

Muscles of the lower limb

Mm. coxae

Musculus iliopsoas

- **ORIGIN:**disci intervertebrales and fibrous bundles along the lumbar spine, fossa iliaca
- **INSERTION:** trochanter minor femoris
- **INNERVATION:** plexus lumbalis
- **FUNCTION:** flexion of hip joint (it starts stepping)

Musculus gluteus maximus

- ORIGIN: linea glutea posterior, alae ossis ilium, fascia thoracolumbalis
- INSERTION: tractus iliotibialis, tuberositas glutea and proximal part of labium laterale lineae asperae femoris
- INNERVATION: n. gluteus inferior
- FUNCTION: extension of hip joint, by pulling tractus, it fixes the knee joint in extension

Musculus gluteus medius

- ORIGIN: between
linea glutea
anterior et
posterior, crista
iliaca
- INSERTION:
trochanter major
- INNERVATION: n.
gluteus superior
- FUNCTION:
abduction of hip
joint, flexion,
extension

Musculus gluteus minimus

- ORIGIN: between
linea glutea inferior
et anterior
- INSERTION:
trochanter major
- INNERVATION: n.
gluteus superior
- FUNCTION:
abduction and
flexion of hip joint

Musculus tensor fasciae latae

- ORIGIN: spina iliaca anterior superior
- INSERTION: tractus iliotibialis
- INNERVATION: n. gluteus superior
- FUNCTION: it stretches tractus iliotibialis and secures stability of knee joint during extension

Musculus piriformis

- **ORIGIN:** lateral part of facies pelvina osis sacri
- **INSERTION:** trochanter major
- **INNERVATION:** plexus sacralis
- **FUNCTION:** femoral supination

Musculus gemellus superior

- ORIGIN: spina ischiadica
- INSERTION: fossa trochanterica
- INNERVATION:
 - plexus sacralis
- FUNCTION: femoral supination

Musculus obturatorius internus

- **ORIGIN:**
membrana
obturatoria
- **INSERTION:** fossa
trochanterica
- **INNERVATION:**
plexus sacralis
- **FUNCTION:**
femoral supination

Musculus gemellus inferior

- ORIGIN: tuber ischiadicum
- INSERTION: fossa trochanterica
- INNERVATION: plexus sacralis
- FUNCTION: femoral supination

Musculus quadratus femoris

- ORIGIN: tuber ischiadicum
- INSERTION: crista intertrochanterica
- INNERVATION: plexus sacralis
- FUNCTION: femoral supination

- **Mm. femoris**

Musculus sartorius

- **ORIGIN:** spina iliaca anterior superior
- **INSERTION:** pes anserinus
- **INNERVATION:** n. femoralis
- **FUNCTION:** flexion of hip joint, flexion of knee joint

Musculus quadriceps femoris

- **ORIGIN:** rec: spina iliaca anterior inferior, med: labium mediale, lat: labium laterale, inter: corpus femoris
- **INSERTION:** basis patellae, ligamentum patellae, tuberositas tibiae
- **INNERVATION:** n. femoralis
- **FUNCTION:** extension of knee joint
rectus: flexion of hip joint

Musculus quadriceps femoris

M. rectus femoris

M. vastus lateralis

M. vastus medialis

M. vastus intermedius

Musculus semitendinosus

- ORIGIN: tuber ischiadicum
- INSERTION: pes anserinus
- INNERVATION: n. ischiadicus
- FUNCTION: extension of hip joint, flexion of knee joint

Musculus semimebranosus

- ORIGIN: tuber ischiadicum
- INSERTION: proximal part of tibia, ligamentum popliteum obliquum
- INNERVATION: n. ischiadicus
- FUNCTION: extension of hip joint, flexion of knee joint

Musculus biceps femoris

- ORIGIN: caput longum: tuber ischiadicum, caput breve: labium laterale lineae asperae
- INSERTION: caput fibulae
- INNERVATION: n. ischiadicus
- FUNCTION: flexion of knee joint, extension of hip joint

