

Muscles of the medial compartment of the thigh

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Muscles of the medial compartment of the thigh

Pectineus

Origin: Pectineal line & surface of superior pubic ramus

Insertion: Pectineal line of femur, just inferior to lesser trochanter

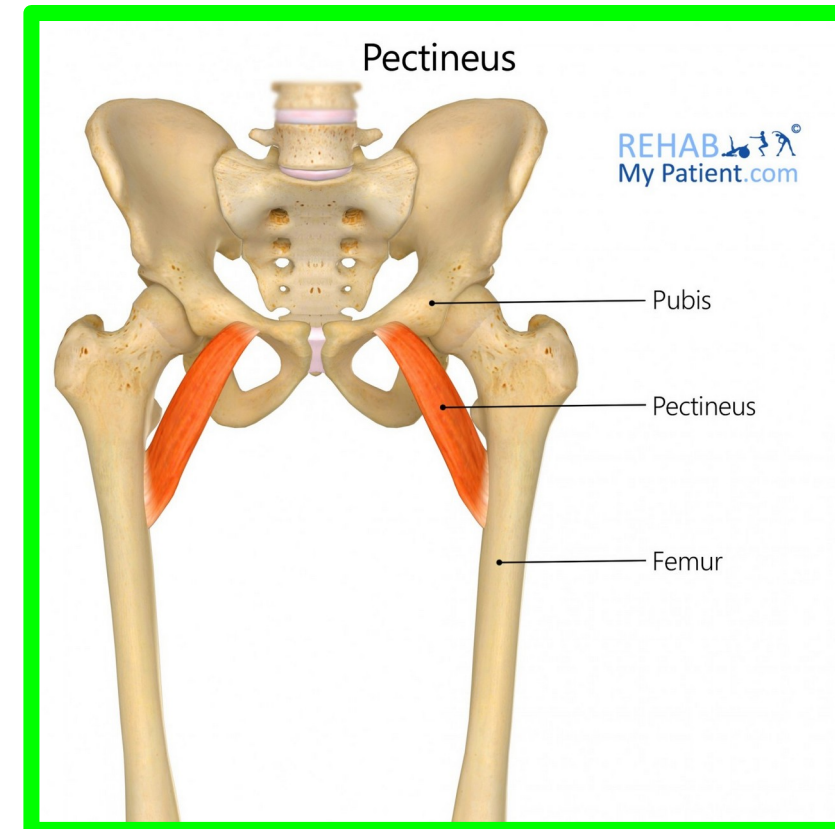
Innervation: femoral & obturator, accessory obturator

Action: Adduction & flexion of thigh



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Adductor longus

Origin: Body of pubis inferior to pubic crest

Insertion: Middle third of linea aspera

Innervation: Obturator N.

Action: Adduction & flexion of thigh



Adductor Longus



Gracilis

Origin: Body and inferior ramus of pubis

Insertion: Superior part of medial surface of tibia

Innervation: Obturator N.

Action: Adducts hip joint; flexes knee joint and helps rotate it medially-**guy rope**

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Adductor brevis

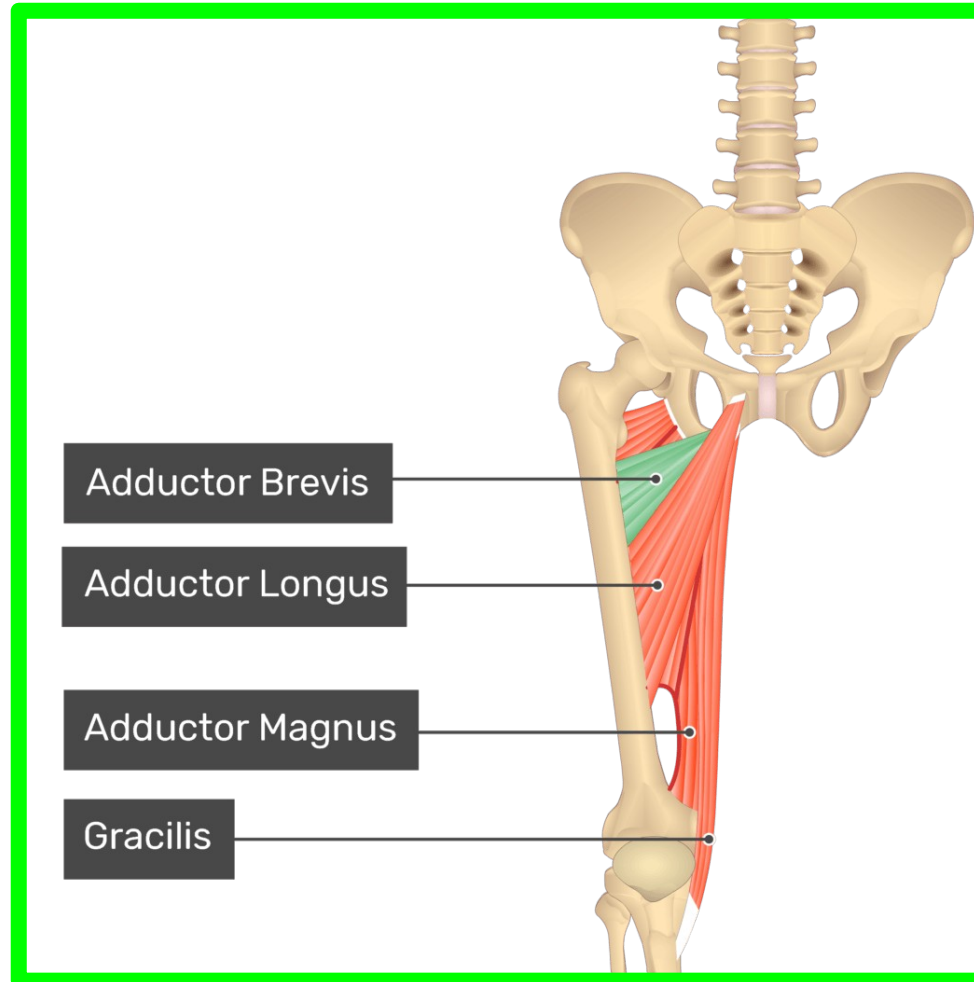
Origin: Body and inferior ramus of pubis

Insertion: Pectineal line and proximal part of linea aspera of femur

Innervation: Obturator N.

Action: Adducts hip joint
and to some extent
flexes it

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Adductor Magnus

Origin:

✓ **Pubic(adductor):** inferior ramus of pubis, ramus of ischium

Insertion: gluteal tuberosity, linea aspera, medial supracondylar.

Innervation: Obturator N. (L2, L3)

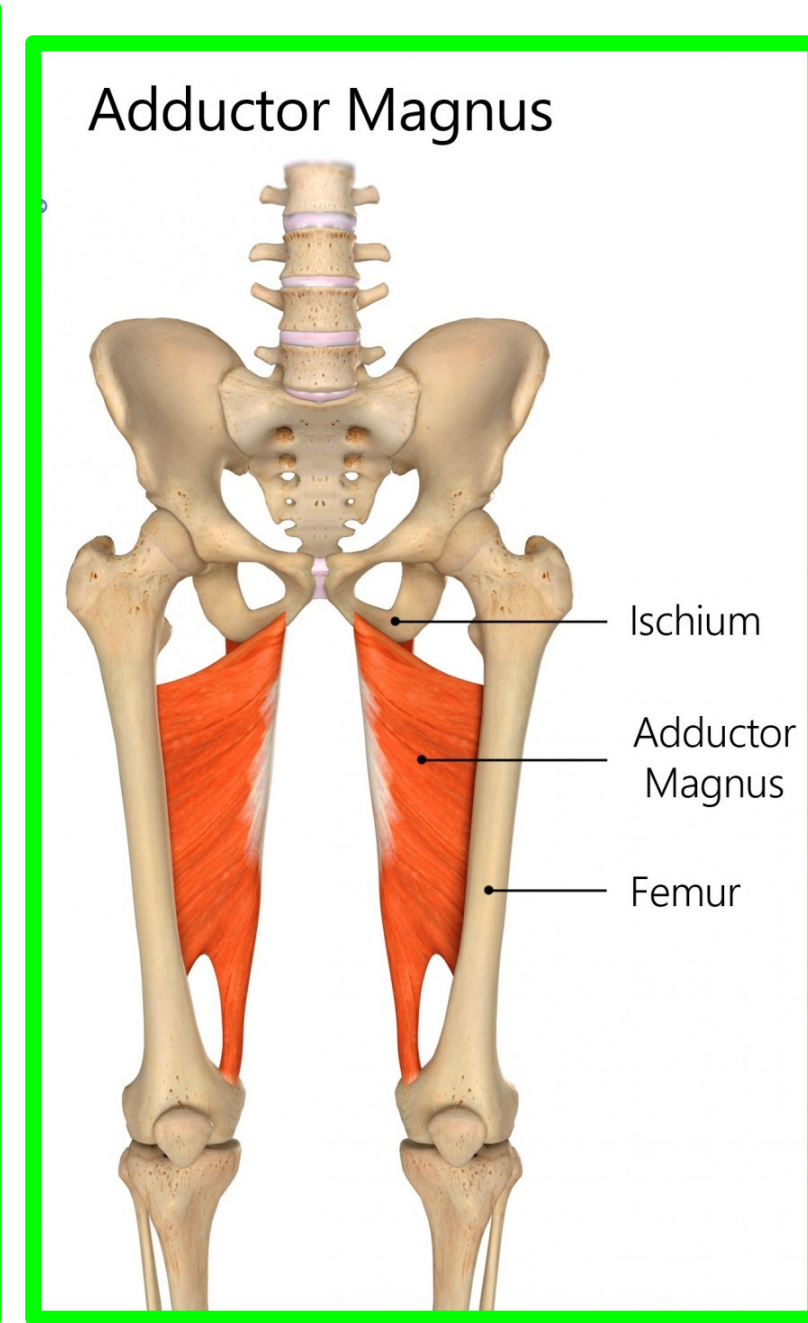
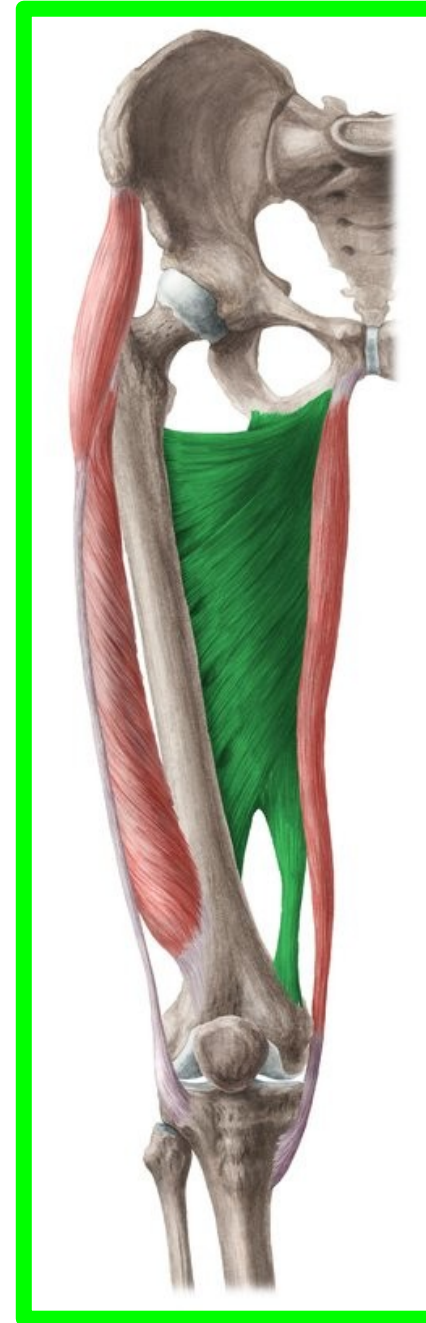
Action: Adduction of thigh

✓ **ischial(hamstring):** lower part of ischial tuberosity

Insertion: Adductor tubercle

Innervation: Sciatic N.

