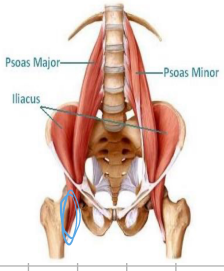
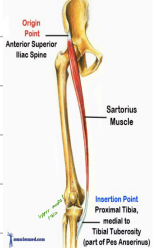
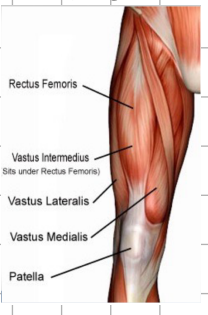


Summary of the lower limb

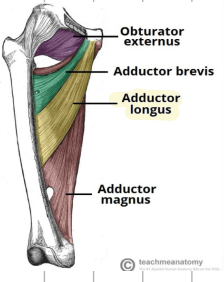
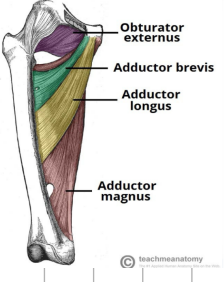
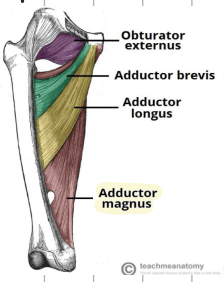

The Thigh is divided into three compartments: Anterior, Medial, Posterior.

1. Anterior Compartment of the Thigh.

	Origin	Insertion	NERVES	ACTION
<p>Iliopsoas</p> 	<p>Iliacus: Iliac fossa</p> <p>psoas Major: T12-15 Vertebrae</p>	<p>lesser trochanter of femur</p>	<p>Femoral Nerve</p> <p>Except psoas Major by L1, L2, L3</p>	<p>Flexes the thigh</p> <p>Psoas major Flexes trunk on thigh; if thigh is fixed.</p>
<p>Sartorius</p> 	<p>anterior superior iliac spine</p>	<p>Upper medial surface of shaft of tibia (SGS)</p>	<p>Femoral Nerve</p>	<p>Tailor position</p> <p>The thigh: Flexion, abduction, lateral rotation.</p> <p>The Knee: Flexion and medial rotation</p>
<p>Quadriceps Femoris</p> 	<p>Has 4 heads with different origin</p> <ol style="list-style-type: none"> 1. Rectus Femoris 2. Vastus intermedius 3. Vastus Lateralis 4. Vastus Medialis 	<p>Same insertion</p> <p>patella and tibia tuberosity via patellar ligament</p>	<p>Femoral Nerve</p>	<p>Extends Knee</p> <p>Rectus Femoris: Flexes thigh also.</p>


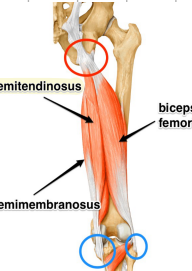


- All are innervated by the Femoral Nerve except Psoas Major by L1, 2, 3.

2. Medial Compartment of the thigh (Adductors)

	Origin	Insertion	NERVES	ACTION
<p>Aductor longus</p> 	—	—	OBTURATOR NERVE	Adductors: Adduct the thigh
<p>Adductor brevis</p> 	—	—	OBTURATOR NERVE	Adductors: Adduct the thigh
<p>Adductor magnus (pubic head)</p> 	—	—	OBTURATOR NERVE	Adductors: Adduct the thigh
<p>Gracilis</p> 	—	—	OBTURATOR NERVE	Adducts thigh, Flexes and medial rotates the leg.

- All innervated by **OBTURATOR Nerve**.

3. Posterior Compartment of thigh - Hamstring

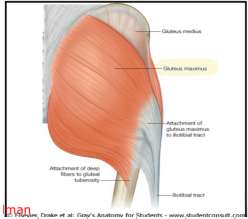
	Origin	Insertion	NERVES	ACTION
<p>Biceps femoris (long and short head)</p> 	—	—	<ul style="list-style-type: none"> - Long head: Tibial branch of Sciatic Nerve. - Short head: common peroneal branch of sciatic nerve 	<ul style="list-style-type: none"> - Flexes the knee - Lateral muscle: rotate the knee laterally. - Medial muscle: rotate the knee medially - Long head: extends the hip.
<p>Semitendinosus</p> 	—	—	Tibial branch of Sciatic Nerve	<ul style="list-style-type: none"> - Extends the hip - Lateral muscle: rotate the knee laterally. - Medial muscle: rotate the knee medially.
<p>Semimembranosus</p> 	—	—	Tibial branch of Sciatic Nerve	<ul style="list-style-type: none"> - Extends the hip - Lateral muscle: rotate the knee laterally. - Medial muscle: rotate the knee medially.
<p>Adductor magnus (Ischial head)</p> 	—	—	Tibial branch of Sciatic Nerve	<ul style="list-style-type: none"> - Extends the hip - Lateral muscle: rotate the knee laterally. - Medial muscle: rotate the knee medially.

