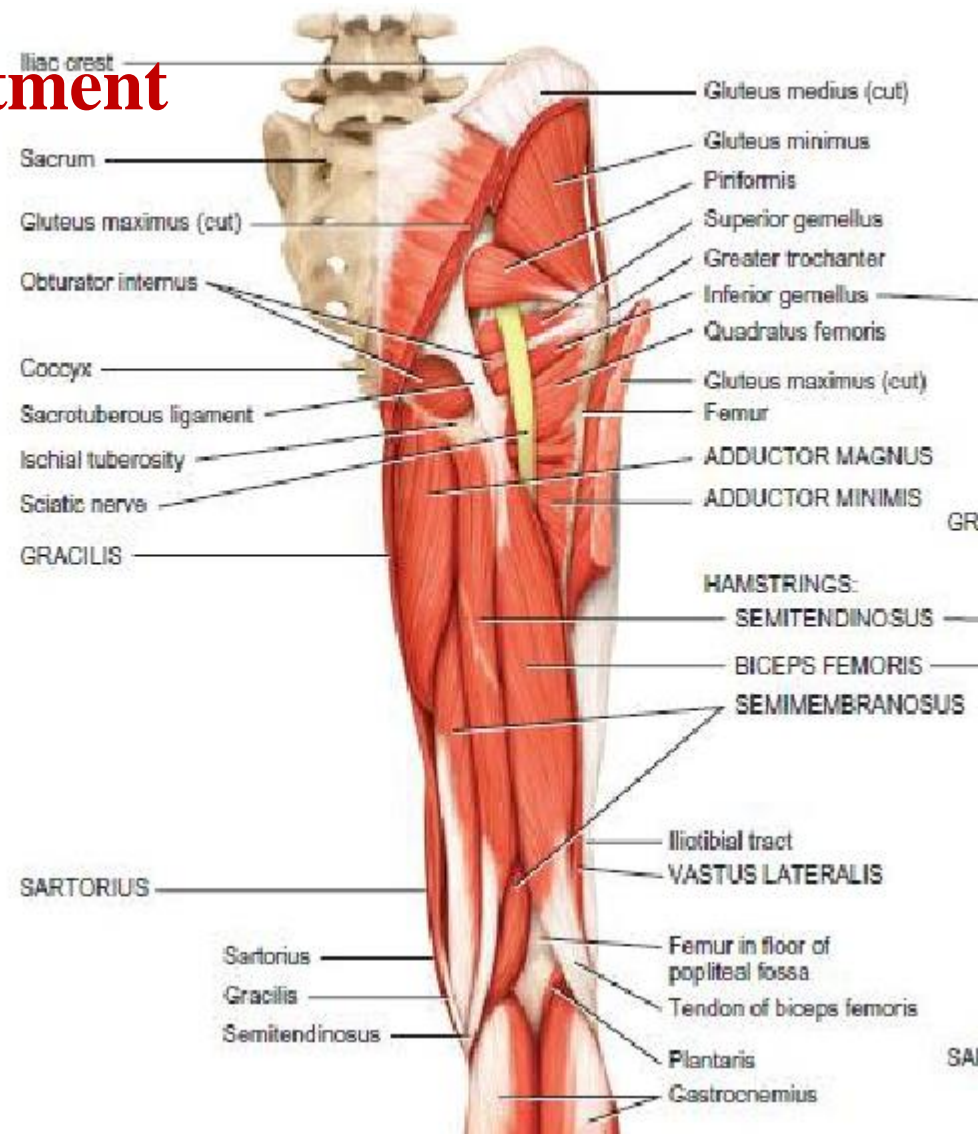
# Muscles of the Thigh That Move the Femur, Tibia, and Fibula

