

ANATOMY OF THE THIGH

I) Skin of the thigh

1- Lateral cutaneous nerve of the thigh

2- Femoral branch of the genitofemoral nerve

Anterior view

**1, 2 and 3 are
From the *lumber plexus***

5- Intermediate cutaneous nerve of the thigh

3- Ilioinguinal nerve

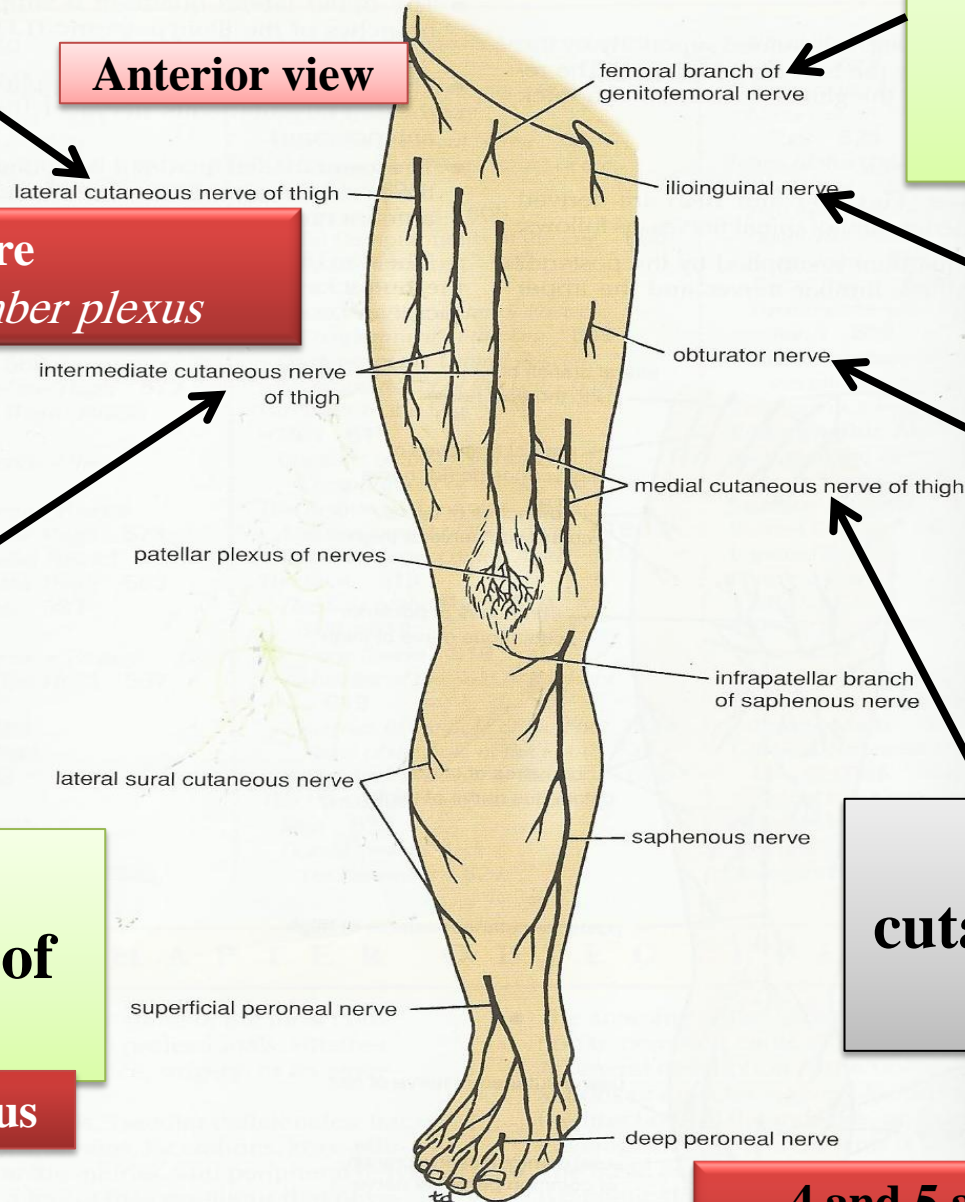
6- Branches from the obturator nerve

7- Posterior cutaneous nerve of the thigh

from the *Sacral plexus*

4- Medial cutaneous nerve of the thigh

4 and 5 are branches from the *femoral nerve*



Cutaneous nerves of the anterior surface of the right leg

Femoral Nerve and Lateral Cutaneous Nerve of Thigh

Cutaneous Innervation

Obturator Nerve

Cutaneous Innervation

Sciatic Nerve and Posterior Cutaneous Nerve of Thigh

Cutaneous Innervation

The Lateral cutaneous nerve of the thigh

Anterior cutaneous branches of femoral nerve

Intermediate cutaneous nerve of the thigh

Infrapatellar branch of saphenous nerve

Medial cutaneous nerves of leg (branches of saphenous nerve)

Posterior cutaneous nerve of the thigh

Branches from the obturator nerve

Common fibular (peroneal) nerve via lateral sural cutaneous nerve (from sciatic nerve)

Medial sural cutaneous nerve (from sciatic nerve)

Superficial fibular (peroneal) nerve (from sciatic nerve)

Sural nerve (from sciatic nerve)

Tibial nerve via medial calcaneal branches (from sciatic nerve)

II) Fascia

A- Superficial fascia of the thigh

B- Deep fascia of the thigh (fascia lata)

