

# Muscles of the lower limb

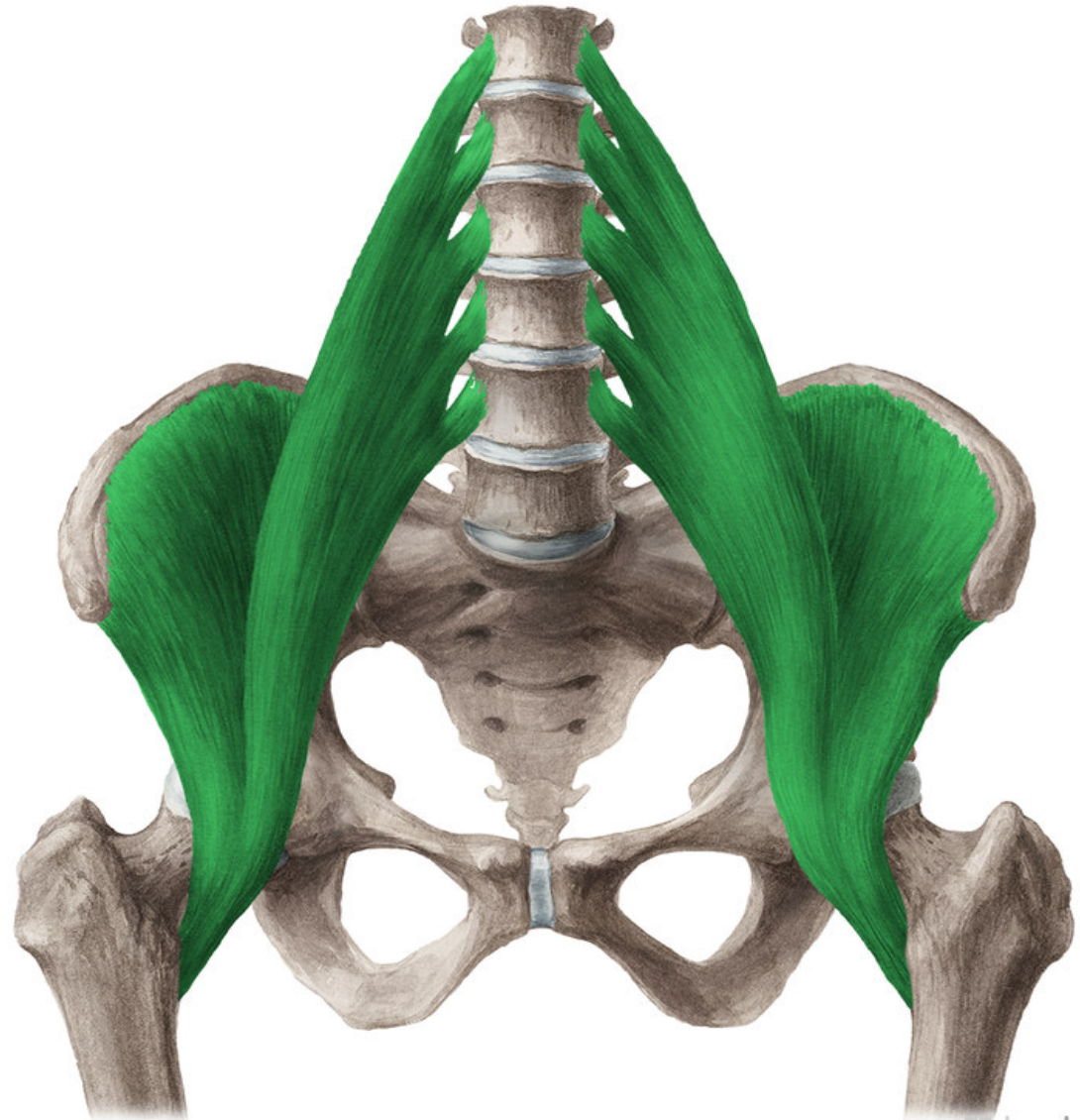


**Mm. coxae**  
**(Coxal muscles)**

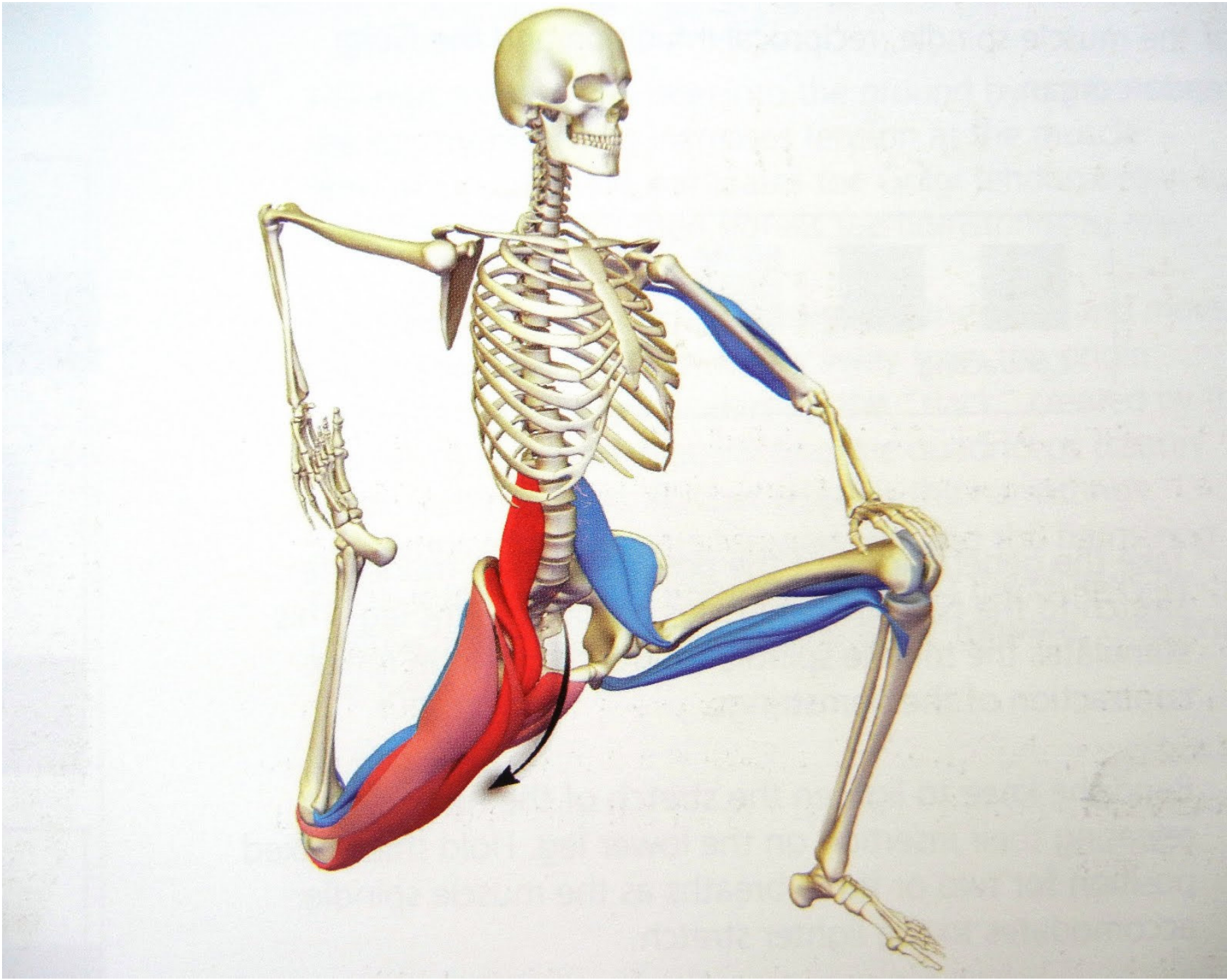
# ANTERIOR GROUP

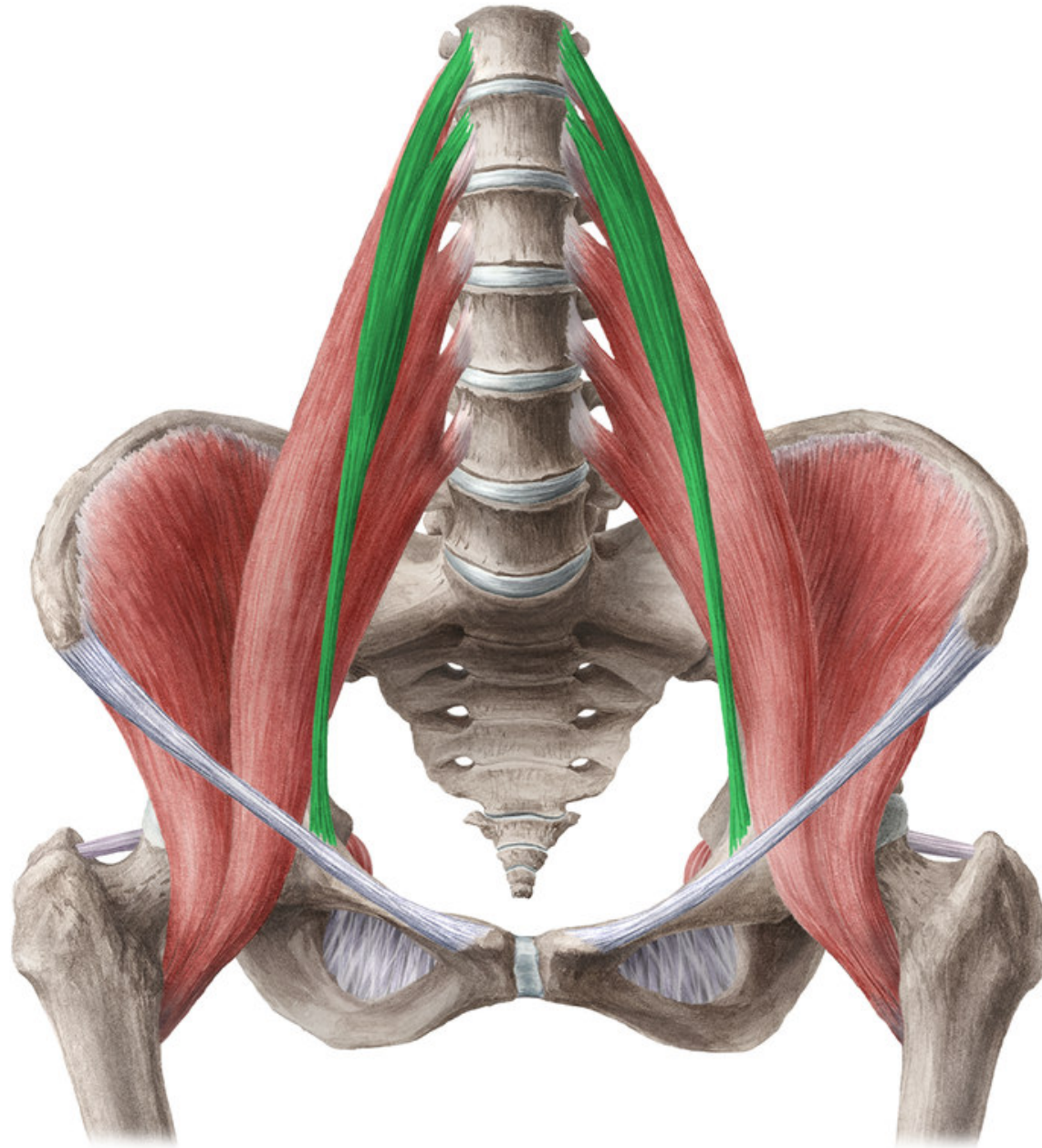
# Musculus iliopsoas

- **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)









