Fascia thoracolumbalis
Fascia glutea
Fascia lata
    Lamina superficialis
    Lamina profunda
Fascia cruris

DORSAL MUSCLES OF THE HINDLIMB (ca)

M. gluteus superficialis
- Origin: sacrum and first caudal vertebrae, partly from sacrotuberous ligament; (and by means of deep gluteal fascia also from cranial dorsal iliac spine)
- Insertion: on tuberositas glutea (below greater trochanter)
- Action: extension of hip

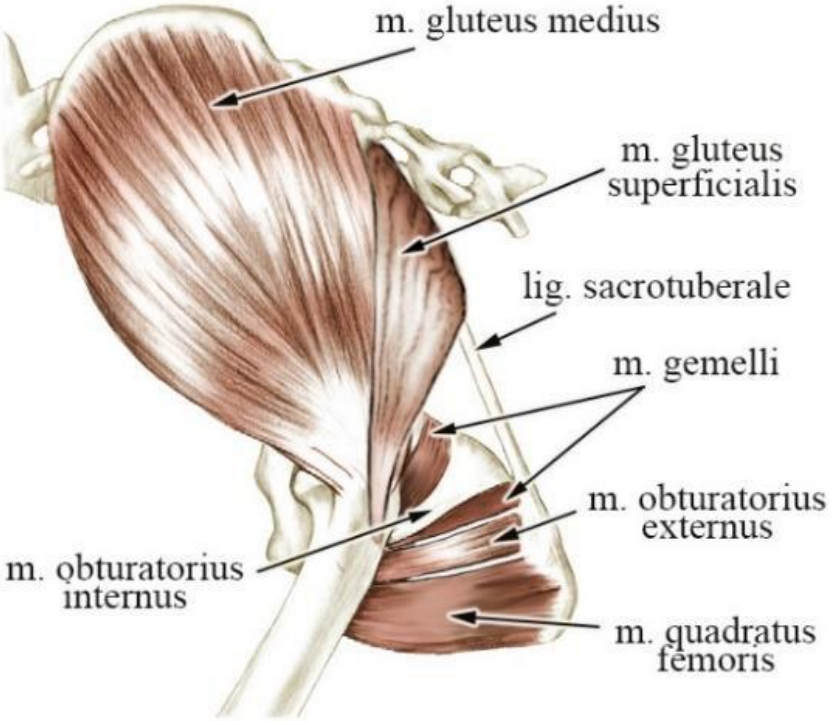
M. gluteus medius
- Origin: crista iliaca and gluteal surface of iliac bone
- Insertion: greater trochanter of femur
- Action: strongest extensor of hip joint

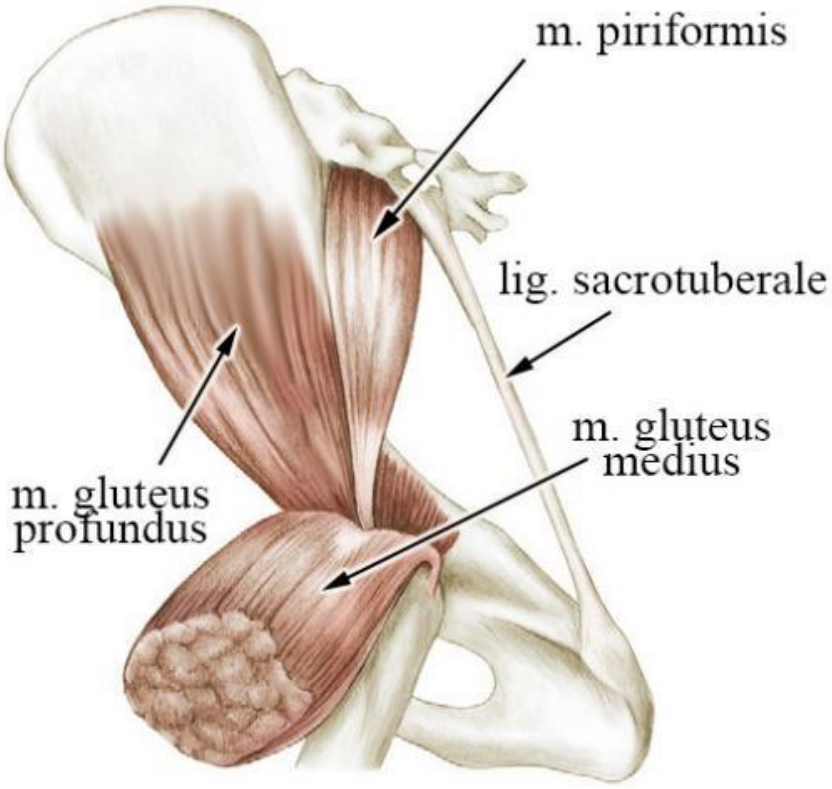
M. piriformis
- Origin: last sacral and first caudal vertebrae
- Insertion: greater trochanter of femur
- Action: extension of hip joint

M. gluteus profundus
- Origin: gluteal surface and body of iliac bone
- Insertion: greater trochanter of femur
- Action: extension of hip joint

Interspecies differences

M. gluteus superficialis in bo, su: fused with m. biceps femoris and they form m. gluteobiceps, eq: inserts on trochanter tertius
M. piriformis in eq, bo, su: fused with m. gluteus medius


m. gluteus medius
m. gluteus superficialis
lig. sacrotuberale
m. gemelli
m. obturatorius externus
m. obturatorius internus
m. quadratus femoris


m. piriformis
lig. sacrotuberale
m. gluteus medius
m. gluteus profundus

DEEP MUSCLES OF THE HINDLIMB (ca)

M. obturatorius externus

- Origin: outer surface of pelvis, around foramen obturatum
- Insertion: trochanteric fossa of femur
- Action: lateral rotation (supination) of hindlimb