Action: Extension of thigh



Obturator externus

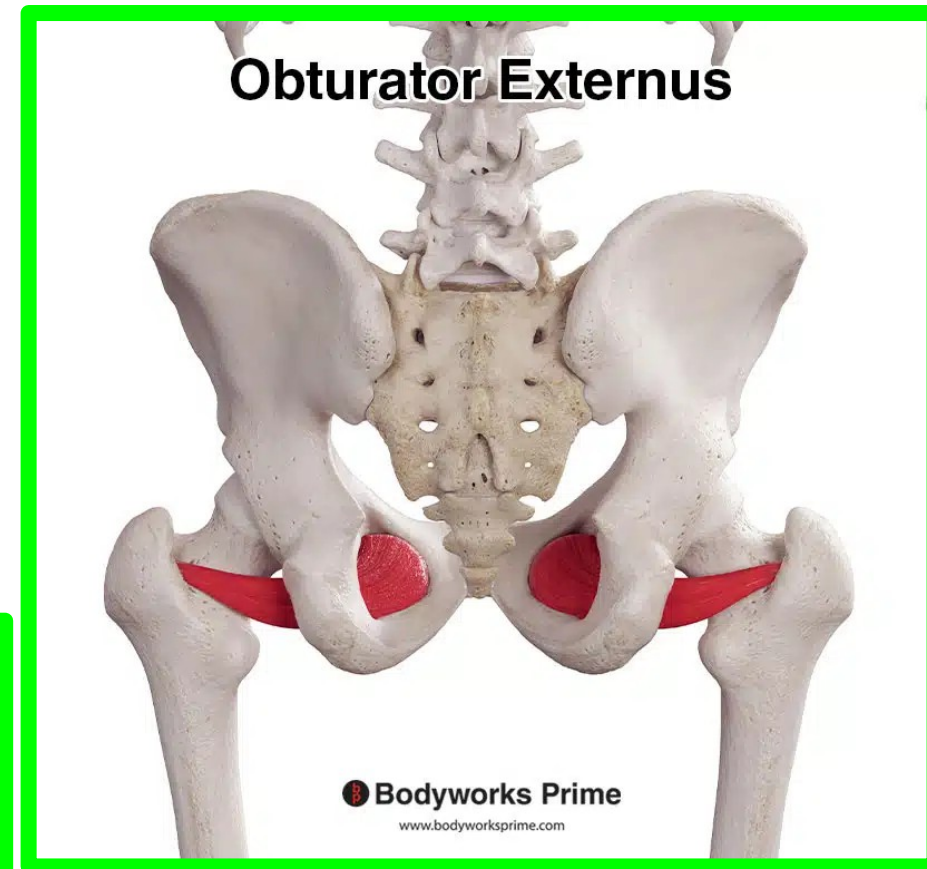
Origin: Obturator membrane & near bone

Insertion: Trochanteric fossa

Innervation: Obturator N.

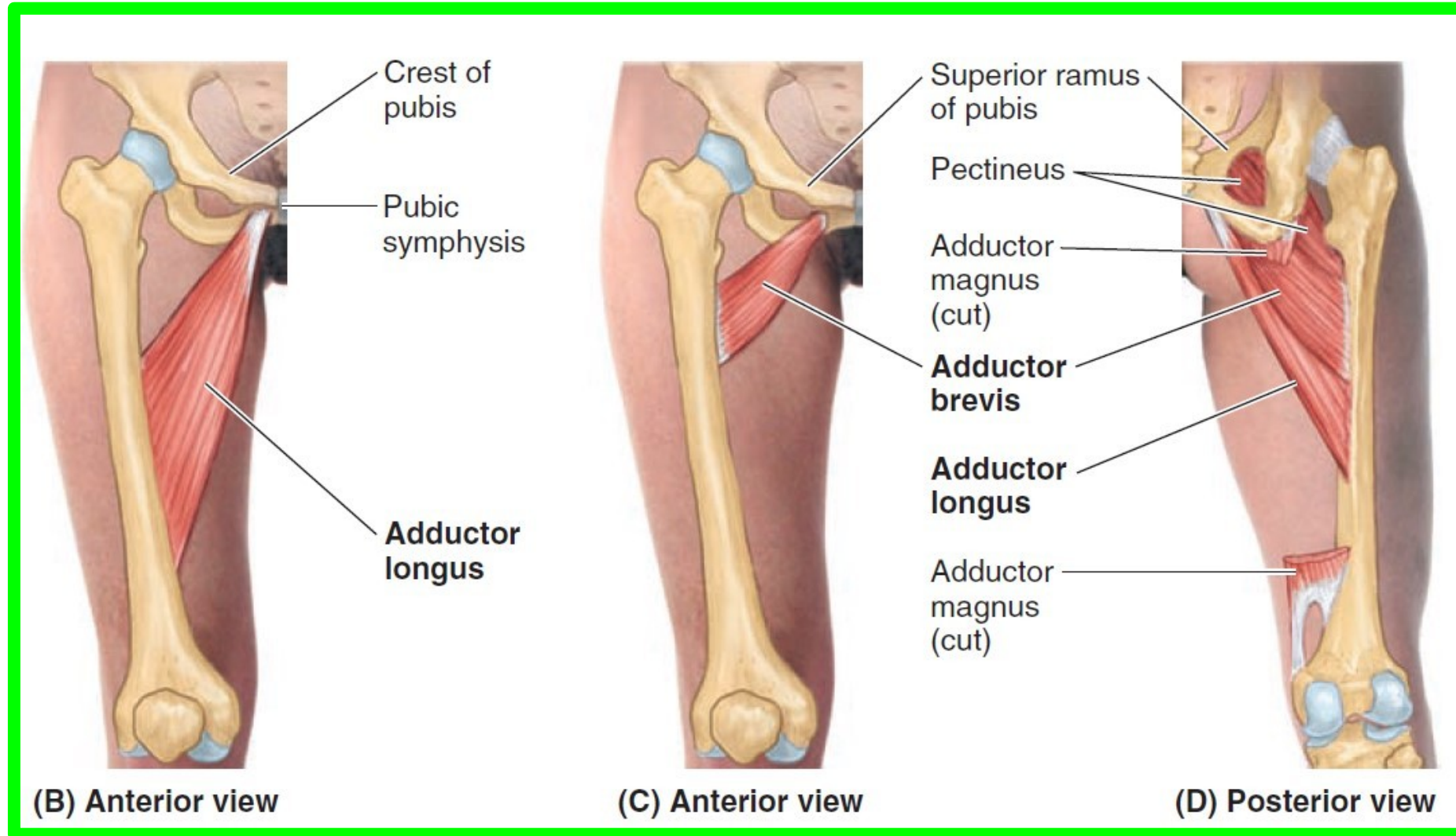
Action: Lateral rotation of thigh, pulls head of femur into acetabulum holding pelvis steady

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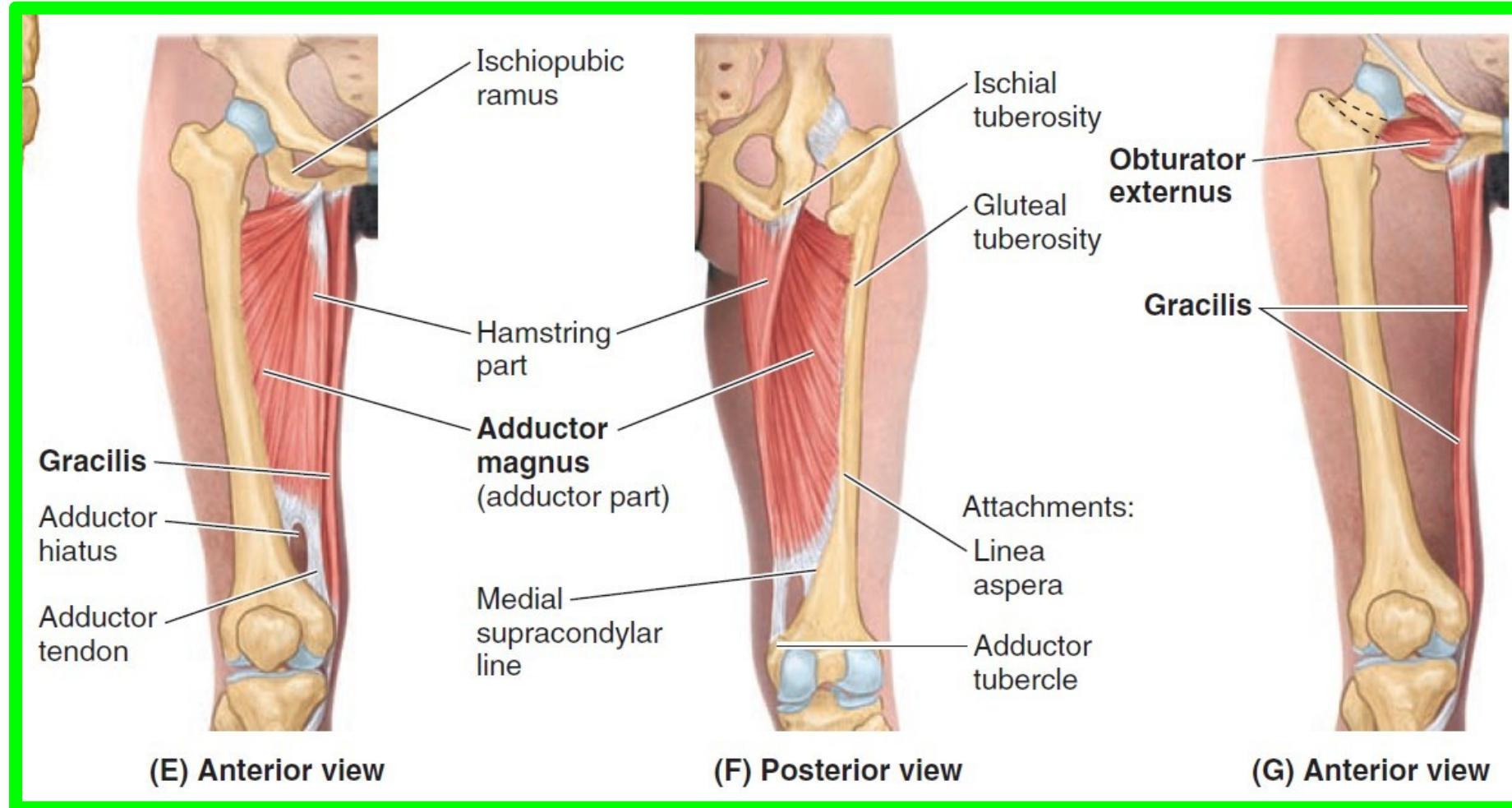
Muscles of the medial compartment of the thigh