POSTERIOR GROUP



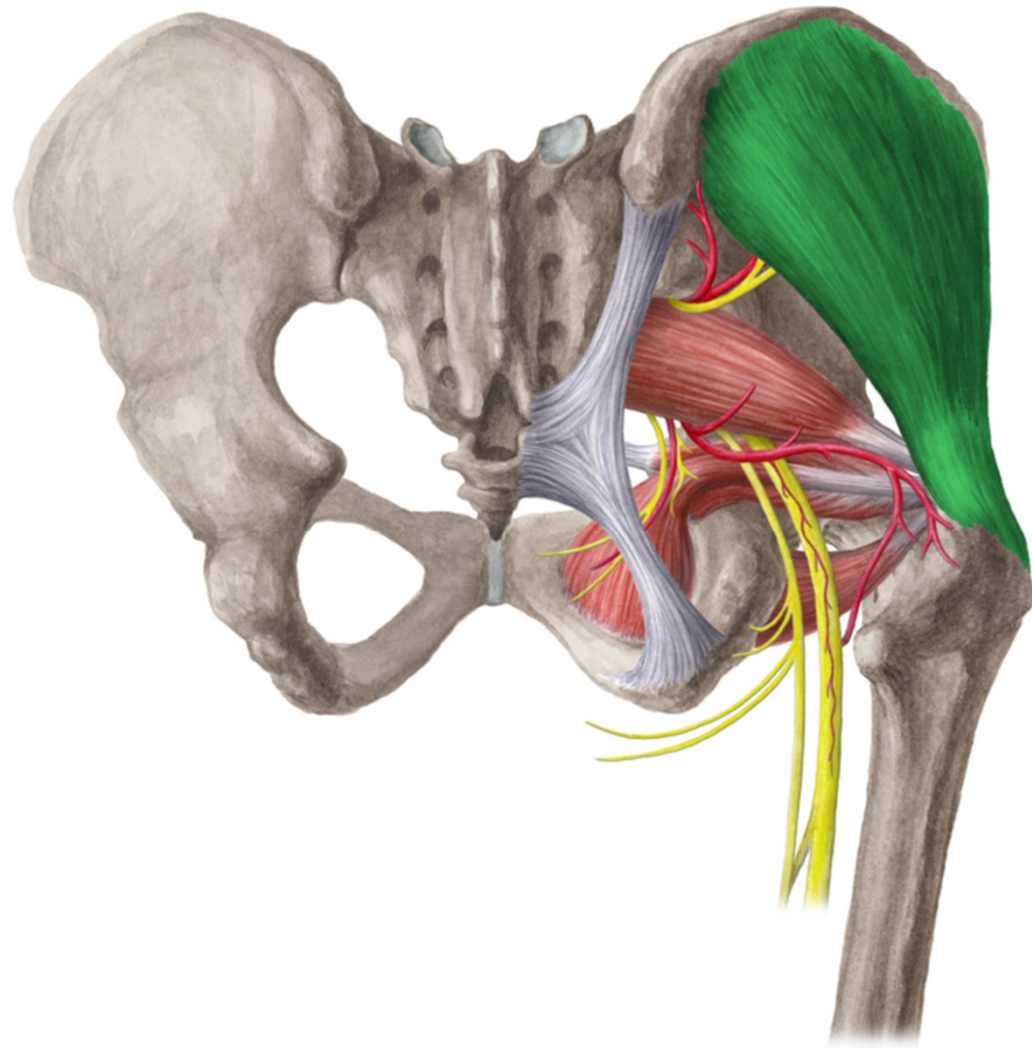
# Musculus gluteus maximus

- **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



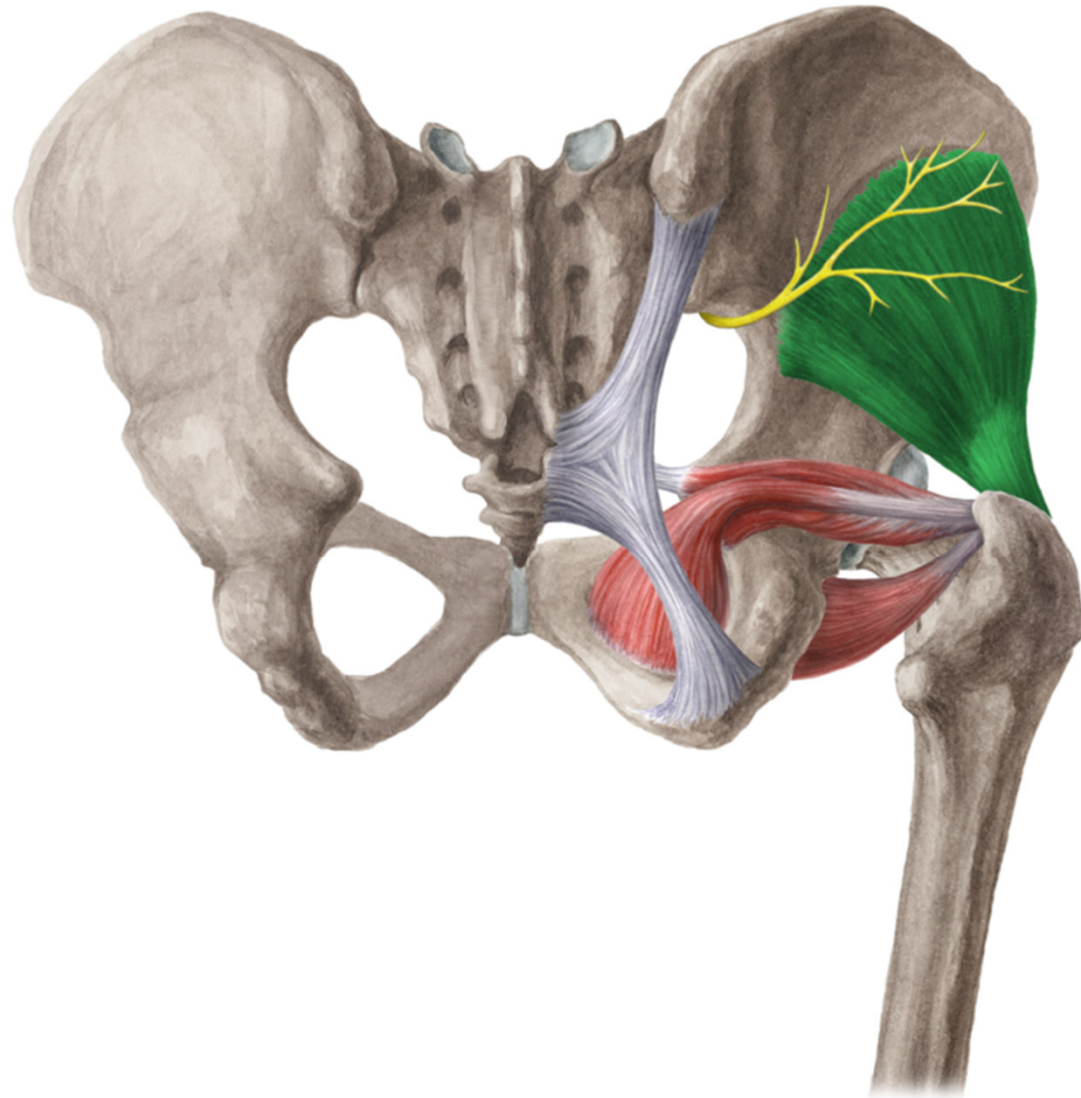
# Musculus gluteus medius

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



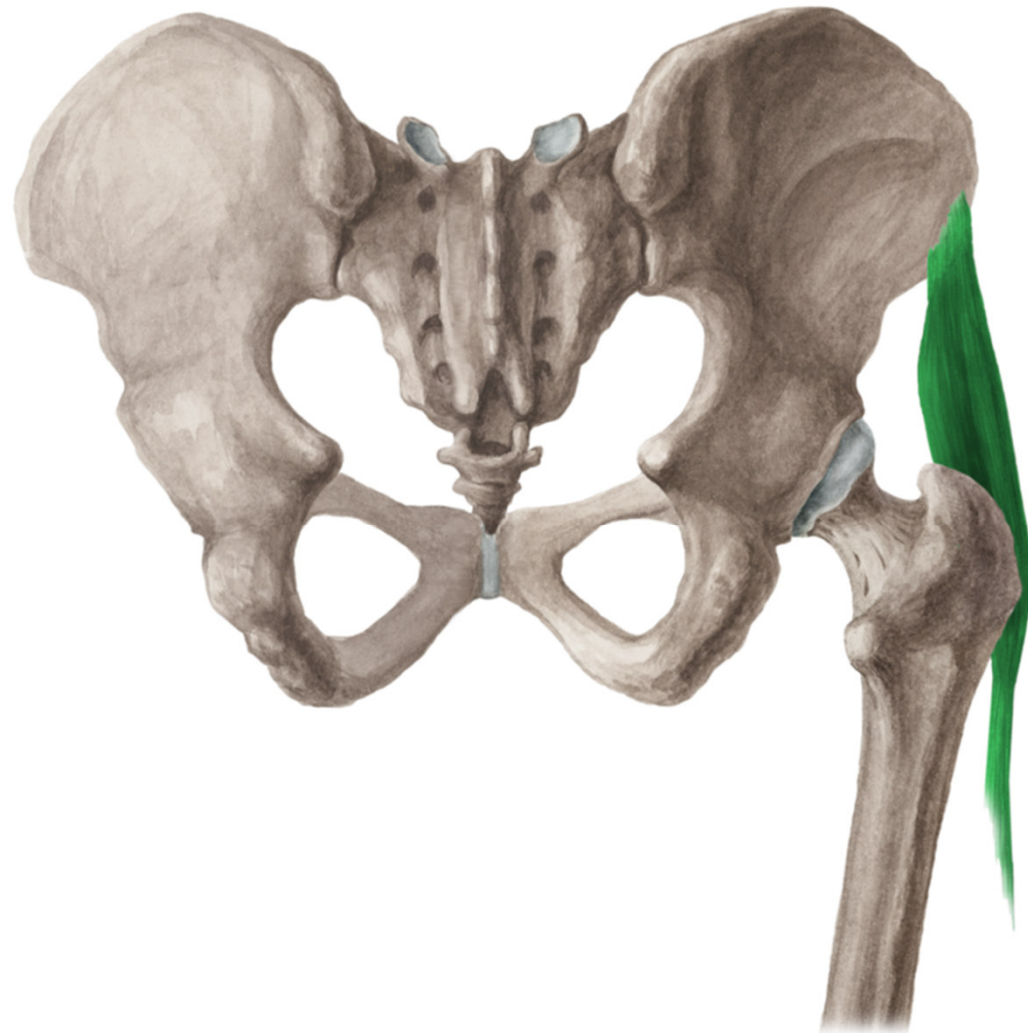
# Musculus gluteus minimus

- **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



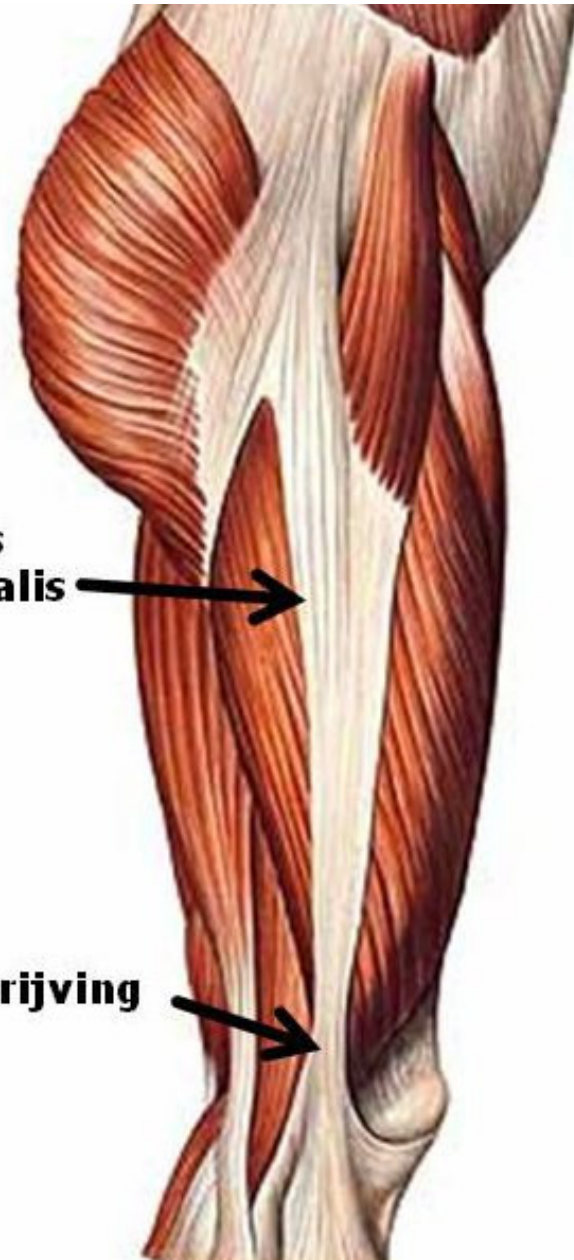