M. quadratus femoris

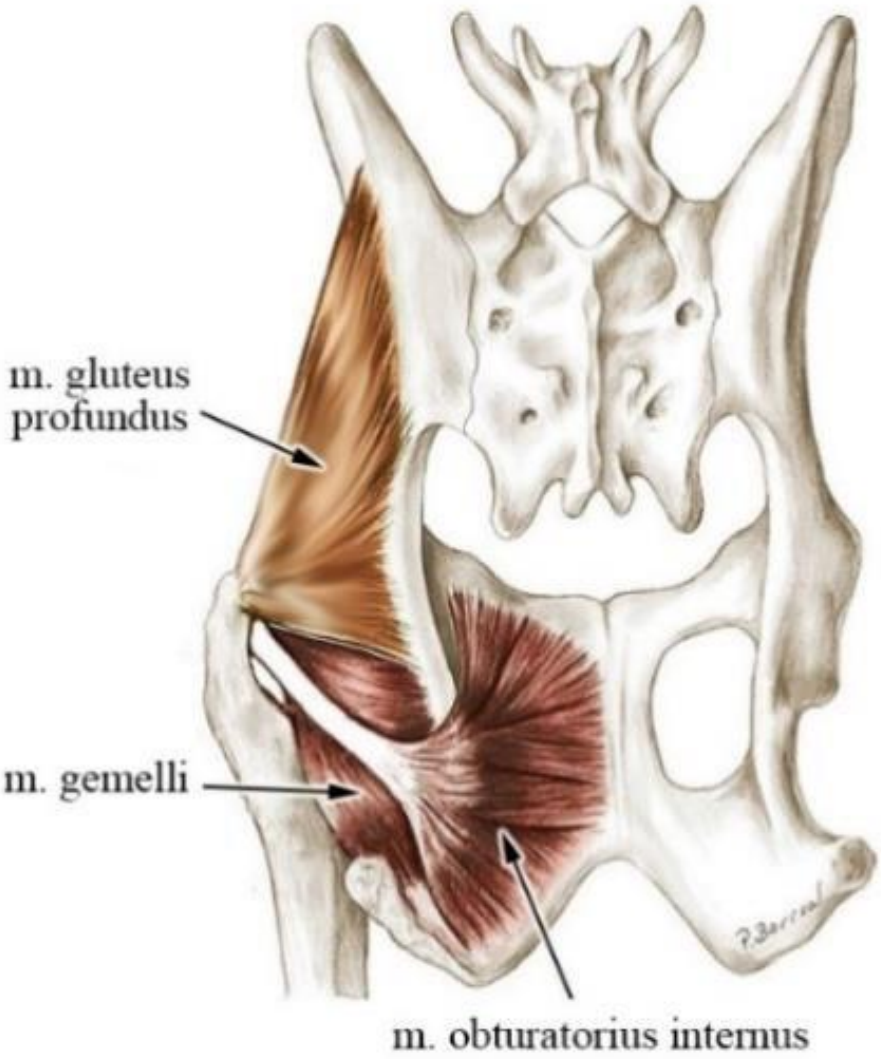
- Origin: ventral surface of tabula ossis ischii (medial to tuber ischiadicum)
- Insertion: trochanteric fossa of femur
- Action: extension of hip joint and lateral rotation of hindlimb

M. obturatorius internus

- Origin: inner surface of pelvis around for. obturatum (from regions of ramus cranialis et caudalis ossis pubis, ramus ossis ischii and tabula ossis ischii)
- Insertion: after crossing lesser sciatic notch it will attach in trochanteric fossa of femur; its tendon runs over the muscle belly of m. gemelli
- Action: lateral rotation (supination) of hindlimb

M. gemelli

- Origin: lateral side on corpus ossis ischii (ventral to lesser sciatic notch – incisura ischiadica minor)
- Insertion: trochanteric fossa of femur
- Action: lateral rotation (supination) of hindlimb


m. gluteus
profundus
m. gemelli
m. obturatorius internus

CAUDAL MUSCLES OF THE HINDLIMB (ca)

M. biceps femoris

- Origin: its cranial part on sacrotuberous ligament, caudal part on tuber ischiadicum
- Insertion: by means of fascia lata and crural fascia to patella, patellar ligament, and tibial tuberosity and tibial crest, tuber calcanei by an accessory tendon
- Action: extends hip, and hock; its cranial part extends, caudal part flexes stifle

M. abductor cruris caudalis

- Origin: distal part of sacrotuberous ligament
- Insertion: disappears in crural fascia on lateral side (it runs first medial, then lateral to m. biceps femoris)
- Action: abducts hindlimb, flexes stifle

M. semitendinosus

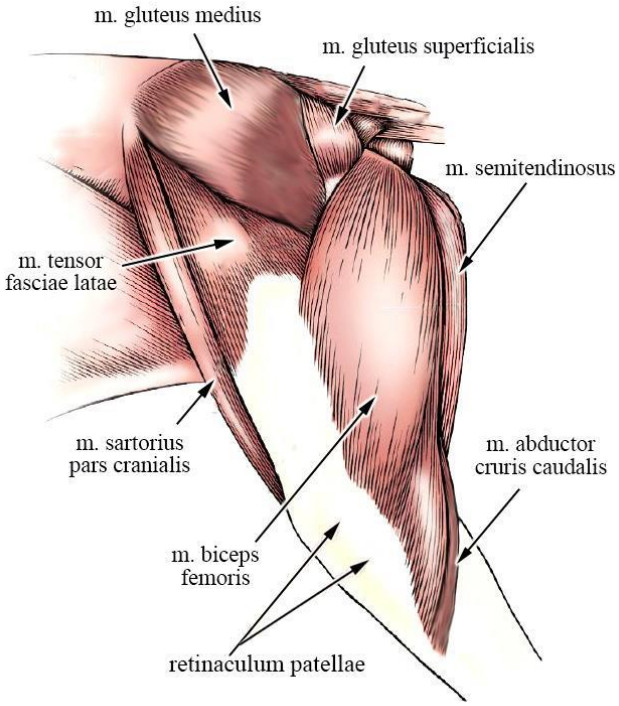
- Origin: tuber ischiadicum
- Insertion: tibial crest (medially), and tuber calcanei by means of an accessory tendon
- Action: extends hip, flexes stifle and extends hock

