

Muscles

I. Anterior femoral muscles

- A. Articularis genu
 - attachments – from anterior distal femoral shaft to proximal synovial membrane of knee
 - actions – retracts the suprapatellar bursa during leg extension
 - innervation – femoral nerve
- B. Iliacus
 - attachments – from iliac fossa, iliac crest & sacrum to the lesser trochanter of the femur
 - actions – flexes thigh and stabilizes hip joint
 - innervation – femoral nerve & lumbar plexus branches
- C. Psoas (L. muscle of the loin)
 - attachments – from anterior lumbar transverse processes vertebral bodies & discs to the lesser trochanter of the femur
 - actions – flexes thigh and stabilizes hip joint
 - innervation – ventral rami L1–3
- D. Rectus femoris (L2, 3, 4) (L. straight)
 - attachments – from anterior inferior iliac spine and groove superior to the acetabulum to the base of the patella
 - actions – flexes thigh, and extends leg
 - innervation – femoral nerve
- E. Sartorius (L. sartor, a tailor)
 - attachments – from anterior superior iliac spine to the medial aspect of the proximal tibia
 - actions – flexes, abducts & laterally rotates thigh, and flexes leg
 - innervation – femoral nerve
- F. Tensor fasciae latae
 - attachments – from anterior superior iliac spine & adjacent iliac crest to iliotibial tract
 - actions – abducts, flexes & medially rotates thigh, and assists in maintaining extended leg
 - innervation – superior gluteal nerve
- G. Vastus intermedius (L2, 3, 4)
 - attachments – from the anterior aspect of the proximal 2/3rds of the femoral shaft to the base of the patella
 - actions – extends leg
 - innervation – femoral nerve
- H. Vastus lateralis (L2, 3, 4)
 - attachments – from lateral/posterior femur to the lateral border of the patella
 - actions – extends leg
 - innervation – femoral nerve
- I. Vastus medialis (L2, 3, 4)
 - attachments – from medial/posterior femur to the medial border of the patella
 - actions – extends leg
 - innervation – femoral nerve

II. Medial Femoral Muscles

- A. Adductor brevis
 - attachments – from inferior pubic ramus to proximal posterior femur
 - actions – adducts thigh
 - innervation – obturator nerve
- B. Adductor longus
 - attachments – from pubic crest to midshaft posterior femur
 - actions – adducts & flexes thigh
 - innervation – obturator nerve
- C. Adductor magnus
 - attachments – from ischial tuberosity to posterior femur & adductor tubercle
 - actions – adducts (adductor part) & extends (hamstring part) thigh
 - innervation – obturator nerve (adductor region) & tibial division (hamstring region) of the sciatic nerve
- D. Gracilis (L. scanty)
 - attachments – from inferior pubic ramus to the proximal, medial tibia
 - actions – flexes & medially rotates the leg, and adducts thigh
 - innervation – obturator nerve

- E. Pectineus
attachments – from superior pubic ramus to proximal posterior femoral shaft
actions – adducts & flexes thigh
innervation – femoral nerve & accessory obturator nerve when this nerve is present
- F. Obturator externus
attachments – from the external aspect of rim of obturator foramen to the trochanteric fossa
actions – laterally rotates thigh
innervation – obturator nerve

III. Muscles of the Gluteal Region

- A. Gemellus inferior (L. twin)
attachments – from the ischial tuberosity to the obturator internus tendon
actions – laterally rotates thigh
innervation – nerve to the quadratus femoris
- B. Gemellus superior
attachments – from the ischial spine to the obturator internus tendon
actions – laterally rotates thigh
innervation – nerve to the obturator internus
- C. Gluteus maximus
attachments – from the aponeurosis of the erector spinae, sacrum, sacrotuberous ligament & posterior gluteal line (innominate) to gluteal tuberosity of the femur & the iliotibial tract
actions – extends & laterally rotates thigh, & tenses fascia lata (iliotibial tract)
innervation – inferior gluteal nerve
- D. Gluteus medius
attachments – from the external iliac surface to the lateral aspect of the greater trochanter
actions – abducts & medially rotates thigh; and keeps the pelvis level when opposite leg is raised
innervation – superior gluteal nerve
- E. Gluteus minimus
attachments – from the external iliac surface to the anterolateral aspect of the greater trochanter
actions – abducts & medially rotates thigh; and keeps the pelvis level when opposite leg is raised
innervation – superior gluteal nerve
- F. Obturator internus
attachments – from the anterolateral wall of the pelvis & obturator membrane to the medial surface of the greater trochanter
actions – laterally rotates thigh
innervation – nerve to the obturator internus
- G. Piriformis
attachments – from the anterolateral sacrum & posterior inferior iliac spine to the upper border of the greater trochanter
actions – abducts & laterally rotates thigh
innervation – branches of the lumbosacral plexus
- H. Quadratus femoris
attachments – from the ischial tuberosity to the quadrate tubercle of the femur
actions – laterally rotates thigh
innervation – nerve to the quadratus femoris

IV. Posterior Femoral Muscles

- A. Biceps femoris
attachments – from the ischial tuberosity (long head) & distal posterior/lateral femur (short head) to the fibular head
actions – flexes leg (both heads) & extends thigh (long head only)
innervation – tibial (long head) & peroneal (short head) divisions of the sciatic nerve
- B. Semimembranosus
attachments – from ischial tuberosity to posterior aspect of the medial tibial condyle
actions – extends thigh & flexes leg
innervation – tibial division of the sciatic nerve
- C. Semitendinosus
attachments – from the ischial tuberosity to the proximal, medial tibia
actions – extends thigh & flexes leg
innervation – tibial division of the sciatic nerve