**tractus  
iliotibialis**



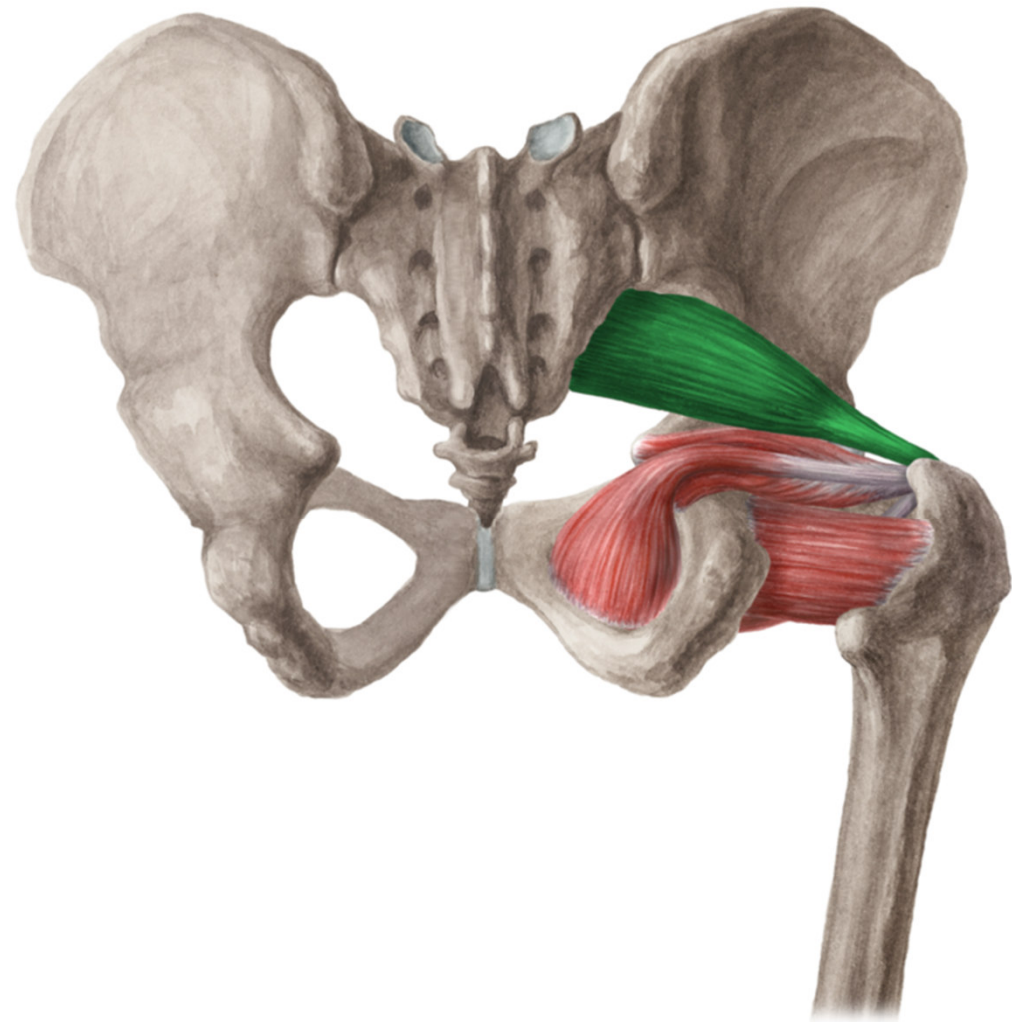
**wrijving**

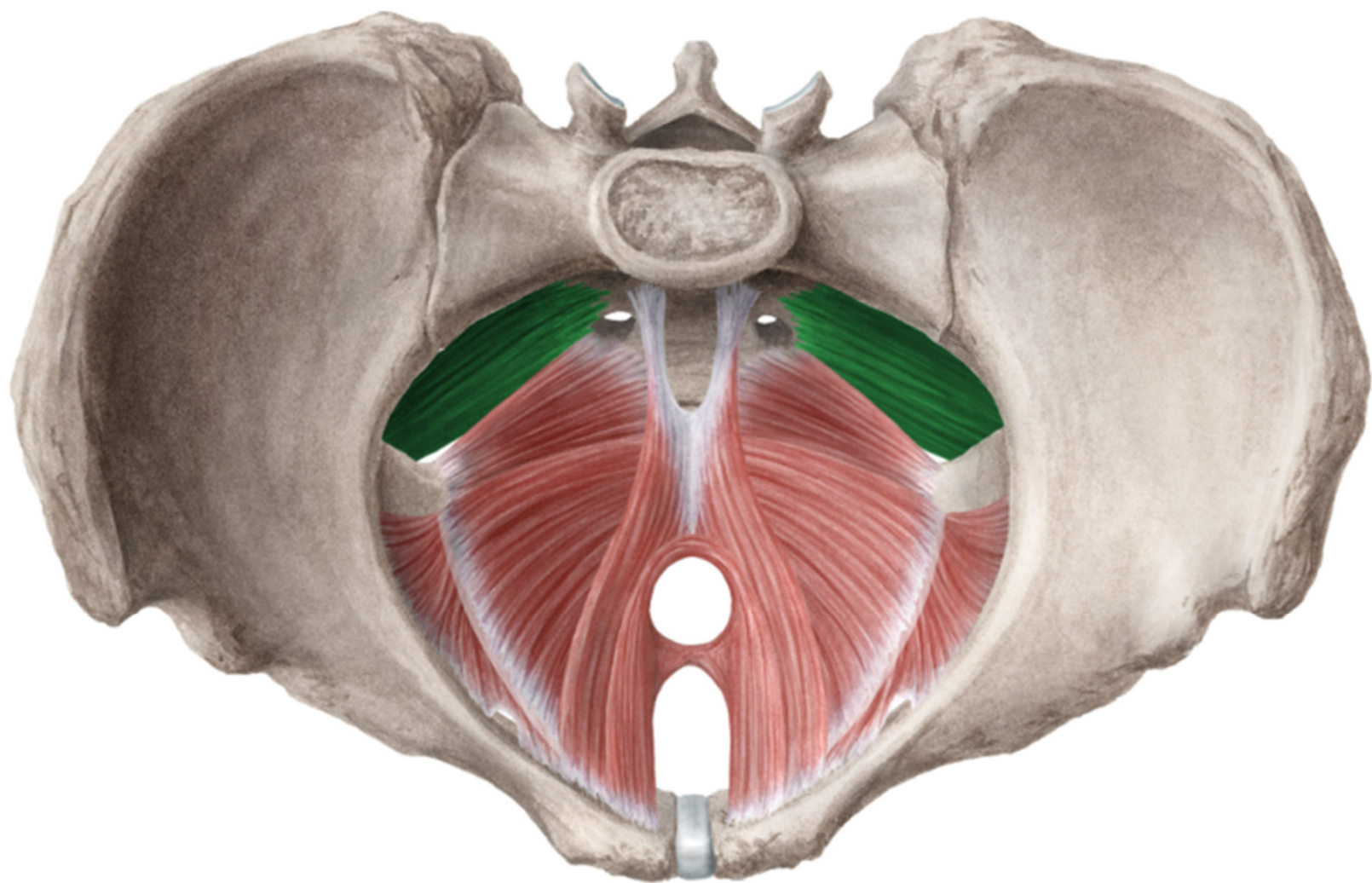


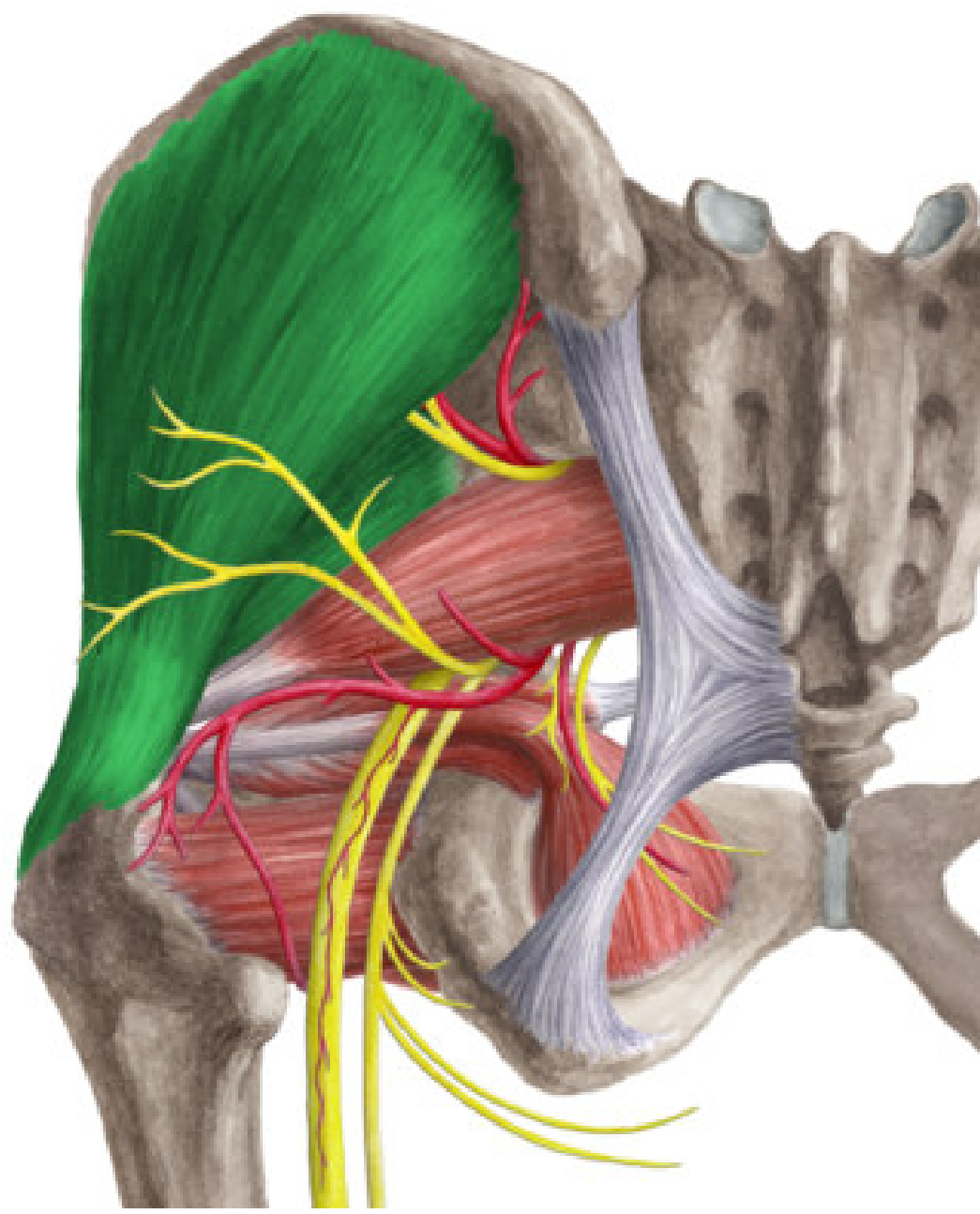


# Musculus piriformis

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

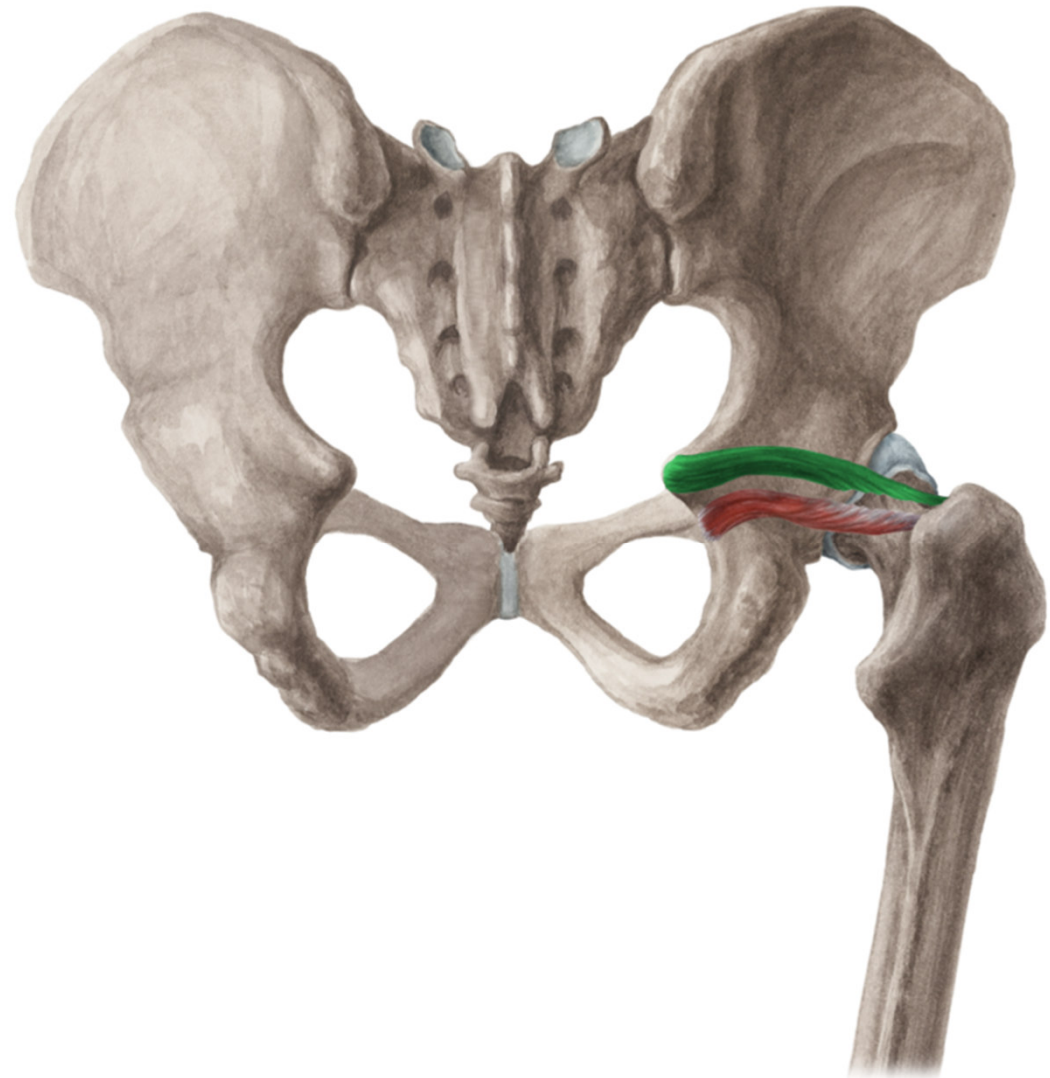






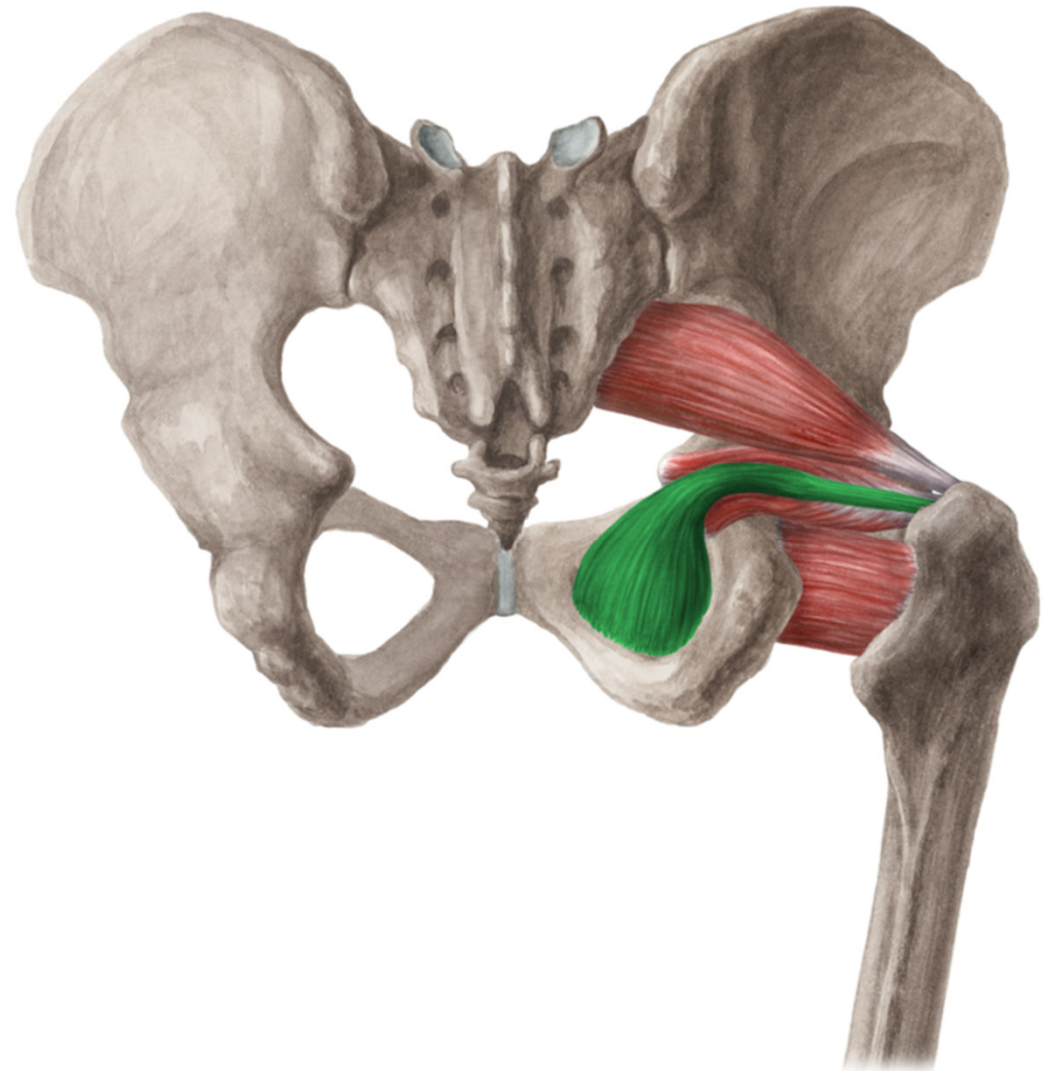
# Musculus gemellus superior

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

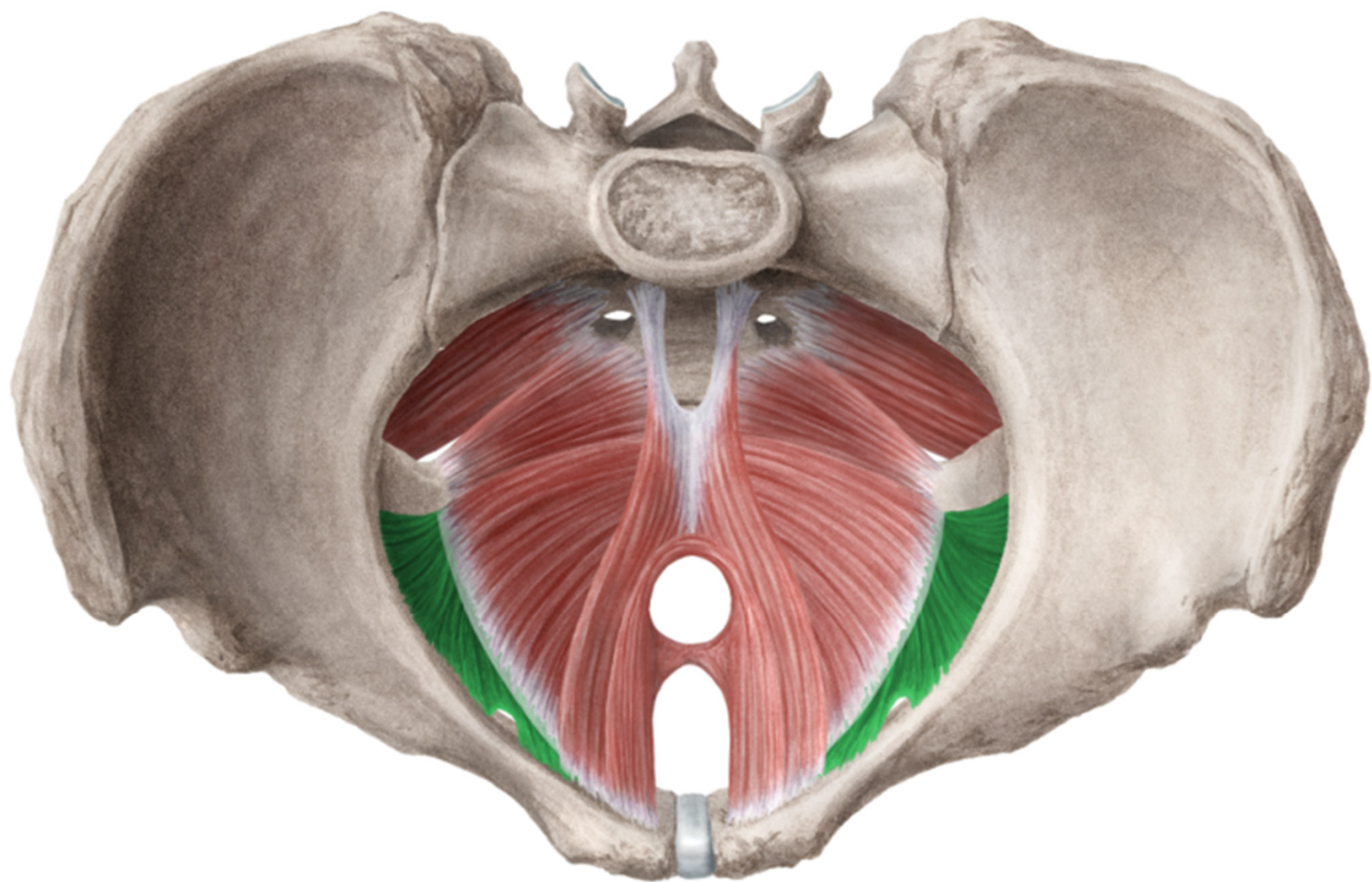