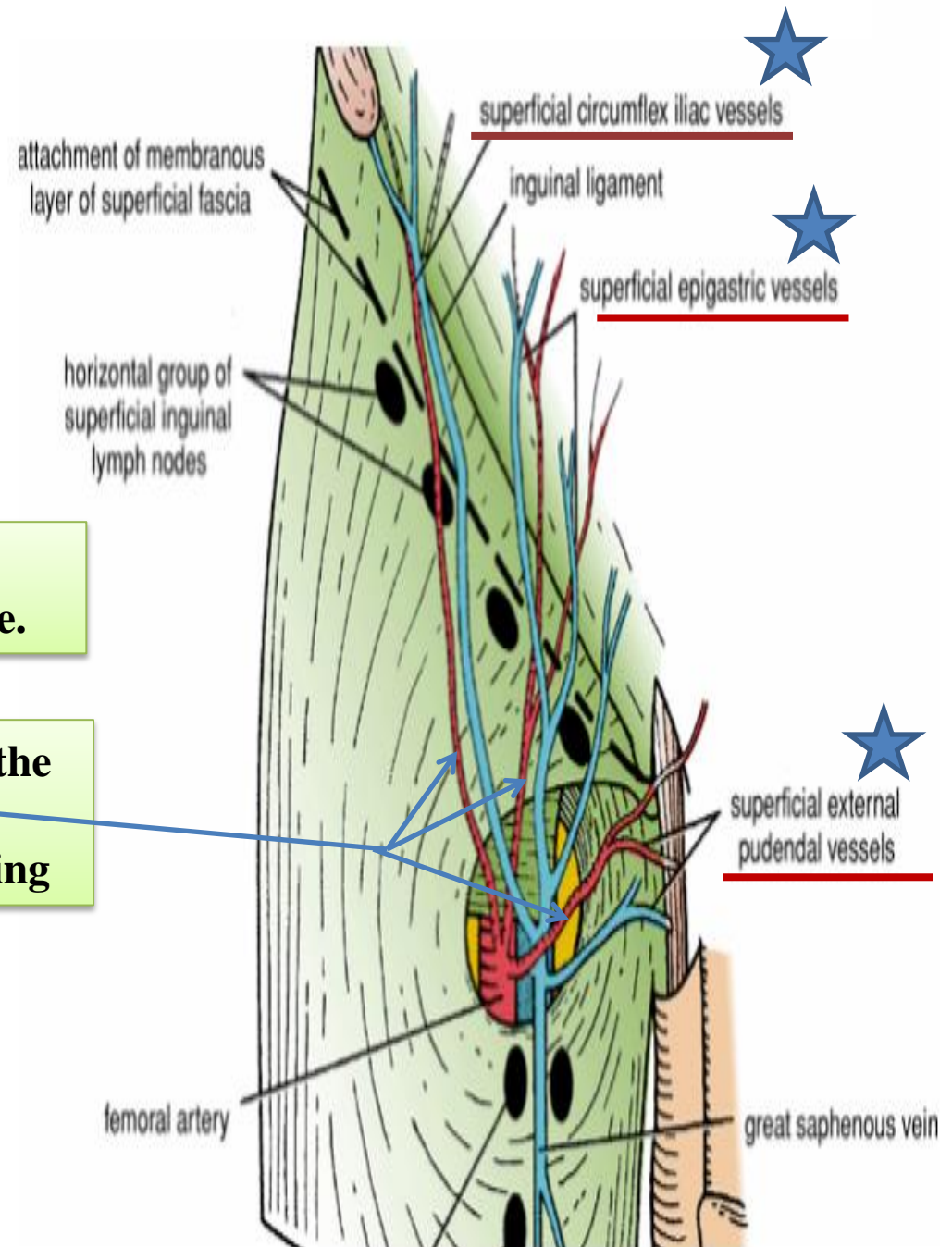
A-The superficial fascia of the thigh

Contains:

1- Cutaneous nerves

all nerves that have been mentioned above.

2- Superficial arteries (branches from the femoral artery)
that emerge through the Saphenous opening



3- Superficial inguinal lymph nodes

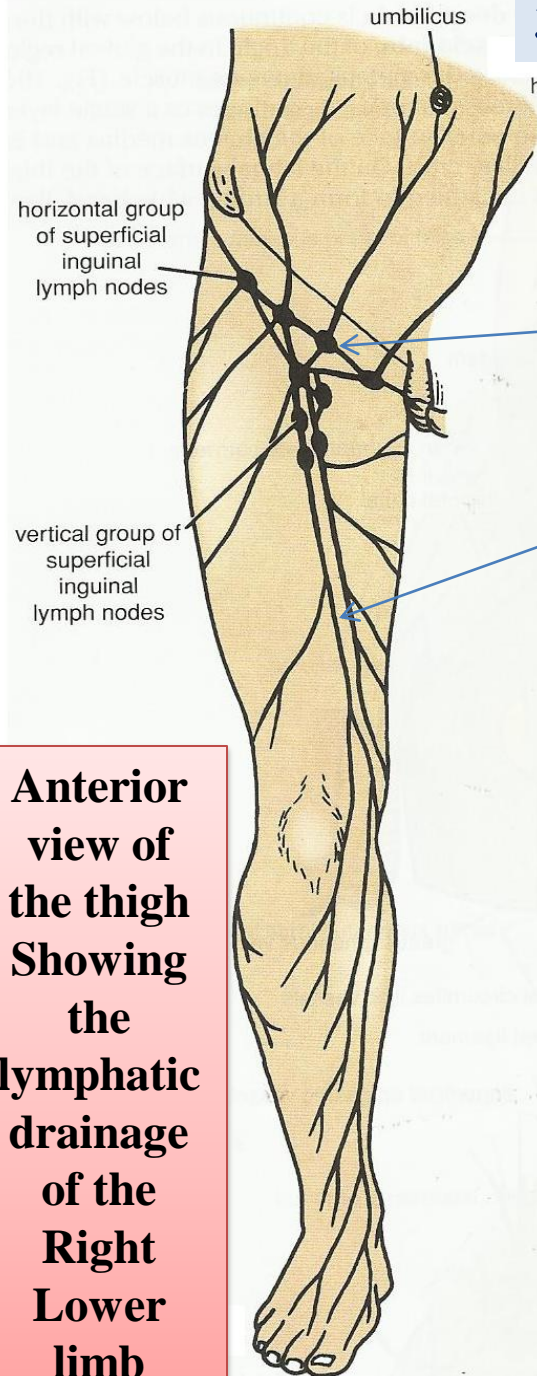
➤ *Lies below the inguinal ligament*

➤ *Divided into two groups;
horizontal and vertical.*

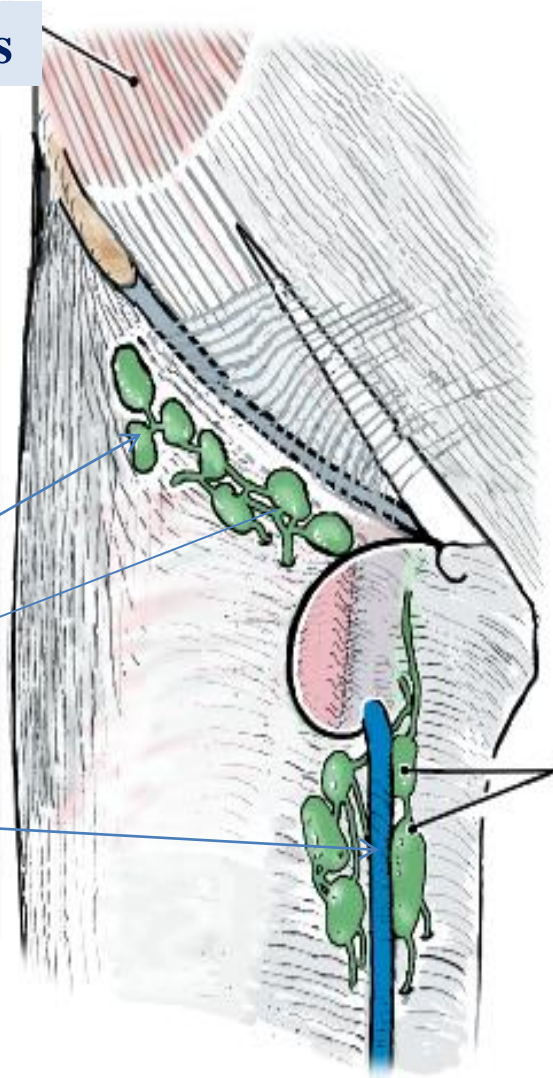
A-The horizontal group lies below
and parallel to the *inguinal*
ligament.

It divides into medial and lateral
groups

B-The vertical group lies along the
terminal part of *Saphenous vein*.