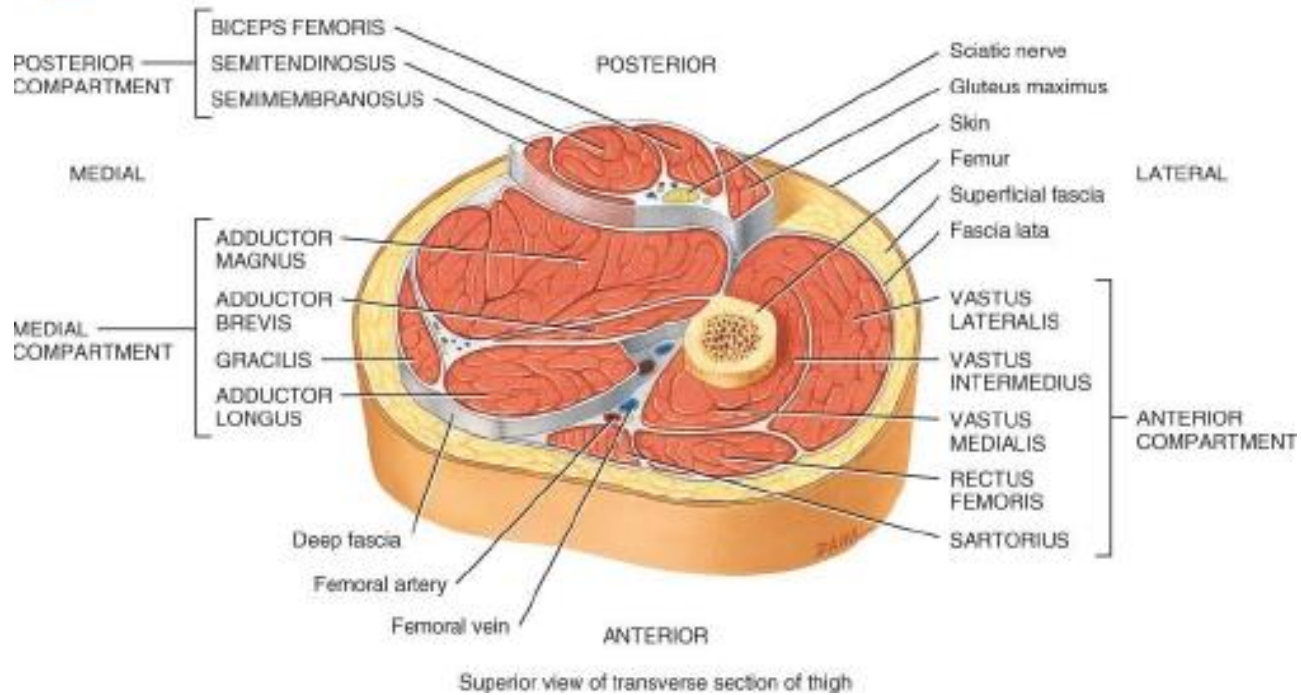
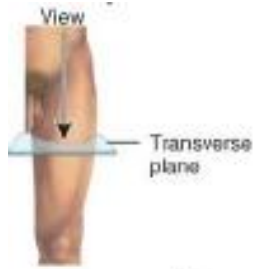
## Posterior (flexor) compartment

### ■ Hamstring muscles

1. **semimembranosus** (medial)
2. **semitendinosus** (medial)
3. **biceps femoris** (lateral)