# Musculus obturatorius internus

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

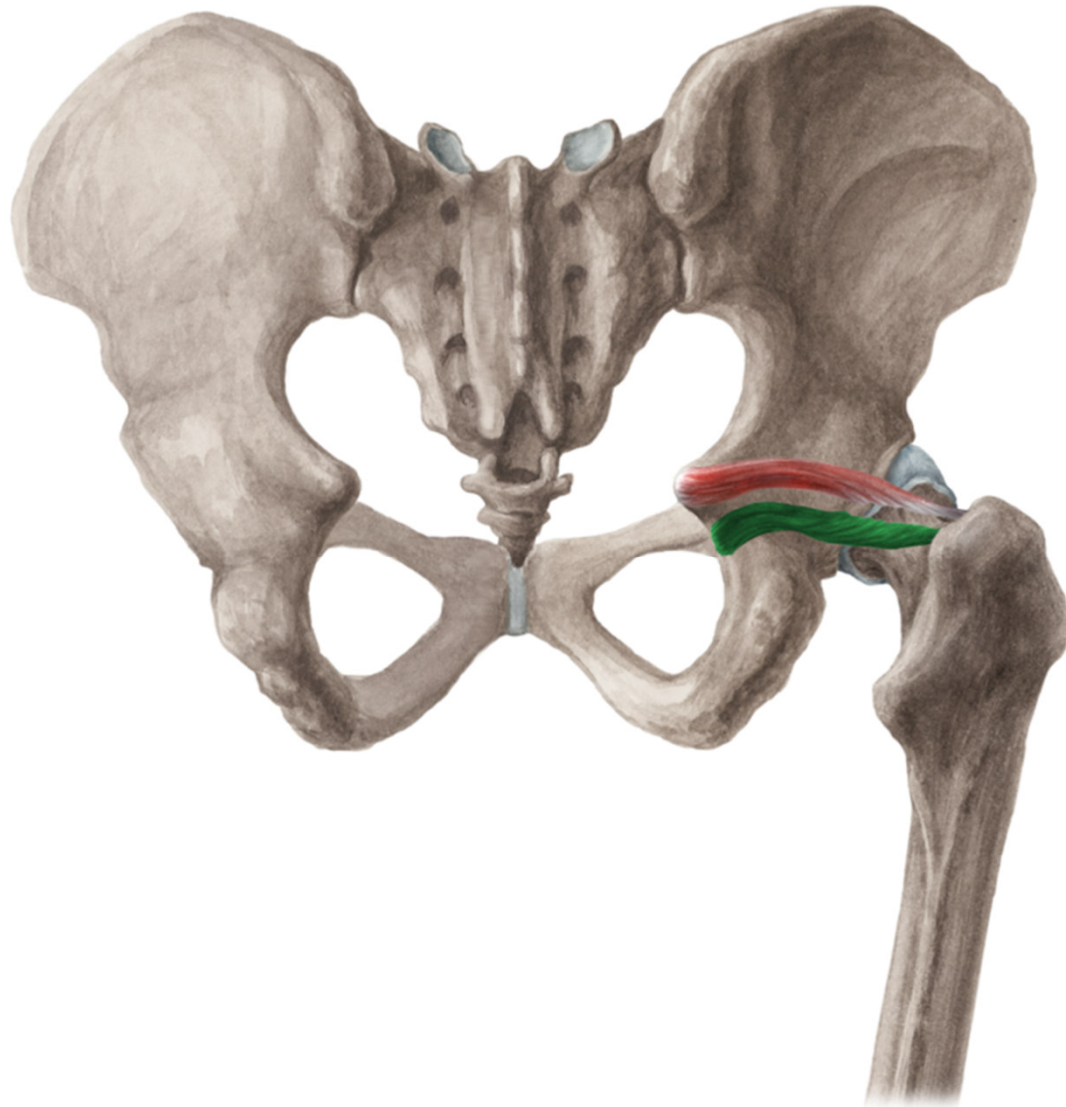






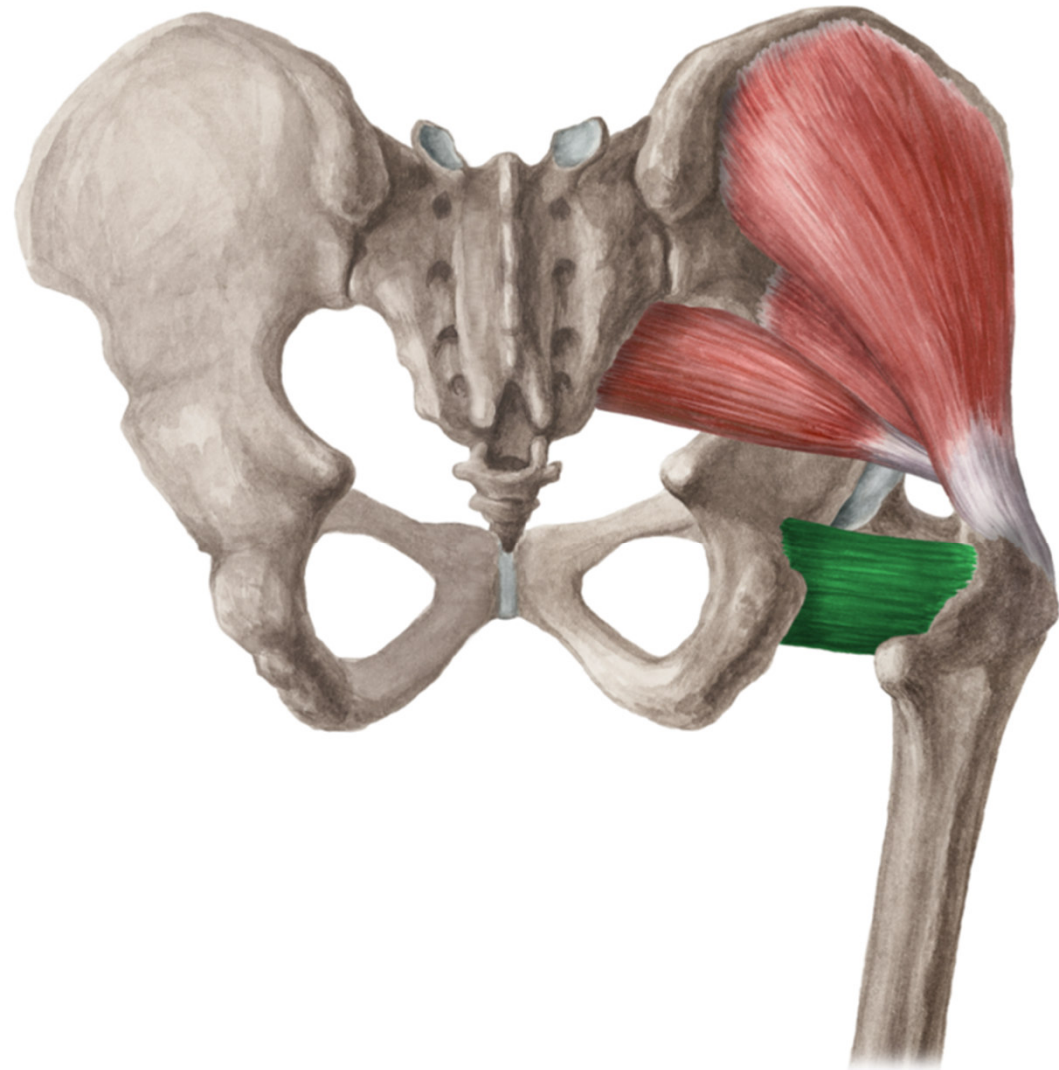
# Musculus gemellus inferior

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

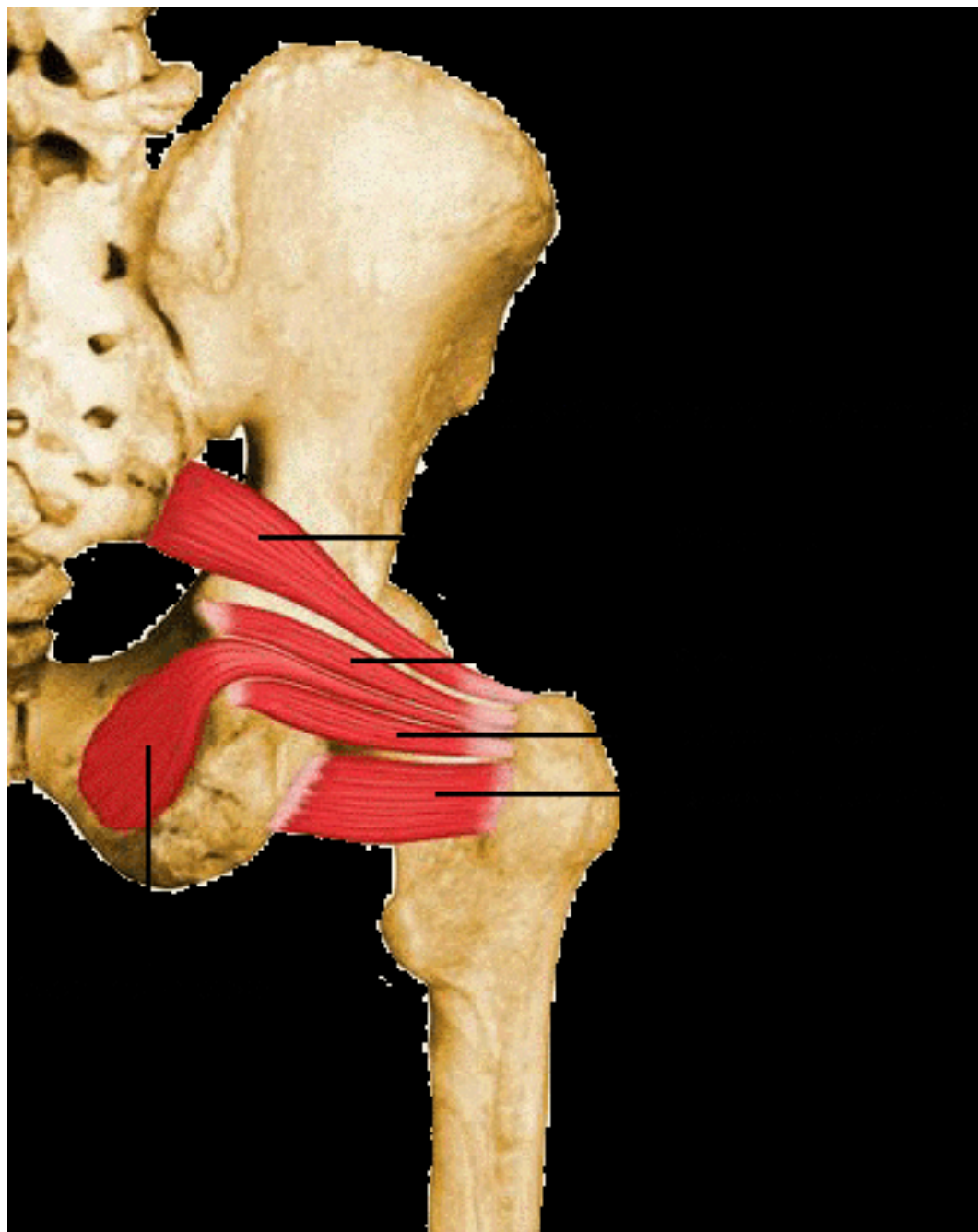


# Musculus quadratus femoris

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







- Mm. femoris  
(Femoral muscles)