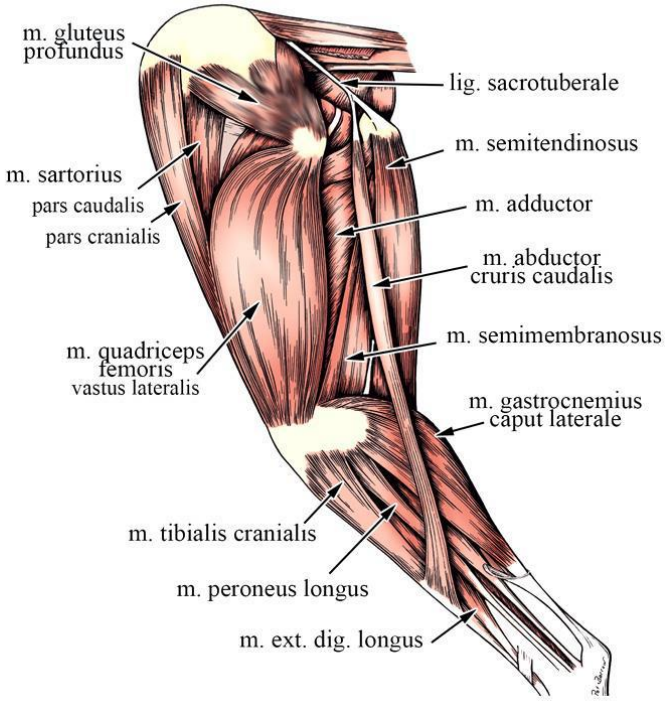
M. semimembranosus

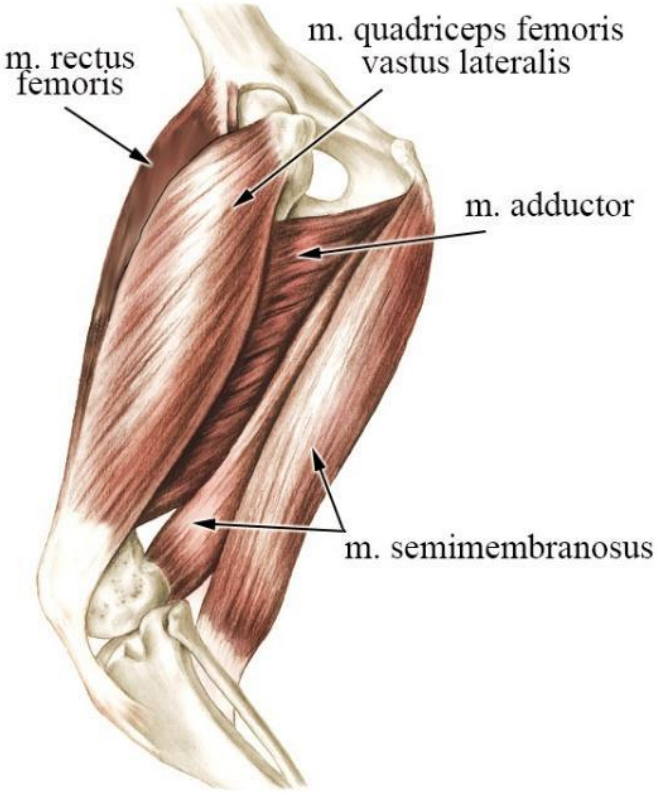
- Origin: ventral aspect of tuber ischiadicum
- Insertion: cranial belly distally on medial lip and medial condyle of femur, caudal muscle belly on medial condyle of tibia (behind medial collateral ligament)
- Action: extends hip and flexes stifle joint

Interspecies differences

M. abductor cruris caudalis - not present in eq, bo


m. gluteus medius
m. gluteus superficialis
m. semitendinosus
m. tensor fasciae latae
m. sartorius pars cranialis
m. abductor cruris caudalis
m. biceps femoris
retinaculum patellae


m. gluteus profundus
lig. sacrotuberale
m. semitendinosus
m. sartorius
pars caudalis
pars cranialis
m. adductor
m. abductor cruris caudalis
m. quadriceps femoris
vastus lateralis
m. semimembranosus
m. gastrocnemius caput laterale
m. tibialis cranialis
m. peroneus longus
m. ext. dig. longus


m. rectus femoris
m. quadriceps femoris vastus lateralis
m. adductor
m. semimembranosus

CRANIAL MUSCLES OF THE HINDLIMB (ca)