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

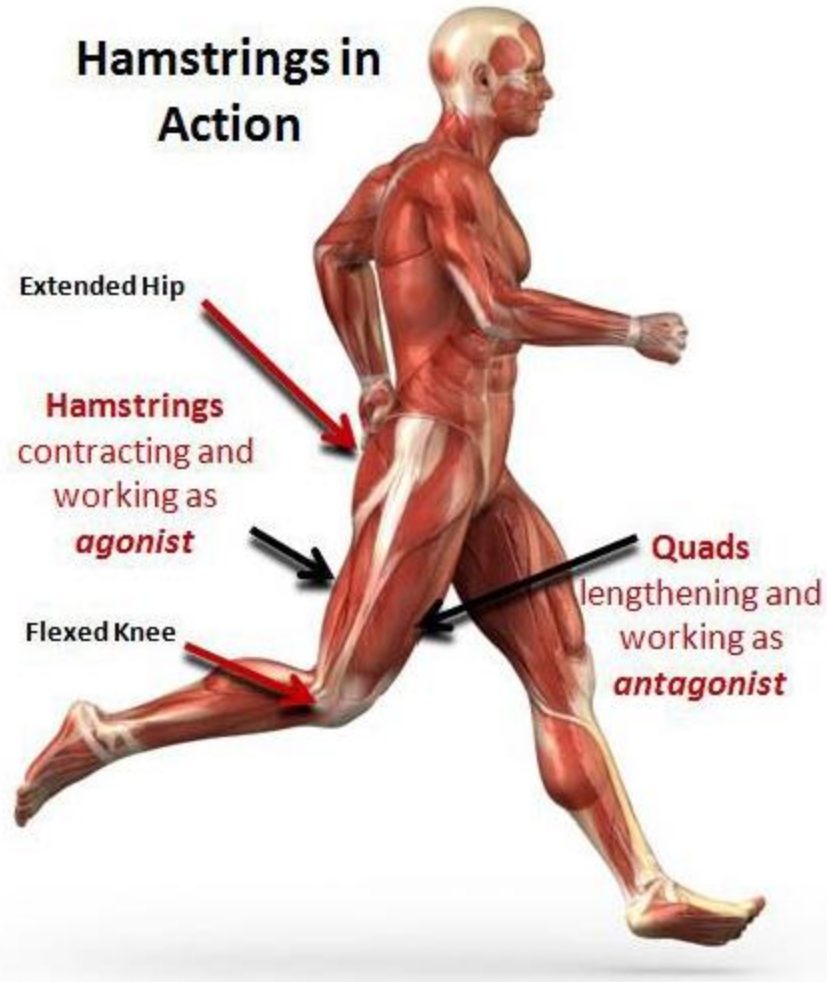




## Cross-Section through Thigh



## Hamstrings in Action





# Innervation

## anterior compartment

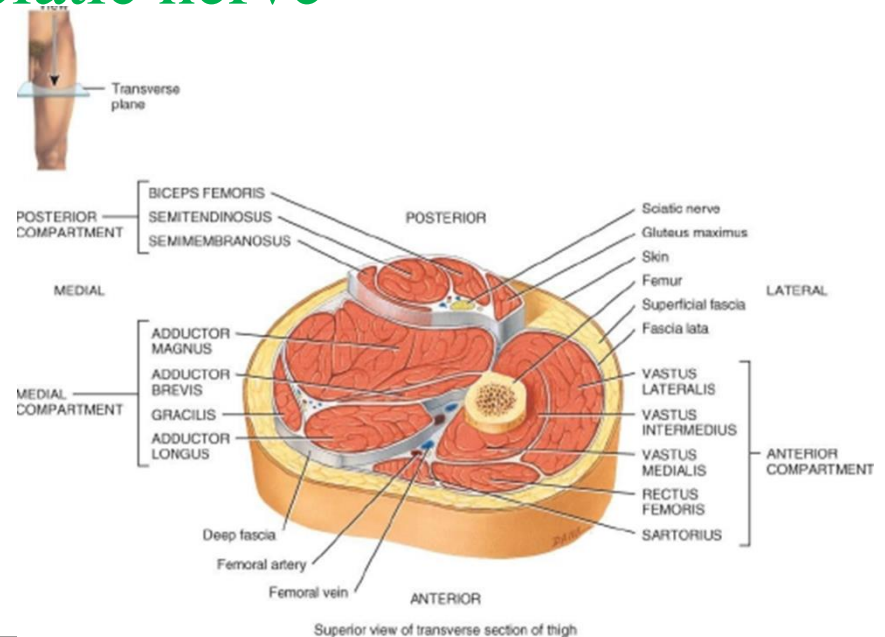
is quadriceps femoris innervated by **femoral nerve**

## medial compartment

is adductors innervated by **obturator nerve**

## posterior compartment

is hamstrings innervated by **sciatic nerve**



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# 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.
-

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# Muscles of the Leg That Move the Foot and Toes