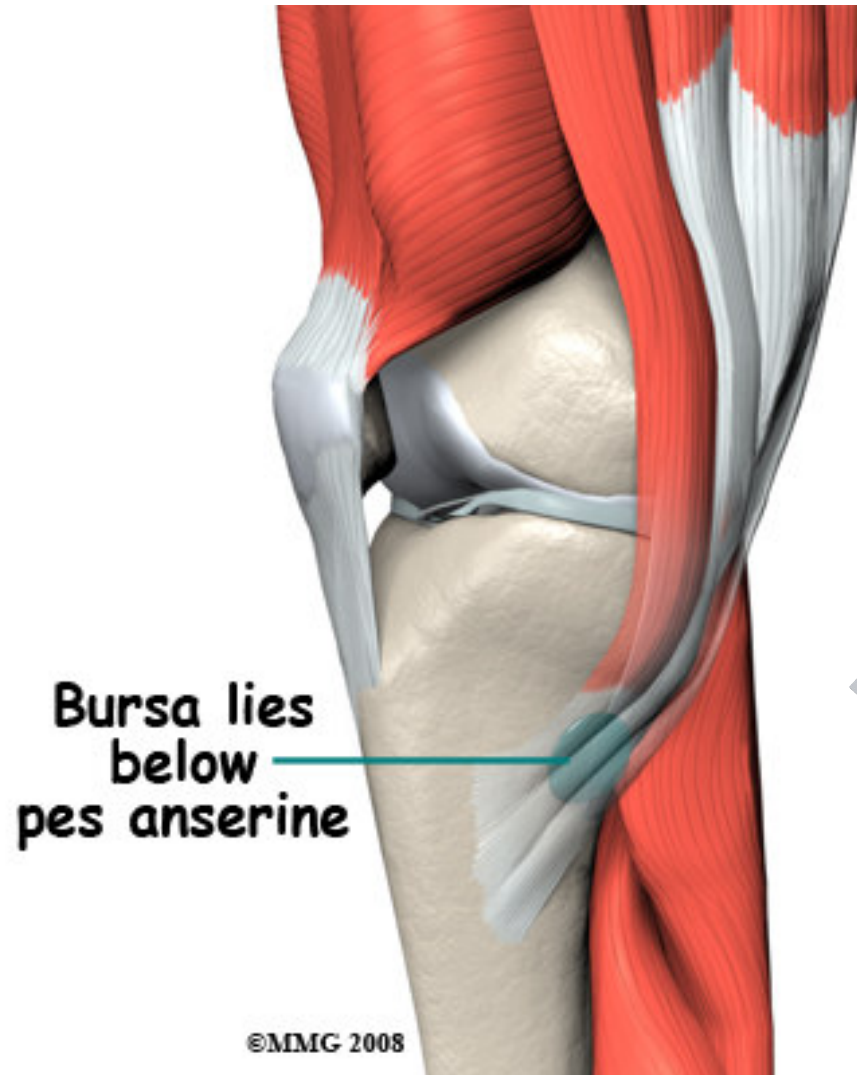
**ANTERIOR GROUP**

# Musculus sartorius

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



# Pes anserinus



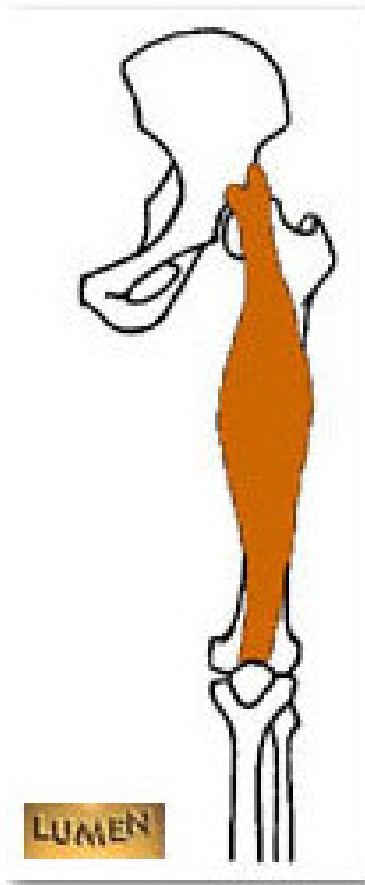
# Musculus quadriceps femoris

- **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

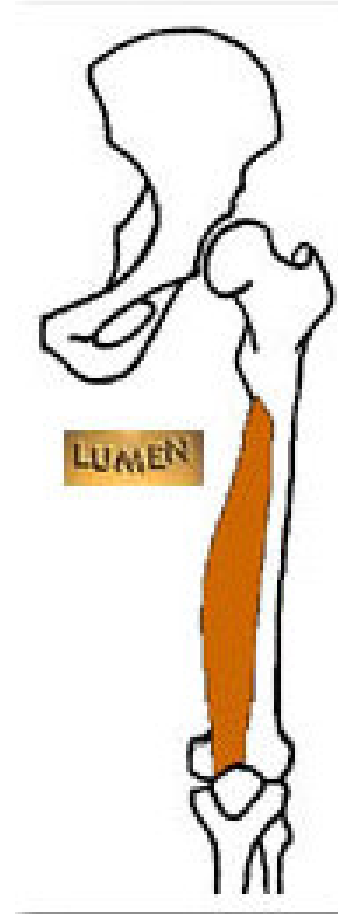
M. rectus femoris



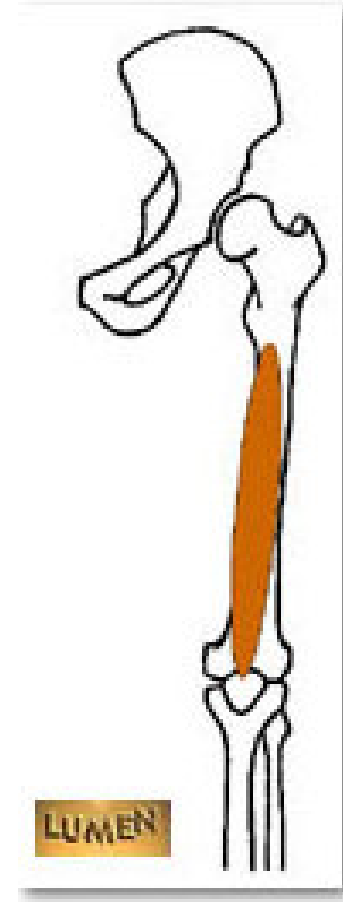
M. vastus lateralis



M. vastus medialis



M. vastus intermedius



POSTERIOR GROUP



# Musculus semitendinosus

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



# Musculus semimebranosus

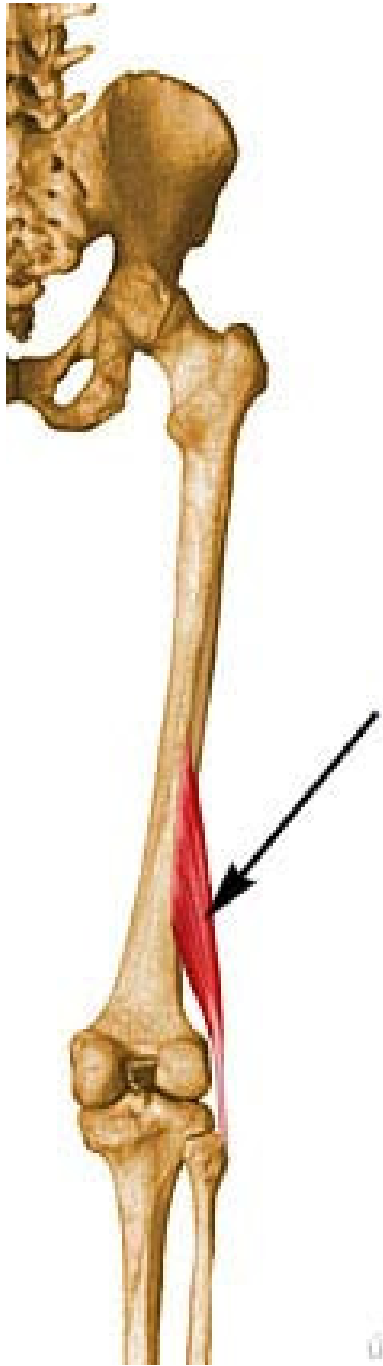
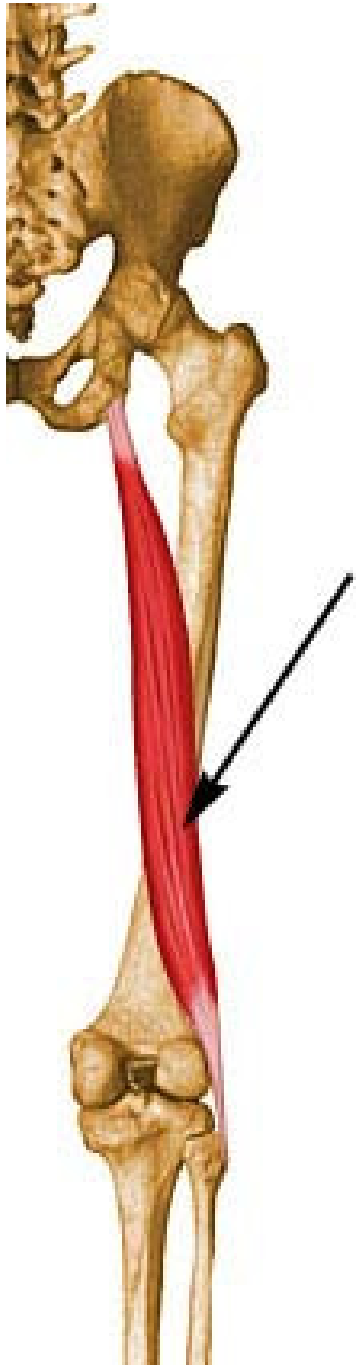
- **ORIGIN:** tuber ischiadicum
- **INSERTION:** proximal part of tibia, ligamentum popliteum obliquum
- **INNERVATION:** n. ischiadicus
- **FUNCTION:** extension of hip joint, flexion of knee joint