**Anterior
view of
the thigh
Showing
the
lymphatic
drainage
of the
Right
Lower
limb**



Note:

**Lymph nodes cannot be palpated
or seen unless they are enlarged**

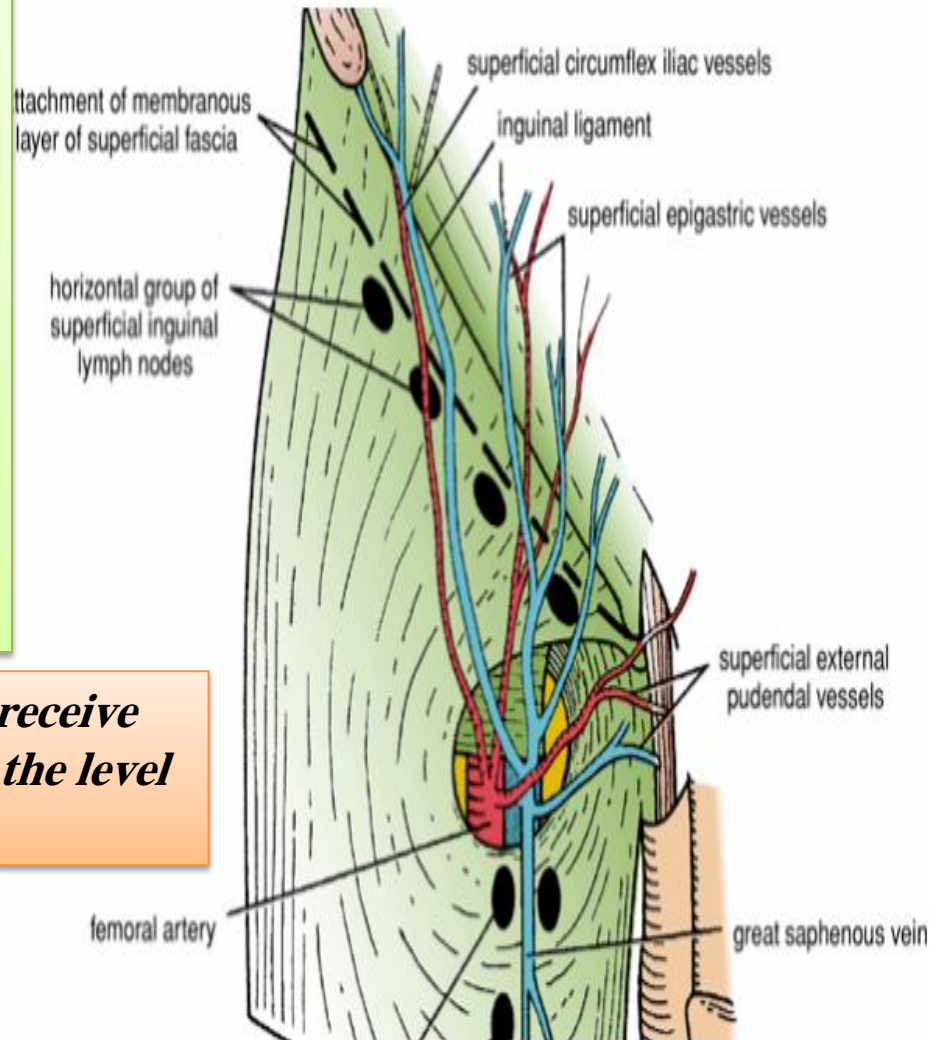
The medial members of the horizontal group receive superficial lymph vessels from:

- 1-The anterior abdominal wall below the level of the umbilicus**
- 2-The perineum**
- 3-The urethra**
- 4-The external genitalia of both sexes (EXCEPT the testes)?!!!!**
- 5-The lower half of the anal canal**
- 6- The lower third of the vagina**

The lateral members of the horizontal group receive superficial lymph vessels from the back below the level of the iliac crests

The vertical group receives most of the superficial lymph vessels of the lower limbs

The efferent lymph vessels from the superficial inguinal nodes pass through the *saphenous opening in the deep fascia and join the deep inguinal nodes.*



Remember that if the patient presented to you with an **enlarged superficial inguinal lymph nodes** you should ask about and check the above mentioned areas

4- Superficial veins

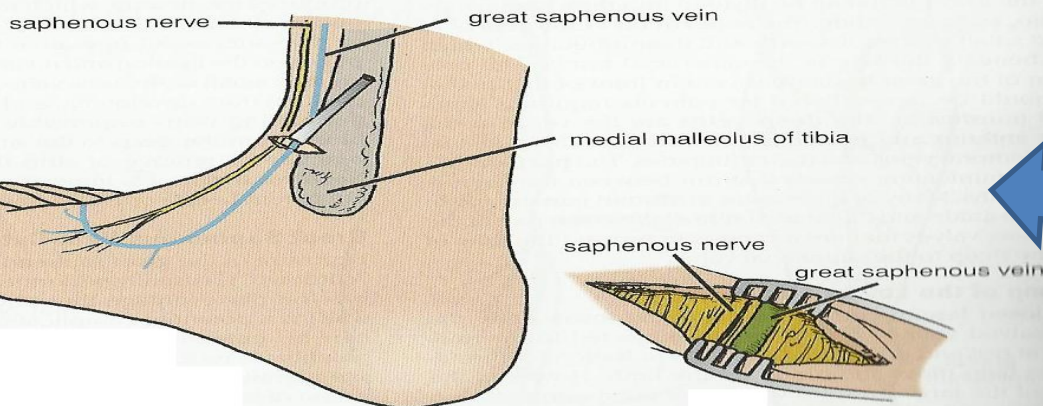
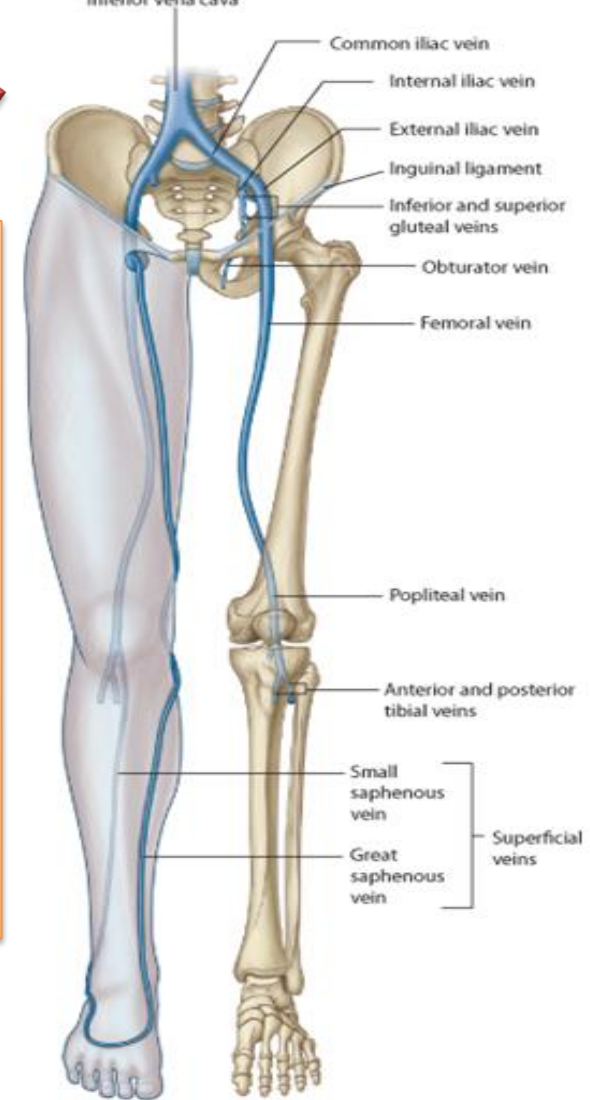
The most important superficial vein is the

Great Saphenous vein.

The great Saphenous vein

- drains **the medial end** of the **dorsal venous arch**.
- passes **directly in front** of **the medial malleolus** of the tibia.
 - ascends in a company with **the Saphenous nerve** in the superficial fascia **over the medial side of the leg**.
- passes **behind the knee** and then curves around the **medial side of the thigh**.
- pierces the **Saphenous opening** and then joins **the femoral vein** about **4cm below and lateral to the pubic tubercle**.

important



Great Saphenous vein cutdown at the ankle?
When we need this procedure

B- Deep fascia of the thigh (fascia lata)

➤ Forms on the antero-medial side of the thigh the *Saphenous opening (fossa ovalis)*.

