

<i>MSS</i>	<i>NERVE SUPPLY</i>	<i>ACTION</i>	<i>ORIGIN</i>	<i>INSERTION</i>
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Muscles of Front of Thigh

<i>Sartorius</i>	<i>Femoral n</i>	<i>flexion & medial rotation on knee flexion, abduction & lat. Rotation on Hip (tailor's position = cross leg position).</i>	<i>ASIS</i>	<i>upper part of medial surface of tibia</i>
<i>Iliopsoas</i>	<i>Psoas major: branches from lumbar plexus (L1,2,3). Iliacus: Femoral n</i>	<i>main flexors of the hip joint.</i> <i>they flex thigh on trunk above above they flex trunk on thigh from below</i>	<i>Psoas major : lumbar vertebrae Iliacus: iliac fossa</i>	<i>lesser trochanter of femur</i>
<i>Quadriceps Femoris</i>	<i>FEMORAL NERVE</i>	<i>main extensor of the knee joint</i> <i>Rectus femoris helps flexion of hip joint as its origin is above the hip joint</i>	<i>1-Rectus Femoris</i> <i>Straight head :AIIIS Reflected head: groove above acetabulum</i> <i>2-Vastus Lateralis +3-Vastus medialis</i> <i>•intertrochanteric line •Linea aspera</i> <i>4-Vastus intermedius</i> <i>upper ¾ of anterior & lateral surface of shaft of femur</i>	<i>quadriceps tendon into base & margins of patella then through ligamentum patellae into tibial tuberosity</i>

Medial side of the thigh

<i>Pectineus</i>	<i>femoral n</i>	<i>Adduction & flexion of thigh at hip</i>	<i>superior pubic ramus.</i>	<i>In line extending from lesser trochanter to linea aspera.</i>
<i>Adductor longus</i>	<i>anterior division of obturator n</i>	<i>adduction & med. rotation of thigh</i>	<i>Front of pubic bone</i>	<i>Linea aspera</i>
<i>Gracilis</i>		<i>Adduction of thigh Flexion of knee & medial rotation of leg</i>	<i>pubic bone.</i>	<i>upper part of medial surface of tibia between sartorius (ant.) & semitendinosus (post.) (SGS)</i>
<i>Adductor brevis</i>	<i>anterior & posterior division of</i>	<i>adduction & med. rotation of thigh</i>	<i>from pubic bone.</i>	<i>into line extending from lesser trochanter to upper</i>

	obturator n			part of linea aspera
Adductor magnus * main adduction is by the 3 adductors above	Pubic part: <u>posterior division of obturator n</u> • Ischial part: <u>tibial part of sciatic n</u>	Pubic part: adduction & med rotation of thigh Ischial part: extension of thigh N.B. pubic part belongs to adductors while ischial part belongs to hamstrings (muscles of back of thigh)	.Pubic part: pubic arch (ischio-pubic ramus *.Ischial part: Ischial tuberosity	Pubic part : gluteal tuberosity & linea aspera. * Ischial part : adductor tubercle of femur
<i>Muscles of the gluteal region</i>				
Gluteus maximus	inferior gluteal nerve	Main extensor of hip. .Lat. Rotation of thigh Through its attachment to iliotibial tract, it stabilizes femur on tibia & maintains extension of knee during standing when quadriceps is relaxed	Gluteal surface of ilium • Back of sacrum & coccyx • Back of sacrotuberous ligament	Superficial ¾ into iliotibial tract • Deep ¼ into gluteal tuberosity
Gluteus medius + Gluteus minimis	superior gluteal nerve	Main abductors of thigh Their anterior fibers are medial rotators of thigh Main medial rotators of hip is the Ant. Fibers of Glut.medius & minimis + tensor fasciae latae	gluteal surface of ilium	G. minimis at anterior surface (front) of greater trochanter of femur and G.medius at the lateral surface
Tensor fasciae latae		Through the iliotibial tract → it maintains the extension of the knee & steadies the Femur on the Tibia like Gluteus maximus	anterior 5 cm of outer lip of iliac crest	iliotibial tract (fascia)
Piriformis	ventral rami of S1,2 (sacral plexus)	6 lateral rotators of the hip.	front (pelvic surface) of middle 3 pieces of sacrum (S 2,3,4).	upper border of greater trochanter
Obturator internus	nerve to obturator internus (from sacral plexus)		pelvic surface of obturator membrane & margins of obturator foramen.	greater trochanter of femur
Gemellus superior			upper margin of lesser sciatic notch	blends with upper part of tendon of obturator internus ☑ greater trochanter.
Gemellus inferior	N. to quadratus femoris		lower margin of lesser sciatic notch	blends with lower part of tendon of obturator internus ☑ greater trochanter.
Quadratus Femoris			Ischial tuberosity	quadrate tubercle in intertrochanteric

				crest
<i>Obturator externus</i>	post division of obturator n		outer margin of obturator foramen & outer surface of obturator membrane	trochanteric fossa of greater trochanter of femur.