- ✓ **Adductor longus:** the most anterior muscle in the group
- ✓ **Adductor brevis:** deep (posterior) to the pectineus and adductor longus muscles



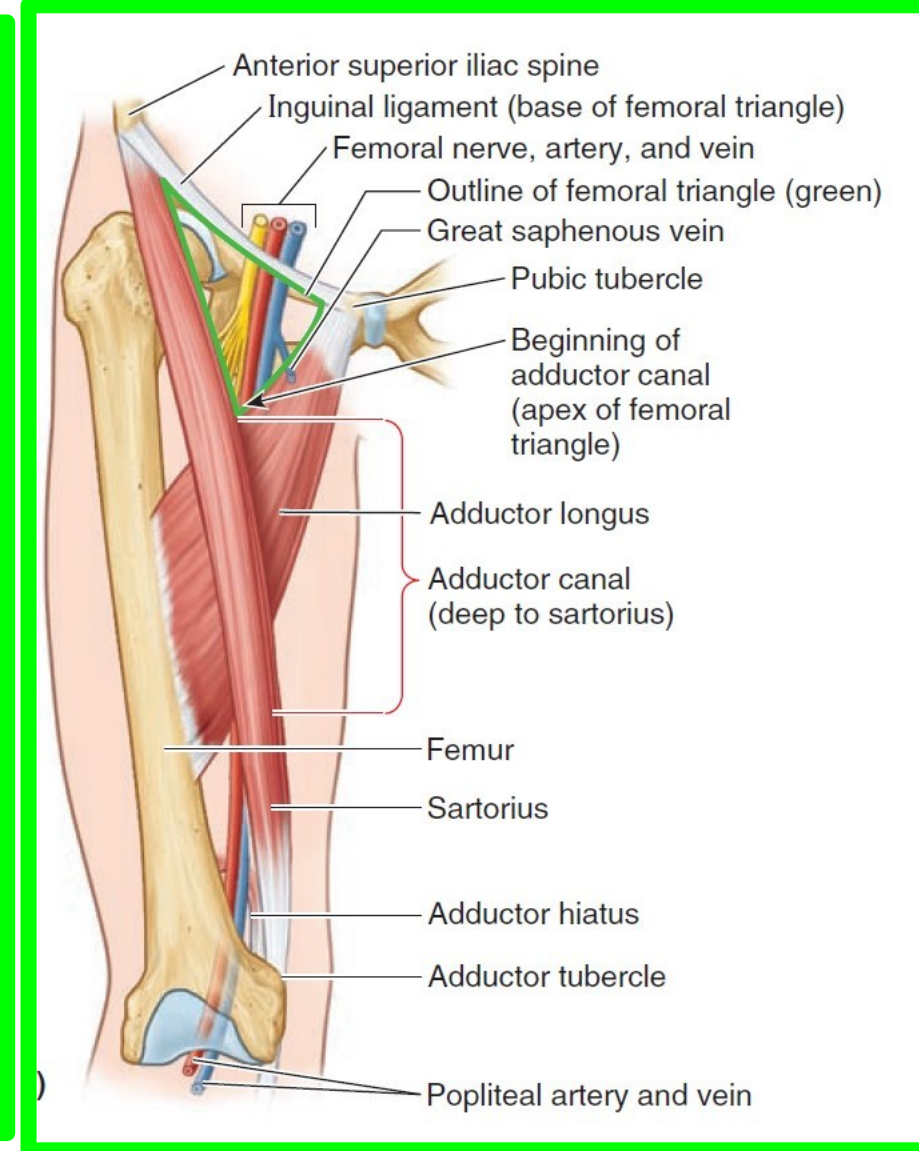
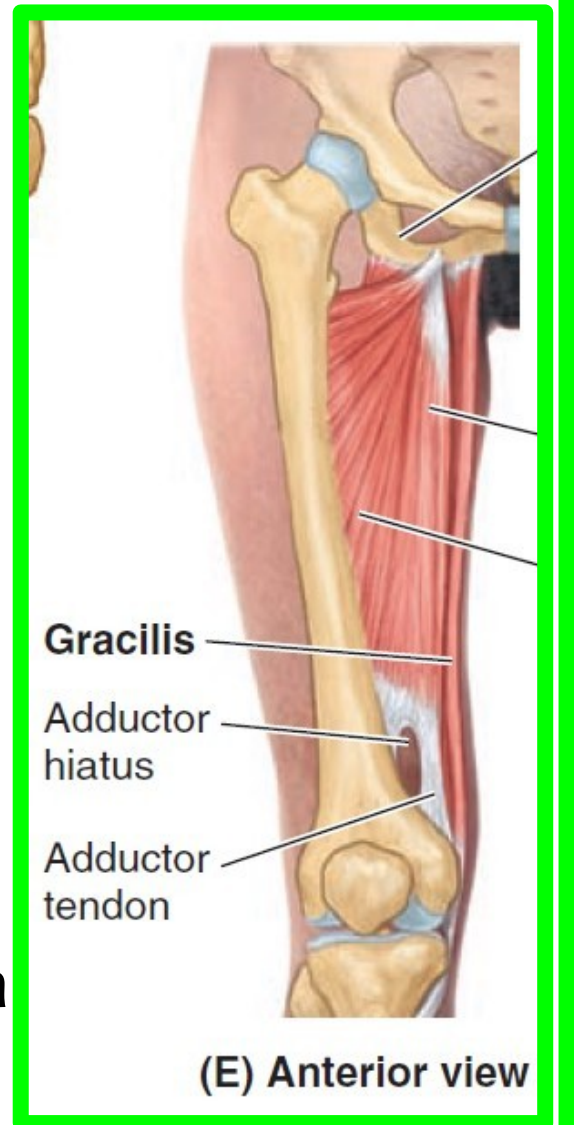
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- ✓ **Adductor Magnus:** the largest adductor muscle, composed of adductor and hamstring parts; the parts differ in their attachments, nerve supply, and main actions.
- ✓ **Gracilis:** a long, strap-like muscle lying along the medial side of the thigh and knee; it is the only adductor muscle to cross and act at the knee joint as well as the hip joint.
- ✓ **Obturator externus:** a deeply placed fan-shaped muscle in the superomedial part of the thigh



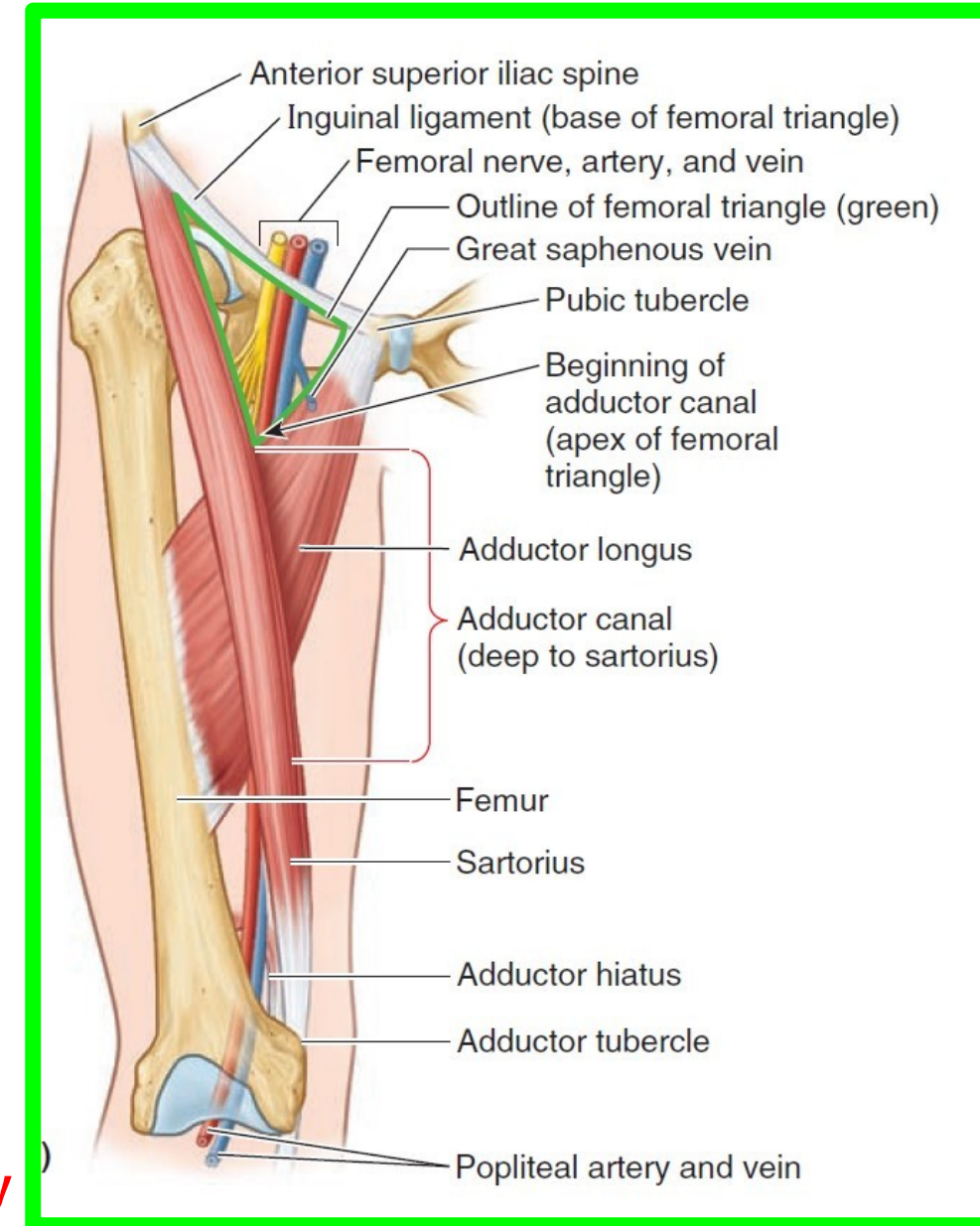
The adductor hiatus

- ❖ is an opening between the distal aponeurotic attachment of the **adductor part** of the adductor Magnus and the tendon of the **hamstring part**
- ❖ The hiatus transmits the **femoral artery** and **vein** from the anterior compartment of the thigh to the popliteal fossa posterior to the knee.



