

FRONT OF THE THIGH

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Superficial fascia of the thigh

- It is formed of 2 layers: ➤
 - 1- Fatty layer: superficial ➤
 - 2- Membranous layer: deep. ➤
- It is attached to the deep fascia about a finger-breadth below the inguinal ligament



Deep fascia of the thigh (fascia lata)

- It encloses the thigh like a trouser .
- Its upper end is attached to the pelvis.
- Its lateral aspect is thickened to form iliotibial tract (attached above to iliac tubercle and below to lateral condyle of tibia).



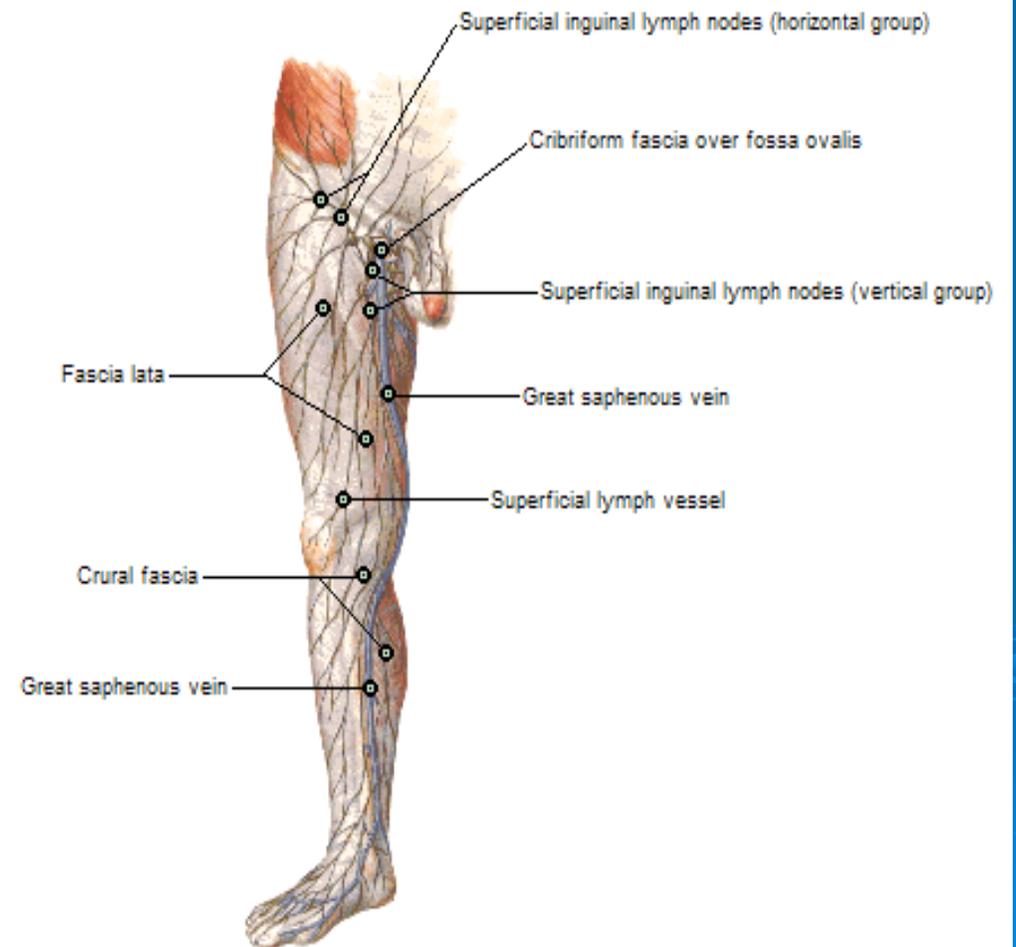
Superficial veins

➤ The great saphenous vein :

- it pass upwards in front of medial malleolus .
- it curves forward around the medial side of the thigh .
- it passes through lower part of saphenous opening .
- it join the femoral vein about one and half inches below and lateral to pubic tubercle .