Musculus gracilis

- **ORIGIN:**
ventrocaudally from
symphysis
- **INSERTION:** pes
anserinus
- **INNERVATION:** n.
obturatorius
- **FUNCTION:** adduction
of hip joint, flexion of
knee joint

Pes anserinus

Musculus adductor longus

- **ORIGIN:** ramus superior ossis pubis
- **INSERTION:** middle part of labium mediale lineae asperae
- **INNERVATION:** n. obturatorius
- **FUNCTION:** adduction of thigh

Musculus adductor brevis

- **ORIGIN:** between ramus superior et inferior
- **INSERTION:** proximal part of labium mediale lineae asperae
- **INNERVATION:** n. obturatorius
- **FUNCTION:** adduction of thigh

Musculus adductor magnus

- **ORIGIN:** from ramus inferior to tuber ischiadicum
- **INSERTION:** labium mediale lineae asperae, epicondylus medialis femoris
- **INNERVATION:** n. obturatorius, n. ischiadicus
- **FUNCTION:** adduction of thigh

Musculus pectineus

- ORIGIN: pecten ossis pubis
- INSERTION: linea pectinea femoris
- INNERVATION: n. obturatorius, n. femoralis
- FUNCTION: adduction of thigh

Musculus obturatorius externus

- ORIGIN: external surface of membrana obturatoria
INSERTION: fossa trochanterica
- INNERVATION: n. obturatorius
- FUNCTION: supination of hip joint

FEMORAL FASCIAE

- **Fascia lata- tractus iliotibialis**

Mm. cruris

Musculus tibialis anterior

- **ORIGIN:** lateral part of tibia, membrana interossea cruris
- **INSERTION:** base of 1st metatarsal bone, os cuneiforme mediale
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** dorsal flexion of foot, supination

Musculus extensor hallucis longus

- **ORIGIN:** distal part of fibula, membrana interossea cruris
- **INSERTION:** dorsal aponeurosis of big toe
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** extension of big toe, dorsal flexion of foot

Musculus extensor digitorum longus

- **ORIGIN:** condylus lateralis tibiae, fibula, membrana interossea
- **INSERTION:** dorsal aponeuroses of 2nd-5th toes, tuberositas ossis metatarsi quinti (m. peroneus tertius)
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** dorsal flexion of toes and foot, tertius-pronation of foot

Musculus fibularis longus

- **ORIGIN:** caput fibulae and proximal part of fibula
- **INSERTION:** os cuneiforme mediale, base of 1st metatarsal bone, on the plantar side!
- **INNERVATION:** n. fibularis superficialis
- **FUNCTION:** plantar flexion and pronation of foot, transversal foot vault

Musculus fibularis brevis

- **ORIGIN:** distal part of fibula
- **INSERTION:** tuberositas ossi metatarsi quinti
- **INNERVATION:** n. fibularis superficialis
- **FUNCTION:** plantar flexion and pronation of foot

Musculus triceps surae

- ORIGIN: m. gastrocnemius-epikondyly femuru, soleus-caput fibulae a arcus tendineus musculi solei
- INSERTION: tendo calcaneus-tuber calcanei
- INNERVATION: n. tibialis
- FUNCTION: plantar flexion of foot, gastrocnemius-flexion of knee joint

Musculus plantaris

- **ORIGIN:**
epicondylus
lateralis femoris
- **INSERTION:**
tendo calcanei
- **INNERVATION:**
n. tibialis
- **FUNCTION:**
flexion of knee
joint

Musculus popliteus

- **ORIGIN:** epicondylus lateralis femoris
- **INSERTION:** proximally from linea m. solei on tibia
- **INNERVATION:** n. tibialis
- **FUNCTION:** flexion of knee joint

Musculus tibialis posterior

- ORIGIN: membrana, tibia
- INSERTION: tuberositas ossis navicularis
- INNERVATION: n. tibialis
- FUNCTION: plantar flexion of foot, foot vault