V. Anterior Crural Muscles

- A. Extensor digitorum longus
attachments – from the lateral tibial condyle, proximal fibula and interosseous membrane to the dorsal

digital expansions of toes 2–5

actions – dorsiflexes ankle, and extends digits 2–5 (IP & MP)

innervation – deep peroneal nerve

- B. Extensor hallucis longus (L. hallex, great toe)

attachments – from the mid-fibula & interosseous membrane to the distal phalangeal base of the 1st toe

actions – dorsiflexes ankle, and extends great toe (MP & IP)

innervation – deep peroneal nerve

- C. Peroneus tertius

attachments – from the distal fibula and interosseous membrane to the base of the 5th metatarsal

actions – dorsiflexes ankle, and everts foot

innervation – deep peroneal nerve

- D. Tibialis anterior

attachments – from the lateral condyle and proximal lateral tibia & interosseous membrane to the medial cuneiform & adjacent 1st metatarsal

actions – dorsiflexes ankle, and inverts foot

innervation – deep peroneal nerve

VI. Lateral Crural Muscles

- A. Peroneus longus

attachments – from the head & proximal fibula to the lateral aspects of the 1st metatarsal & adjacent medial cuneiform

actions – plantar flexes ankle, and everts foot

innervation – superficial peroneal nerve

- B. Peroneus brevis

attachments – from the distal fibula to the lateral base of the 5th metatarsal

actions – plantar flexes ankle, and everts foot

innervation – superficial peroneal nerve

VII. Posterior Crural Muscles

- A. Flexor digitorum longus

attachments – from the posterior tibia distal to the soleal line to the plantar surfaces of the distal phalangeal bases

actions – plantar flexes ankle, and flexes digits 2–5 (MP & IP)

innervation – tibial nerve

- B. Flexor hallucis longus

attachments – from the distal posterior fibular surface & interosseous membrane to the plantar aspect of the distal phalangeal base of the 1st toe

actions – plantar flexes ankle, and flexes great toe (MP & IP)

innervation – tibial nerve

- C. Gastrocnemius (S1,2) (G. gaster, belly + kneme, leg)

attachments – from the posterior aspect of the femoral condyles to the calcaneal tuberosity

actions – flexes leg, and plantar flexes ankle

innervation – tibial nerve

- D. Plantaris (L. planta, sole)

attachments – from the lateral supracondylar line to the calcaneal tuberosity

actions – flexes leg, and plantar flexes ankle

innervation – tibial nerve

- E. Popliteus

attachments – from the lateral femoral condyle to the soleal line of the tibia

actions – unlocks knee during (initial) flexion

innervation – tibial nerve

- F. Soleus (S1,2)

attachments – from the posterior proximal fibula & tibial soleal line to the calcaneal tuberosity

actions – plantar flexes ankle

innervation – tibial nerve

- G. Tibialis posterior

attachments – from the interosseous membrane, lateral tibia & medial fibula to the medial tarsals & metatarsals

actions – plantar flexes ankle, and inverts foot

innervation – tibial nerve

VIII. Muscles of the foot

- A. Abductor digiti minimi

attachments – from calcaneal tuberosity to lateral side of proximal phalangeal base of 5th digit

- actions – abducts & flexes 5th digit
innervation – lateral plantar nerve
- B. Abductor hallucis
attachments – from medial calcaneal tuberosity to medial side of proximal phalangeal base of great toe
actions – flexes & abducts great toe
innervation – medial plantar nerve
- C. Adductor hallucis
attachments – from 2–4th metatarsal bases (oblique head) & distal ends of 3–5 metatarsal (transverse head) to lateral base of proximal phalanx of great toe
actions – adducts great toe
innervation – lateral plantar nerve
- D. Extensor digitorum brevis
attachments – from anterolateral calcaneus to the lateral sides of tendons of extensor digitorum longus (2–4)
actions – extension of digits 2–5 (MP & IP)
innervation – deep peroneal nerve
- E. Extensor hallucis brevis
attachments – from anterolateral calcaneus to dorsal aspect of base of proximal phalanx of the hallux
actions – extension of great toe (MP & IP)
innervation – deep peroneal nerve
- F. Flexor digitorum accessorius
attachments – from medial surface of calcaneus & lateral process of calcaneal tuberosity to long flexor tendons
actions – assists flexor digitorum longus
innervation – lateral plantar nerve
- G. Flexor digitorum brevis
attachments – from medial process of calcaneal tuberosity to sides of intermediate phalanges of digits 2–5
actions – flexes toes (proximal IP)
innervation – medial plantar nerve
- H. Flexor digiti minimi
attachments – from 5th metatarsal base to proximal phalangeal base
actions – flexion of 5th digit (MP)
innervation – lateral plantar nerve
- I. Flexor hallucis brevis
attachments – from cuboid & tendon of tibialis posterior to base of proximal phalanx of great toe
actions – flexion of great toe (MP)
innervation – medial plantar nerve
- J. Interossei–dorsal
attachments – from metatarsal shafts to proximal phalangeal bases & dorsal digital expansions of digits 2–4
actions – abducts (MP) & flexes (MP) & extends (IP) digits 2–4
innervation – lateral plantar nerve
- K. Interossei–plantar
attachments – from plantar surface of shaft of metatarsals to dorsal digital expansions of digits 3–5
actions – adducts & flexes (MP) & extends (IP) digits 3–5
innervation – lateral plantar nerve
- L. Lumbricals
attachments – from tendons of flexor digitorum longus to medial sides of dorsal expansions of digits 2–5
actions – flexes proximal phalanges (MP), and extend IP joints
innervation – 1st– medial plantar nerve & 2–4– lateral plantar nerve