Lymph Vessels and Nodes of Lower Limb

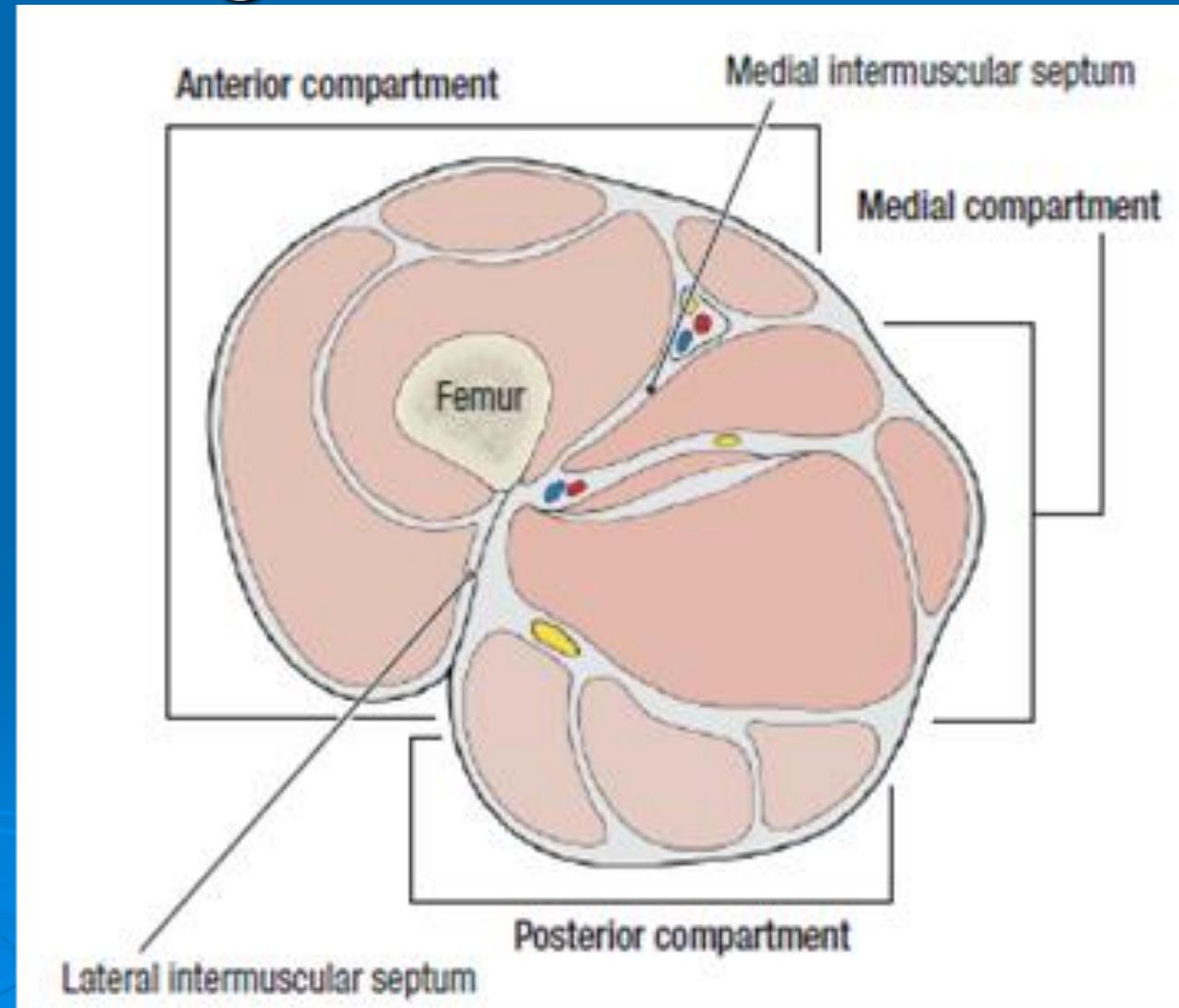
Anterior View



fascial compartment of the thigh

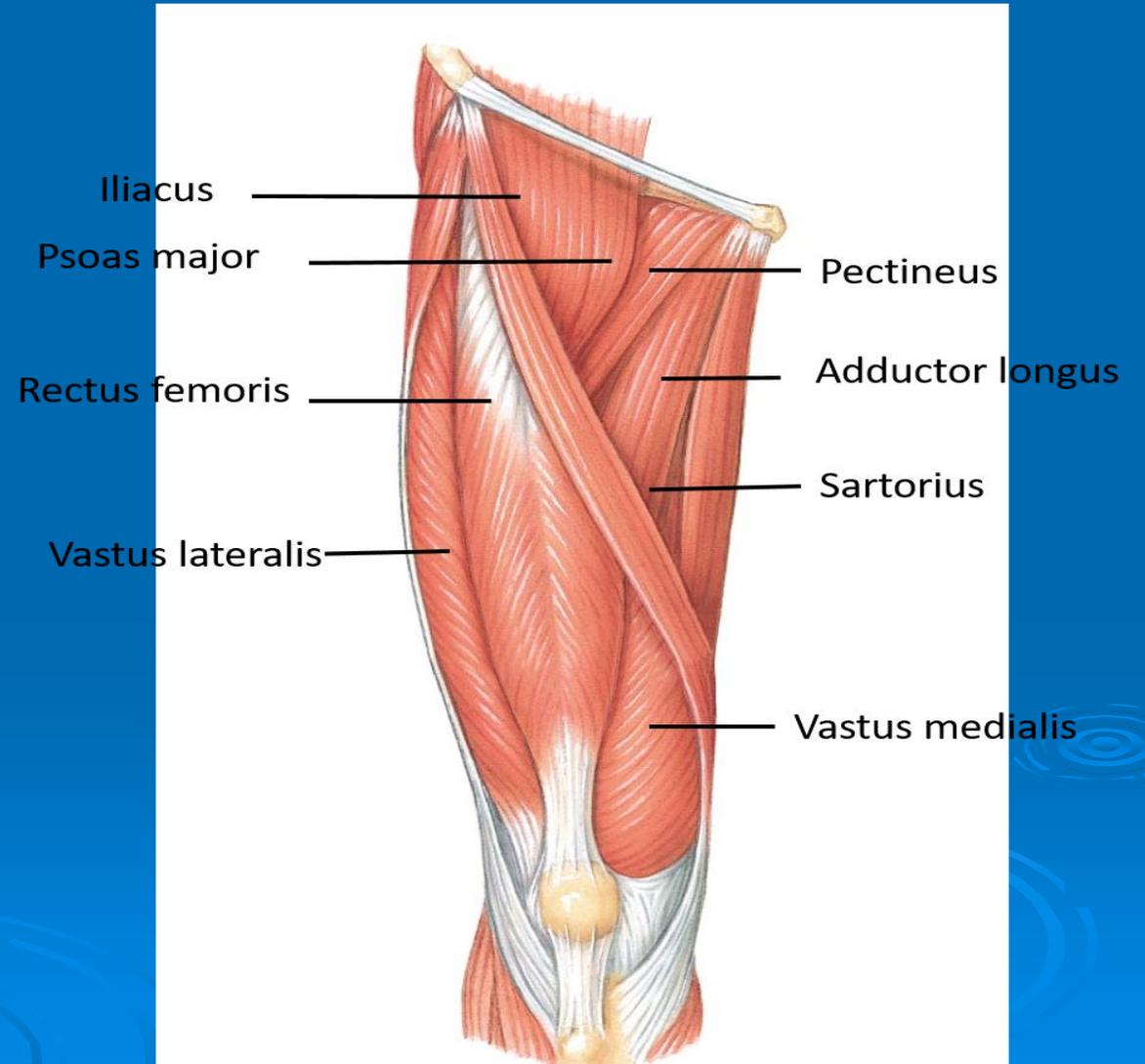
The thigh is divided into three compartments by intermuscular septa between the posterior aspect of the femur and the fascia lata .

The three fascial compartments of the thigh: anterior (extensor), medial (adductor), and posterior (flexor).



Muscles of anterior compartment

- Sartorius.
- Iliacus .
- Psoas .
- Pectineus .
- Quadriceps femoris.



Muscles of anterior compartment

Sartorius muscle:

Origin

Anterior superior iliac spine.

Insertion

Upper part of the medial surface of the tibia.

Action

Flexion , abduction , & Lateral rotation of the hip joint.

Flexion, & medial rotation of knee joint

Nerve supply

Femoral nerve.



Muscles of anterior compartment

Psoas major muscle:

Origin:

Roots of transverse processes, sides of vertebral bodies, & intervertebral discs from 12th thoracic to 5th lumbar vertebra.

Insertion:

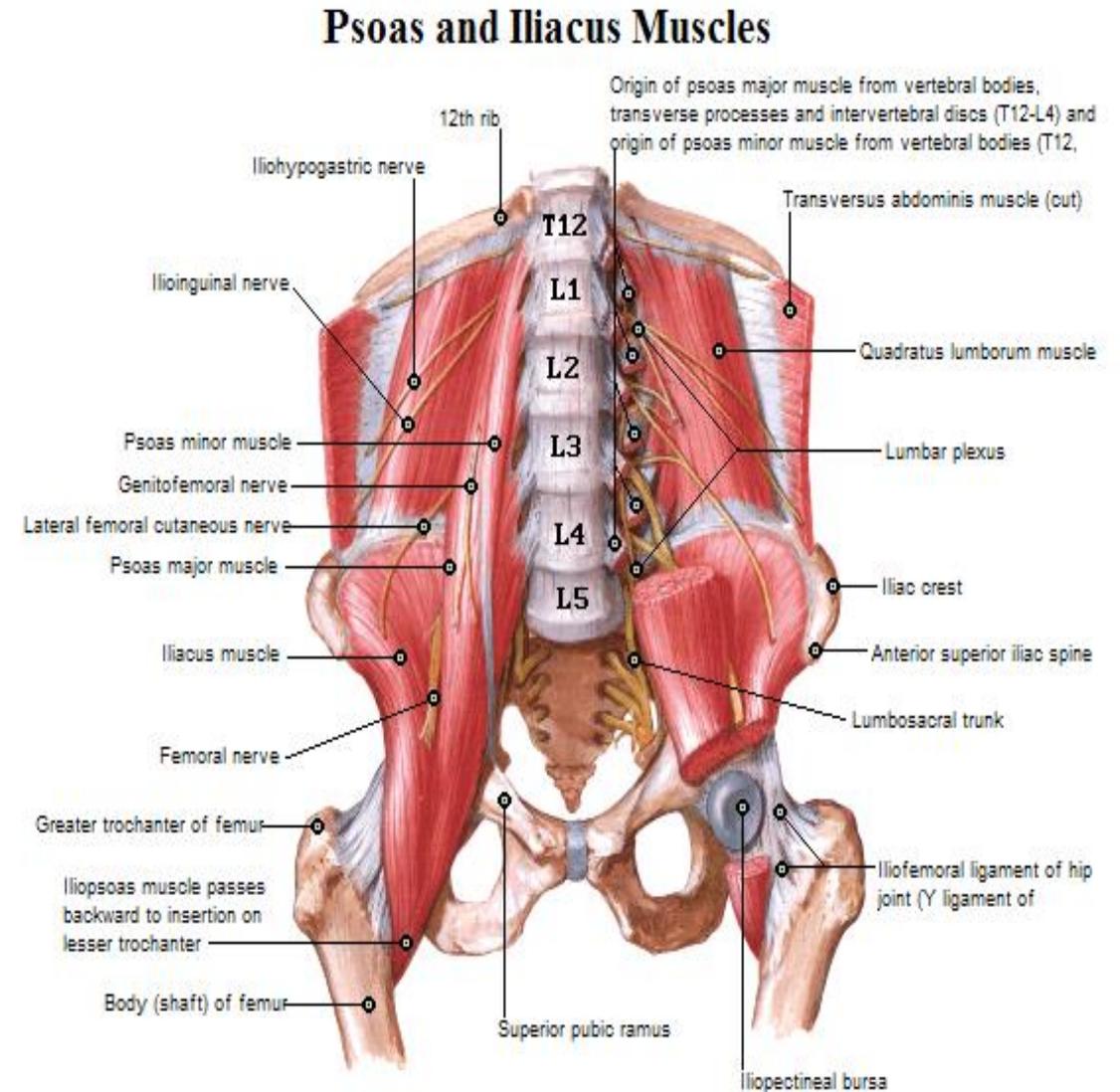
Lesser trochanter of the femur together with iliacus muscle.