# 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

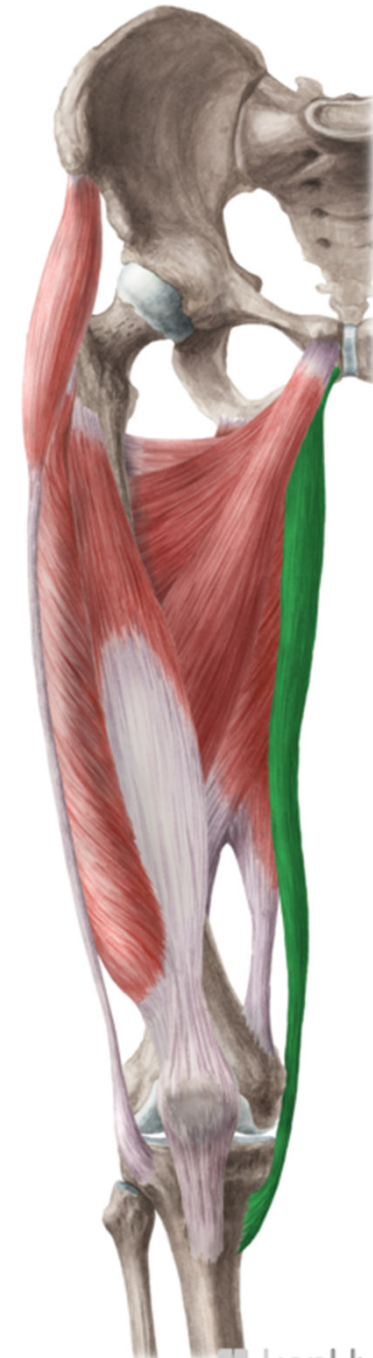




**MEDIAL GROUP**

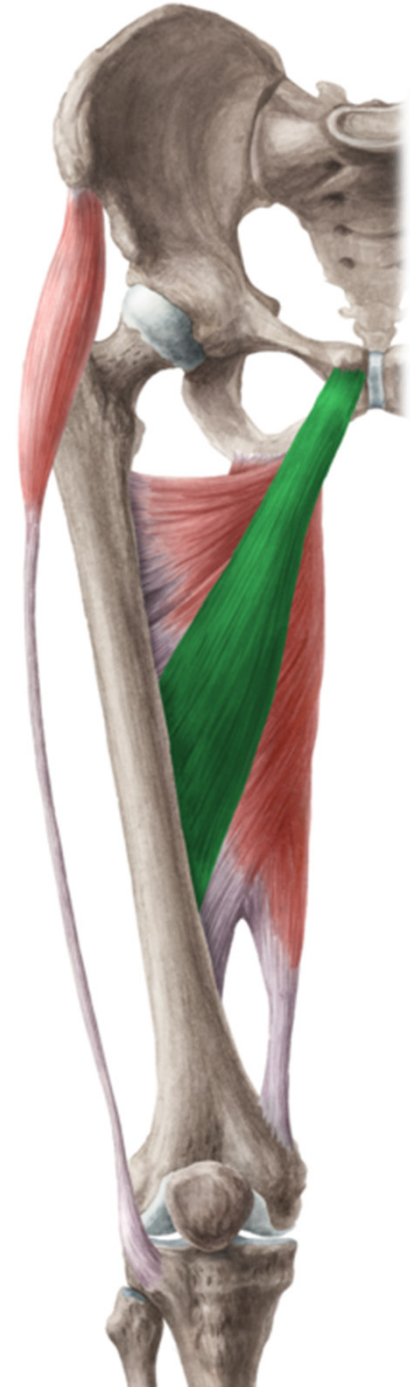
# Musculus gracilis

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



# 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





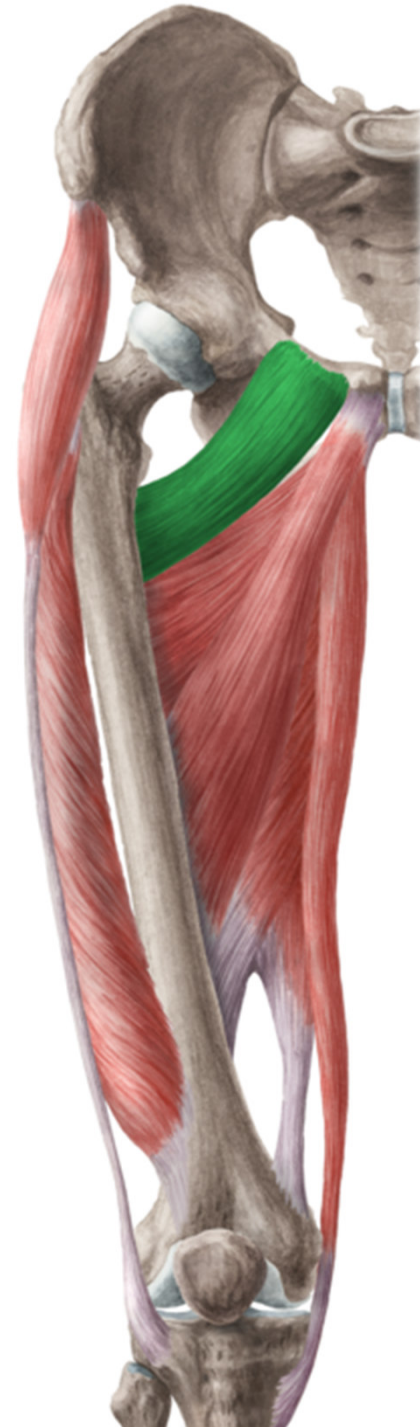
# Musculus adductor magnus

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



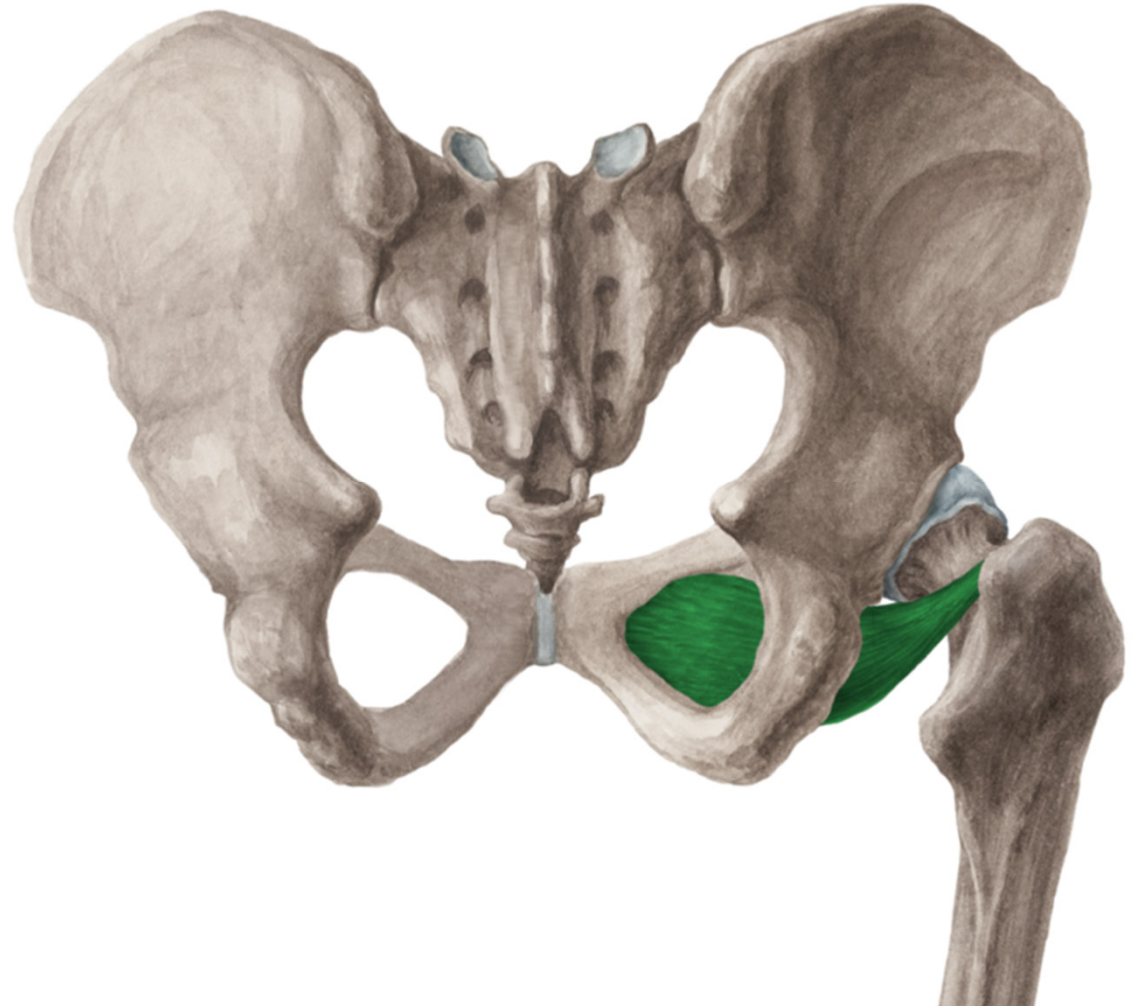
# Musculus pectineus

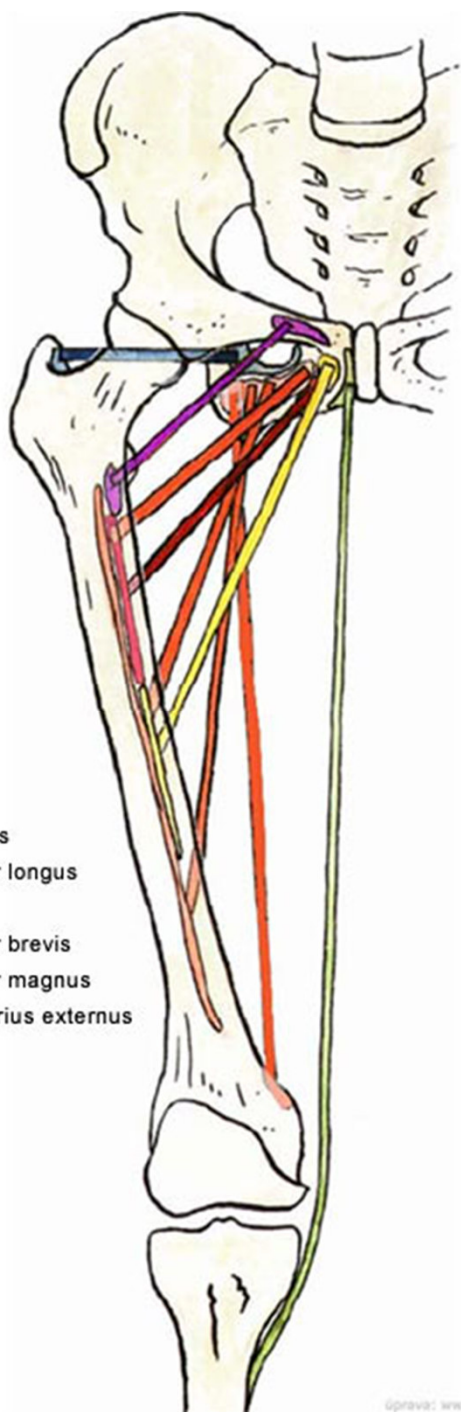
- ORIGIN: pecten ossis pubis
- INSERTION: linea pectinea femoris
- INNERVATION: n. obturatorius, n. femoralis
- FUNCTION: adduction of thigh



# Musculus obturatorius externus

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



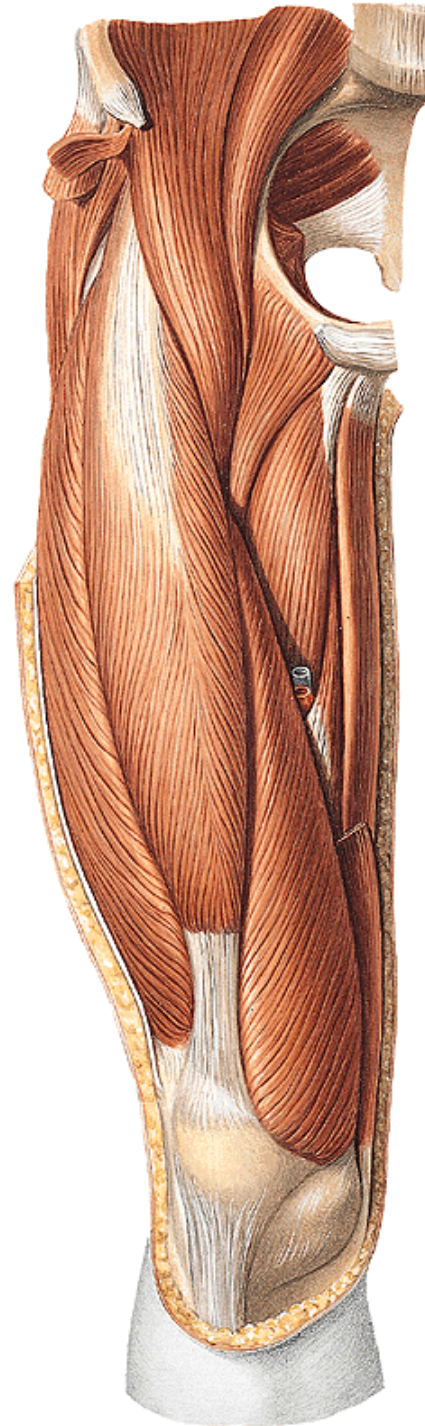
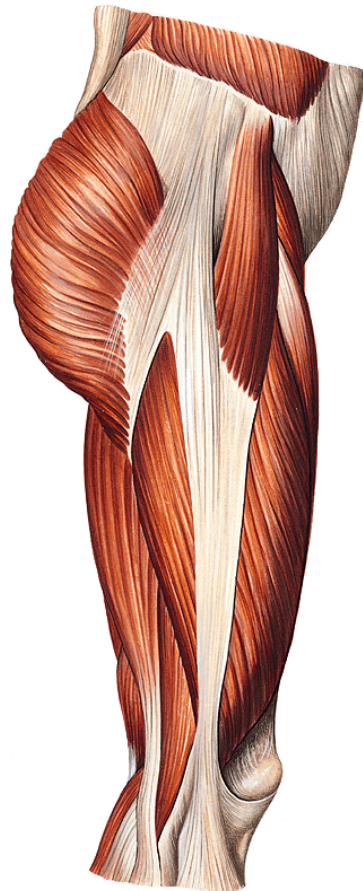
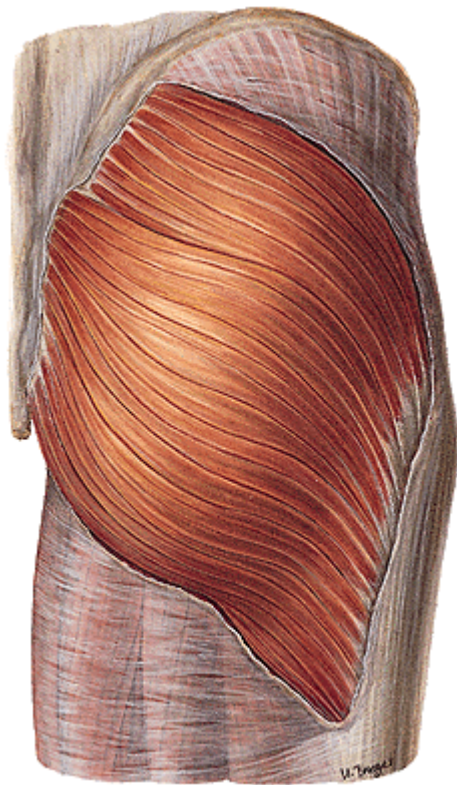


- musculus pectineus
- musculus adductor longus
- musculus gracilis
- musculus adductor brevis
- musculus adductor magnus
- musculus obturatorius externus



# FEMORAL FASCIAE

- Fascia lata- tractus iliotibialis



**Mm. cruris**  
**(Crural muscles)**

**ANTERIOR GROUP**

# 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



**LATERAL GROUP**

# 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

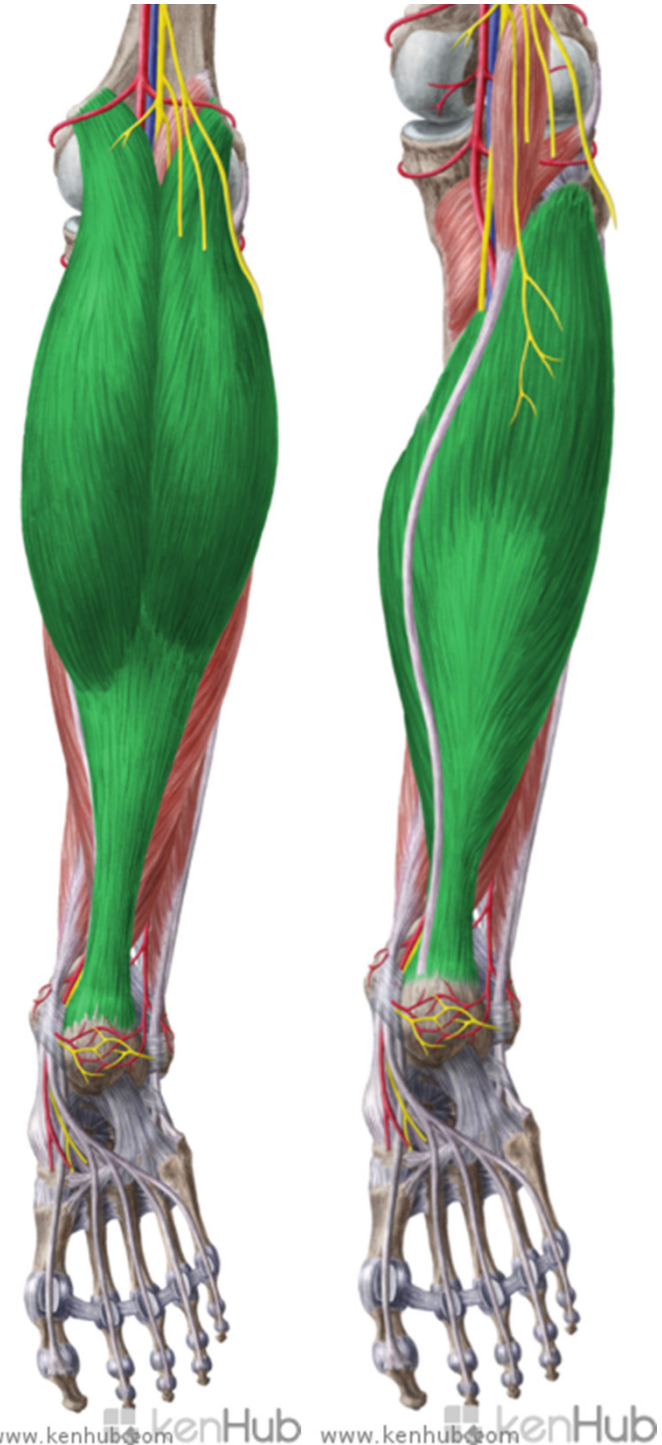
- **ORIGIN:** distal part of fibula
- **INSERTION:** tuberositas ossi metatarsi quinti
- **INNERVATION:** n. fibularis superficialis
- **FUNCTION:** plantar flexion and pronation of foot