Saphenous opening (fossa ovalis) is a gap in the fascia lata which is covered by *loose connective tissue* called **cribriform fascia**.

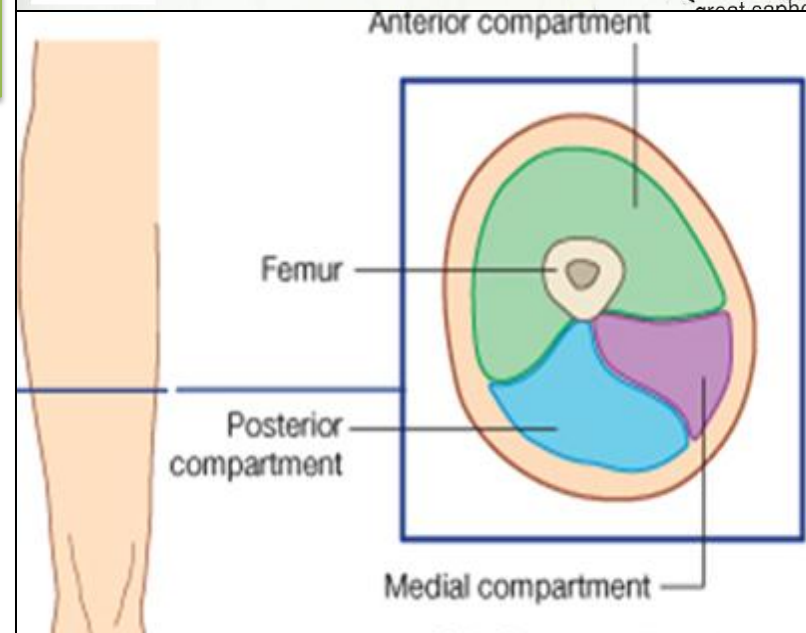
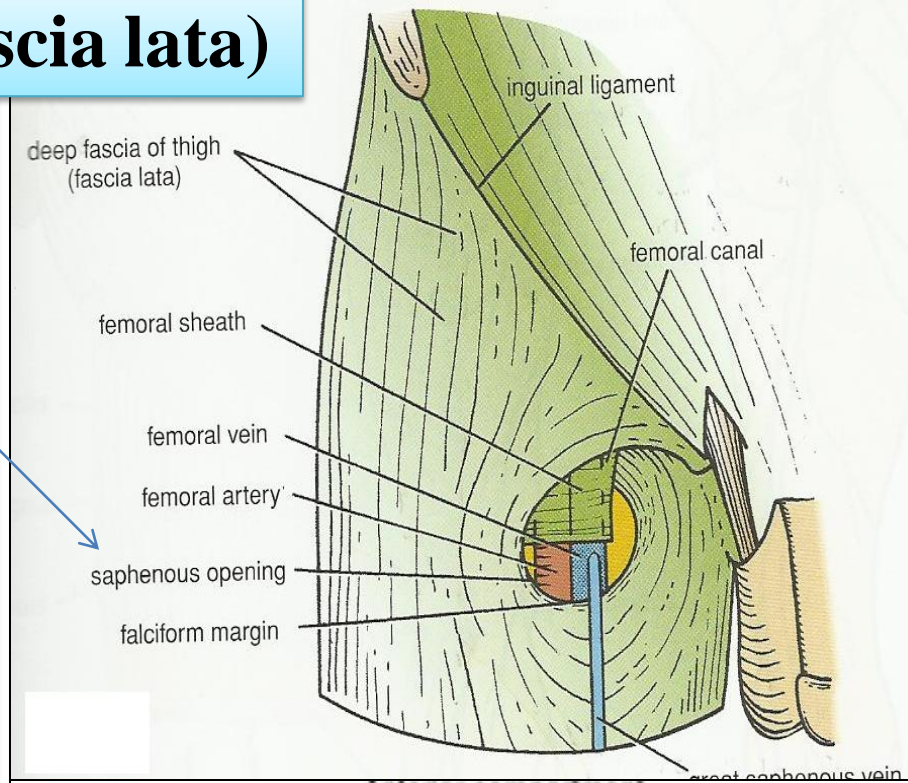
The **cribriform fascia** is pierced by:

- 1- Great Saphenous vein
- 2- superficial branches of the femoral artery
- 3- Lymphatics.

Fascia lata is connected to the linea aspera by **three intermuscular septa**;

- 1- *Medial intermuscular septum*
- 2- *Lateral intermuscular septum*
- 3- *Posterior intermuscular septum*

Thus the deep fascia and septa divide the thigh into three compartment; **Anterior**, **Posterior** and **Medial**.



FASCIAL COMPARTMENTS OF THE THIGH

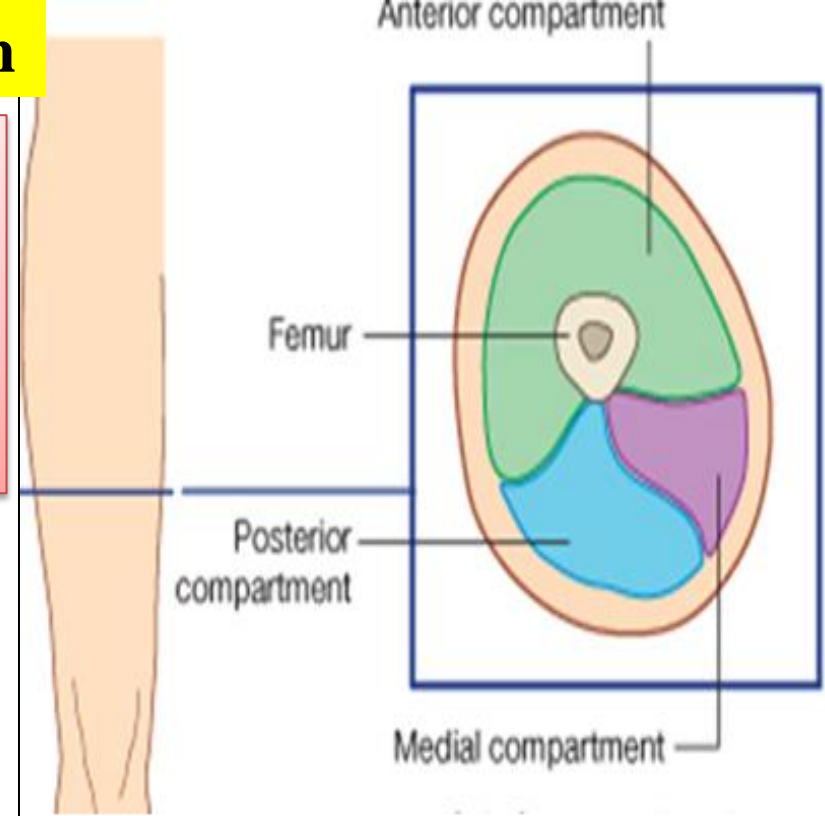
Fascial Compartments of the Thigh

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Anterior
Posterior
Medial.