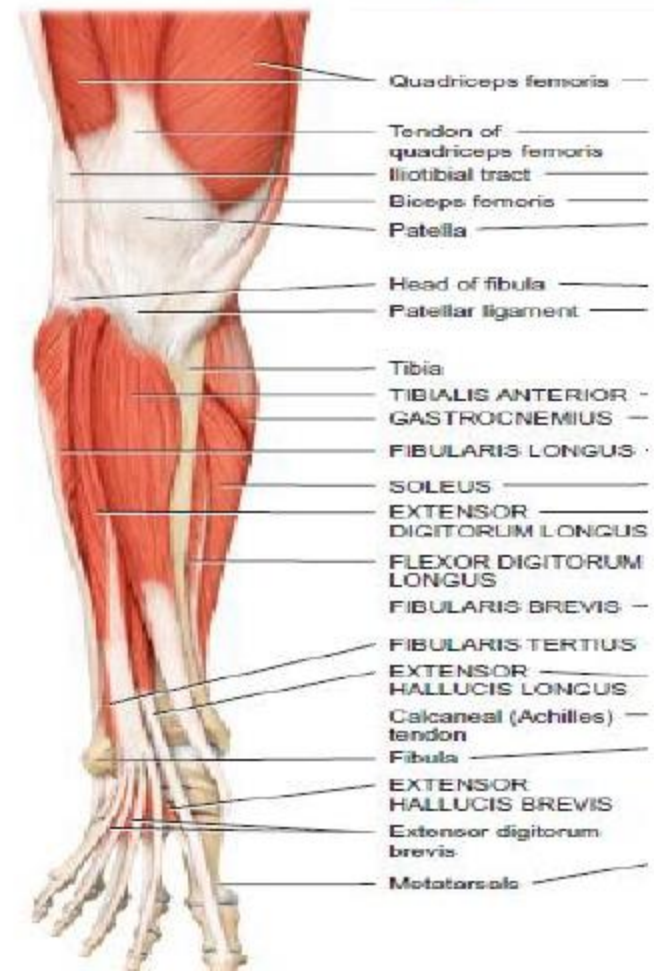
- Anterior compartment of the leg.
  - Lateral (fibular) compartment of the leg.
  - Superficial posterior compartment of the leg.
  - Deep posterior compartment of the leg.