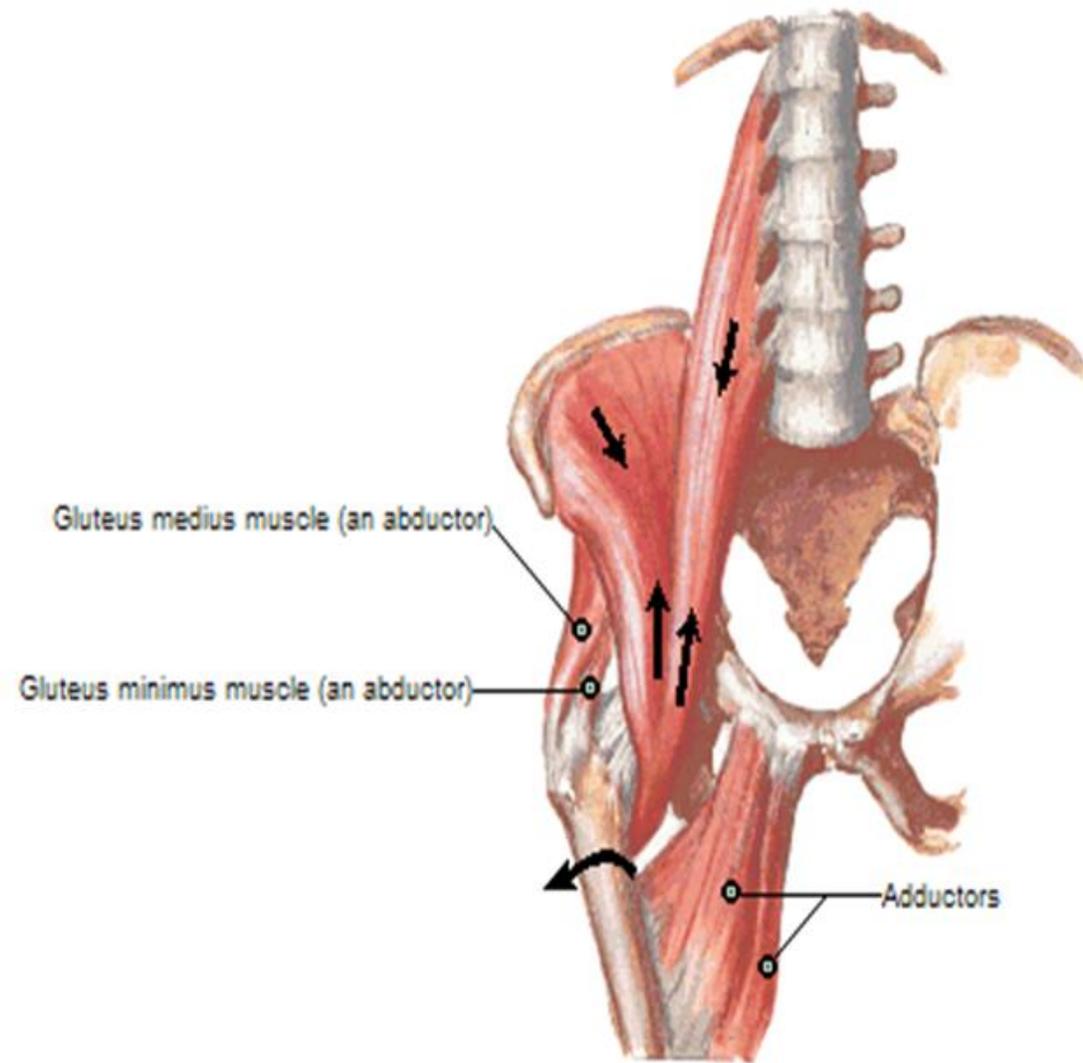
Action:

Flexion of the thigh on the trunk

Nerve supply:

Branches from lumbar plexus.





Note: arrows indicate direction of action of iliopsoas muscle

Muscles of anterior compartment

➤ Pectineus:

Origin:

Superior ramus of the pubis.

Insertion:

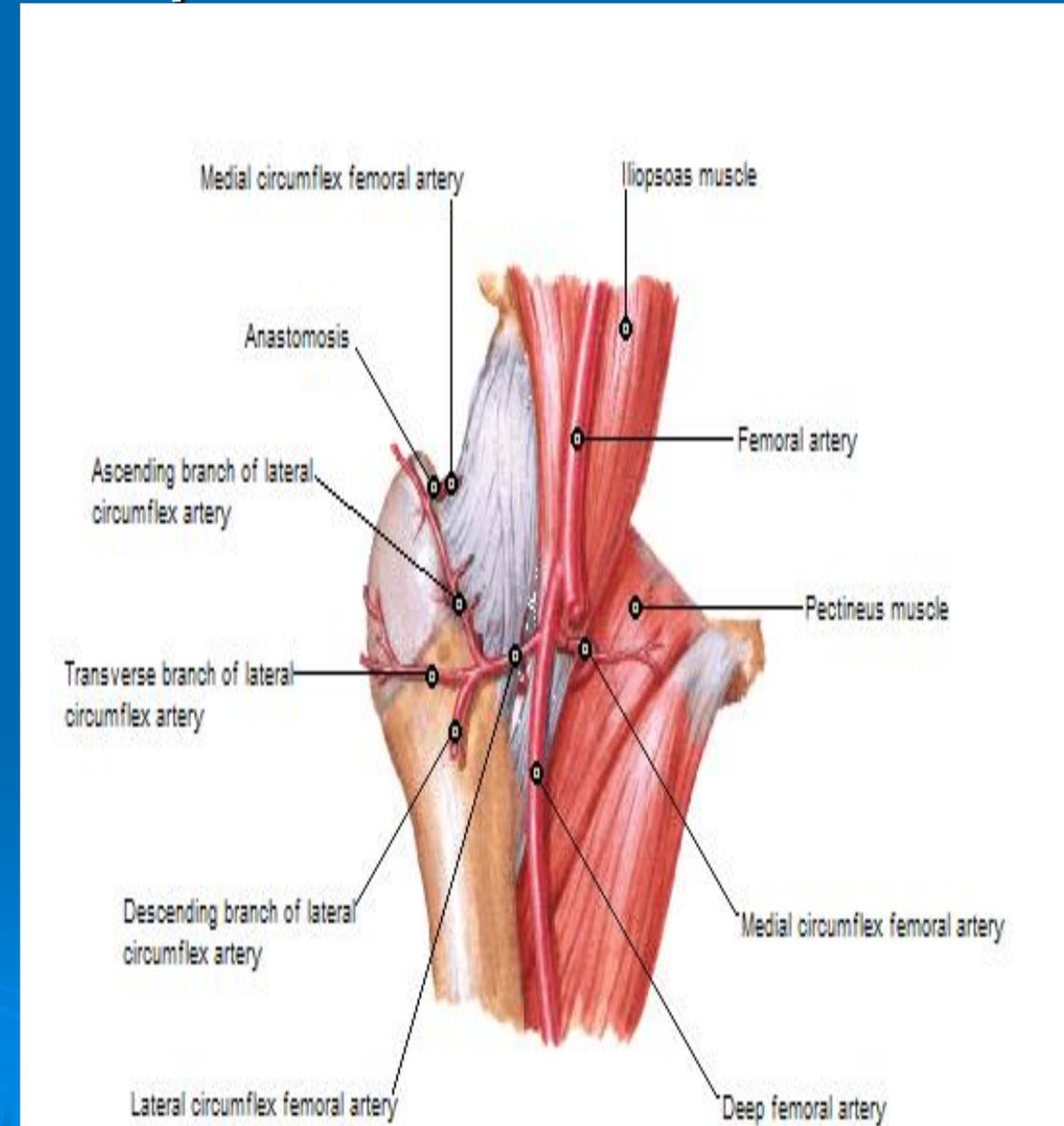
Upper end of the Linea aspera below the lesser trochanter.

Action:

Flexion & adduction of thigh at hip joint.

Nerve supply:

Femoral nerve (occasionally obturator nerve).



Muscles of anterior compartment of the thigh

Muscle	Origin	Insertion	Nerve supply	Action
Pectineus	Superior ramus of pubis	Pectineal line of femur	Femoral nerve; sometimes also by obturator nerve	Adduction and flexion of hip; medial rotation of thigh
Psoas major (illiopsoas)	Sides of T12-L5 vertebrae and discs between them; transverse processes of all lumbar vertebrae	Lesser trochanter of femur	Ventral rami of L1-L3	Flexion of thigh at hip
Iliacus (illiopsoas)	Iliac crest, iliac fossa, ala of sacrum	lesser trochanter	Femoral nerve	Flexion of thigh at hip

Muscles of anterior compartment

➤ Quadriceps femoris:

1. Rectus femoris

Origin:

Straight head from anterior inferior iliac spine.