Contents of the Anterior Fascial Compartment of the Thigh

1-Muscles: *Sartorius, iliacus, psoas, pectineus, and quadriceps femoris*

2-Blood supply: *Femoral artery*

3-Nerve supply: *Femoral nerve*

*Note: that not all the contents of the anterior compartment have the Same function. For example psoas is the **main flexor** of the thigh at the hip joint while quadriceps femoris is the **main extensor** of the leg at the knee joint.*

Sartorius

Origin: *Anterior superior iliac spine*

Insertion: *Upper medial surface of shaft of tibia*

Nerve supply: *Femoral nerve*

Actions: *Flexes, abducts, laterally rotates
thigh at hip joint
Flexes and medially rotates leg
at knee joint*

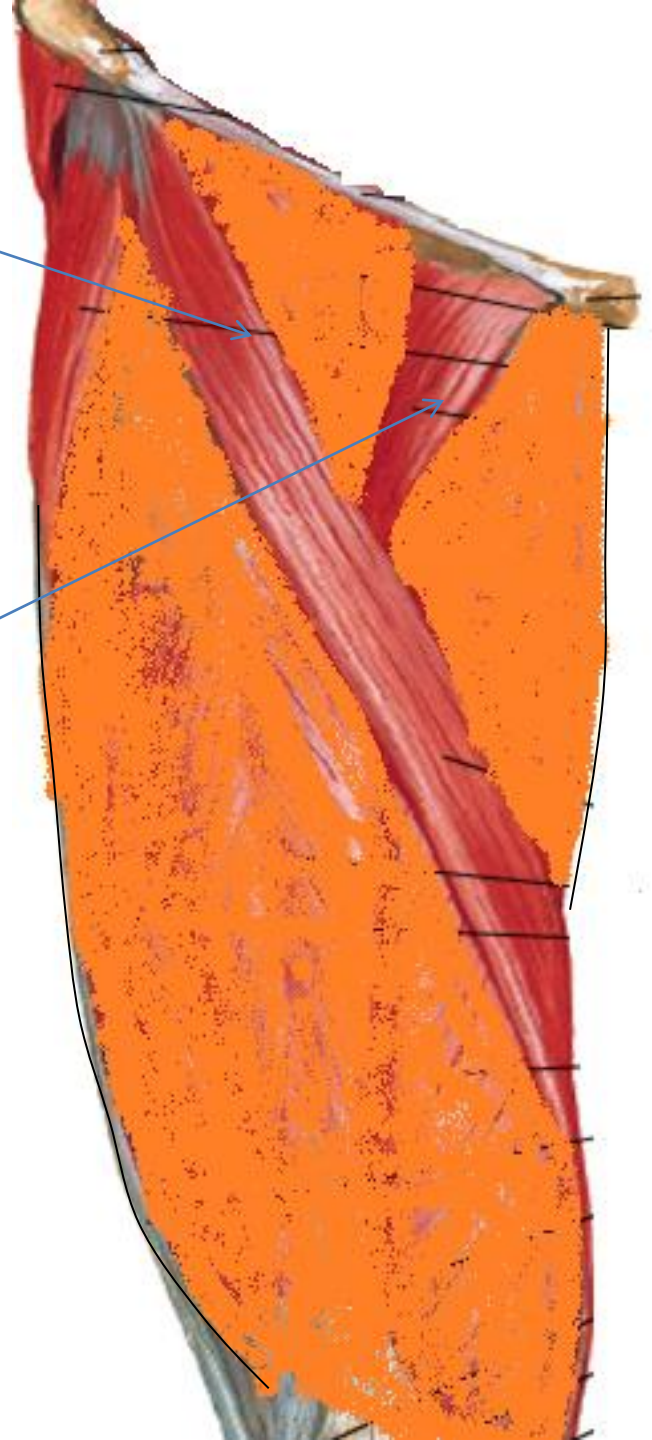
Pectineus

Origin: *Superior ramus of pubis*

Insertion: *Upper end of linea aspera of shaft of femur*

Nerve supply: *Femoral nerve?*

Actions: *Flexes and adducts thigh at hip joint*



Psoas and Iliacus Muscles

Psoas

Origin: *Transverse processes, bodies, and intervertebral discs of the 12th thoracic and five lumbar vertebrae*

Insertion: *With iliacus into lesser trochanter of femur*

Nerve supply: *Lumbar plexus*

Actions: *Flexes thigh on trunk; if thigh is fixed, it flexes the trunk on thigh as in sitting up from lying down.*

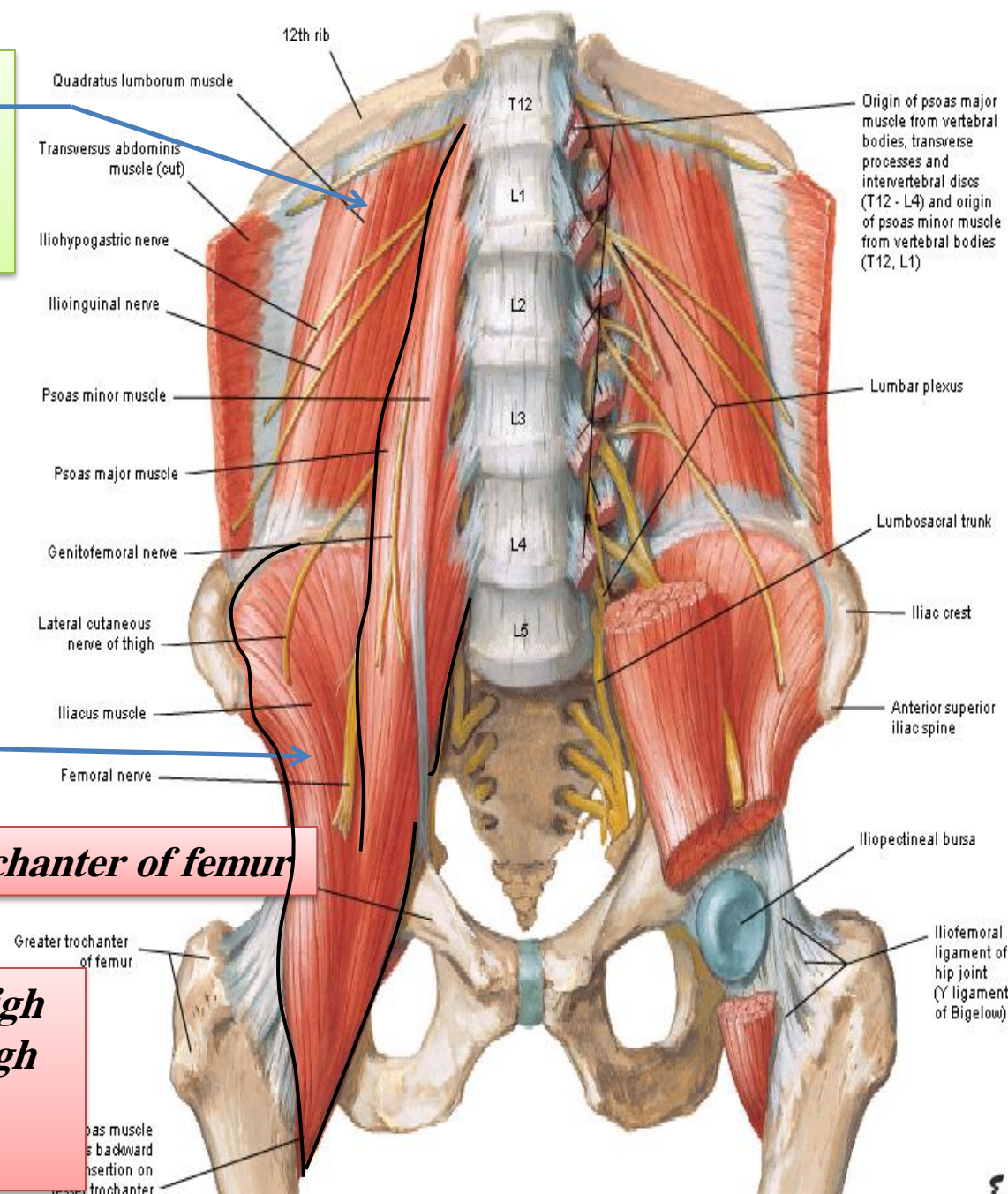
Iliacus

Origin: *Iliac fossa of hip bone*

Insertion: *With psoas into lesser trochanter of femur*

Nerve supply: *Femoral nerve*

Actions: *Flexes thigh on trunk; if thigh is fixed, it flexes the trunk on the thigh as in sitting up from lying down(the same as psoas).*