**POSTERIOR GROUP**

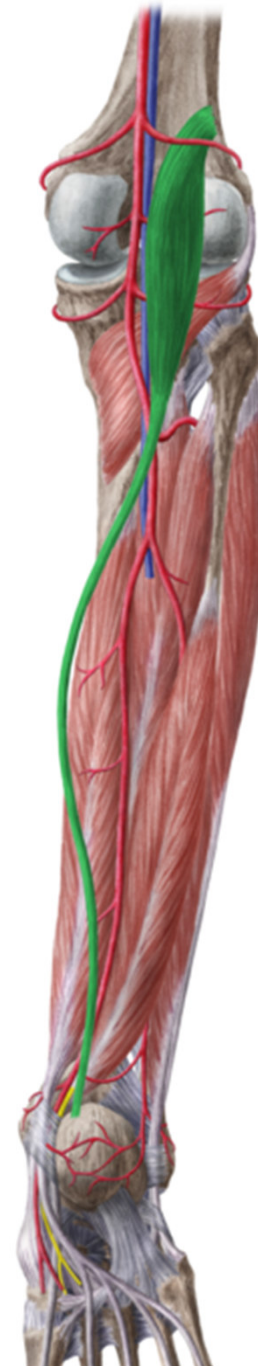
# Musculus triceps surae

- 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

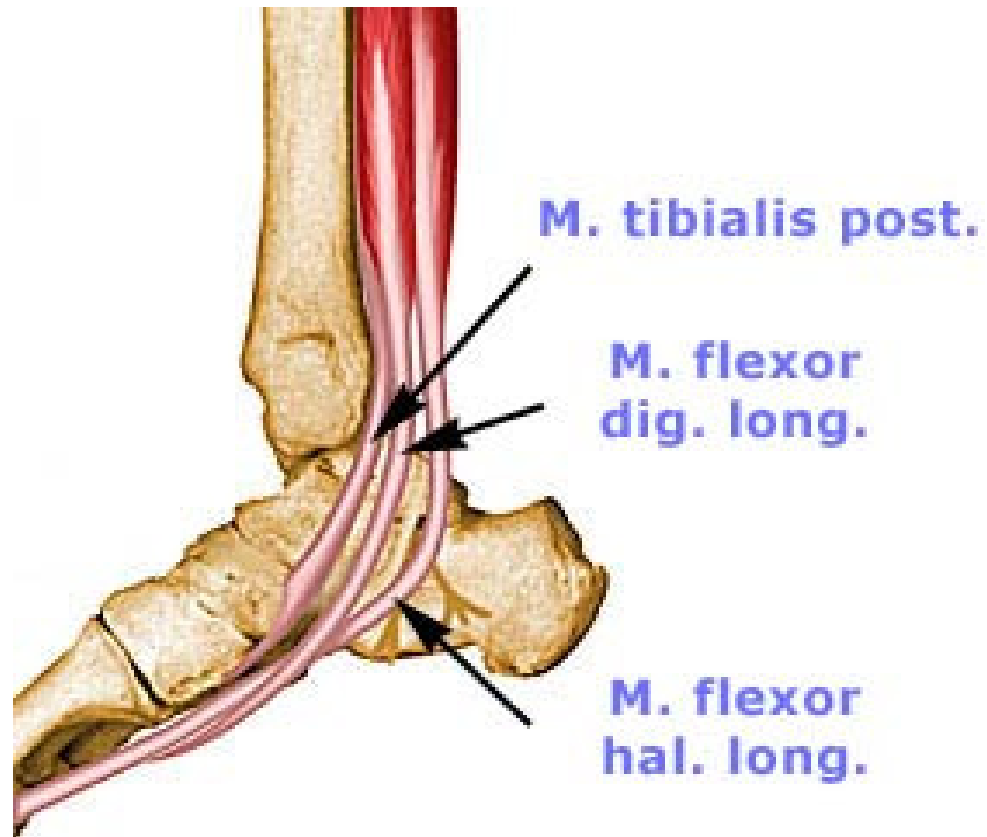


# Musculus flexor hallucis longus

- **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



# Behind the medial ankle



**Mm. pedis**  
**(Foot muscles)**



**DORSAL GROUP**

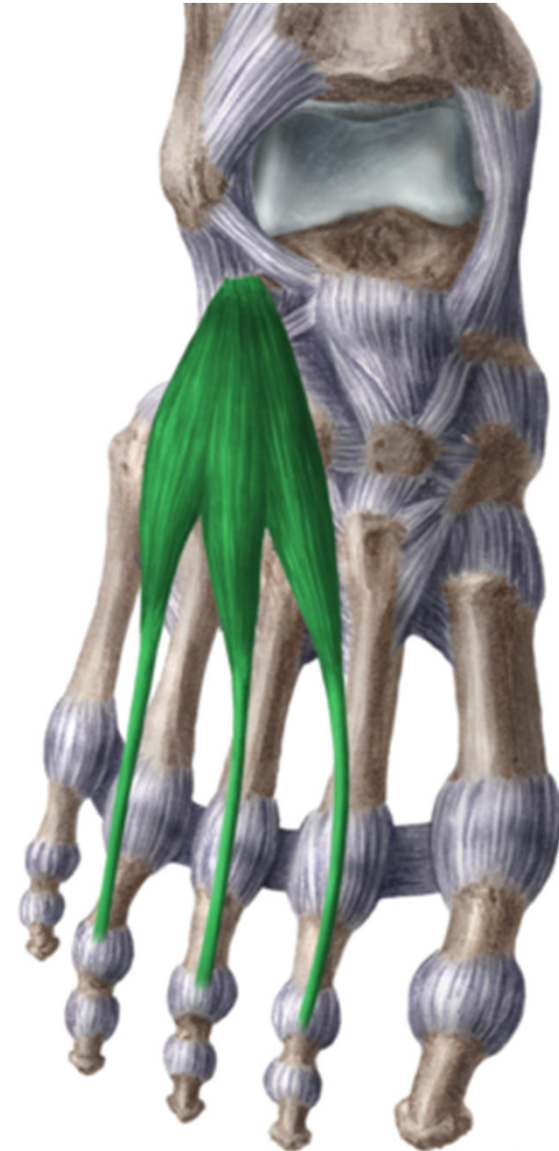
# Musculus extensor hallucis brevis

- **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

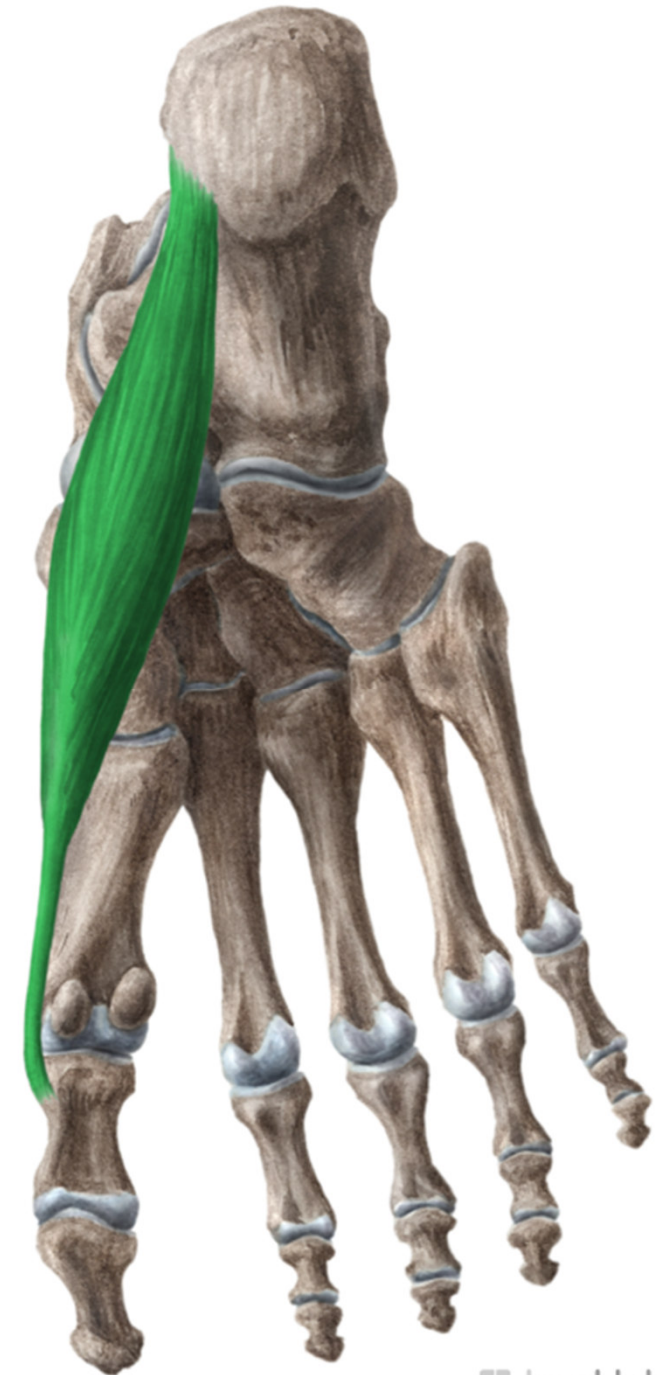
- **ORIGIN:** in area of sinus tarsi
- **INSERTION:** dorsal aponeurosis of the 2nd-4th toes
- **INNERVATION:** n. fibularis profundus
- **FUNCTION:** extension of the 2nd – 4th toes



**PLANTAR GROUP**

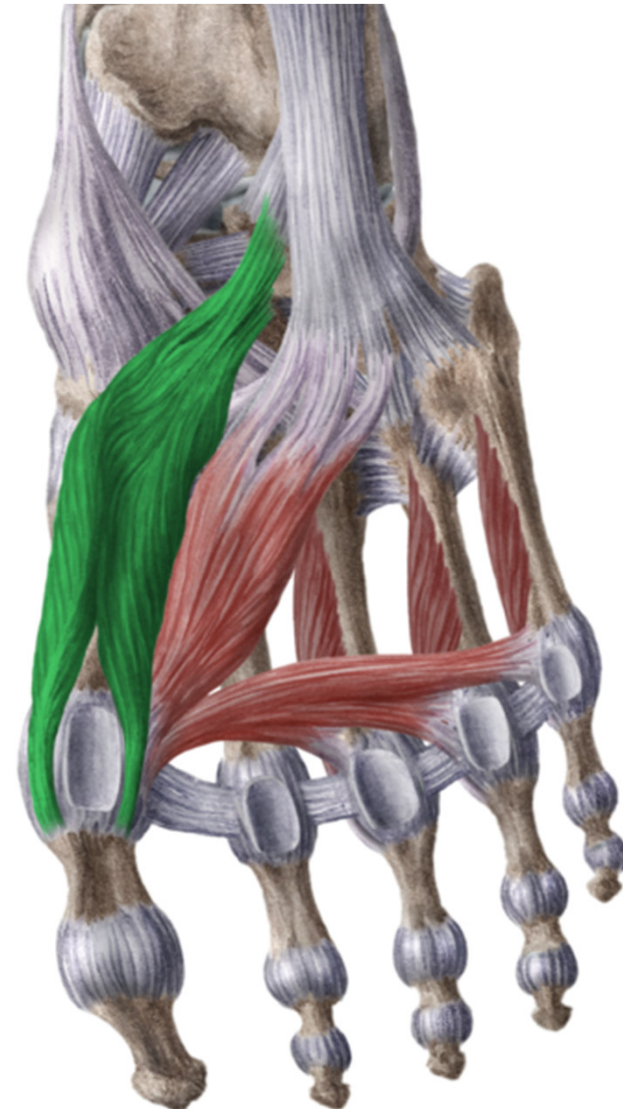
# Musculus abductor hallucis

- **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

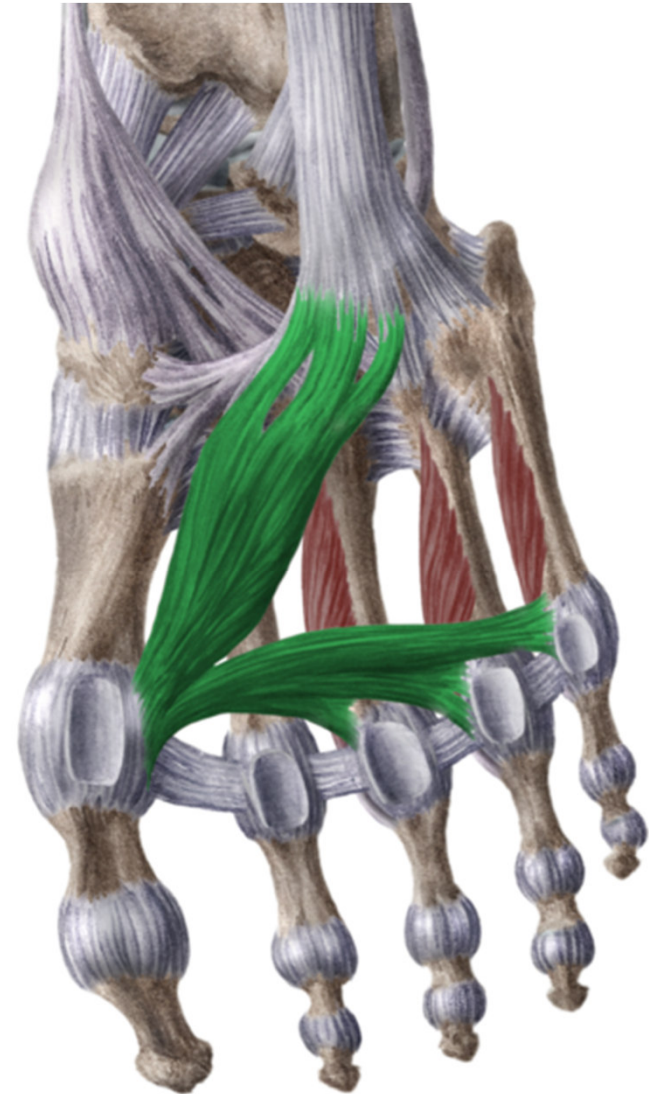
- **ORIGIN:** plantar side of ossa cuneiformia,
- **INSERTION:** sesamoidal bone
- **INERVATION:** n. plantaris medialis
- **FUNCTION:** flexion of big toe