-

# 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.

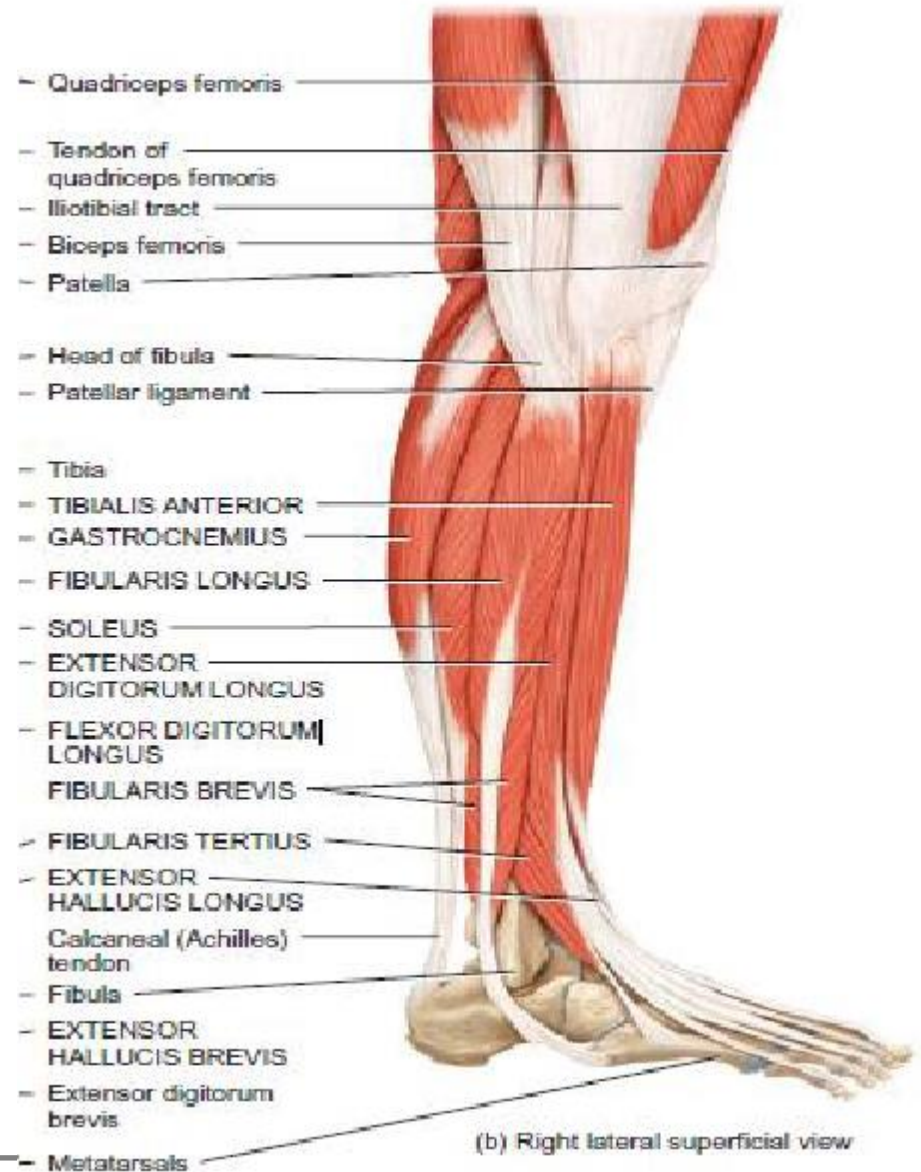
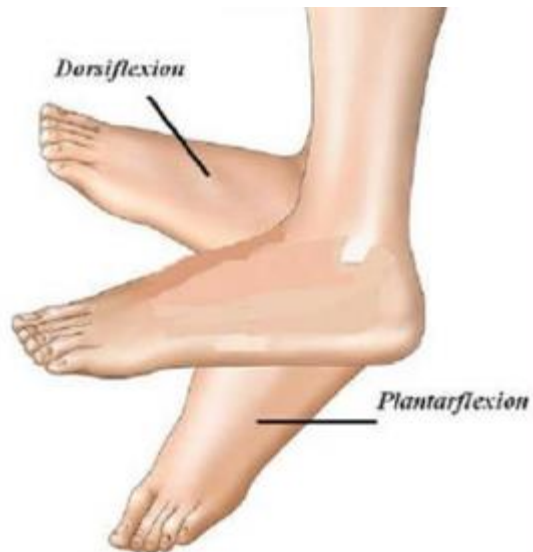
All **extend (dorsiflexion)** foot at ankle joint.