Reflected head from the ilium above the acetabulum

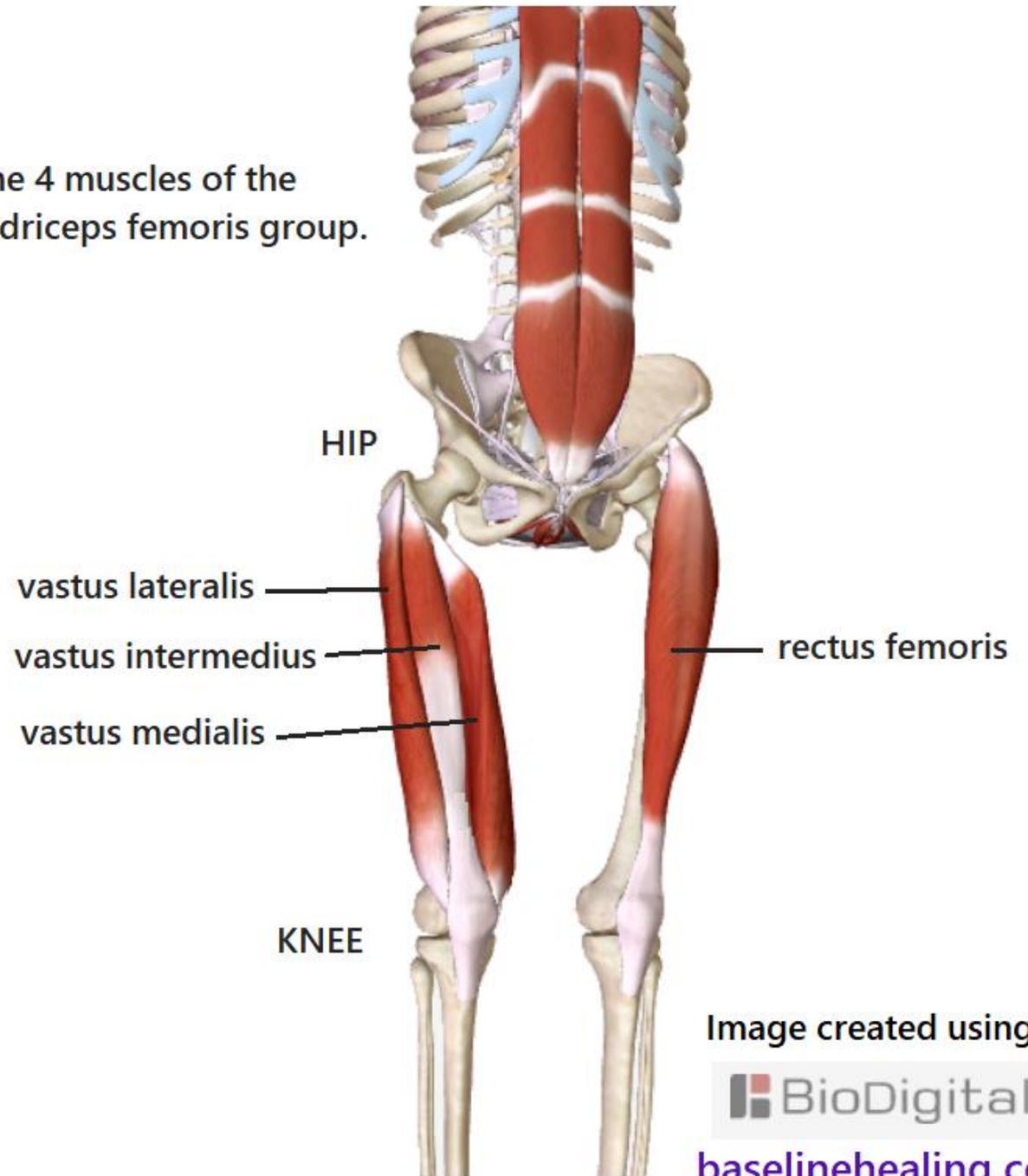
Insertion:

Quadriceps tendon & patella.

Nerve supply:

Femoral nerve.

The 4 muscles of the quadriceps femoris group.



Muscles of anterior compartment

➤ Vastus lateralis

Origin:

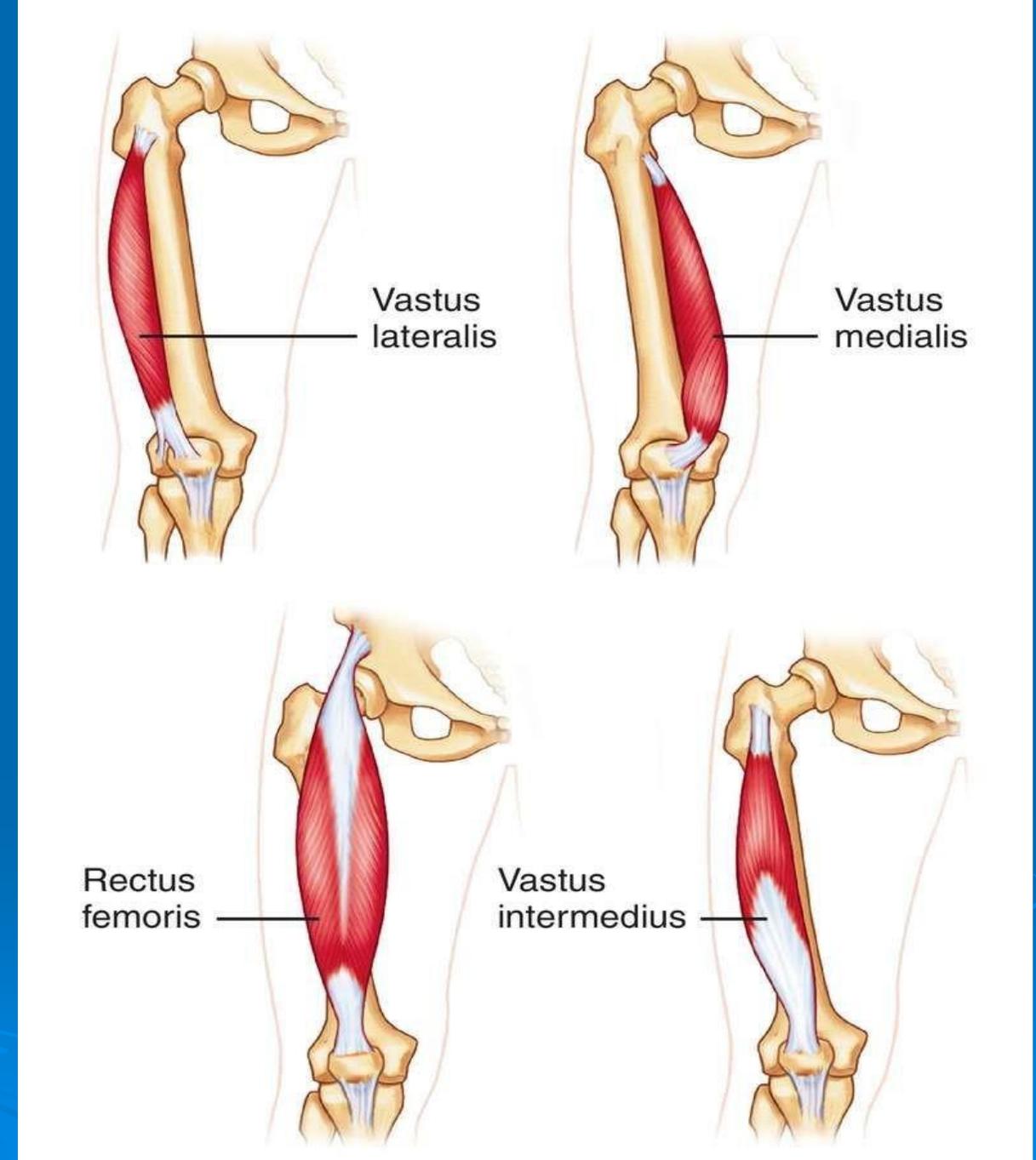
Intertrochanteric line, base of greater trochanter, linea aspera

Insertion:

Quadriceps tendon & patella.
Some fibres inserted into capsule of the knee joint.