- All innervated by Tibial branch of Sciatic Nerve except short head of biceps femoris by common peroneal branch of Sciatic Nerve.
- All extends the hip except short head of biceps.

Gluteal Muscles

Origin	Insertion	NERVES	ACTION
 <p>Gluteus Maximus</p>		Inferior Gluteal Nerve	Extends and lateral rotation of thigh.
 <p>Gluteus Medius</p>		Superior Gluteal Nerve	- Abduction - Prevent tilting of the pelvis when the opposite limb is raised.
 <p>Gluteus Minimus</p>		Superior Gluteal Nerve	- Abduction - Prevent tilting of the pelvis when the opposite limb is raised.

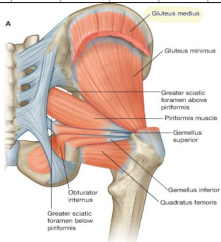
Gluteus Maximus



Inferior
Gluteal
Nerve

Extends and lateral rotation of thigh.

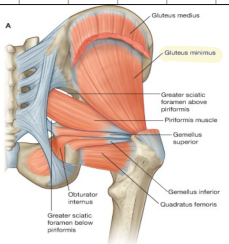
Gluteus Medius



Superior
Gluteal
Nerve

- Abduction
- Prevent tilting of the pelvis when the opposite limb is raised.

Gluteus Minimus



Superior
Gluteal
Nerve

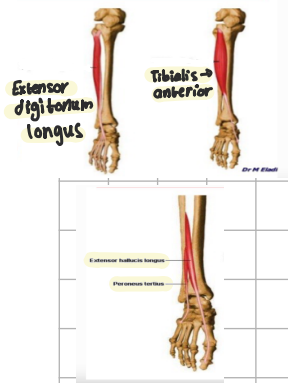
- Abduction
- Prevent tilting of the pelvis when the opposite limb is raised.

- All are innervated by the Superior Gluteal Nerve Except Gluteal maximus by Inferior Gluteal nerve.

The leg is divided into Anterior, lateral and Posterior compartments

1. Muscles of the Anterior Compartment

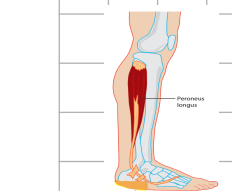
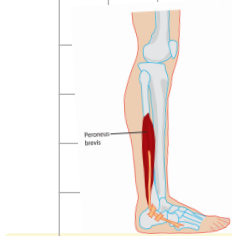
	Origin	Insertion	NERVES	ACTION
1. Tibialis Anterior 2. Extensor hallucis longus. 3. Extensor digitorum longus. 4. Peroneus tertius	—	—	Deep Fibular Nerve	All DorsiFlexion of the Foot Plus. Tibialis: inversion of the Foot. Hallucis: Extends big toe. Digitorum: Extends Four toes. Peroneus: eversion of the Foot.



- All are innervated by Deep Fibular nerve.

2. Muscles of the Lateral Compartment.

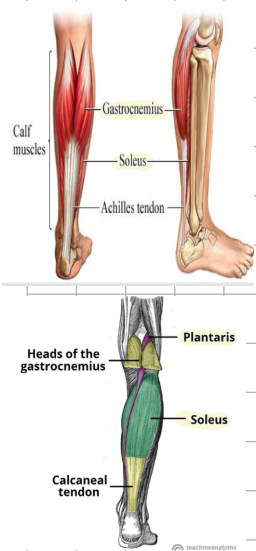
	Origin	Insertion	NERVES	ACTION
Fibularis Peroneus brevis	—	—	Superficial Fibular Nerve	PlantarFlexion and eversion of Foot.
Fibularis Peroneus longus	—	—	Superficial Fibular Nerve	PlantarFlexion and eversion of Foot.




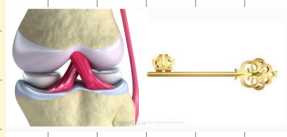

- All are innervated by the superficial Fibular nerve.

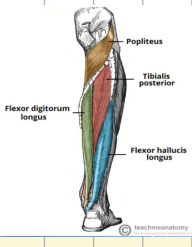
Posterior compartment is divided into superficial and deep.