Musculus flexor digitorum longus

- **ORIGIN:** posterior surface of tibia
- **INSERTION:** distal phalanx of 2nd-5th toes
- **INNERVATION:** n. tibialis
- **FUNCTION:** plantar flexion of foot and toes

Musculus flexor hallucis longus

- **ORIGIN:** posterior surface of fibula
- **INSERTION:** distal phalanx of big toe, goes together with tendon of m. fdl
- **INNERVATION:** n. tibialis
- **FUNCTION:** plantar flexion of foot and big toe

Mm. pedis

Musculus extensor hallucis brevis

- **ORIGIN:** in area of sinus tarsi
- **INSERTION:** dorsal aponeurosis of big toe
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** extension of big toe

Musculus extensor digitorum brevis

- **ORIGIN:** in area of sinus tarsi
- **INSERTION:** dorsal aponeurosis of the 2nd-4th toes
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** extension of the 2nd – 4th toes

Musculus abductor hallucis

- **ORIGIN:** processus medialis tuberis calcanei
- **INSERTION:** medial sesamoidal bone and base of proximal phalanx of big toe
- **INNERVATION:** n. plantaris medialis
- **FUNCTION:** flexion and abduction of proximal phalanx of big toe

Musculus flexor hallucis brevis

- ORIGIN: plantar side of ossa cuneiformia,
- INSERTION: sesamoidal bone
- INERVATION: n. plantaris medialis
- FUNCTION: flexion of big toe

Musculus adductor hallucis

- **ORIGIN:** by two heads- caput obliquum- plantar side of os cuboideum and base of the 4th and 5th metatarsal bone
- caput transversum- plantar side of the 3rd-5th metatarsophalangeal joint
- **INSERTION:** lateral sesamoidal bone
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** adduction of big toe

Musculus abductor digiti minimi

- **ORIGIN:** processus lateralis tuberis calcanei
- **INSERTION:** base of proximal phalanx of the 5th toe
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** abduction of the 5th toe

Musculus flexor digiti minimi brevis

- **ORIGIN:** base of the 5th metatarsal bone
- **INSERTION:** base of the proximal phalanx of 5th toe
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** flexion of 5th toe

Musculus opponens digiti minimi

- ORIGIN: plantar side of os cuboideum
- INSERTION: body of the 5th metatarsal bone
- INNERVATION: n. plantaris lateralis
- FUNCTION: mild opposition of the 5th toe

Musculus flexor digitorum brevis

- **ORIGIN:** processus medialis tuberculi calcanei
- **INSERTION:** 4 parts to toes with three phalanges, middle phalanx, chiasma tendinum
- **INNERVATION:** n. plantaris medialis
- **FUNCTION:** flexion of proximal and middle phalanx

Musculus quadratus plantae

- ORIGIN: tuber calcanei
- INSERTION: tendon of m. flexor digitorum longus
- INNERVATION: n. plantaris lateralis
- FUNCTION: participates in flexion of toes

Musculi interossei plantares (3)

- **ORIGIN:** medial side of the 3th-5th metatarsal bone
- **INSERTION:** medial side of proximal phalanx of 3th-5th toes
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** adduction of the 3th-5th toes, mild flexion of proximal phalanges

Musculi interossei dorsales (4)

- **ORIGIN:** with two heads on adjacent sides of neighboring metatarsal bones
- **INSERTION:** proximal phalanges of appropriate toes
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** abduction of toes, flexio of proximal phalanges

Musculi lumbricales

- **ORIGIN:** tendons of m. flexor digitorum longus
- **INSERTION:** medial side of base of prox. phalanges of the 2nd-5th and to their dorsal aponeuroses
- **INNERVATION:** the 1st and 2nd ones - n. plantaris medialis, the 3rd and 4th - n. plantaris lateralis
- **FUNCTION:** flexion of proximal palanges, inclination of toes to medial side

Thank you for your attention!

Obrázky:

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