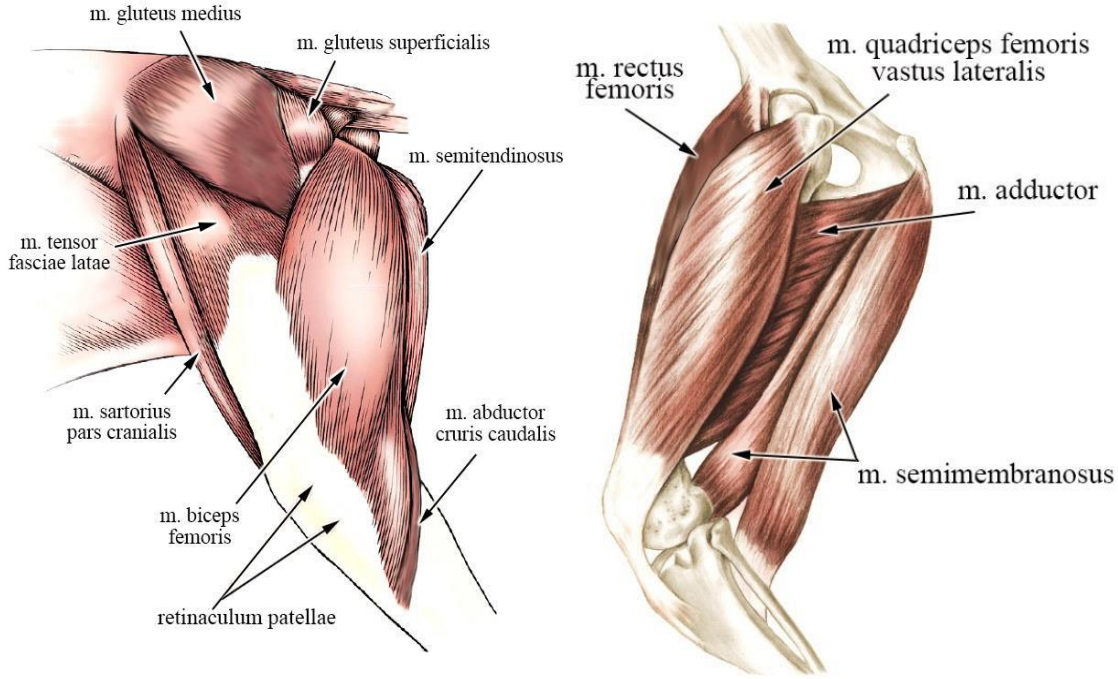
M. quadriceps femoris

It has four muscle bellies.

- Origin: m. rectus femoris from body of ilium (area m. recti femoris medialis et lat.), the three vastus proximally on femur: vastus lateralis from its craniolateral, vastus medialis from its craniomedial and vastus intermedius from its cranial surface
- Insertion: patella, and by means of patellar ligament on tibial tuberosity
- Action: strongest extensor of stifle joint; m. rectus femoris also flexes hip

M. tensor fasciae latae

- Origin: tuber coxae (cranial ventral iliac spine and spina alaris)
- Insertion: radiates into fascia lata and fascia cruris. Its superficial fascial layer covers thigh, deep fascial layer surrounds m. quadriceps femoris and attaches to femur
- Action: tenses fascia lata, flexes hip and extends stifle



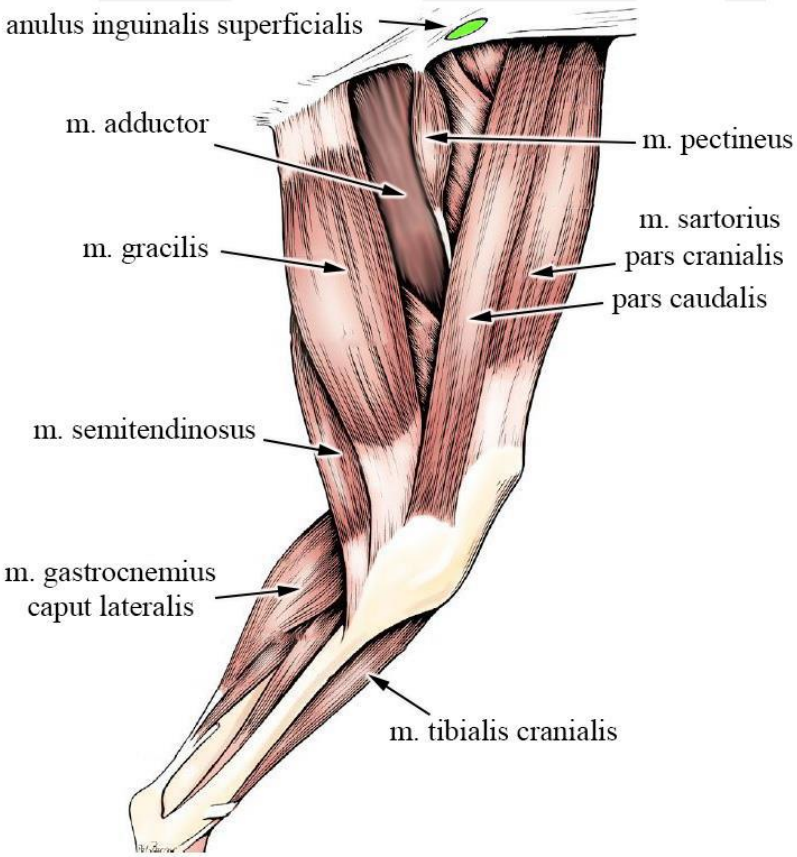
MEDIAL MUSCLES OF THE HINDLIMB (ca)

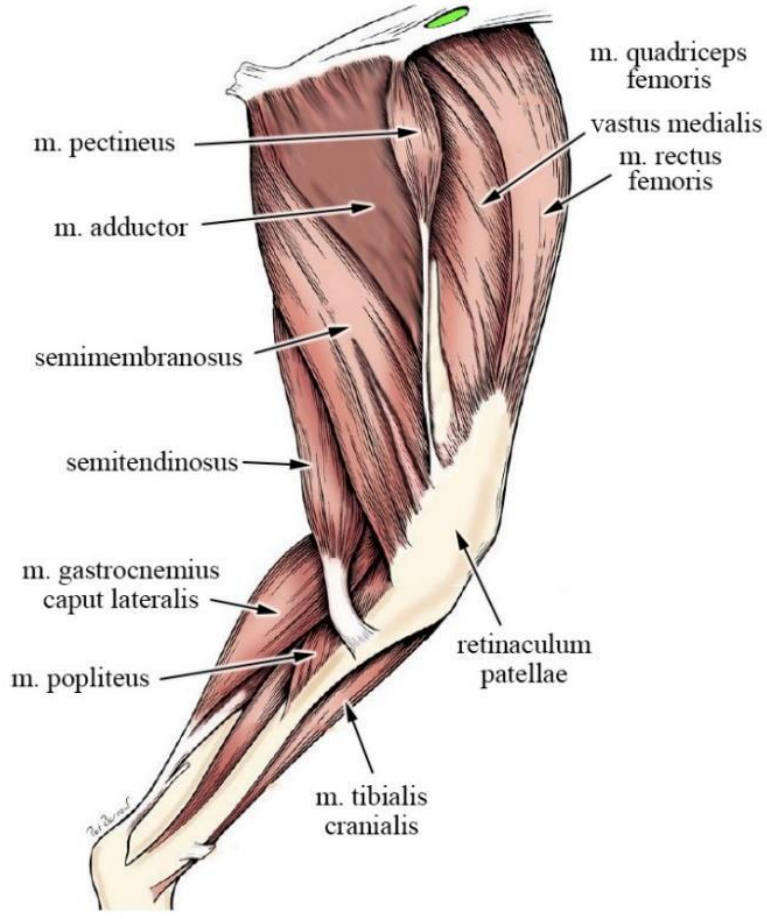
M. sartorius
In dogs it has a cranial and caudal part.
- Origin: iliac crest, cranial ventral iliac spine, thoracolumbar fascia
- Insertion: radiating into fascia lata and crural fascia, cranial part inserts above stifle joint, caudal part inserts below stifle joint (the latter medially reaches tibial crest)
- Action: flexes hip, extends or flexes stifle (depending on which part contracts more)