Nerve supply

Femoral nerve.



Muscles of the anterior compartment

➤ Vastus medialis

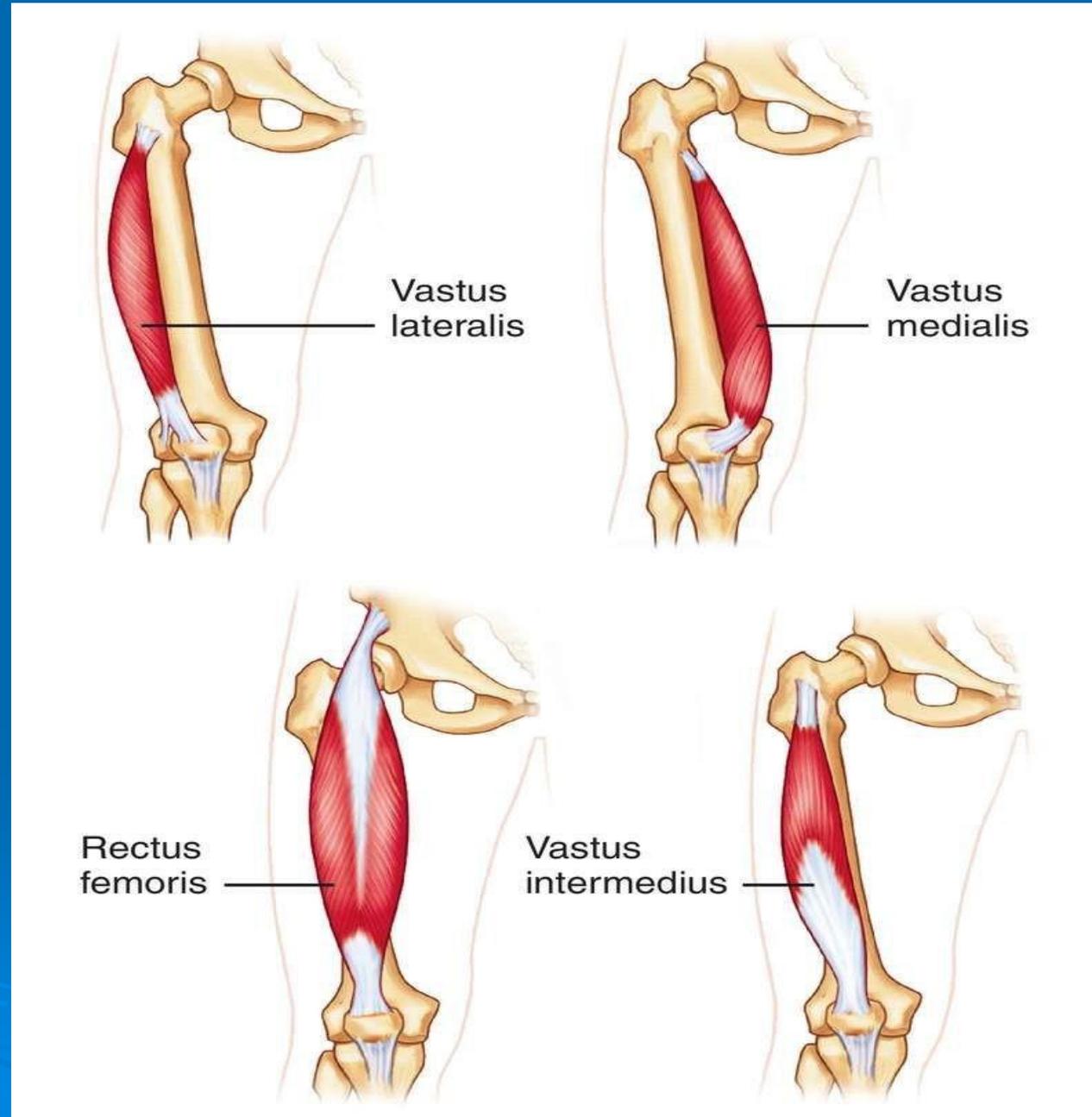
Origin:

Intertrochanteric line, linea aspera.

Insertion:

Quadriceps tendon & patella

The lowest fibres are horizontal in direction, & attached directly to the patella preventing its lateral dislocation. **Nerve supply**
Femoral nerve.



Muscles of the anterior compartment

➤ Vastus intermedius

Origin Anterior&lateral surfaces of the shaft of the femur.

Insertion:

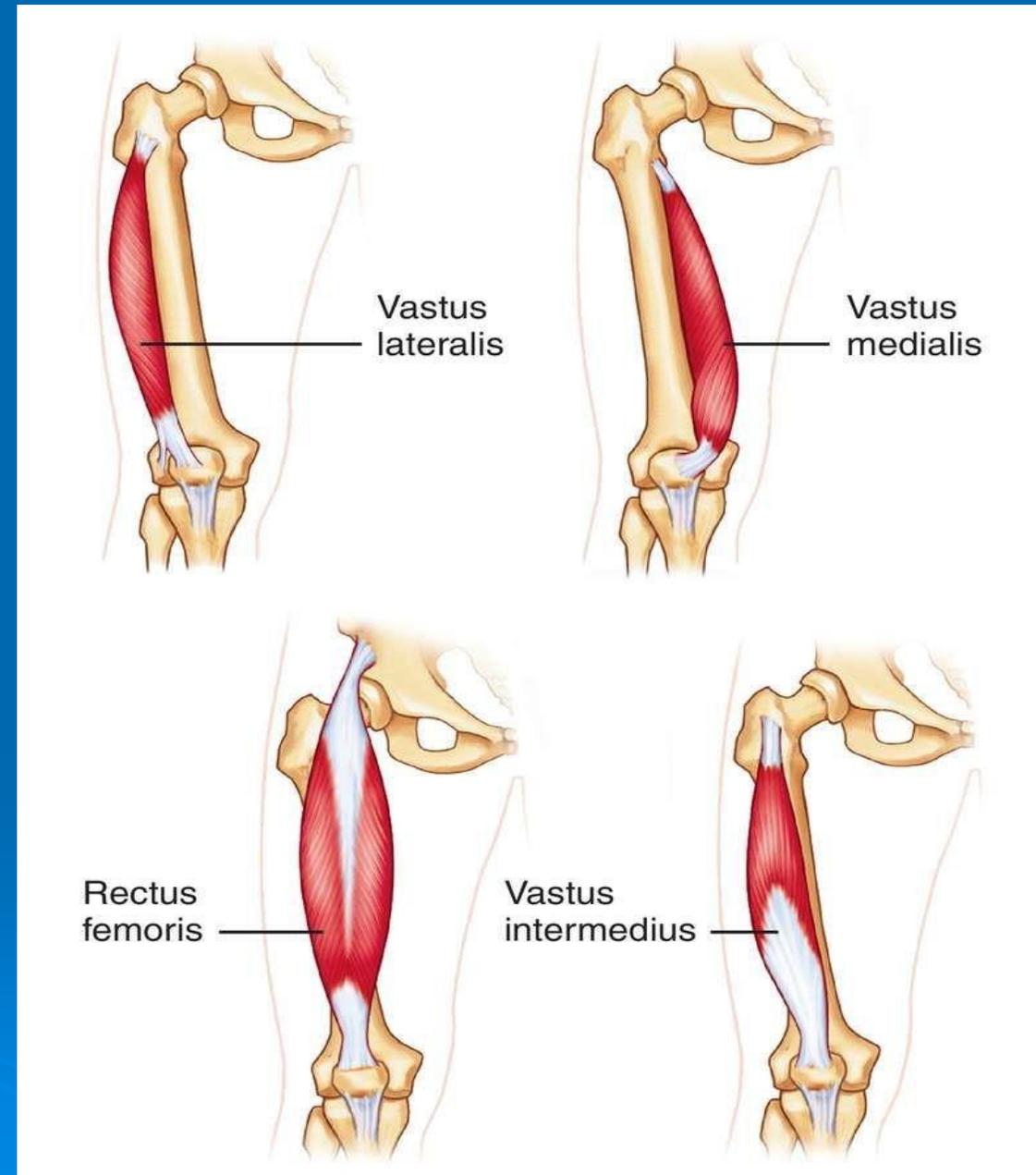
Quadriceps tendon & patella.

Nerve supply:

Femoral nerve.

