

# Lower Limb Muscles

thigh & Gluteal region



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# ANTERIOR FASCIAL COMPARTMENT OF THE THIGH

Muscle	Origin	Insertion	Nerve Supply	Action
Sartorius	Anterior superior iliac spine	Upper medial surface of shaft of tibia	Femoral nerve	→ Flexes, abducts, laterally rotates thigh <u>at hip joint</u> . → Flexes and medially rotates leg <u>at knee joint</u> .
Pectineus	Superior ramus of pubis	Upper end of linea aspera of shaft of femur	Femoral nerve	Flexes and adducts thigh <u>at hip joint</u>
Psoas Major	Transverse processes, bodies, and intervertebral discs of the 12th thoracic and five lumbar vertebrae	Lesser trochanter of femur	Lumbar plexus	it Flexes thigh on trunk; if thigh is fixed (The insertion is fixed while the origin is moving) It flexes the trunk on thigh as in sitting up from lying down.
iliacus	Iliac fossa of hip bone	Lesser trochanter of femur	Femoral nerve	<u>sit-up' exercise</u>

Muscle	Origin	Insertion	Nerve Supply	Action
<p>The quadriceps femoris muscle :</p> <p>1- The rectus femoris</p>	<p>Originates by two heads  <b>Straight head</b> from anterior inferior iliac spine  <b>Reflected head</b> from ilium above acetabulum</p>	<p>patella and, via the ligamentum patellae, to the tibial tuberosity (the real insertion)</p>	<p>femoral nerve</p>	<p>Extends the leg at knee joint;</p> <p>flexes thigh at hip joint (only the rectus femoris head).</p>
<p>2- The vastus intermedius</p>	<p>Anterior and lateral surfaces of shaft of femur</p>			
<p>3- The vastus lateralis  4- The vastus medialis</p>	<p>Upper end and shaft of femur (linear origin)</p>			

# MEDIAL FASCIAL COMPARTMENT OF THE THIGH

Muscle	Origin	Insertion	Nerve Supply	Action
Adductor longus	body of pubis, medial to pubic tubercle	Posterior surface of shaft of femur (linea aspera)	Obturator nerve	Adducts thigh <b>at hip joint</b>
Adductor brevis	Inferior ramus of pubis	Posterior surface of shaft of femur (linea aspera)	Obturator nerve	Adducts thigh <b>at hip joint</b>
Adductor magnus (pubic part)	Ischio-pubic ramus	mainly linea aspera, gluteal tuberosity and medial supracondylar line	Obturator nerve	Adducts thigh <b>at hip joint</b>
Gracilis	inferior ramus of pubis, ramus of ischium	Upper part of shaft of tibia on medial surface (SGS) area	Obturator nerve	→ Adducts thigh <b>at hip joint</b> → flexes leg <b>at knee joint</b>
Obturator externus	Outer surface of obturator membrane and pubic and ischial rami	Medial surface of greater trochanter	Obturator nerve	Laterally rotates thigh <b>at hip joint</b>

# POSTERIOR FASCIAL COMPARTMENT OF THE THIGH

Muscle	Origin	Insertion	Nerve Supply	Action
Biceps femoris	<p><u>two heads</u>  <b>1-Long head:</b>                      ischial tuberosity</p> <p><b>2-Short head:</b>                      linea aspera,                      lateral supracondylar                      ridge of shaft                      of femur</p>	Head of fibula	<p><b>Long head:</b>                      tibial portion of sciatic nerve</p> <p><b>Short head:</b>                      common peroneal portion of sciatic nerve</p>	<p>→Flexes and laterally rotates leg <b>at knee joint</b></p> <p>→<b>long head</b> also extends thigh <b>at hip joint</b></p>
Semitendinosus	Ischial tuberosity	Upper part of medial surface of shaft of tibia (SGS area)	Tibial portion of sciatic nerve	<p>→Flexes and medially rotates leg <b>at knee joint</b></p> <p>→Extends thigh <b>at hip joint</b></p>
Semimembranosus	Ischial tuberosity	Medial condyle of tibia	Tibial portion of sciatic nerve	<p>→Flexes and medially rotates leg <b>at knee joint</b></p> <p>→ extends thigh <b>at hip joint</b></p>
Adductor magnus (hamstring part or ischial part)	Ischial tuberosity	Adductor tubercle of femur	Tibial portion of sciatic nerve	Extends thigh <b>at hip joint</b>

# MUSCLES OF THE GLUTEAL REGION

Muscle	Origin	Insertion	Nerve Supply	Action
Gluteus maximus	<p>1-Ilium ( area behind the posterior gluteal line)</p> <p>2 -Back of sacrum and coccyx</p> <p>3- Back of sacrotuberous ligament</p>	<p><b>1- The superficial three -fourths</b> are inserted into the iliotibial tract</p> <p><b>2-The lower deep part</b> is inserted into the gluteal tuberosity of femur</p>	Inferior gluteal nerve, L5,S1,2	<p>→ Extends thigh, some lateral rotation (main extensor of the hip joint)</p> <p>→ Supports the Extended knee joint through Iliotibial tract</p> <p>→ Plays an important role in climbing cycling and upstairs</p>
Gluteus medius	Ilium	Greater trochanter of femur	Superior gluteal nerve	<p>→ Abduction (main abductor of the hip joint)</p> <p>→ Medial rotation (anterior fibers)</p> <p>→ Both muscle contract reflex on each side alternatively during walking to prevent tilting of the pelvis to the unsupported side</p>

Muscle	Origin	Insertion	Nerve Supply	Action
<p><b>Gluteus minimus</b></p>	<p>Ilium</p>	<p>Greater trochanter of femur</p>	<p>Superior gluteal nerve</p>	<p>→ Abduction (main abductor of the hip joint)</p> <p>→ Medial rotation (anterior fibers)</p> <p>→ Both muscle contract reflex on each side alternatively during walking to prevent tilting of the pelvis to the unsupported side</p>
<p><b>Short Lateral rotator muscles</b></p> <p>1-Piriformis</p> <p>2-Superior gemellus</p> <p>3-Obturator internus</p> <p>4-Inferior gemellus</p> <p>5-Quadratus femoris</p> <p>6-Obturator externus</p>	<p>-----</p>	<p>-----</p>	<p>Sacral Plexus</p>	<p><b>lateral rotation of the thigh at hip joint</b></p>

Muscle	Origin	Insertion	Nerve Supply	Action
Tensor fasciae latae	Iliac crest	Iliotibial tract	Superior gluteal nerve L4,5,S1	Assist gluteus maximus in extending <b>the knee joint</b>

ثم تأتي إرادة الله فتيسر مُعسراتك  
 وتتمهدُ الطُّرق ، وتُفتح مغاليقها ، وتُهيأ أسبابها  
 وتتجمل لتأتيك مصحوبةً بعطائه ! فلا يغرنك تشتتها الآن ،  
 ولا تحزن لاستحالتها  
 فوالله لو كان بينك وبينها عوامق البحار وشواهد الجبال  
 وكانت خيراً لك لآتى بها الله" ♥