# 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.





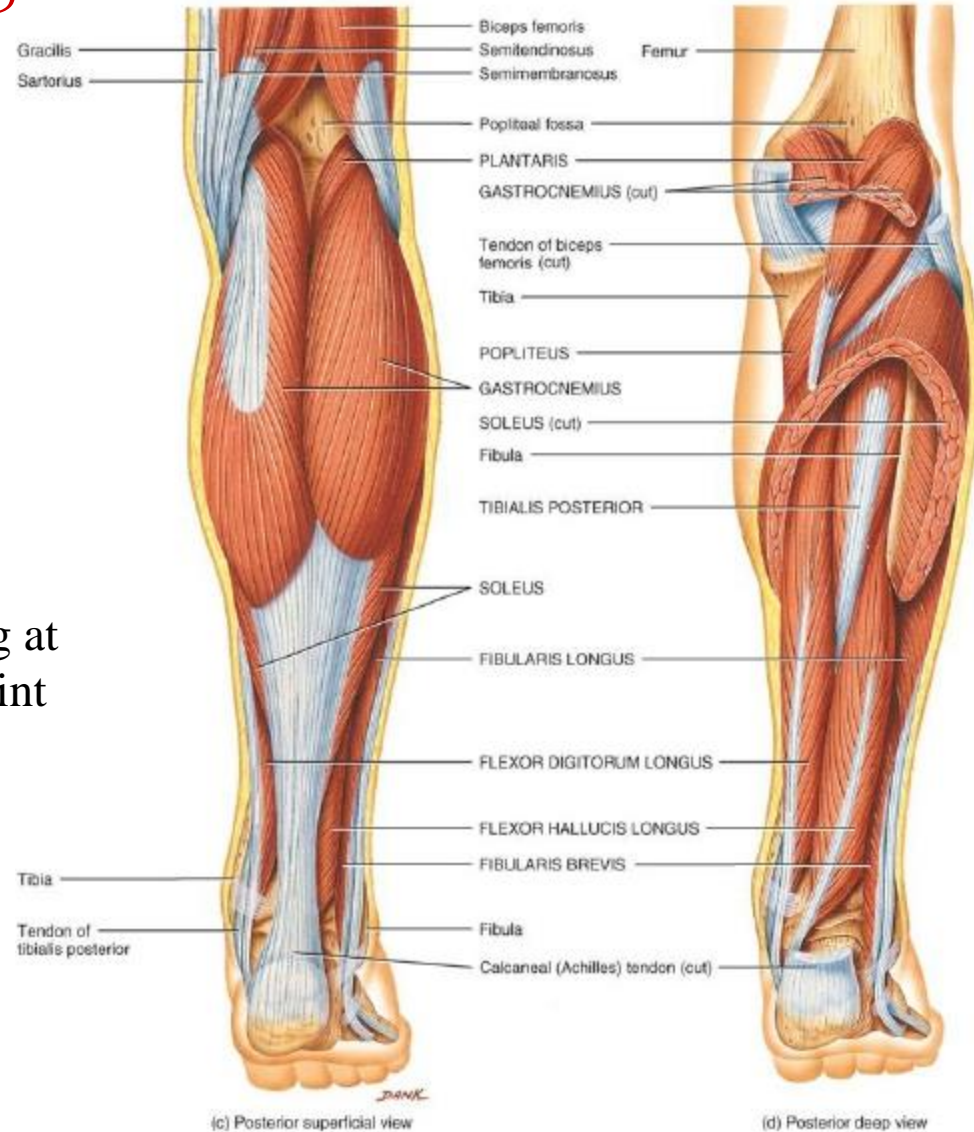
# Muscles of the Leg That Move the Foot and Toes