Consisting of:

- 1- The rectus femoris
- 2- The vastus intermedius
- 3- The vastus lateralis
- 4- The vastus medialis

The quadriceps femoris muscle

Rectus femoris

Originates by two heads

Straight head from *anterior inferior iliac spine*

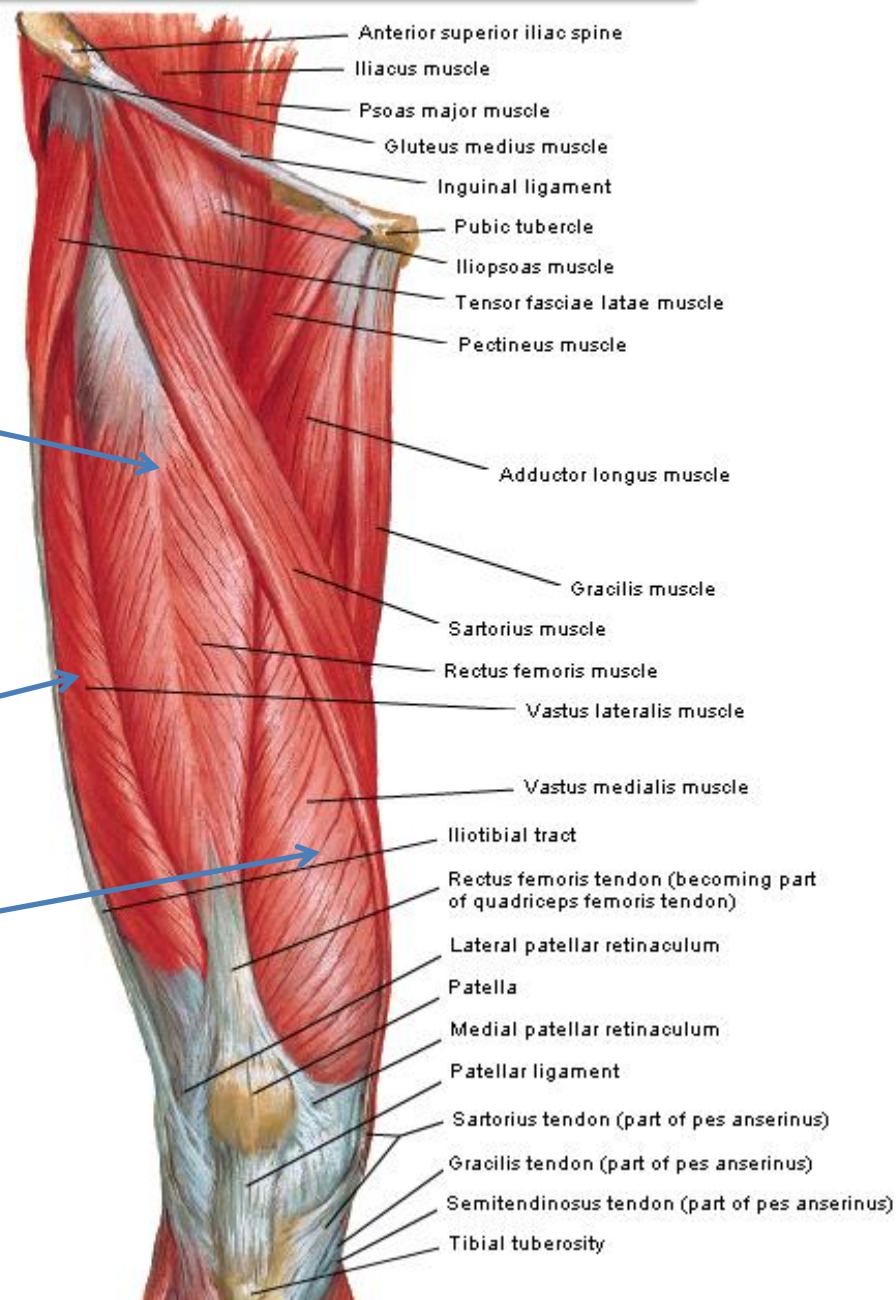
Reflected head from *ilium above acetabulum*

Vastus lateralis

Origin : Upper end and shaft of femur
(linear origin)

Vastus medialis

Origin : Upper end and shaft of femur
(linear origin)



The quadriceps femoris muscle

Vastus intermedius

Origin: Anterior and lateral surfaces of shaft of femur

Insertion: the four heads are attached to the patella and, via the ligamentum patellae, to the tibial tuberosity (the real insertion)