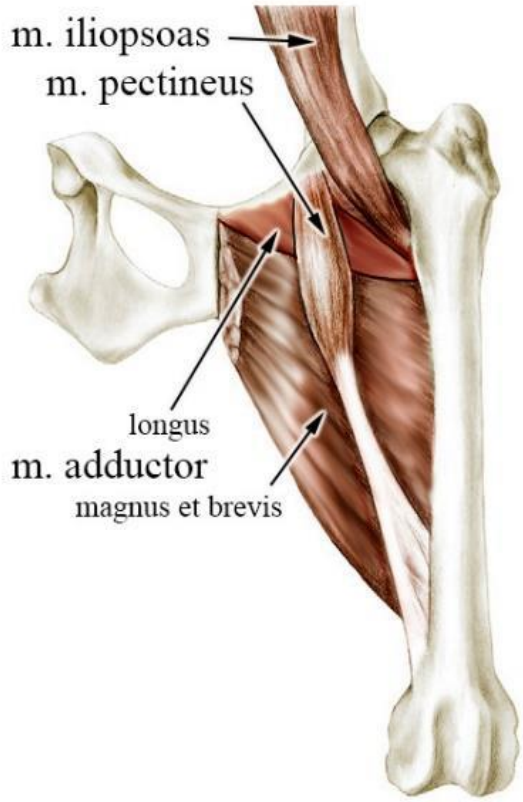
M. adductor
- Origin: m. adductor longus from ramus cranialis ossis pubis, m. adductor magnus et brevis are arising from symphysis pelvis (tendo symphysialis), ramus caudalis ossis pubis and ramus ossis ischi
- Insertion: facies aspera and labium laterale of femur
- Action: adducts hindlimb and extends hip

M. pectineus
- Origin: pecten ossis pubis, prepubic tendon
- Insertion: medial lip of rough surface on femoral shaft (labium mediale ossis femoris, next to facies aspera)
- Action: adduction of thigh

M. gracilis
- Origin: symphysis pelvis (by means of tendo symphysialis)
- Insertion: medially on tibial crest, fascia cruris, tuber calcanei by an accessory tendon to common calcaneal tendon
- Action: adducts hindlimb, extends hip, flexes stifle, extends tarsus


anulus inguinalis superficialis
m. adductor
m. pectineus
m. sartorius
pars cranialis
pars caudalis
m. gracilis
m. semitendinosus
m. gastrocnemius
caput lateralis
m. tibialis cranialis


m. quadriceps
femoris
vastus medialis
m. rectus
femoris
m. pectineus
m. adductor
semimembranosus
semitendinosus
m. gastrocnemius
caput lateralis
m. popliteus
retinaculum
patellae
m. tibialis
cranialis



ARTICULATIONES MEMBRI PELVINI all species
Membrana obturatoria (eq)
Lig. sacrotuberale (ca)
Lig. sacrotuberale latum (Un)
Foramen ischiadicum majus (Un)
Foramen ischiadicum minus (Un)
• **Articulatio sacroiliaca**
type: amphiarthrosis
Ligg. sacroiliaca ventralia
Ligg. sacroiliaca interossea
Ligg. sacroiliaca dorsalia
• **Symphysis pelvina**
Symphysis pubica
Symphysis ischiadica
• **Articulatio coxae**
type: diarthrosis, articulatio simplex, articulatio spheroidea, multiaxial
Capsula articularis
Labrum acetabulare
Lig. capitis ossis femoris
Lig. accessorium ossis femoris (eq)

Articulatio genus (ca)

- **Articulatio femoropatellaris**

type: diarthrosis, articulatio simplex, articulatio delabens, uniaxial

- **Articulatio femorotibialis**

type: diarthrosis, articulatio duplex, articulatio condylaris, biaxial

Extracapsular ligaments (Ligg. extracapsularia) of stifle joint:

- **Retinaculum patellae** *(1)*: from fascia lata and aponeurosis of muscles, covers stifle
- **Lig. patellae** *(2):* Continuation of m. quadriceps femoris's tendon, the patella is a sesamoid bone in the tendon before patellar ligament inserts on tibial tuberosity
- **Lig. collaterale laterale** *(3)*: from lateral epicondyle of femur to head of fibula, a lesser part to lateral condyle of tibia; underneath there is the tendon of m. popliteus
- **Lig. collaterale mediale** *(4)*: from medial epicondyle of femur to distal part of tibia's medial condyle; it also attaches strongly to medial meniscus

Capsular ligaments (Ligg. capsularia) of stifle joint:

- **Lig. femoropatellare laterale** *(5)*: from lateral Vesalius (sesamoid) bone to patella, also attaches to lateral femoral epicondyle; reinforcement of joint's capsule
- **Lig. femoropatellare mediale** *(6)*: from medial Vesalius (sesamoid) bone to patella, also attaches to medial femoral epicondyle; reinforcement of joint's capsule
- **Lig. popliteum obliquum** *(23)*: fibrous reinforcement in caudal wall of joint capsule