The adductor canal (subsartorial canal, Hunter canal)

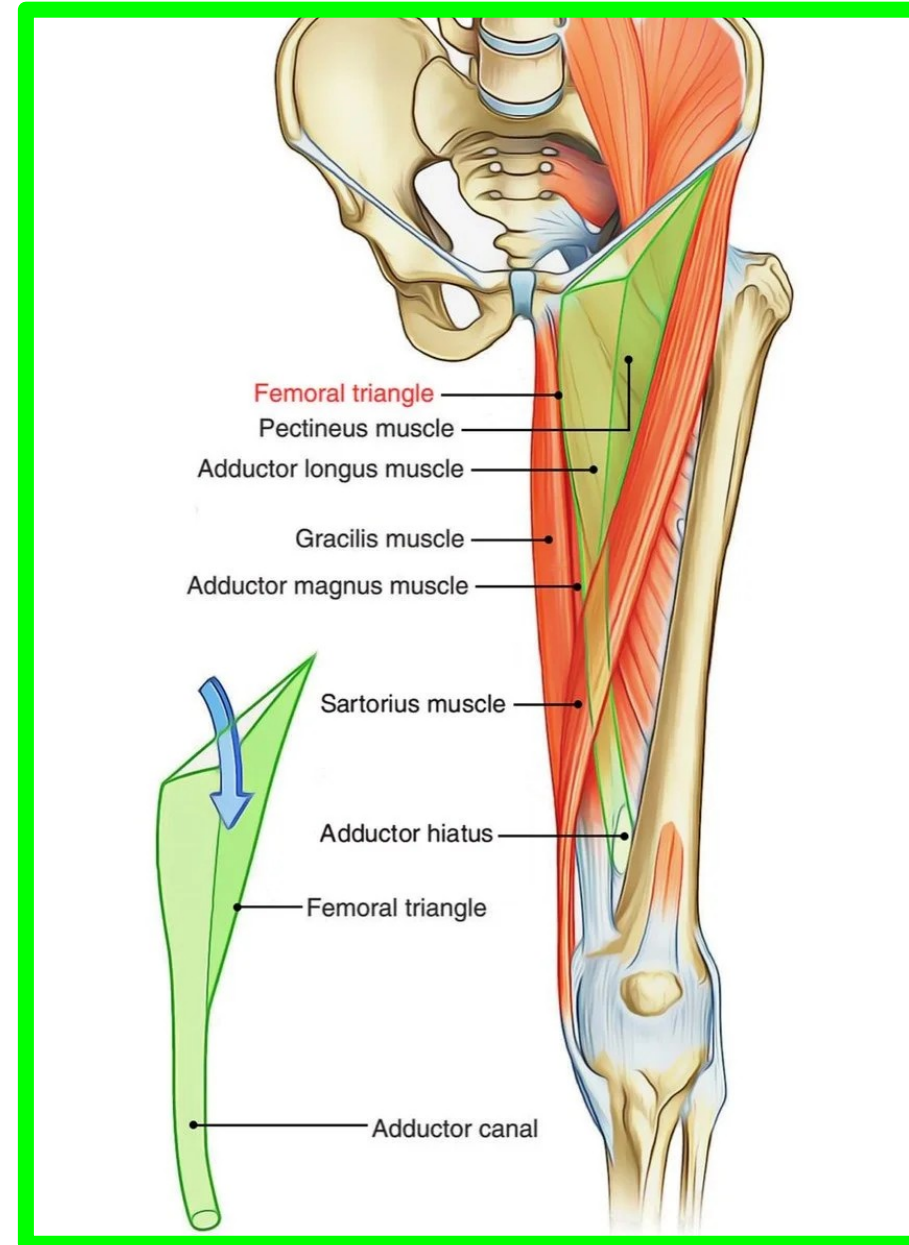
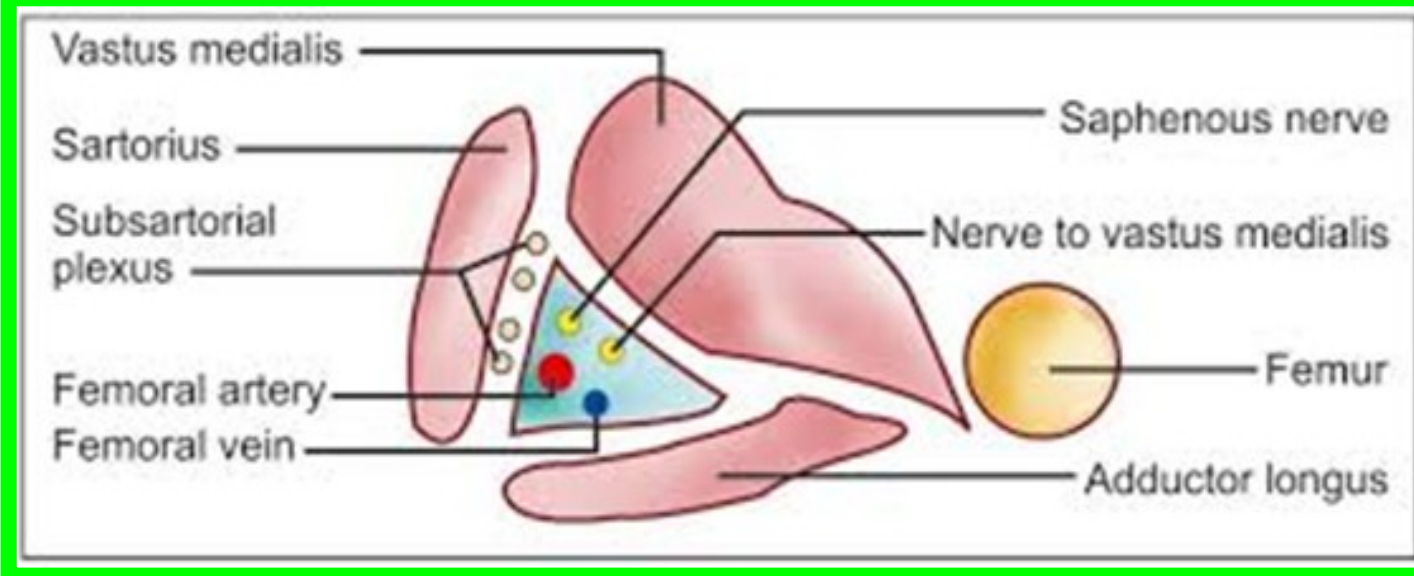
- ❑ Extends from **the apex of the femoral triangle**, where the Sartorius crosses over the adductor longus, **to the adductor hiatus** in the tendon of adductor Magnus.
- ❑ It provides an intermuscular passage for:
 - ✓ the **femoral artery** and **vein**,
 - ✓ the **saphenous nerve**,
 - ✓ the **nerve to vastus medialis**,
 - ✓ delivering the femoral vessels to the **popliteal fossa** where they become **popliteal vessels**



The adductor canal (subsartorial canal, Hunter canal)

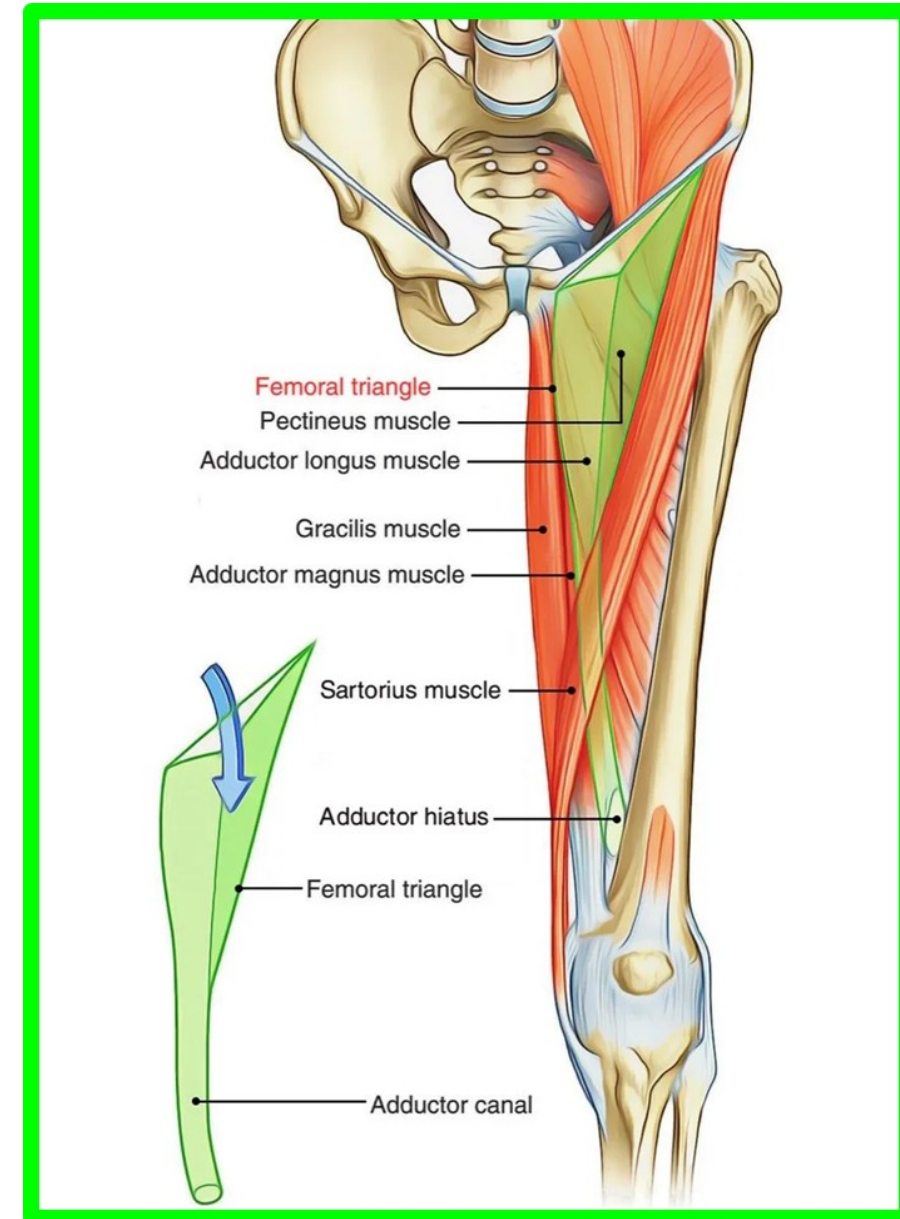
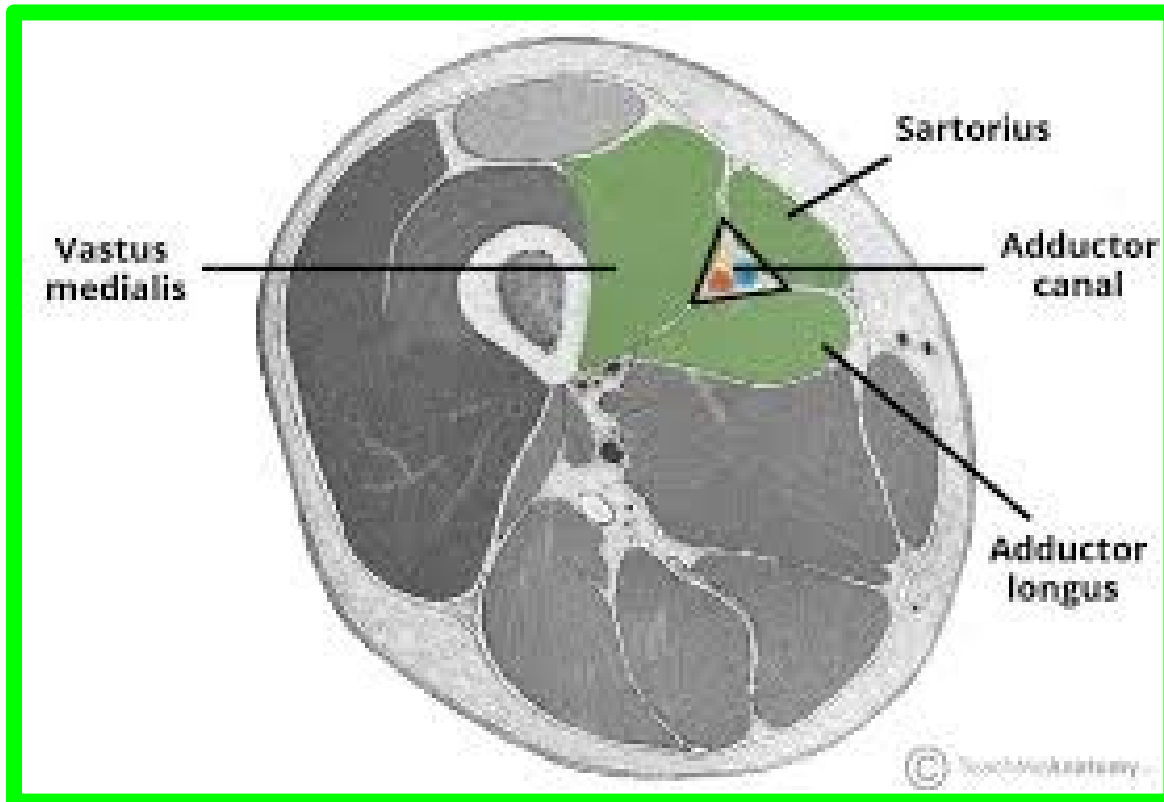
The adductor canal is bounded:

- ✓ **anteriorly and laterally:** vastus medialis;
- ✓ **Posteriorly:** adductor longus and adductor Magnus;
- ✓ **Medially:** Sartorius, which overlies the groove between the above muscles, forming **the roof of the canal**.



The adductor canal (subsartorial canal, Hunter canal)

- ✓ **Upper end:** Apex of femoral triangle where the canal continues with **femoral triangle**
- ✓ **Lower end:** adductor opening(hiatus) where the canal continues with **popliteal fossa**

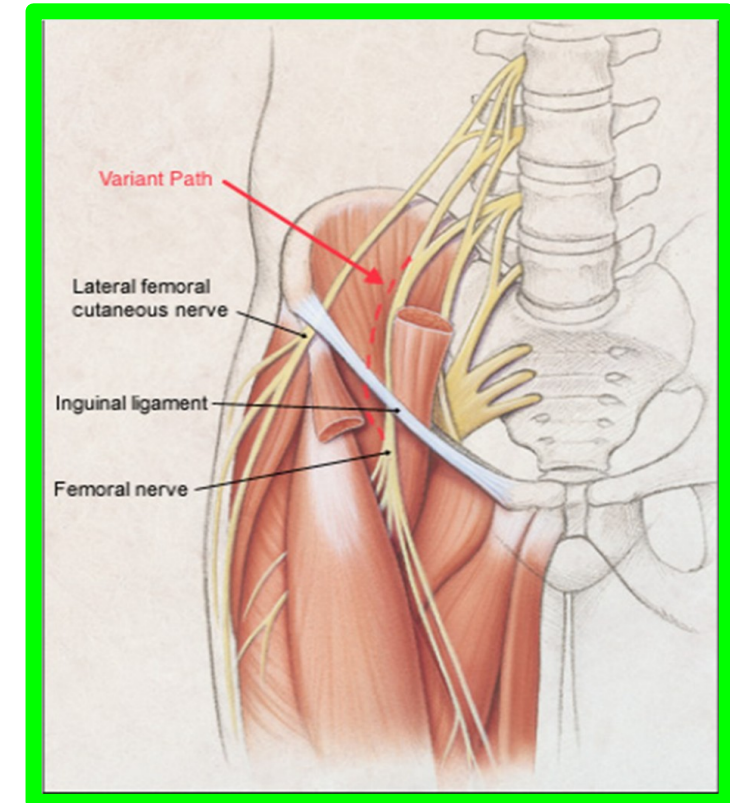
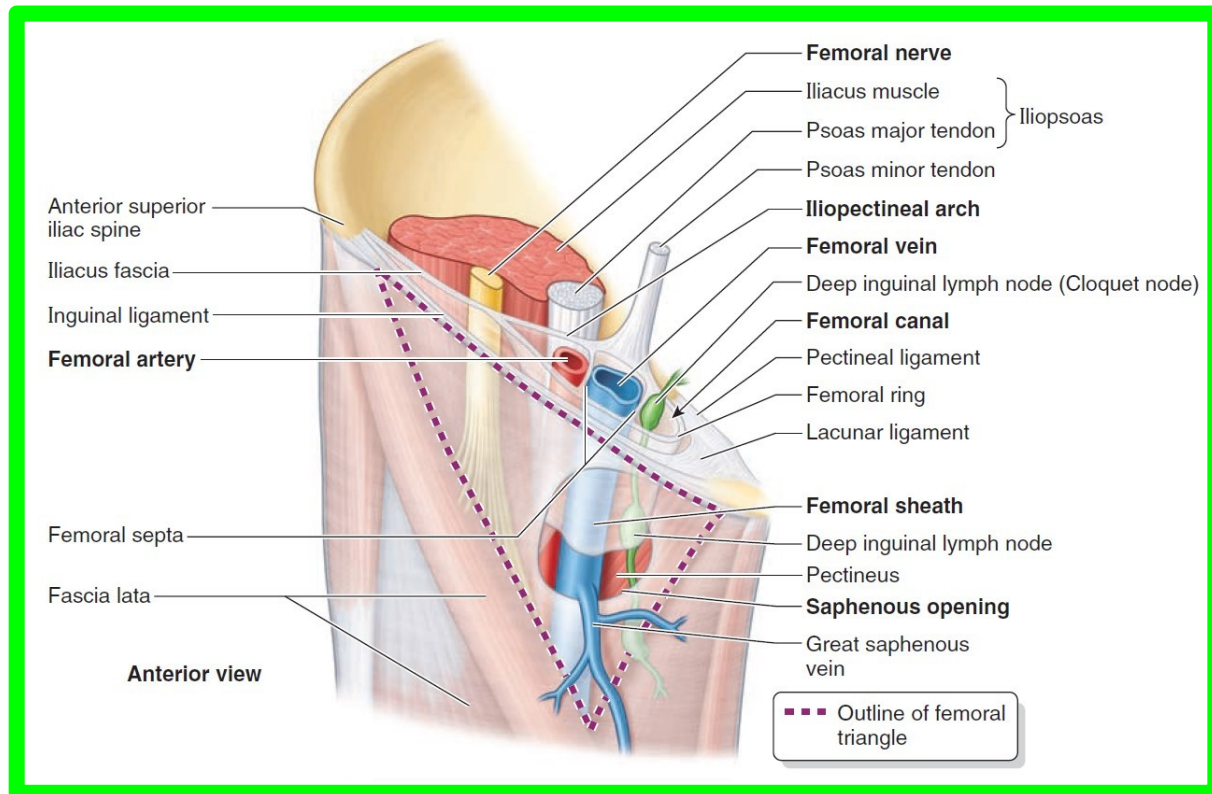


Femoral Nerve

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- ✓ Nerve of anterior compartment
- ✓ **Origin:** inside psoas major from lumbar plexus (L2, 3, 4 nerves)
- ✓ Enter thigh deep to inguinal ligament
- ✓ Pass in **femoral triangle** lateral to **femoral art** outside femoral sheath
- ✓ End **1 inch** below **inguinal ligament** giving its branches

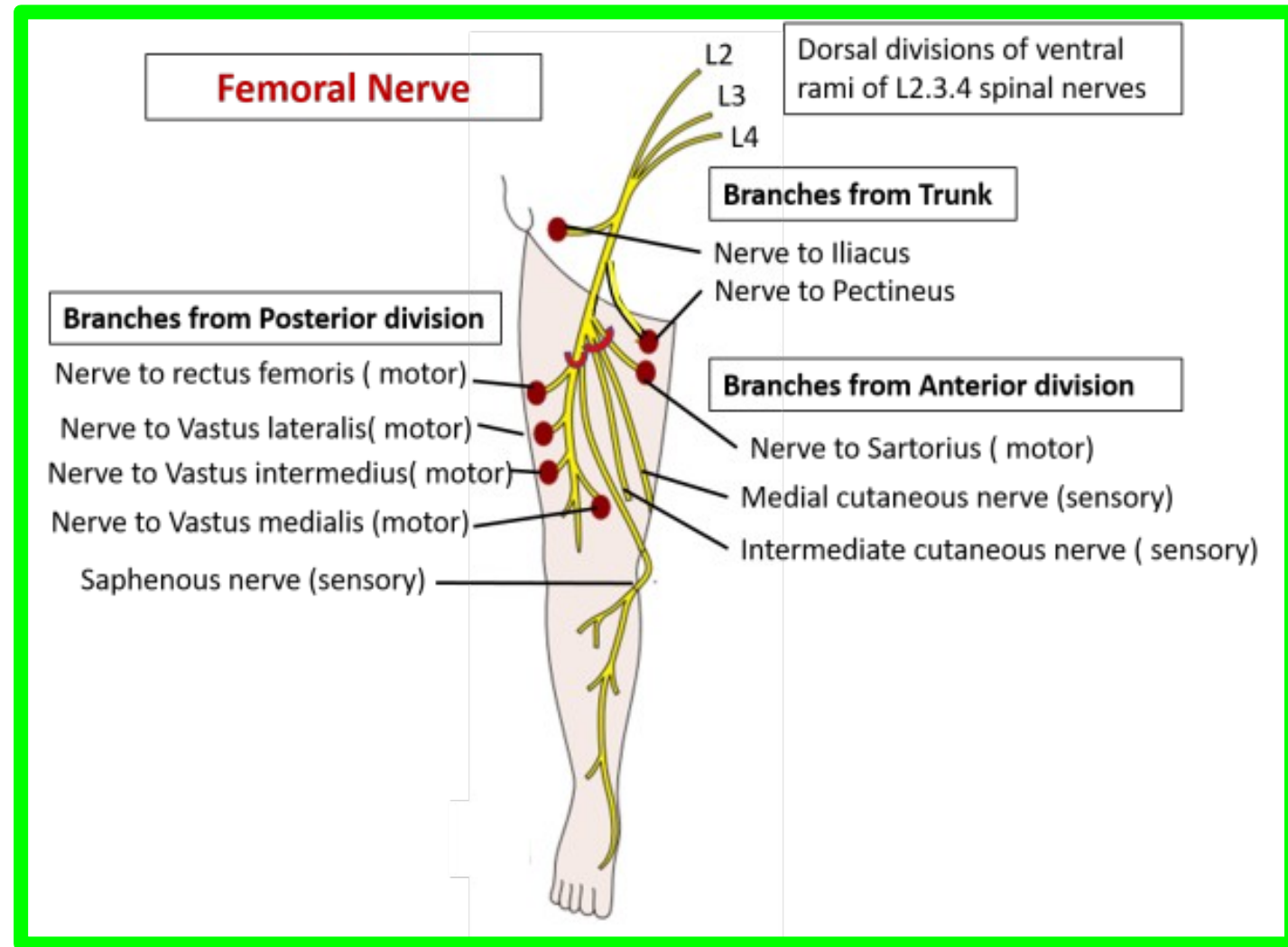


Femoral Nerve

Branches:

A-muscular branches

1. iliacus (in abdomen)
2. Sartorius
3. Pectineus
4. heads of quadriceps femoris

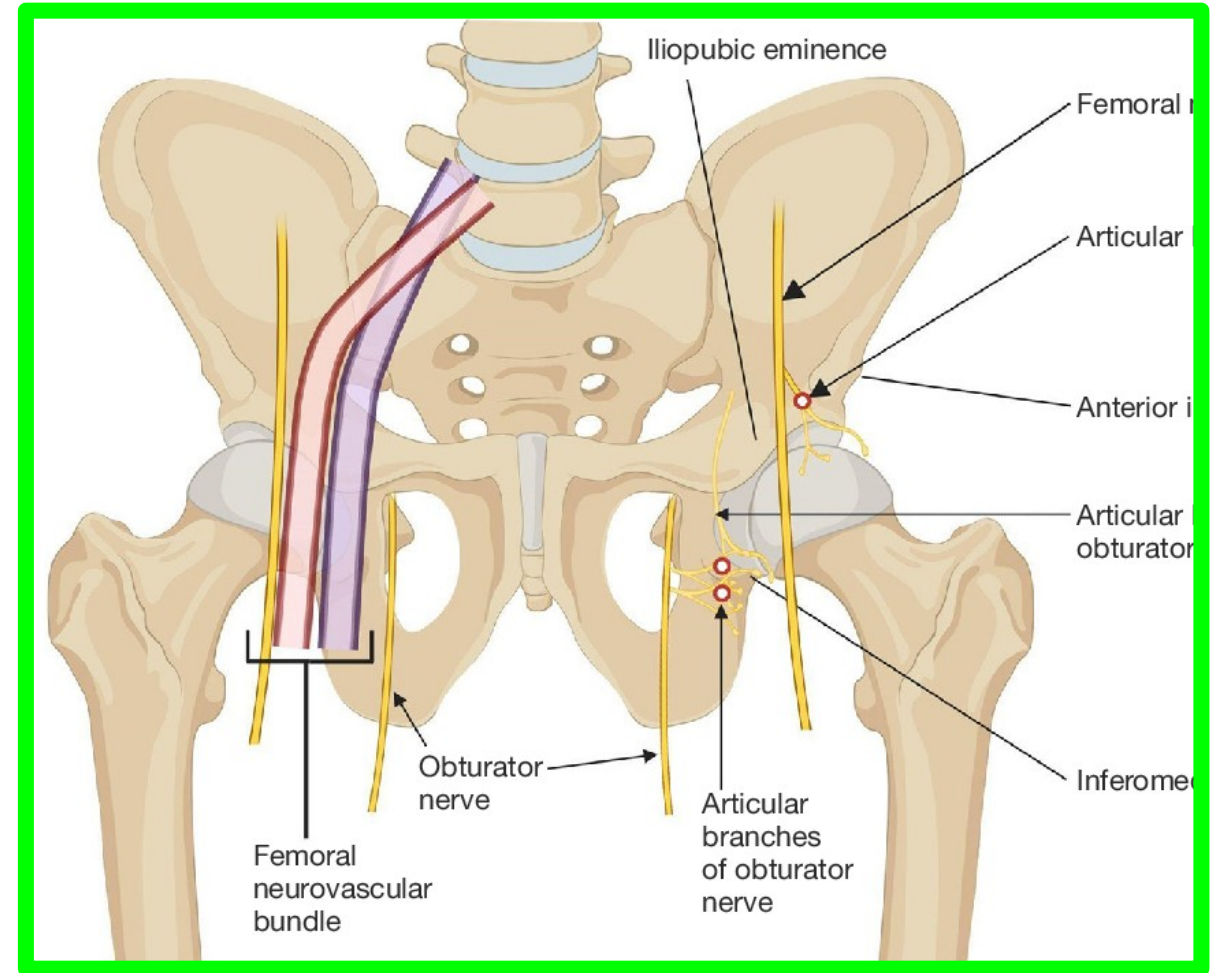
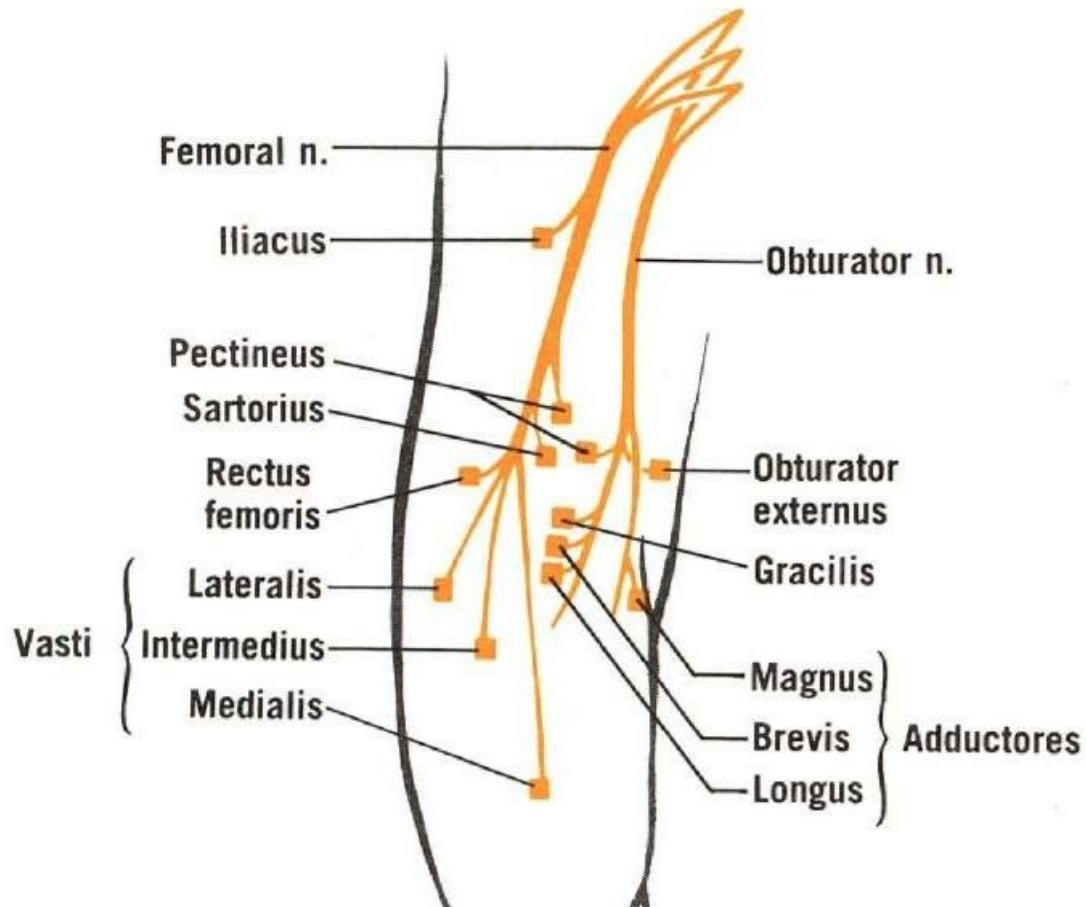


N.B : nerve to v. intermedius → articularis genu

Femoral Nerve

B-articular branches

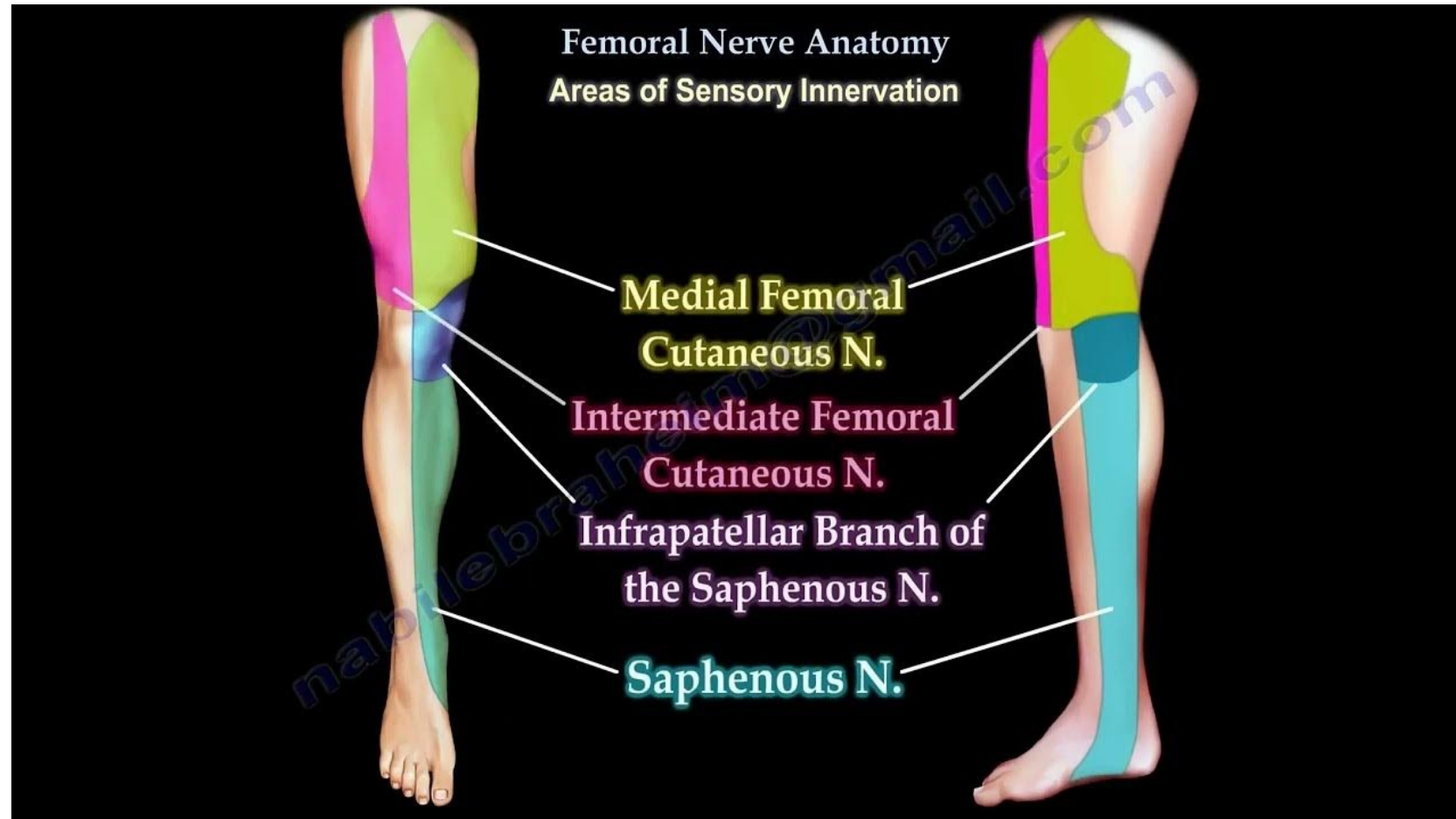
1. **hip** : through n. to rectus femoris
2. **knee** : through nerves to vasti



Femoral Nerve

C-cutaneous branches.