Muscles of Back of thigh(hamstrings)

<i>Laterel Biceps femoris</i>	Long head: tibial part of sciatic N. •Short head: common peroneal part of sciatic N.	Extension of hip Flexion of knee Lateral rotation of the semiflexed knee plays a role in locking of knee * flexion of knee mainly by the hamstrings	Long head: ischial tuberosity •Short head: linea aspera	styloid process (head) of fibula.
<i>Medial Semitendinosus</i>	tibial part of sciatic N.	Extension of hip joint Flexion of knee joint Medial rotation of semiflexed knee * medial rotation of knee mainly by semitendinosus/semimembranosus/ popliteus	with long head of biceps (by common origin) from ischial tuberosity	upper part of medial surface of tibia behind tendons of sartorius & gracilis (SGS)
<i>Medial Semimembranosus</i>				Groove on back of medial condyle of tibia
<i>Ischial part of adductor magnus</i>		extension of thigh (hip)		adductor tubercle of femur

Anterior compartment of leg/ extensors of ankle G

<i>Tibialis Anterior</i>	deep peroneal n	Dorsiflexion i nversion of foot	upper 2/3 of lat surface of tibia	medial cuneiform & adjacent part of base of 1st metatarsal bone
<i>Extensor Hallucis Longus</i>		Dorsiflexion extension of big toe	middle 2/4 of ant (medial) surface of fibula	Base of terminal phalanx of big toe.
<i>Extensor digitorum longus</i>		Dorsiflexion extension of lat 4 toes	upper ¾ of ant. (medial) surface of fibula	joined by tendons of extensor digitorum brevis to form extensor expansion @ middle & terminal phalanges of lat. 4 toes
<i>Peroneus Tertius (may be absent)</i>		Dorsiflexion e version of foot	lower ¼ of ant (medial) surface of fibula	base of 5 th metatarsal bone
<i>Extensor Digitorum</i>		Extension of	upper surface of	4 tendons for

<i>Brevis</i>		<i>metatarsophalangeal joint of big toe & extension of all joints of 2nd, 3rd, 4th toes.</i>	<i>Calcaneus.</i>	<i>medial 4 toes</i>
<i>extensor hallucis brevis: <u>part of E.D.B</u></i>			<i>upper surface of Calcaneus as it is a slip of E.D.Brevis</i>	<i>proximal phalanx of big toe/both E.H.B and E.D.B join extensor expansion: middle & distal phalanges of 2nd 3rd& 4th toes.</i>

Muscles of Lateral Compartment of Leg /flexors of ankle G

<i>Peroneus Longus</i>	<i>Superficial peroneal N</i>	<i>Eversion of foot. Plantar flexion of foot.</i>	<i>Upper 2/3 of the lateral surface of the fibula.</i>	<i>Its tendon passes deep to peroneal retinacula, to be inserted in the base of the 1st metatarsal bone & adjoining part of medial cuneiform bone</i>
<i>Peroneus Brevis</i>			<i>Lower 2/3 of the lateral surface of the fibula.</i>	<i>Its tendon passes deep to peroneal retinacula to end into the tuberosity of the base of the 5th metatarsal bone</i>

The Superficial muscles of the calf (Posterior Compartment of leg) /flexors of ankle G

<i>Gastrocnemius</i>	<i>Tibial nerve</i>	<i>1) The superficial muscles of the calf are strong plantar flexor of ankle Joint (important in walking & running). 2) During standing, calf muscles stabilize the leg on the foot specially soleus. 3) Gastrocnemius and plantaris are knee flexors. (only when the foot is on the ground). One flexion at a time 4) Contraction of the calf muscles (calf pump) plays an important role in venous return from the lower limb specially the soleus which is known as peripheral venous heart</i>	<i>Origin: has 2 heads 1. medial head: arises from the popliteal surface of femur above the medial condyle. 2. lateral head: arises from lateral surface of lateral femoral condyle.</i>	<i>The 2 heads unite in the middle of the leg to form common tendon called tendocalcaneus that is attached to the middle part of the posterior surface of calcaneus.</i>
<i>Plantaris</i>			<i>Lower part of the lateral supracondylar line</i>	<i>Its long tendon fuses with tendocalcaneus or inserts into calcaneus medial to it</i>
<i>Soleus</i>			<i>Has a curved origin from : back of the head of fibula . upper 1/4 of post surface of fibula. Tendinous arch between tibia&fibula. Soleal line of tibia . middle 1/3 of medial border of tibia.</i>	<i>by strong tendon that joins that of gastrocnemius to form tendocalcaneus which is the thickest & strongest tendon in the body.</i>