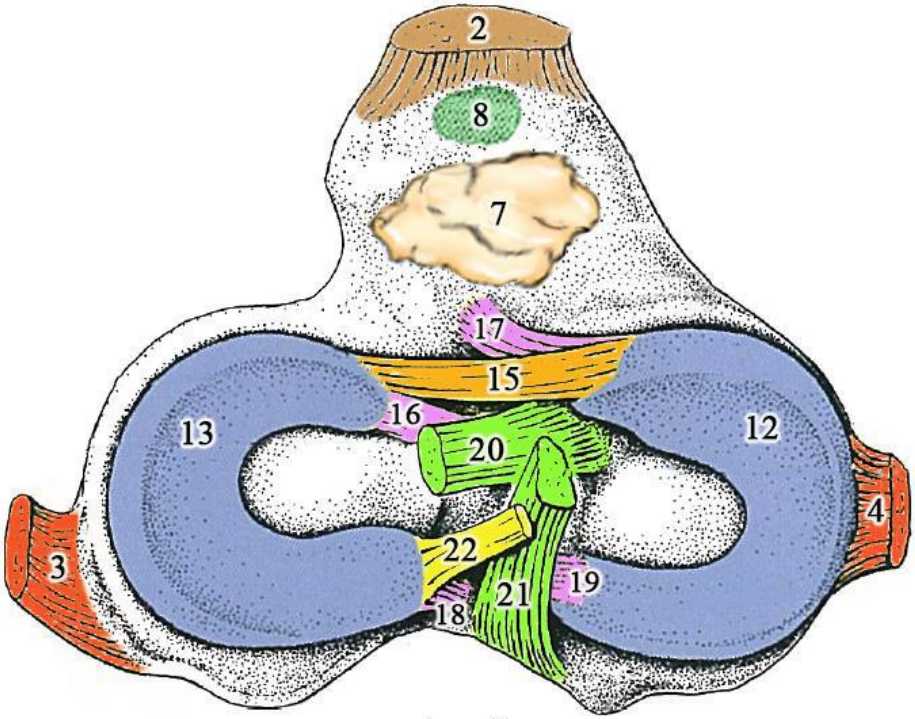
Intracapsular ligaments (Ligg. intracapsularia) of stifle joint:

- **Lig. transversum genus** *(15)*: connects cranial angles of the two meniscus

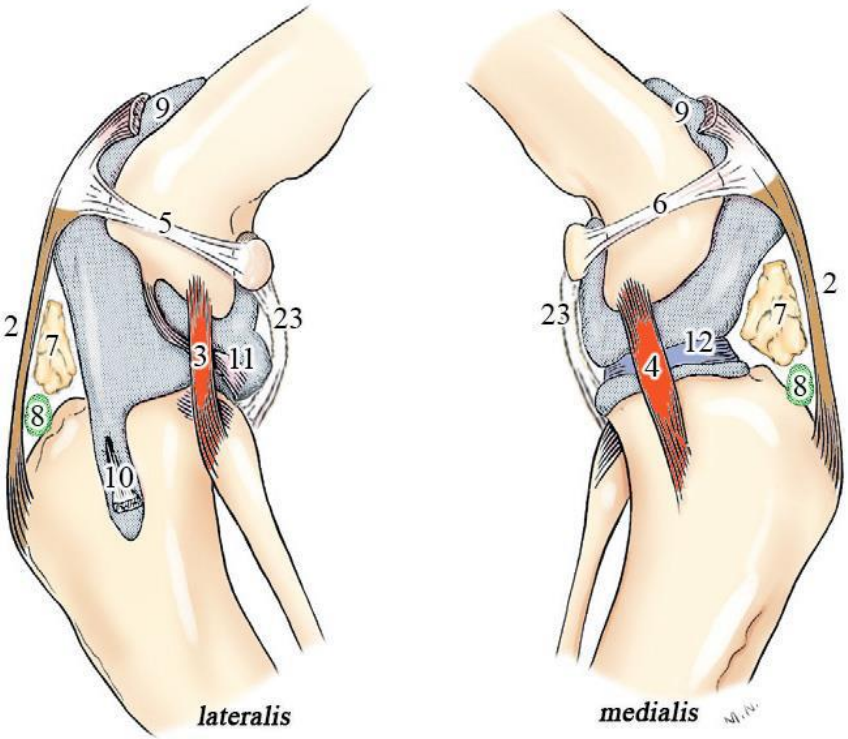
- **Ligg. meniscotibiales**: from cranial and caudal ends of both meniscus to tibia
  - **lig. craniale menisci laterale** *(16)*: area intercondylaris cranialis lateralis
  - **lig. craniale menisci mediale** *(17)*: area intercondylaris cranialis medialis
  - **lig. caudale menisci laterale** *(18)*: incisura poplitea
  - **lig. caudale menisci mediale** *(19)*: area intercondylaris caudalis
- **Lig. cruciatum craniale** *(20)*: from lateral femoral condyle's caudal axial surface to area intercondylaris cranialis of tibia (Nickel, Nomenclatura, does not specify it by species! Only explains horse!)
- **Lig. cruciatum caudale** *(21)*: from medial femoral condyle's cranial axial surface to area intercondylaris caudalis and incisura poplitea of tibia
- **Lig. meniscofemorale** *(22)*: from medial femoral condyle's caudal axial surface to caudal end of lateral meniscus

Synovial, protecting and fibrocartilaginous structures of stifle joint:

- **Corpus adiposum infrapatellare** *(7)*: fatty tissue under lig. patellae
- **Bursa infrapatellaris** *(8)*: under lig. patellae at tibial tuberosity
- **Recessus suprapatellaris** *(9)*: behind and above patella
- **Recessus subextensorius** *(10)*: around tendon of m. ext. dig. longus
- **Recessus subpopliteus** *(11)*: around tendon of m. popliteus
- **Meniscus medialis** *(12)*: fibrocartilage between femur and tibia
- **Meniscus lateralis** *(13)*: fibrocartilage between femur and tibia
- **Fibrocartilago parapatellaris** *(14)*: around patella, on both sides



dorsalis



lateralis *medialis*

Interspecies differences

Lig. transversum genus- not present in eq, bo
Lig. patellae mediale (eq, bo)
Lig. patellae intermedium (eq, bo)
Lig. patellae laterale (eq, bo)
Trochlea ossis femoris

Tuberculum trochleae ossis femoris (eq)