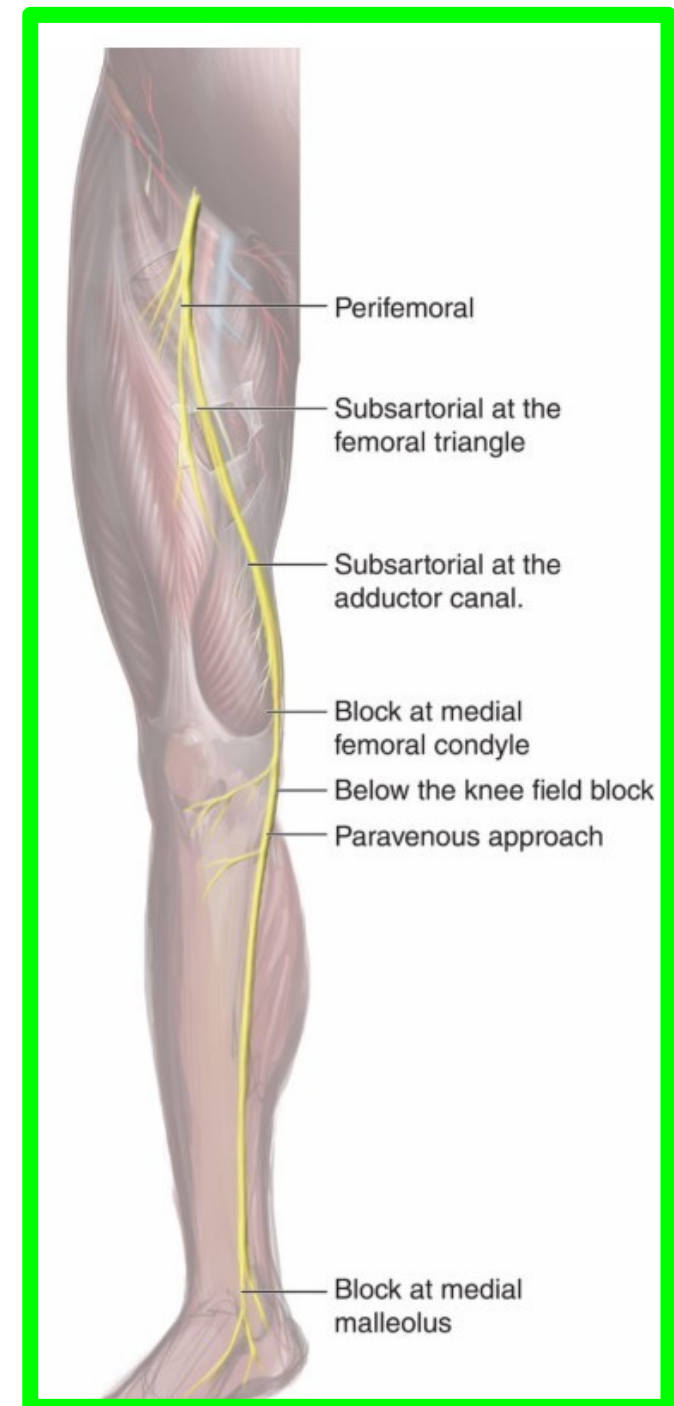
1. Intermediate cut. nerve of thigh :
2. medial cut. nerve of thigh :



Femoral Nerve

3. Saphenous nerve: longest nerve in body

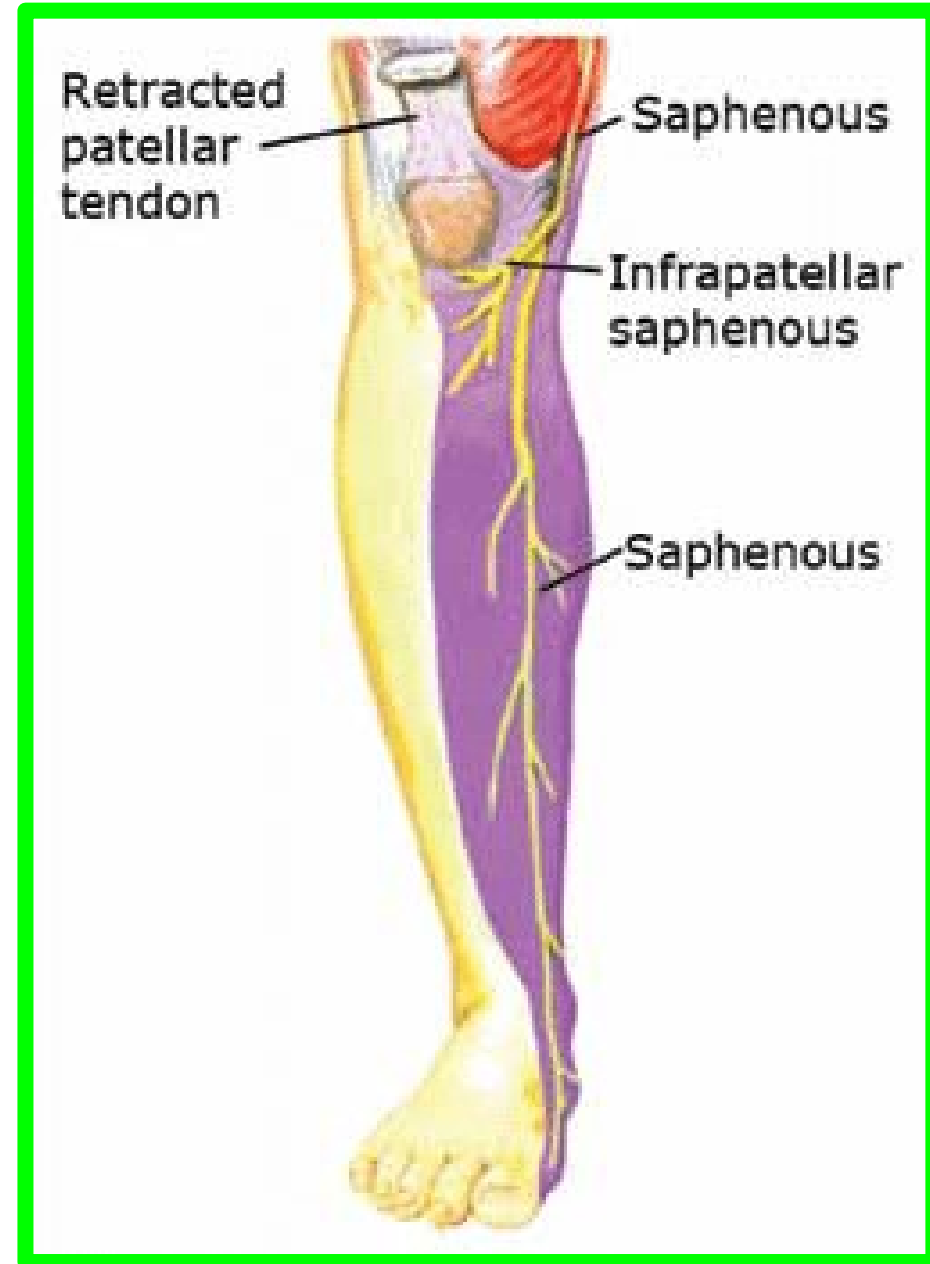
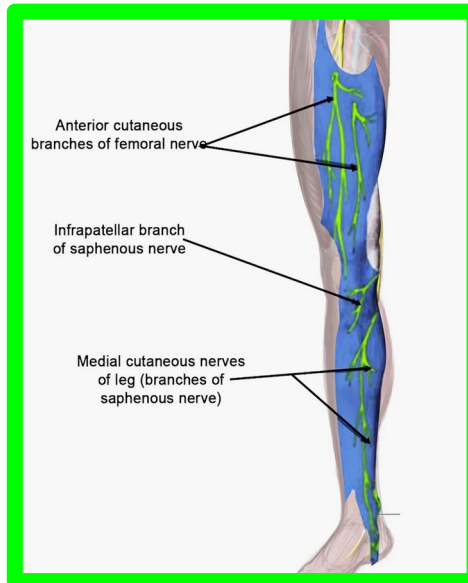
- ❖ Pass lateral to **femoral art.** in **femoral triangle** & **upper part of adductor canal** then cross it to be medial
- ❖ Leave adductor canal by piercing roof behind Sartorius to be in superficial fascia
- ❖ Descend with **great saphenous vein** in medial side of knee & leg and cross in front **ant. Malleolus**
- ❖ Pass in medial part of dorsum of foot to metatarsophalangeal joint of big toe (ball of big toe)



Femoral Nerve

3. Saphenous nerve branches :

1. supply skin of **medial side of knee & leg & dorsum of foot till metatarsophalangeal joint of big toe** (ball of big toe)
2. br. to patellar plexus to supply skin over patella & ligamentum patellae
3. br. to subsartorial plexus to supply skin over adductor canal