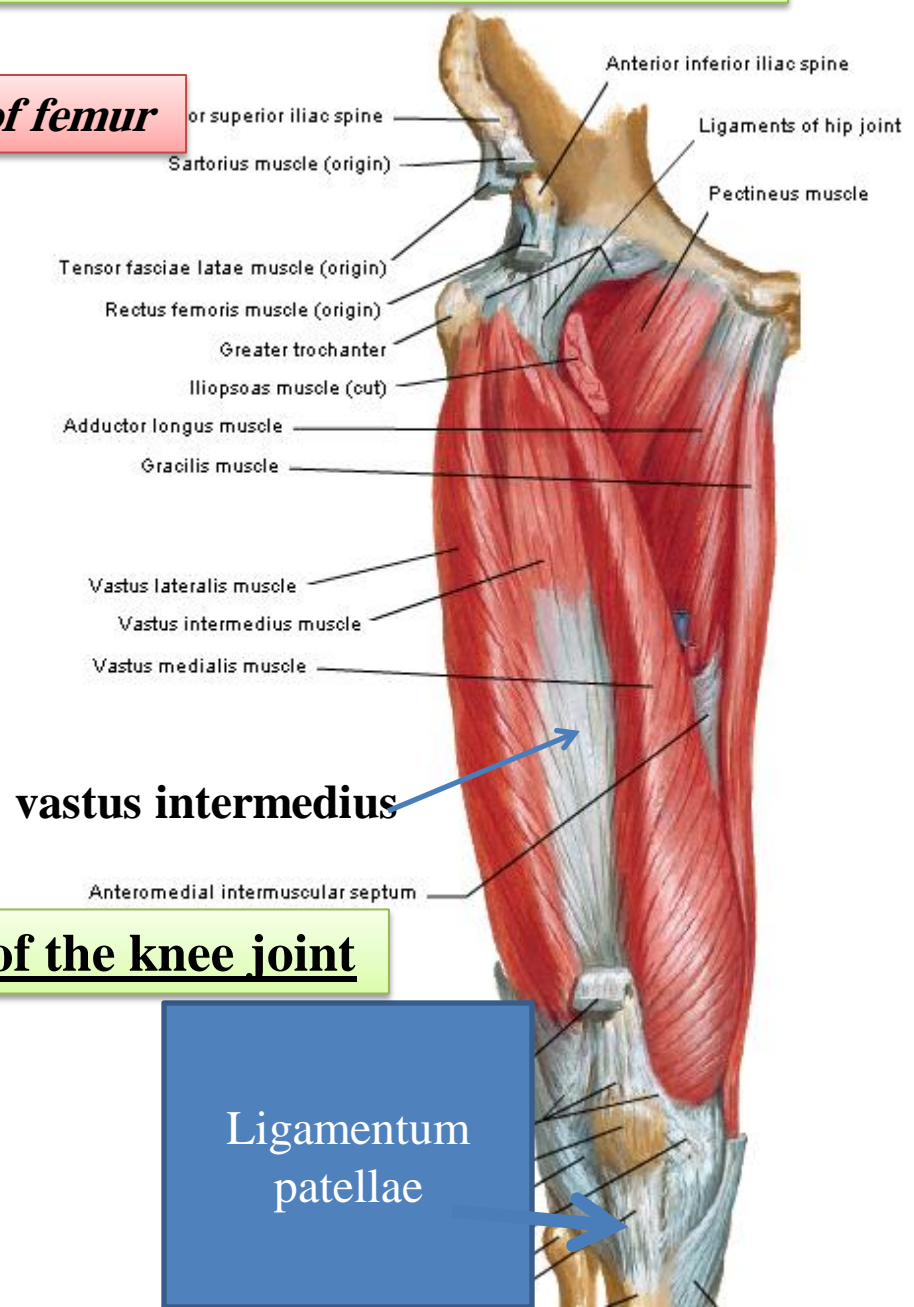
Actions: the quadriceps femoris muscle

Extends the leg at knee joint;
flexes thigh at hip joint (only the rectus femoris head).

Remember

Quadriceps femoris is the main extensor of the knee joint

Nerve supply : femoral nerve



Femoral Nerve

- is the largest branch **of the lumbar plexus** (L2, 3, and 4).
- It emerges from **the lateral border** of the psoas muscle
- enters the thigh **lateral to the femoral artery** and the femoral sheath, **behind** the inguinal ligament.
- it terminates by dividing into **anterior and posterior** divisions.

Anterior Division

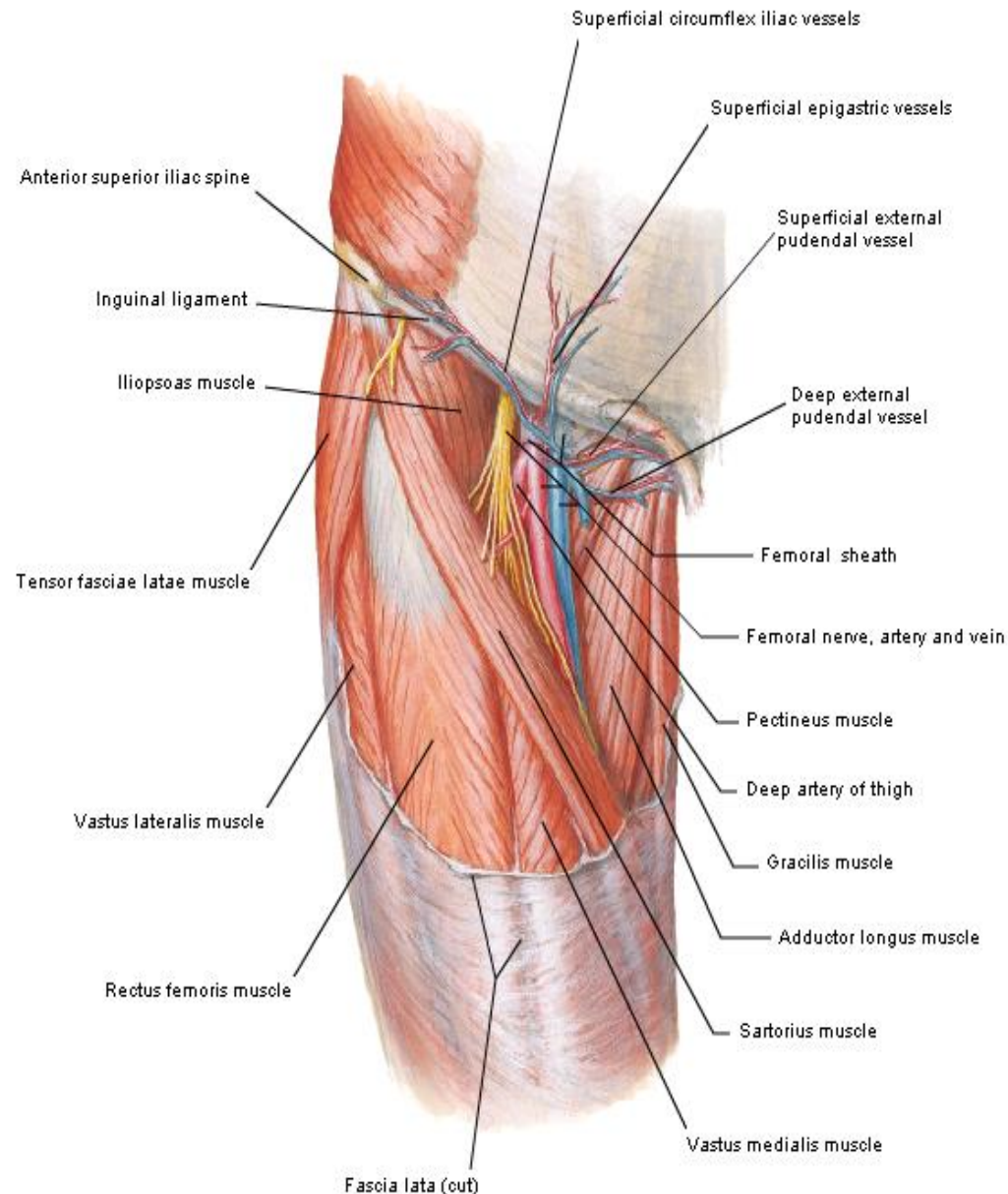
The anterior division gives off **two cutaneous branches**

1- the **medial cutaneous nerve of the thigh.**

2- the **intermediate cutaneous nerve of the thigh**
and **two muscular branches.**

Nerve to **sartorius** and nerve to **pectineus** muscles.