Cavities of the joint capsule (eq): femorotibial joint has separated medial, lateral cavities (which forms proximal, distal sacs), medial femorotibial joint cavity communicates with femoropatellar joint cavity

Lig. cruciatum craniale (eq): from lateral femoral condyle's caudal axial surface to area intercondylaris centralis of tibia

STIFLE EXTENSORS (ca)

M. quadriceps femoris

- Action: strongest extensor of stifle joint; m. rectus femoris also flexes hip

M. tensor fasciae latae

- Action: tenses fascia lata, flexes hip and extends stifle

M. sartorius cranial part

- Action: flexes hip, extends stifle

M. biceps femoris

- Action: extends hip, and hock; its cranial part extends stifle

STIFLE FLEXORS (ca)

M. biceps femoris

- Action: extends hip, and hock; caudal part flexes stifle

M. abductor cruris caudalis

- Action: abducts hindlimb, flexes stifle

M. semitendinosus

- Action: extends hip, flexes stifle and extends hock

M. semimembranosus

- Action: extends hip and flexes stifle joint

M. sartorius pars caudalis

- Action: flexes hip, flexes stifle

M. gracilis

- Action: adducts hindlimb, extends hip, flexes stifle, extends tarsus

M. popliteus

- Origin: fossa m. poplitei on lateral femoral condyle
- Insertion: it twists caudally under lig. collaterale laterale, then inserts caudally on proximal part of tibia, on linea m. poplitei
- Action: flexes stifle, rotates leg medially

M. flexor digitorum superficialis

- Origin: fossa supracondylaris of femur, partly fused with m. gastrocnemius caput lateralis
- Insertion: its plantar tendon (tendo plantaris) turns from medial to lateral direction around common calcaneal tendon, on the surface of tuber calcanei it

makes a cap (galea calcanea), then finally attaches to middle phalanx of digits II-V. on plantar surface
o Action: flexes stifle, extends hock, flexes joints of digits II-V

DIGITAL EXTENSORS (ca)

M. extensor digitorum longus
o Origin: fossa extensoria on lateral femoral condyle
o Insertion: extensor processes of distal phalanx of digits II-V.
o Action: extends joints of digits and flexes tarsus

M. extensor digitorum lateralis
o Origin: proximal third of fibula
o Insertion: unites with long digital extensor's tendon to reach digit V. distal phalanx
o Action: extension and abduction of digit V. (and flexes tarsus)

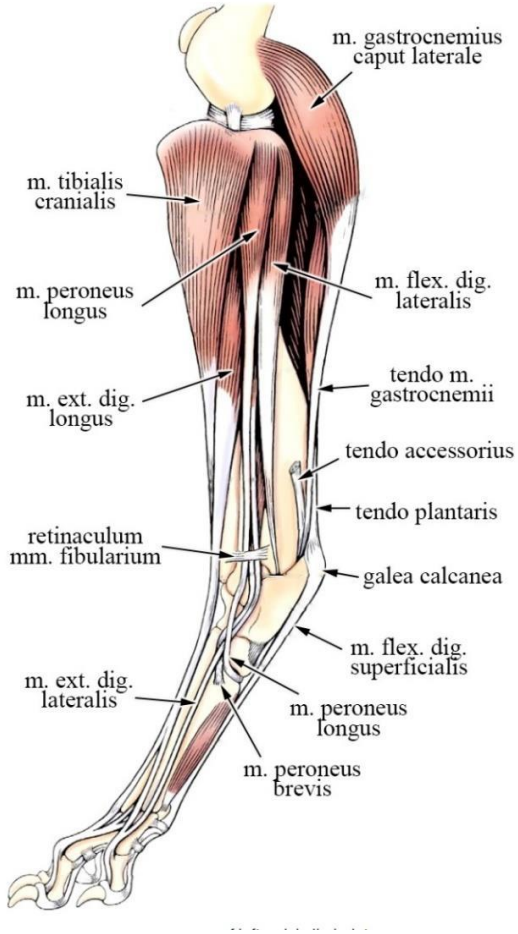
M. extensor digiti I. [hallucis] longus
o Origin: from middle third of fibula
o Insertion: radiates into fascia over metacarpophalangeal joint of digit II.
o Action: extends digit II. (and digit I. if it's present) (and flexes tarsus)

TARSAL FLEXORS (ca)

M. tibialis cranialis
o Origin: cranial margin of lateral condyle and crest of tibia
o Insertion: medial side on os tarsi I. and Mt I-II.
o Action: flexes tarsus

M. peroneus longus – also called: m. fibularis longus
o Origin: cranial margin of tibia's lateral condyle, head of fibula, lateral collateral ligament
o Insertion: first attaches to os tarsi 4+5 (on its plantar surface), then extends to all metatarsal bones' plantar base
o Action: flexes tarsus

M. peroneus brevis – also called: m. fibularis brevis
o Origin: laterally on distal third of fibula (and partly on tibia)
o Insertion: base of Mt. V.
o Action: flexes tarsus



DIGITAL FLEXORS (ca)

M. flexor digitorum superficialis

o Origin: fossa supracondylaris of femur, partly fused with m. gastrocnemius caput lateralis

o Insertion: its plantar tendon (tendo plantaris) turns from medial to lateral direction around common calcaneal tendon, on the surface of tuber calcanei it makes a cap (galea calcanea), then finally attaches to middle phalanx of digits II-V. on plantar surface

o Action: flexes stifle, extends hock, flexes joints of digits II-V

M. flexor digitorum profundus

o Origin: m. flexor digitorum lateralis (former: m. flexor hallucis longus) from proximal caudal half of fibula, proximal caudolateral border of tibia and from interosseous membrane; m. flexor digitorum medialis (former: m. flexor digitorum longus) starts caudo-proximally from tibia. Below tarsus the two parts unite.

o Insertion: plantar surface of distal phalanx of digits II-V. (on tuberculum flexorium)
o Action: extends tarsus, flexes joint if digits II-V.