Superficial posterior compartment of the leg.

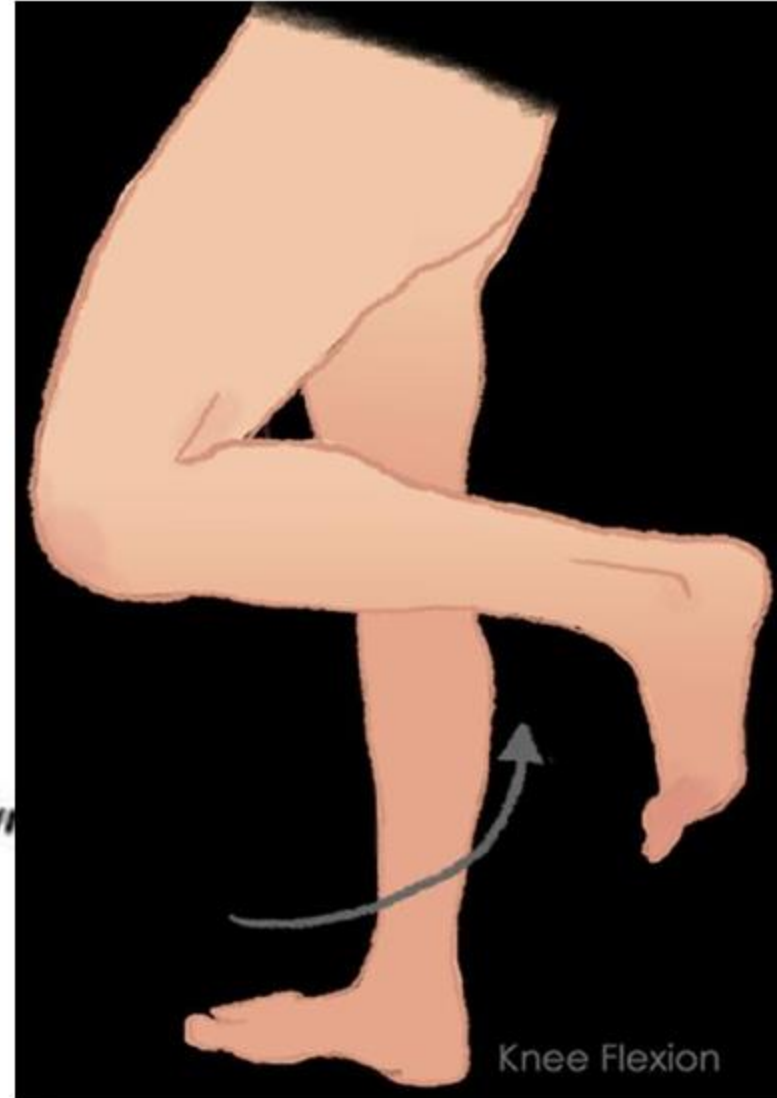
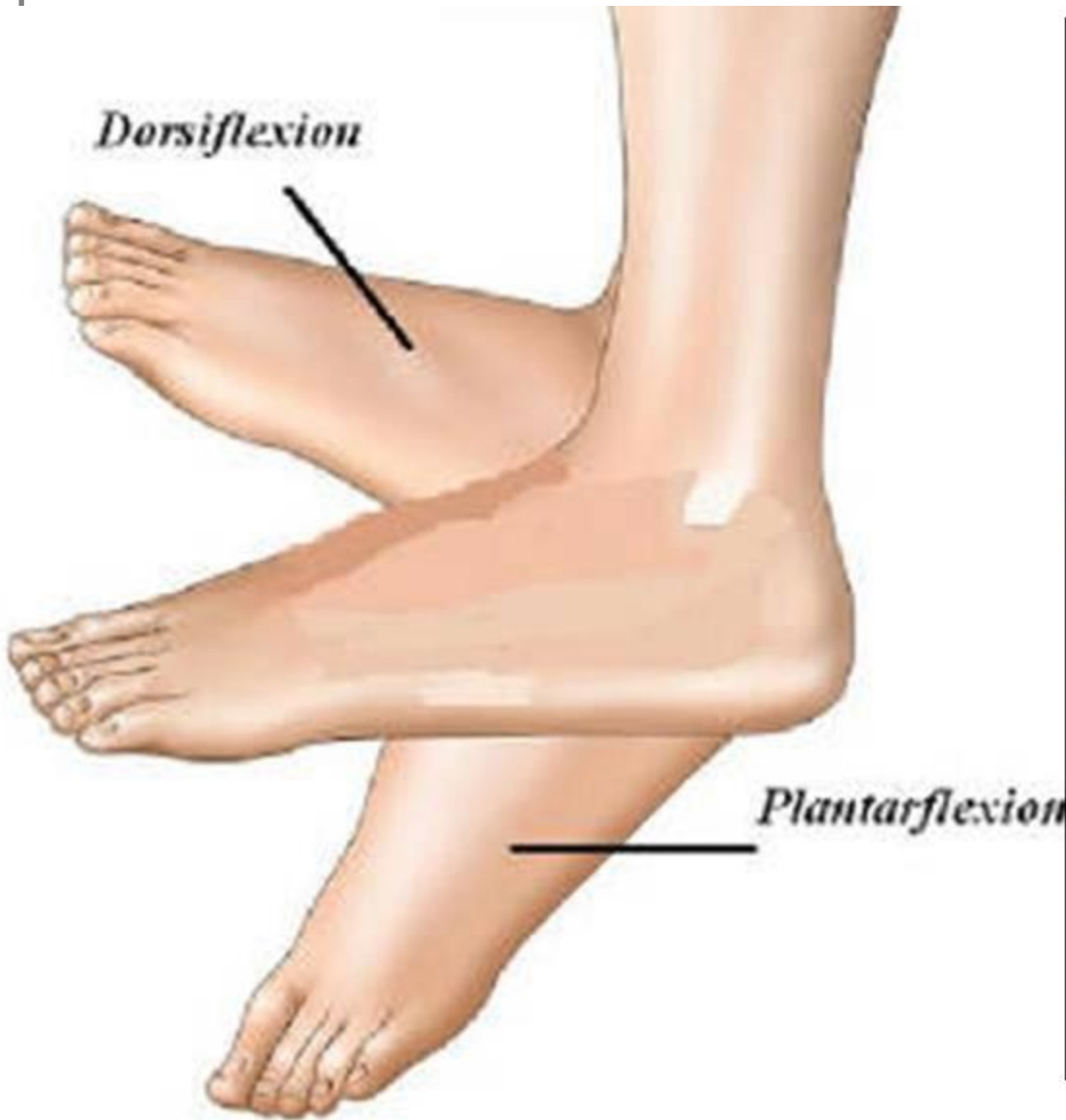
3 muscles insert onto calcaneus