Articularis genus

is muscle fibres attached to the synovial membrane of the knee joint



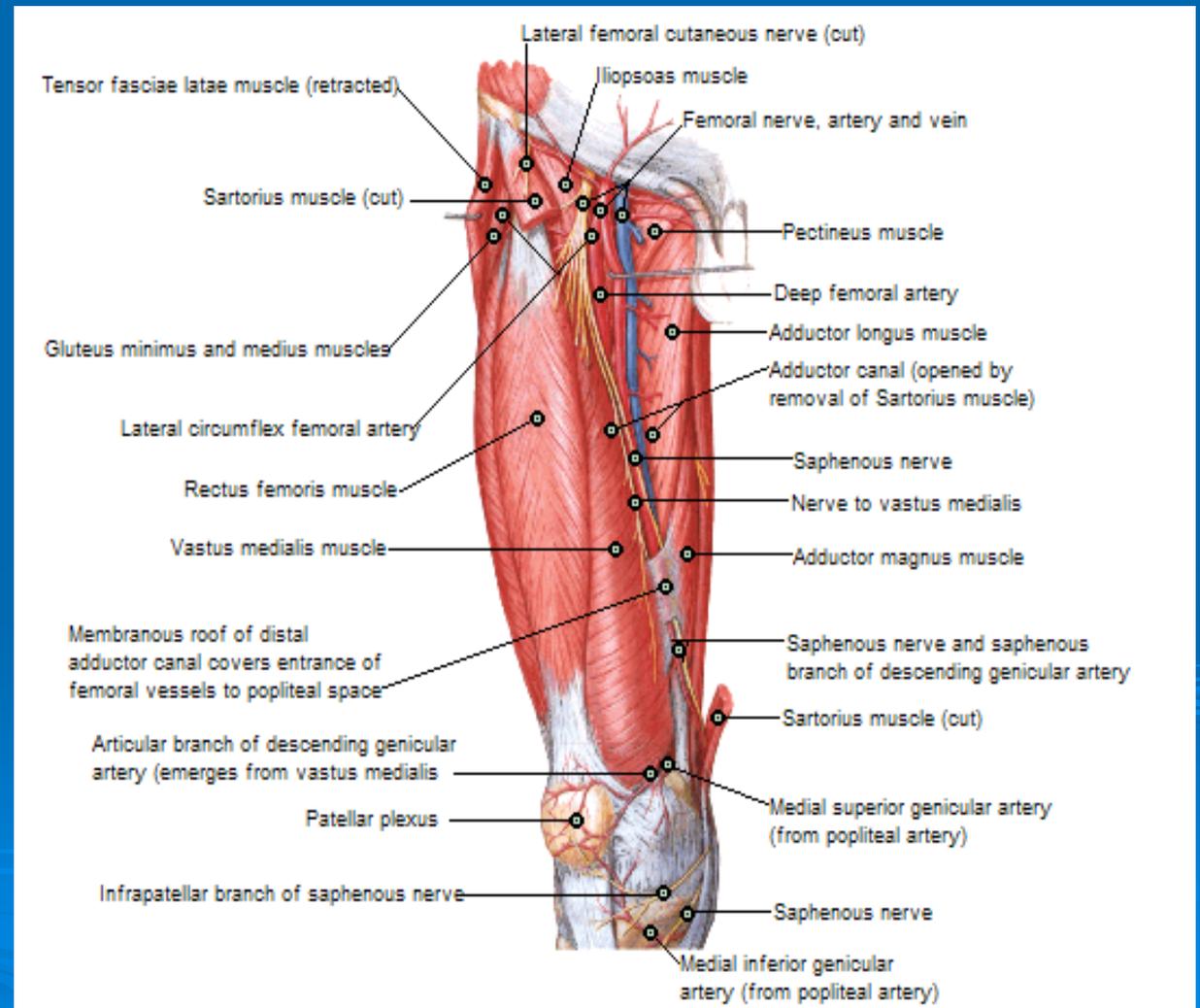
Muscles of the anterior compartment

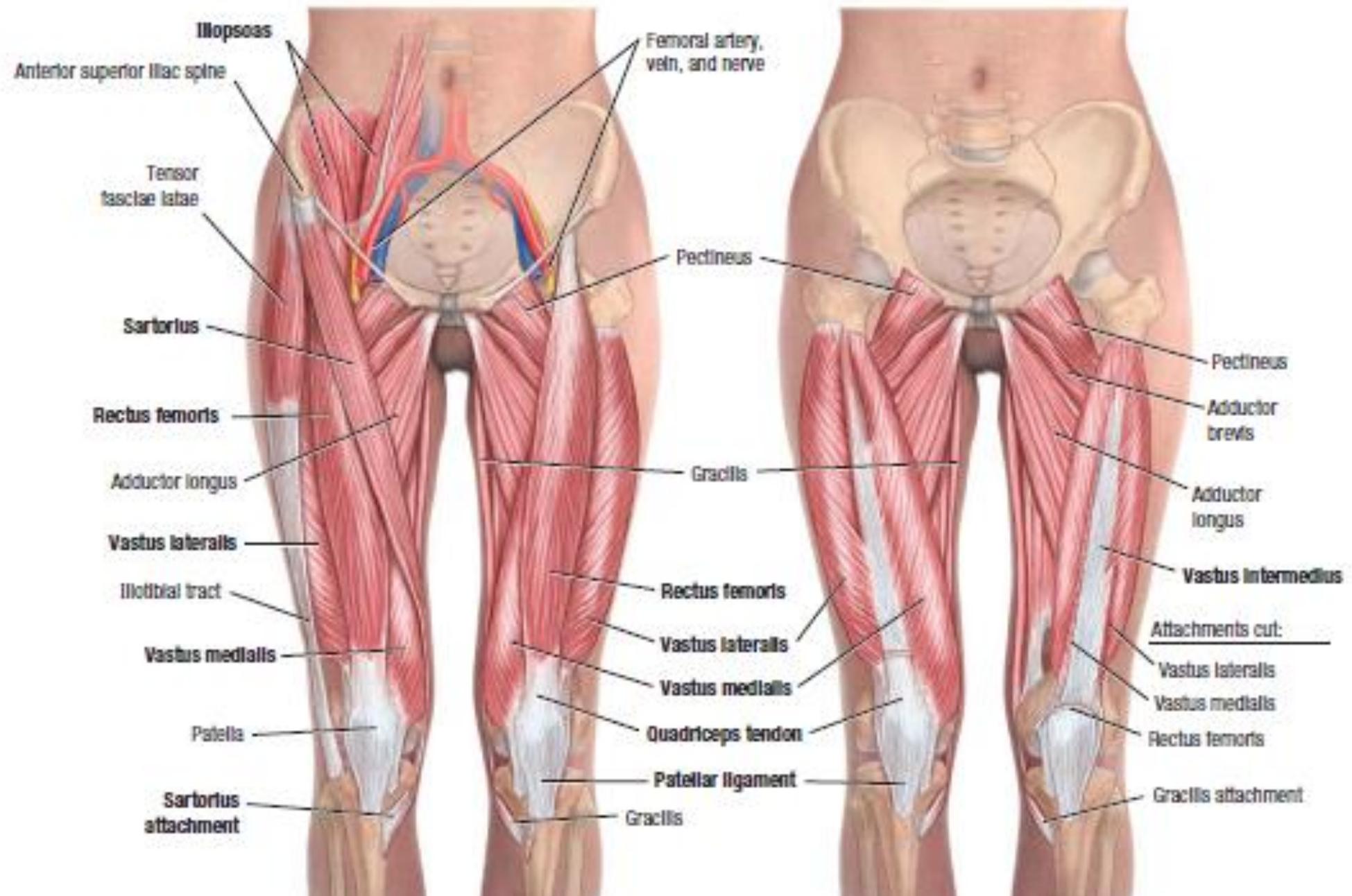
Action of quadriceps femoris muscle:

Powerful extensor of the knee joint.

The rectus femoris also flexes the hip joint.

The lower fibres of the vastus medialis stabilize the patella.