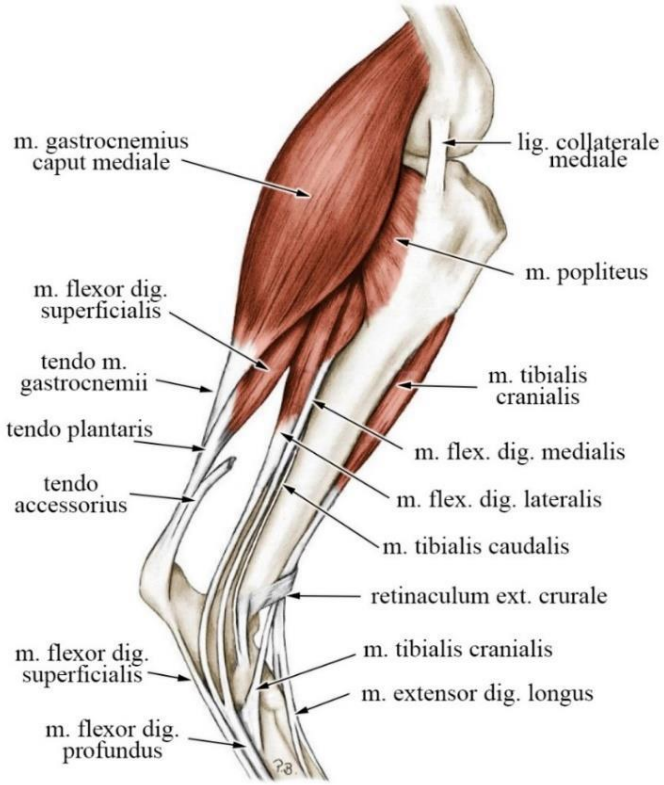
TARSAL EXTENSORS (ca)

M. gastrocnemius
o Origin: medial and lateral supracondylar tuberosities of femur (inside their heads – caput mediale and laterale – there are sesamoid /Vesalius/ bones, former: fabellae)
o Insertion: on tuber calcanei (as a part of common calcaneal tendon)
o Action: flexes stifle, extends tarsus

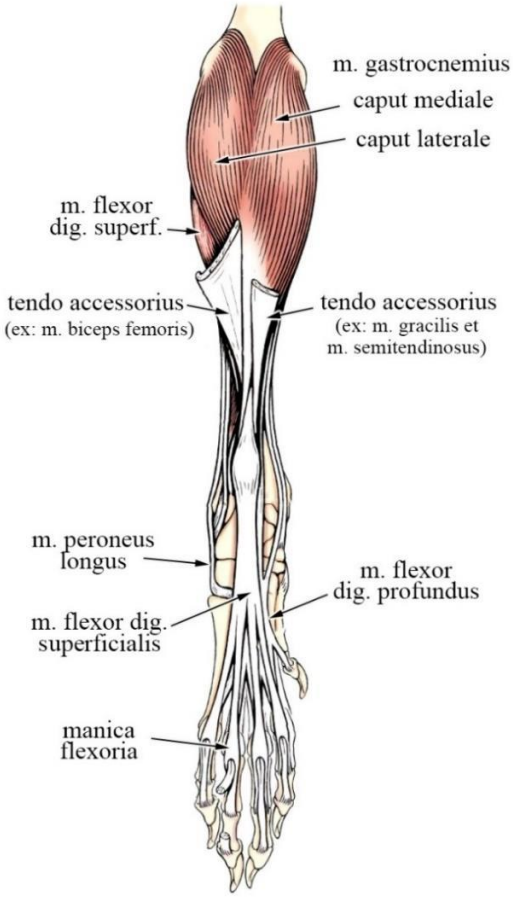
M. tibialis caudalis
o Origin: caudally on head of fibula
o Insertion: medially at tarsus it radiates into tarsal fascia
o Action: extends tarsus

M. flexor digitorum superficialis
M. flexor digitorum profundus

Tendo accessorius (m. biceps femoris, m. semitendinosus, m. gracilis)


m. gastrocnemius caput mediale
lig. collaterale mediale
m. popliteus
m. flexor dig. superficialis
tendo m. gastrocnemii
m. tibialis cranialis
tendo plantaris
m. flex. dig. medialis
tendo accessorius
m. flex. dig. lateralis
m. tibialis caudalis
retinaculum ext. crurale
m. flexor dig. superficialis
m. tibialis cranialis
m. extensor dig. longus
m. flexor dig. profundus


m. popliteus
m. flexor dig. medialis
m. flexor dig. lateralis
m. tibialis caudalis
m. flexor digitorum profundus


m. gastrocnemius
caput mediale
caput laterale
m. flexor dig. superf.
tendo accessorius (ex: m. biceps femoris)
tendo accessorius (ex: m. gracilis et m. semitendinosus)
m. peroneus longus
m. flexor dig. profundus
m. flexor dig. superficialis
manica flexoria

TENDO CALCANEUS COMMUNIS (ca)

o It comprise three main tendons:
- tendo m. gastrocnemii [Achilli] (*ex*: m. gastrocnemius)
- tendo plantaris (*ex*: m. flexor dig. superficialis)
- tendo accessorius, from the following parts:
    - *lateral*: m. biceps femoris
    - *medial*: m. gracilis and m. semitendinosus

o Between skin and tendo plantaris there is a protecting **bursa subcutanea calcanea**, between tendo plantaris and tendo m. gastrocnemii **bursa subtendinea calcanea**, and between tendo accessorius and tendo m. gastrocnemii **bursa tendinis calcanea**.

o As tendo plantaris widens, it forms galea calcanea

o Action: strongest extensor of tarsus

Interspecies differences

eq

- **m. triceps surae: m. gastrocnemius+ m. soleus**
- **m. peroneus longus, m. peroneus brevis-** not present
- **m. peroneus tertius-** purely tendinous,
  o Origin: together with m. extensor digitorum longus from fossa extensoria
  o Insertion: on distal tarsal bones, proximal end of Mt
  o Action: flex the tarsus, important part of passive stay apparatus
- **m. extensor hallucis longus-** not present
- **m. tibialis caudalis –** is a part of the m. flexor digitorum profundus