1. **gastrocnemius**
2. **Plantaris**
3. **Soleus.**

**ALL Plantar flexe** foot at ankle joint



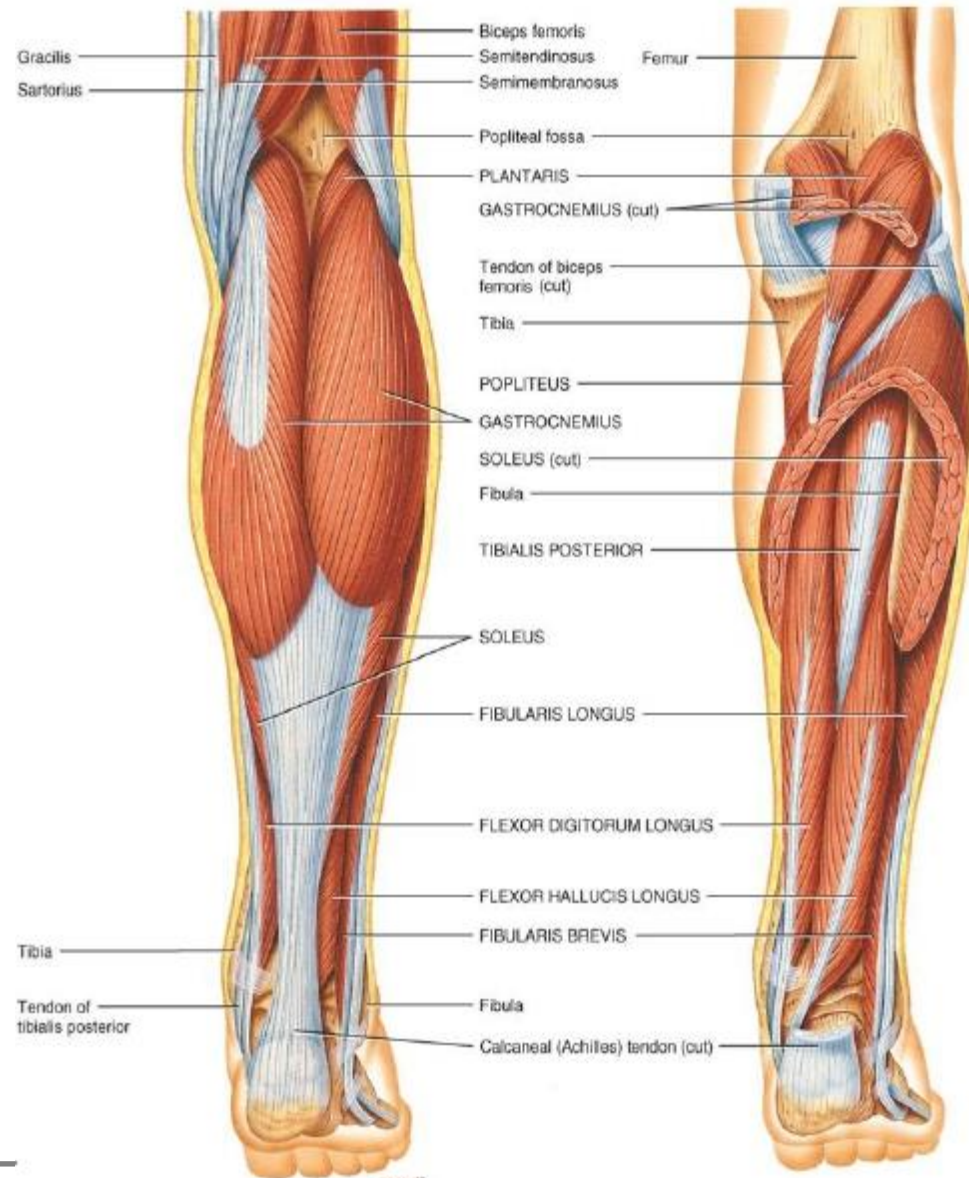
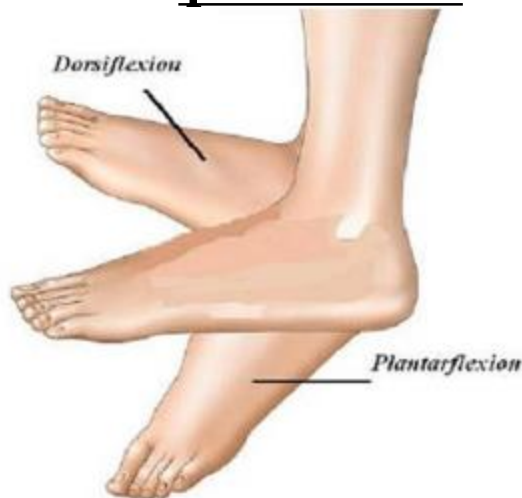
} Flex leg at knee joint



# 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