FEMORAL NERVE

Origin:

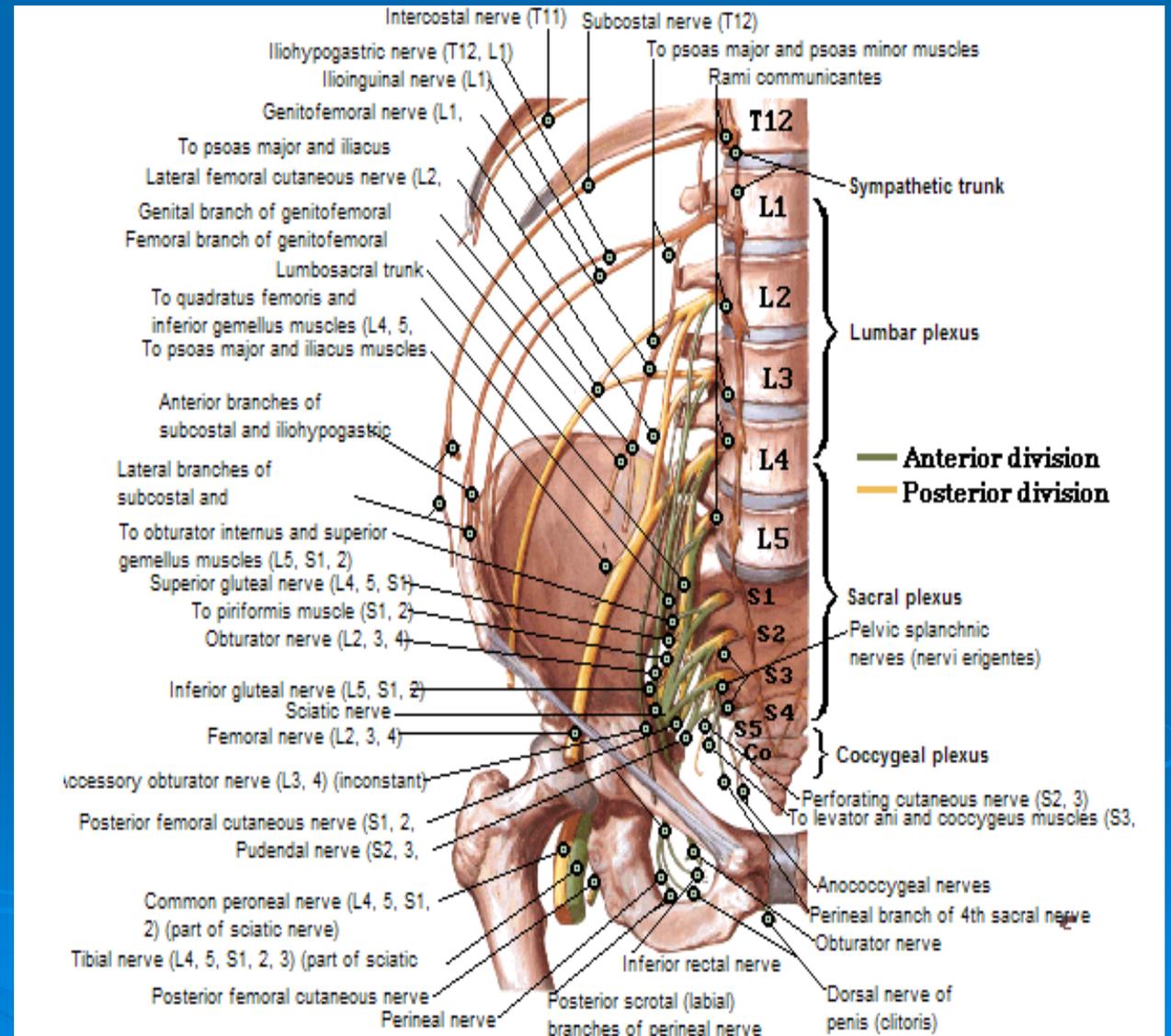
- Is the largest branch of the femoral plexus (L2,3 and4).

Course

- It emerges from lateral border of psoas muscle within the abdomen & passes downward in between psoas & iliacus.

-It lies behind fascia iliaca.

-Enters thigh lateral to the femoral artery & femoral sheath behind the inguinal ligament. (outside the femoral sheath). ➤



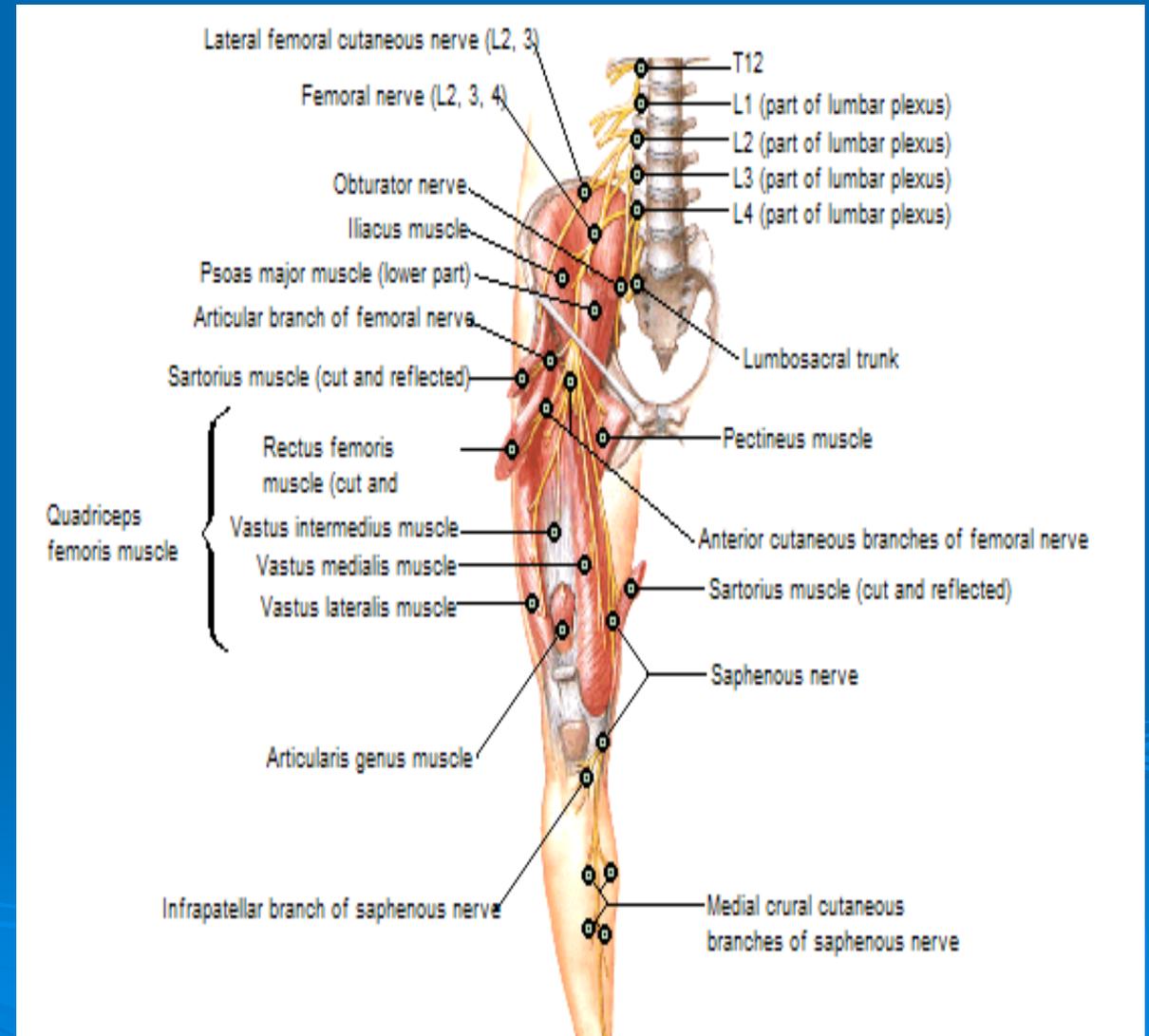
FEMORAL NERVE

Termination:

-1½ inch (4cm) below the inguinal ligament, it terminates by dividing into anterior & posterior divisions.