The Deep muscles of the calf /flexors of ankle G

<i>Popliteus</i>	Tibial nerve	<u>knee</u> flexion unlocking the knee <i>(slight medial rotation of the tibia at beginning of flexion of knee)</i>	By a strong rounded tendon from the popliteal groove on the lateral surface of lateral femoral condyle	Its tendon pierces the capsule of the knee joint and gives the fleshy triangular muscle which is attached to the posterior surface of tibia above the soleal line
<i>Flexor Digitorum Longus</i>		1) Flexion of the metatarsophalangeal and interphalangeal joints of the lateral 4 toes. 2) Assists in plantar flexion of the foot. 3) Supports longitudinal arch of foot (mainly the medial). 4) Weak inverter of the foot	Posterior surface of tibia	Its tendon passes deep to flexor retinaculum to the sole of the foot where it divides into 4 slips which are inserted into the distal phalanges of the lateral 4 toes while F. Hallucis. L. is inserted into the base of the distal phalanx of the big toe.
<i>Flexor Hallucis Longus</i>		1) Flexion of all joints of big toe. 2) Assists in plantar flexion of the foot. 3) Inversion of the foot. 4) Supports the medial longitudinal arch of foot	posterior surface of the fibula	
<i>Tibialis Posterior</i>		It is a strong inverter and powerful plantar flexor of the foot. 2) It supports the medial longitudinal and transverse arches of the foot.	posterior surface of tibia and fibula	its tendon passes deep to the flexor retinaculum & enters the sole of the foot where it divides into 2 parts : a) larger medial part is attached to the tuberosity of navicular bone & medial cuneiform bone. b) smaller lateral part is attached by many slips to all tarsal bones except talus & bases of 2nd, 3rd & 4th metatarsal bones

Sole of Foot

<i>Abductor hallucis / medial</i>	Med. plantar N.	Abduction of big toe.	First Layer (3 Short muscles)	
<i>Flexor digitorum brevis / middle</i>		<i>flexion of lat. 4 toes (metatarsophalangeal & prox. interphalangeal joints).</i>		
<i>Abductor digiti minimi / lateral</i>	Lat. plantar N.	Abduction little toe.		
<i>Flexor digitorum</i>	Lat. plantar	<i>Pulls the tendon to help in the</i>	Second Layer	* Flexor Digitorum

<i>accessories/ quadratus plantea</i>	N. Except the 1st lumbrical by med. plantar n	<i>flexion of the lat. 4 toes</i>	(2 Long tendons & 2 short muscles) Tendons : Flexor Digitorum Longus / Flexor hallucis longus	<i>Longus tendon is the origin of lumbricals and the insertion of quadratus plantea * lumbricals insertion is extensor expansion of lat.4 toes</i>
4 Lumbrical muscles		<i>They flex metatarsophalangeal joints & extend interphalangeal joints of lat. 4 toes</i>		
<i>Flexor hallucis brevis</i>	Med.plantar N.	<i>Flexion of the big toe</i>	Third Layer (3 Short muscles)	Has 2 heads; oblique & transverse heads
<i>Flexor digiti minimi</i>	Lat.plantar N.	<i>Flexion of the little toe</i>		
<i>Adductor hallucis</i>		<i>Adduction of the big toe its transverse head helps in maintaining transverse arch of foot</i>		
3 plantar interossei P1 → acts on 3 rd toe. P2 → acts on 4 th toe. P3 → acts on little toe	Lat.plantar N.	Adduction of the (Pad) lat. 3 toes. <i>+ Flexion of metatarsophalangeal Js. & extension of interphalangeal Js. of the lat. 4 toes.</i>	Fourth Layer (2 Long tendons & 2 groups of short muscles) tendons : Tibialis Posterior/ Peroneus Longus	Unipennate muscles which arise from metatarsal bone of corresponding toe & are inserted in extensor expansion of lat. 3 toes
4 dorsal interossei D1 → acts on 2 nd toe. D2 → acts on 2 nd toe. D3 → acts on 3 rd toe. D4 → acts on 4 th toe		abduct the (Dab) middle 3 toes. <i>+ Flexion of metatarsophalangeal Js. & extension of interphalangeal Js. of the lat. 4 toes.</i>		

Done by Leen Abuserhan