3. Posterior Compartment (Superficial).

	Origin	Insertion	NERVES	ACTION
<ul style="list-style-type: none"> - Gastrocnemius - Soleus - Plantaris 	<ul style="list-style-type: none"> - Gastrocnemius 2 heads - Soleus - Plantaris 	tendo Calcaneus into of Calcaneus bone of the Foot.	All are innervated by Tibial Nerve	<ul style="list-style-type: none"> - Plantar Flex Foot - Weak Knee Flexion

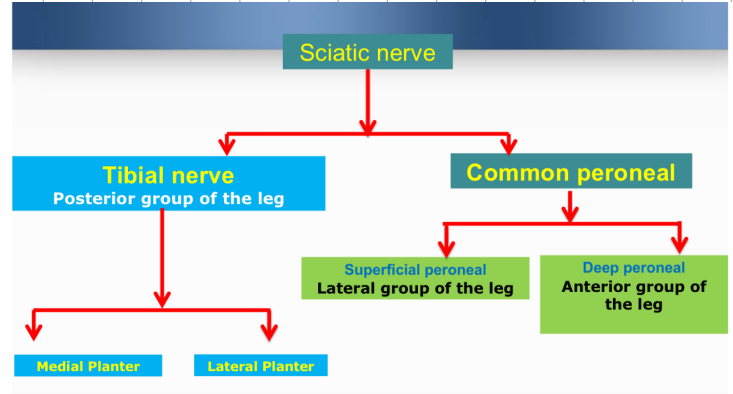
3. Posterior Compartment (Deep).

	Origin	Insertion	NERVES	ACTION
Popliteus 	—	—	—	 <ul style="list-style-type: none"> - Flex - Unlock the Knee.
<ul style="list-style-type: none"> - Flexor digitorum longus - Flexor hallucis longus - Tibialis Posterior 	—	—	—	<ul style="list-style-type: none"> - all Plantar Flexion of the foot Plus - Flexor digitorum longus: Flexes the toes. - Flexor hallucis longus: Flexes big toe

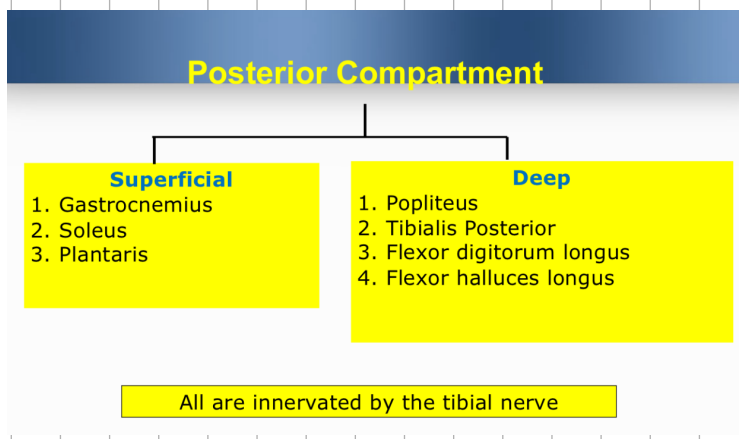
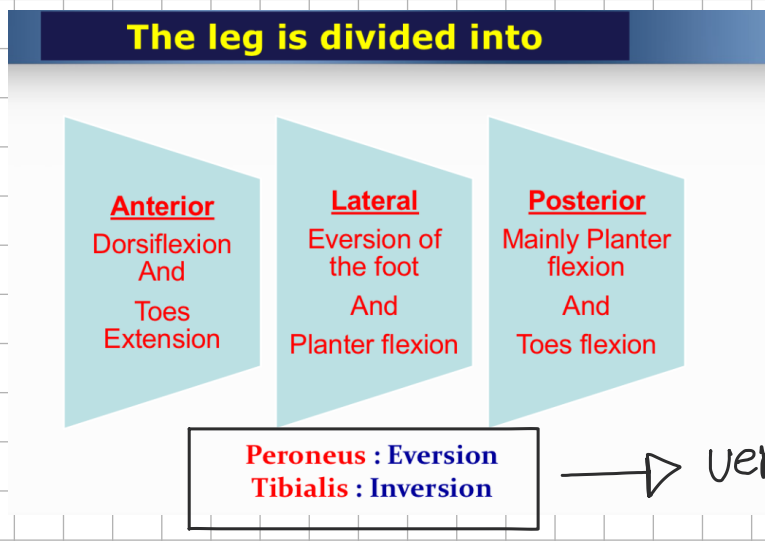


-Tibialis posterior: inversion of Foot.

The rest of the Slides :



Thigh compartments			
	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.



CLINICAL ANATOMY

- I.M (Intramuscular injection)

Which the most suitable quadrangle for IM injection?

Upper lateral quadrant

Sciatic nerve

Dr Ahmed Salman