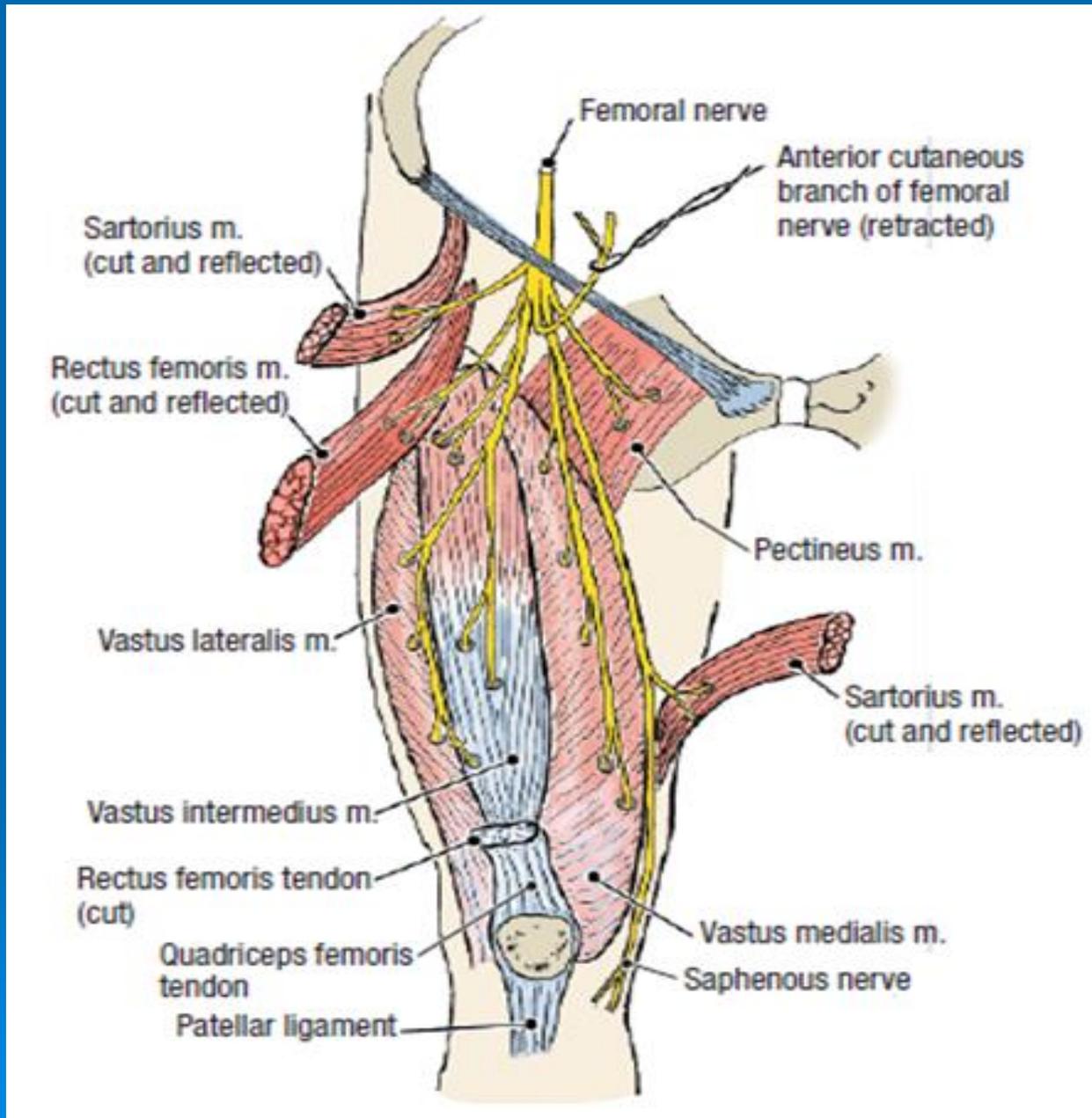
motor Supply:

Muscles of anterior compartment of the thigh.

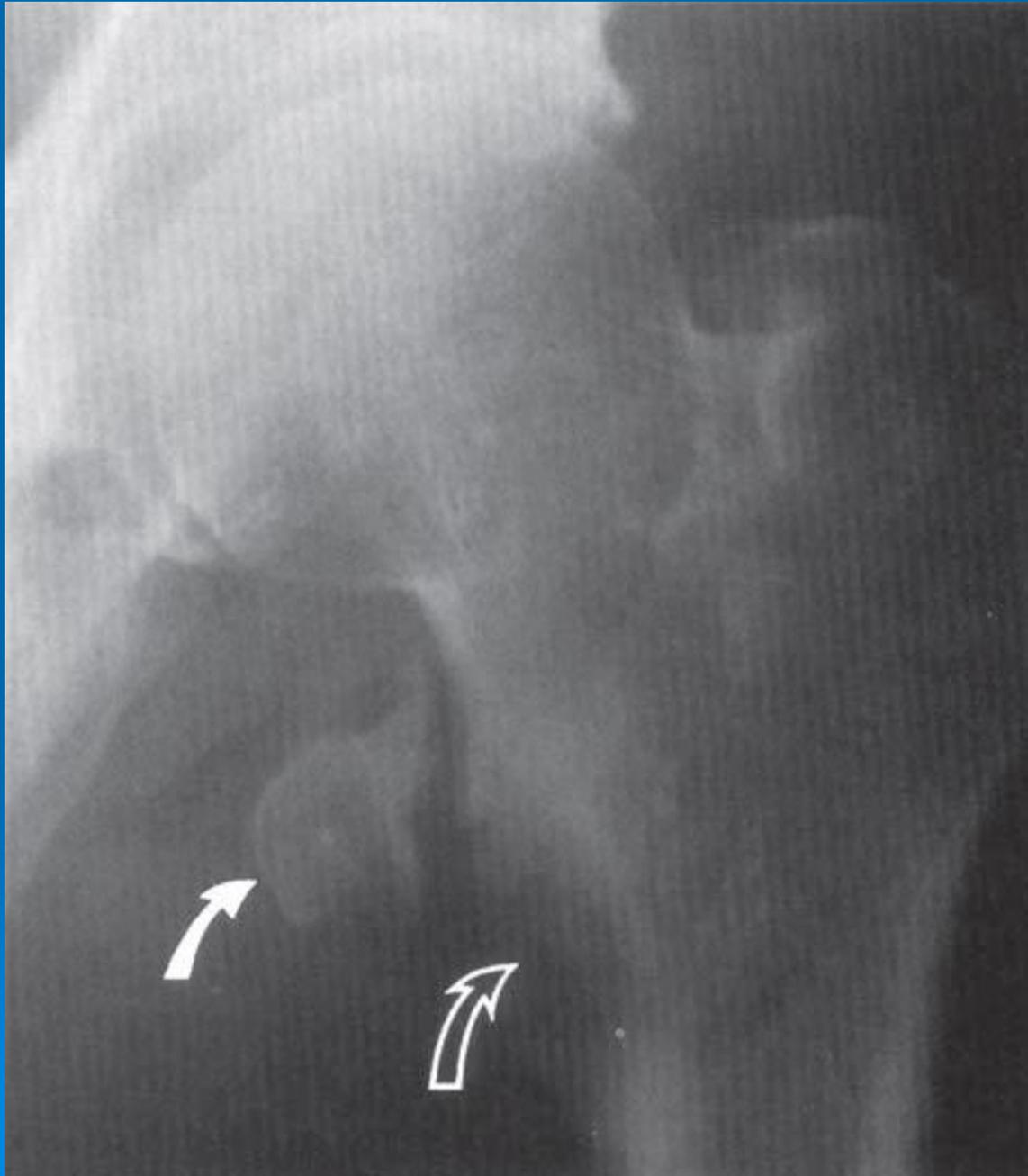


BRANCHES

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- 1- Muscular: Muscles of anterior compartment of the thigh ➤
- 2- Articular: to the knee and hip joints. ➤
- 3- Cutaneous: ➤
 - Intermediate cutaneous nerve of the thigh. ➤
 - Medial cutaneous nerve of the thigh. ➤
 - Saphenous nerve: descends on the medial side of the ➤
knee joint and the medial side of the leg then anterior to the
medial malleolus and passes on the medial side of the foot
reaching the metatarsophalangeal joint of the big toe.



A 36-year-old woman injured in an automobile accident tells the paramedics at the scene that her upper thigh hurts badly and she can barely flex her hip. A plain film of the hip joint reveals an avulsion fracture of the proximal femur, indicated by the open white arrow, and a fracture fragment identified by the solid white arrow. Which of the following muscles is most likely detached?



(A) Adductor magnus ➤

(B) Iliopsoas ➤

(C) Rectus femoris ➤

(D) Biceps femoris ➤

(E) Sartorius ➤