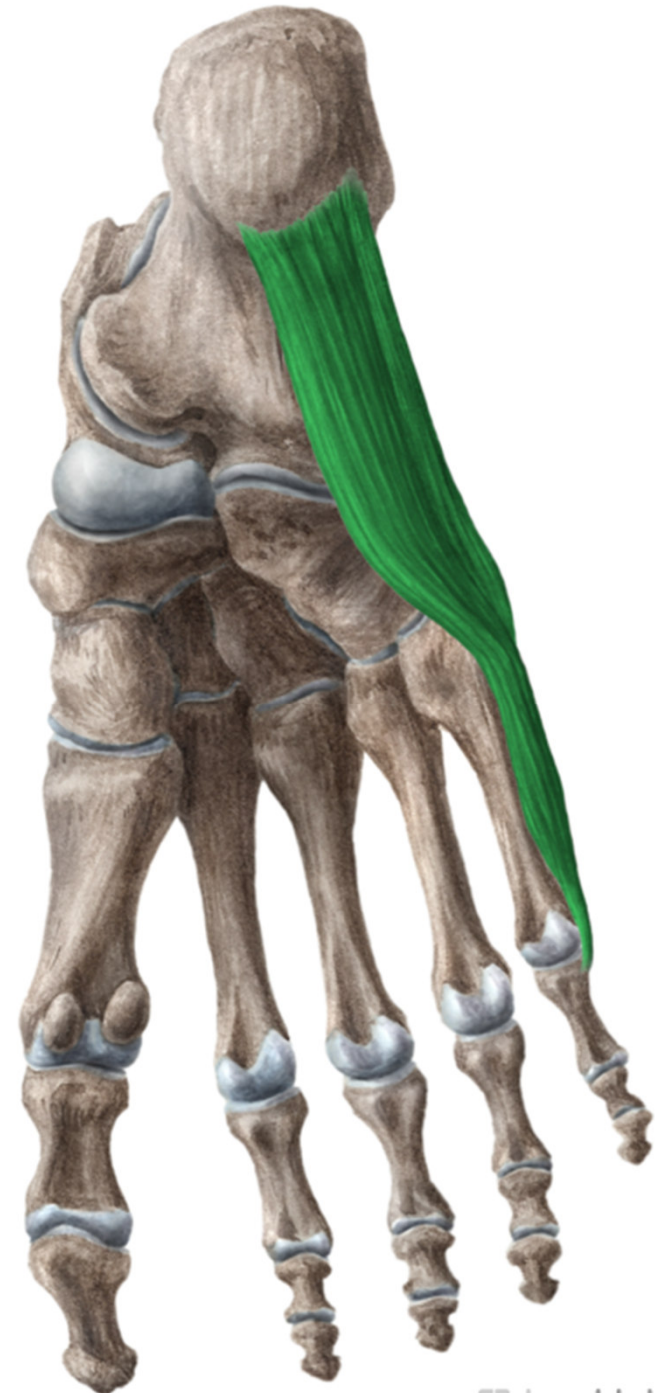
# Musculus adductor hallucis

- **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



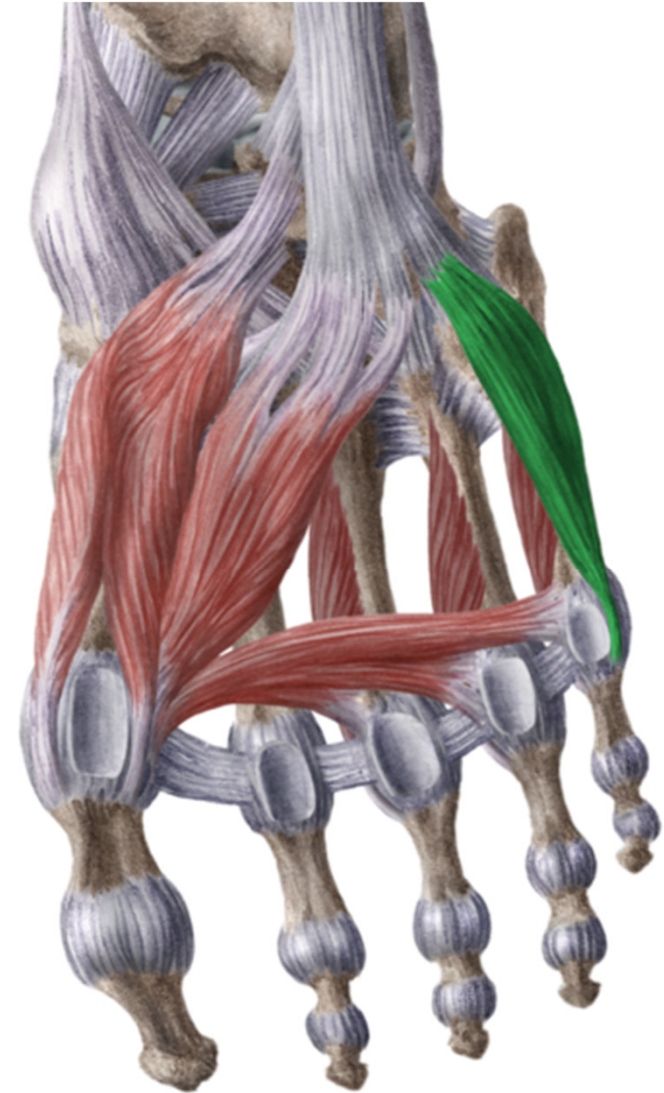
# Musculus abductor digiti minimi

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



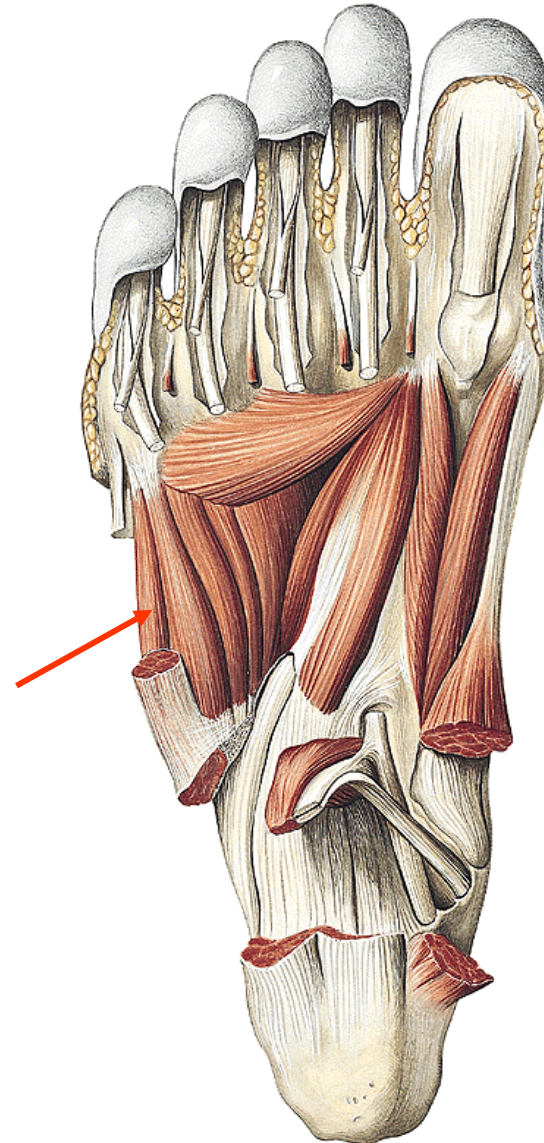
# Musculus flexor digiti minimi brevis

- **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

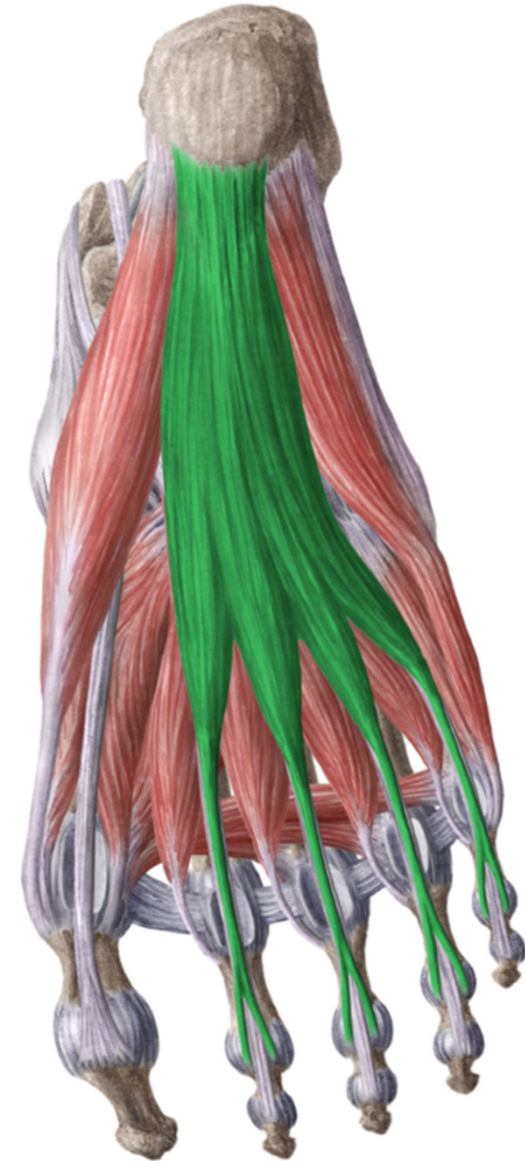
- **ORIGIN:** plantar side of os cuboideum
- **INSERTION:** body of the 5th metatarsal bone
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** mild opposition of the 5th toe





# Musculus flexor digitorum brevis

- **ORIGIN:** processus medialis tuberis 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

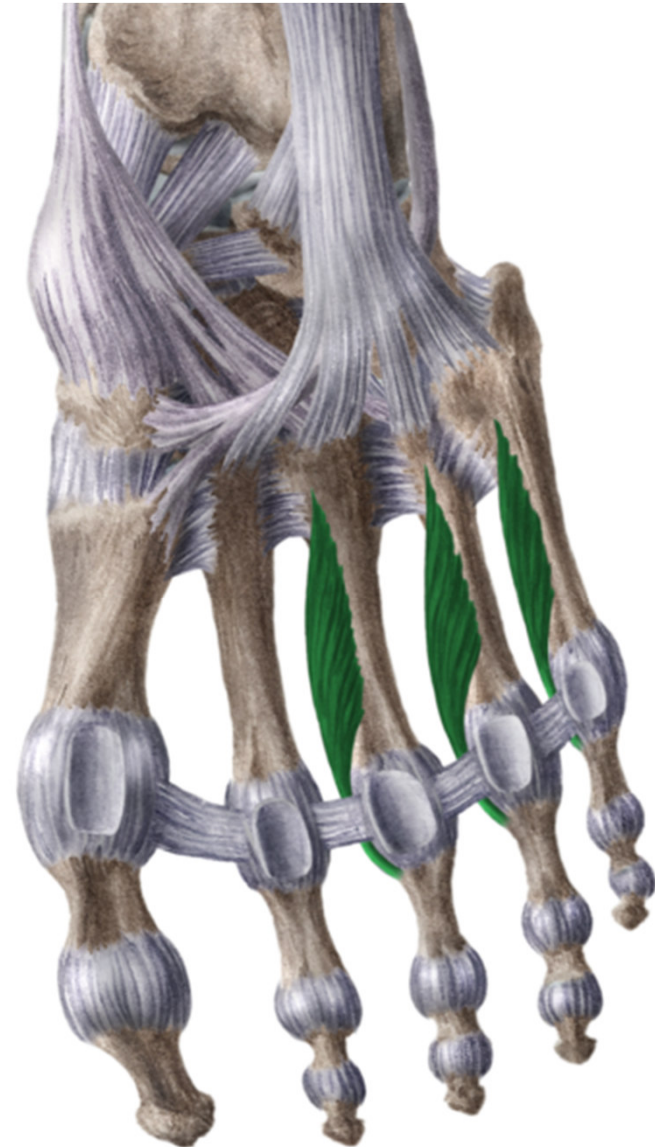
- **ORIGIN:** tuber calcanei
- **INSERTION:** tendon of m. flexor digitorum longus
- **INNERVATION:** n. plantaris lateralis
- **FUNCTION:** participates in flexion of toes





# 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



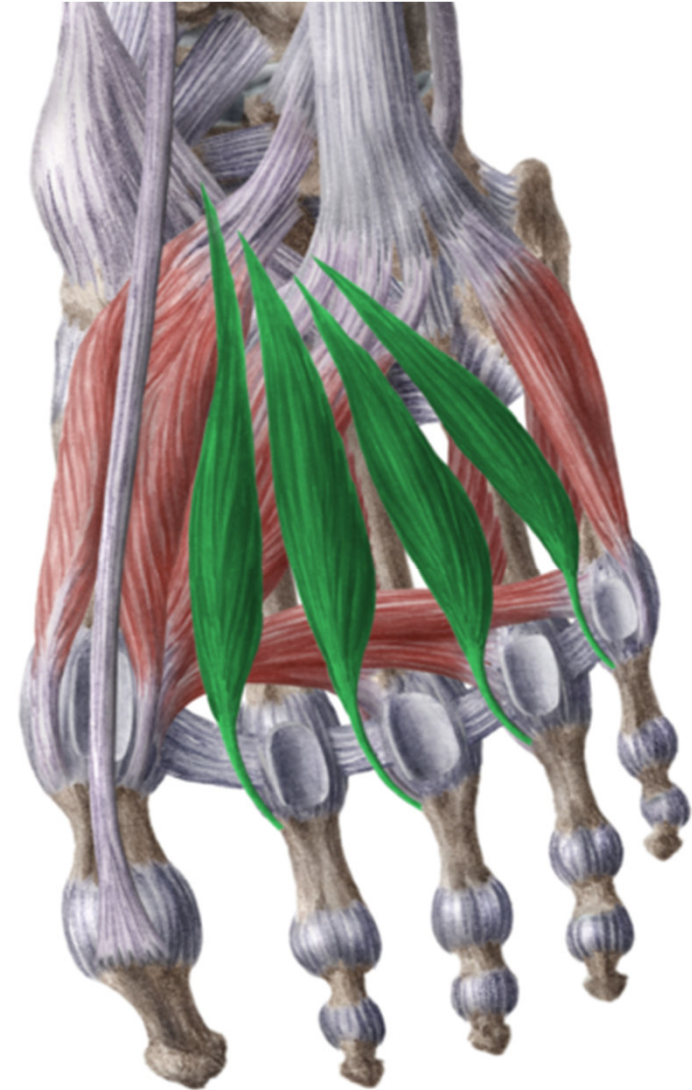
# Musculi interossei dorsales (4)

- **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!**

**Pictures:**

**<https://www.kenhub.com>**