Arteries and Nerves of Thigh Superficial Anterior View



Posterior Division

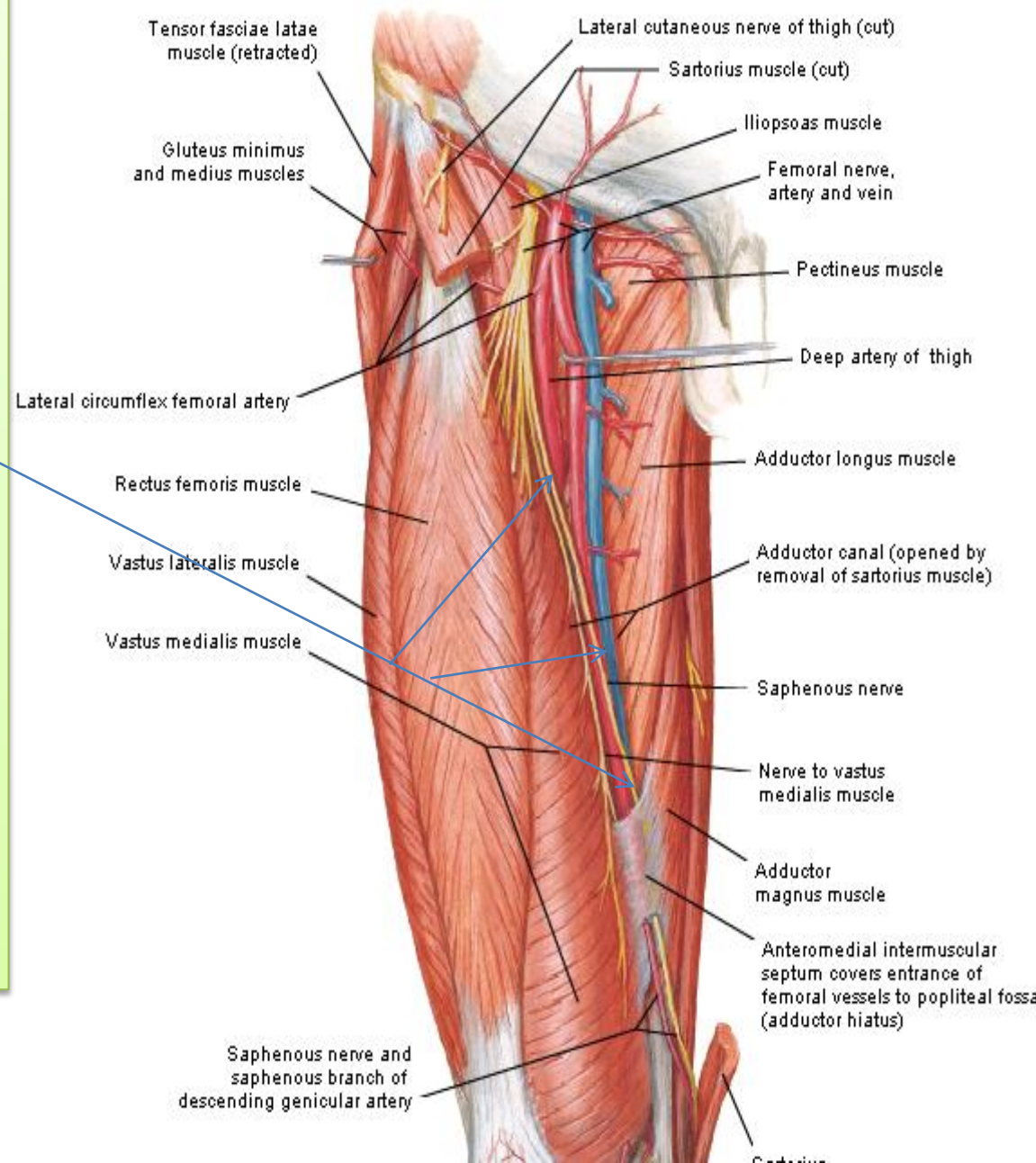
The posterior division gives off **one cutaneous branch**

The Saphenous nerve
and *muscular branches to the quadriceps muscle.*

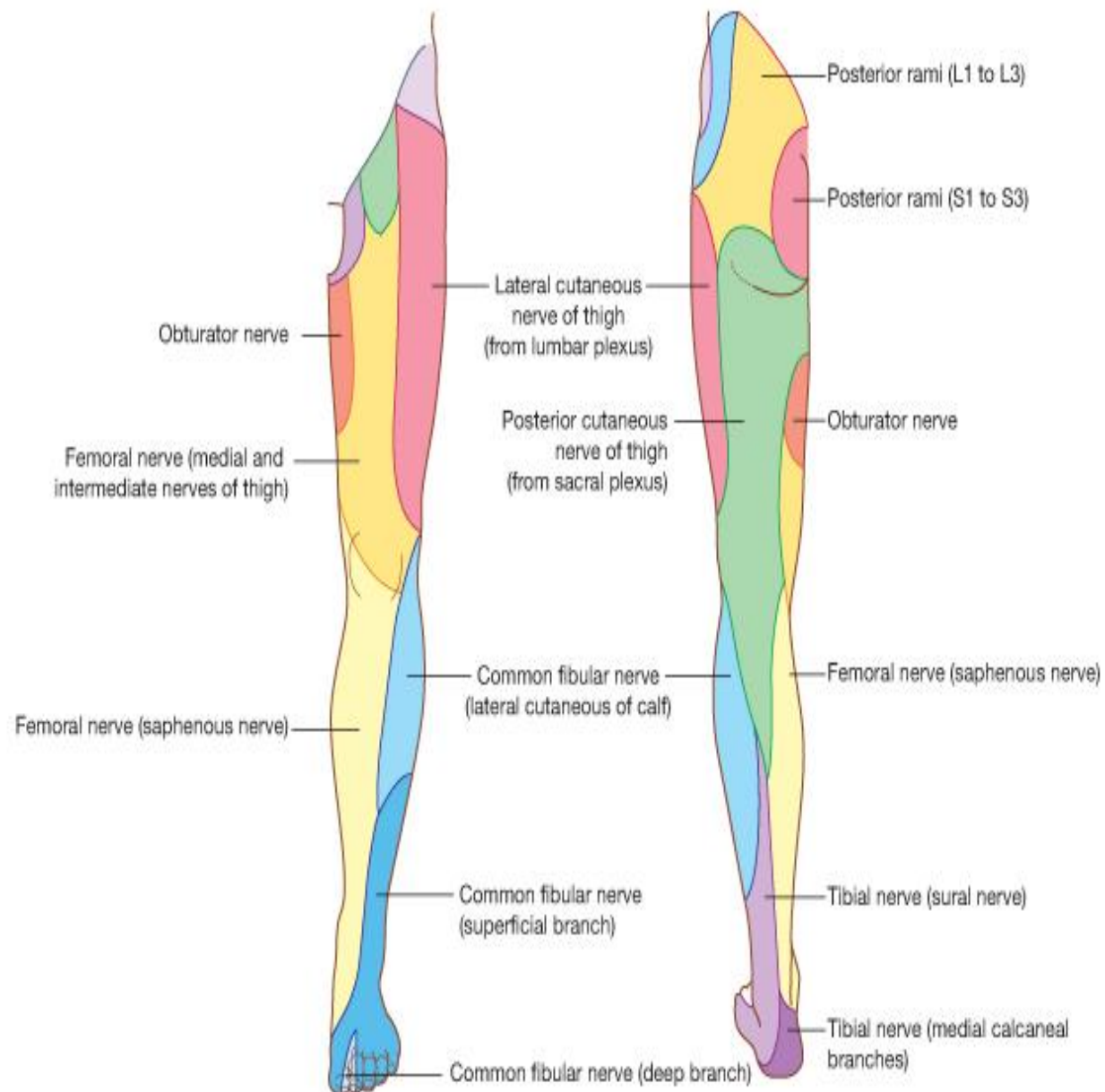
THE SAPHENOUS NERVE

- runs downward and medially.
- It emerges between the tendons of sartorius and gracilis
- It then runs down in company with the **great Saphenous vein**.
- It passes **in front of the medial** malleolus and along the medial border of the foot, where it terminates in the region **of the ball of the big toe**

Arteries and Nerves of Thigh Deeper Anterior View - Superficial Dissections



The **saphenous nerve** accompanies the femoral artery through the adductor canal, but does not pass through the adductor hiatus with the femoral artery. Rather, the saphenous nerve penetrates directly through connective tissues near the end of the canal to appear between the sartorius and gracilis muscles on the medial side of the knee. Here the saphenous nerve penetrates deep fascia and continues down the medial side of the leg to the foot, and supplies skin on the medial side of the knee, leg, and foot.



Femoral Nerve and Lateral Cutaneous Nerve of Thigh