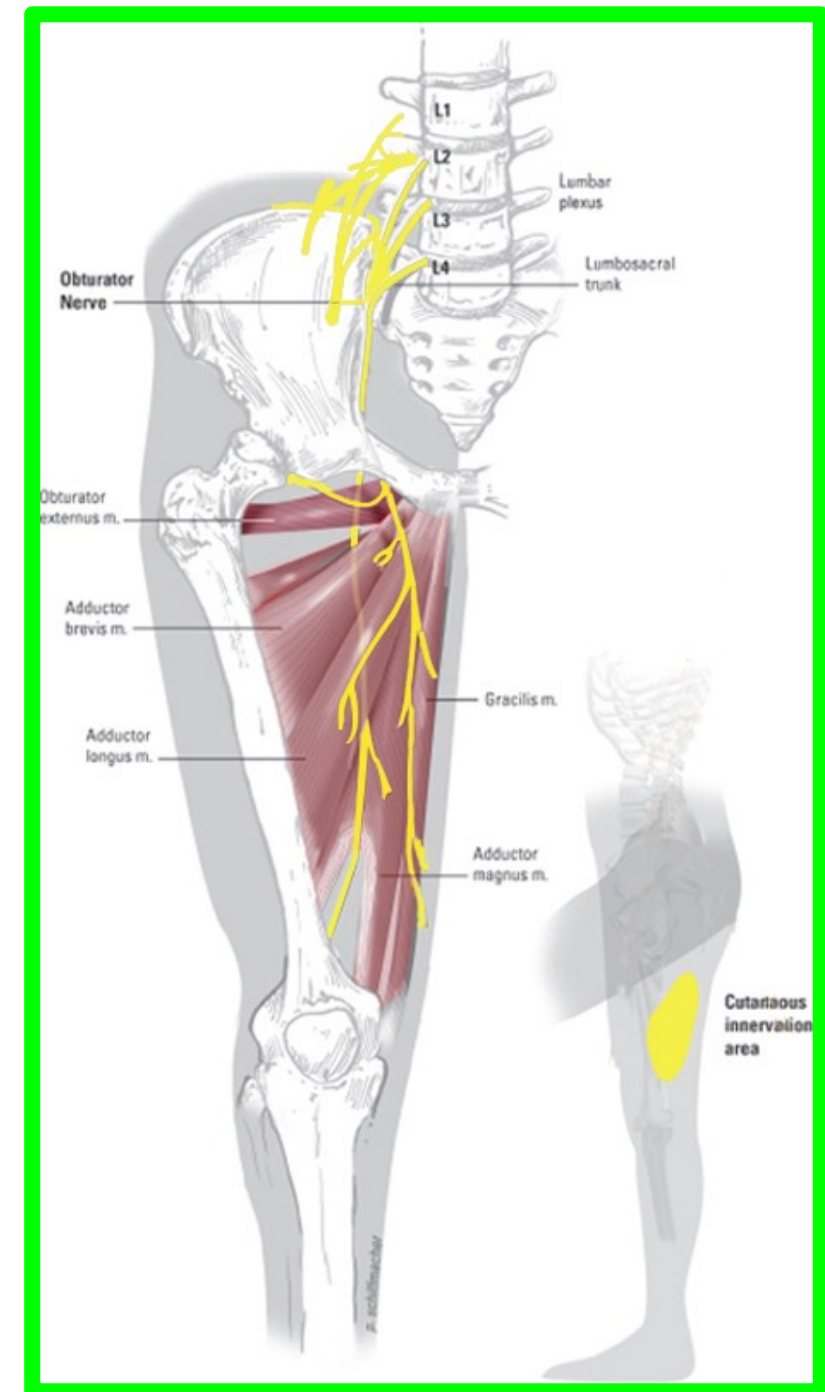


Obturator nerve

Nerve of medial compartment

Origin : inside psoas major from lumbar plexus (L2, 3, 4) nerves

- ❖ leave pelvis through **obturator canal** with obturator vessels
- ❖ At **ant. end of canal** → ant & post. divisions
- ✓ **Ant. division** descend in front adductor brevis behind pectineus & adductor longus
- ✓ **Post. division** descend behind adductor brevis in front of adductor Magnus



Obturator nerve

Branches :

1. Anterior division

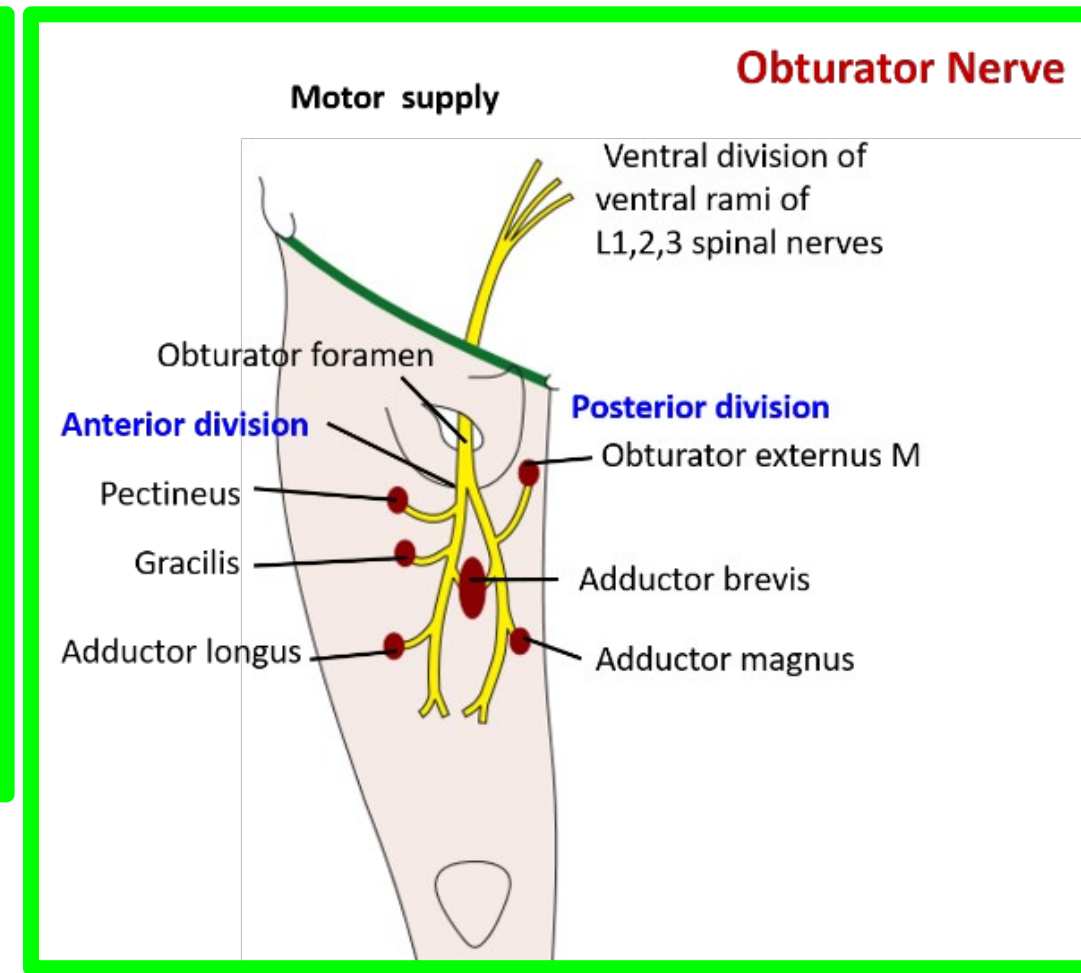
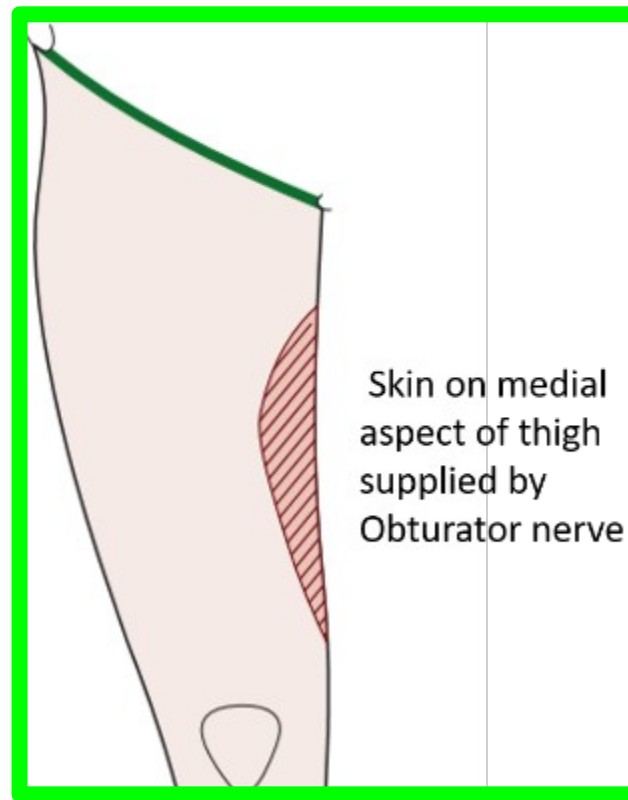
❖ Muscular to:

- Pectineus
- Adductor longus
- Gracilis
- Adductor brevis

❖ Articular to: hip joint

❖ Cutaneous to:

Middle third of medial side of thigh



Obturator nerve

Branches :

2. Posterior division

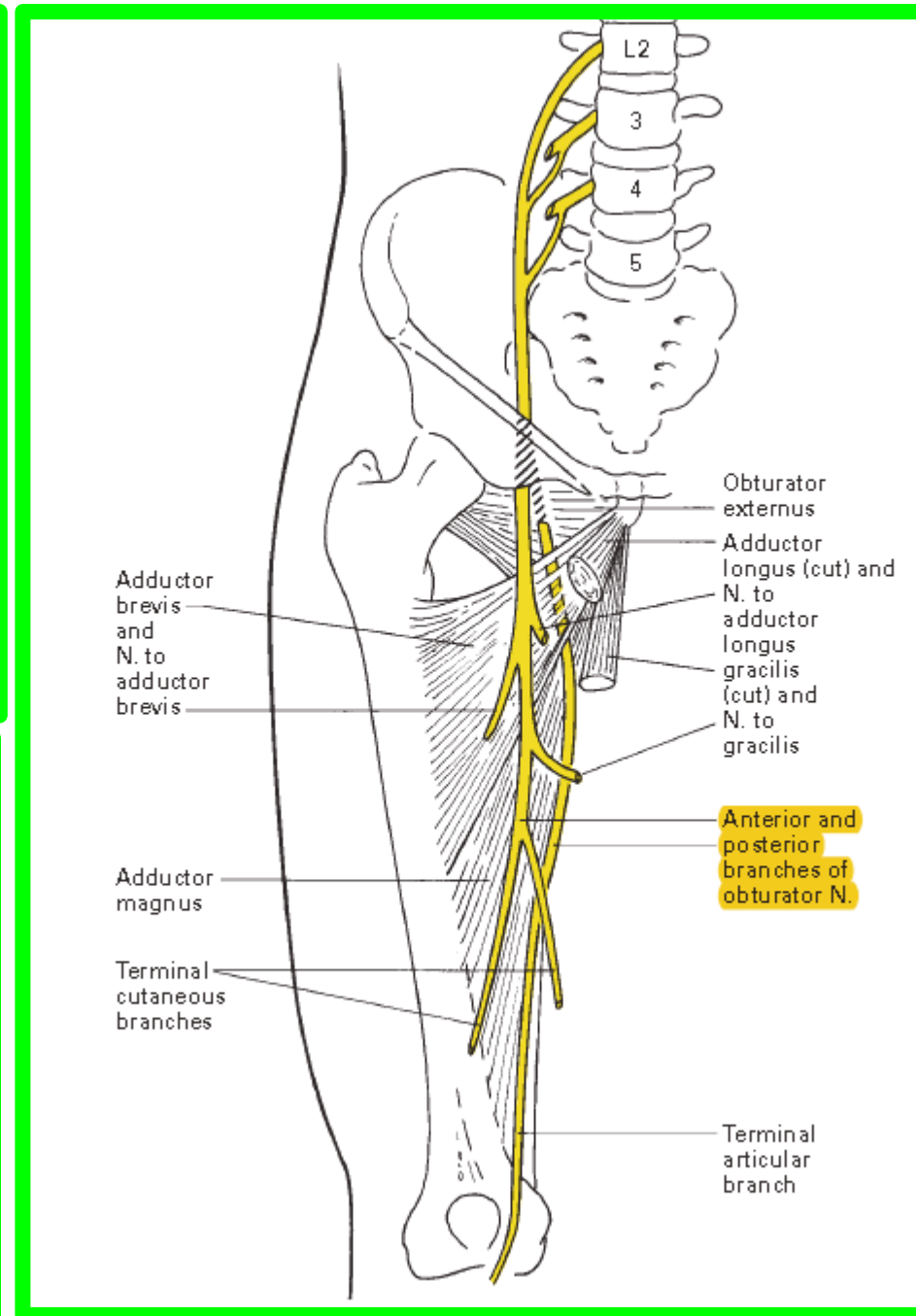
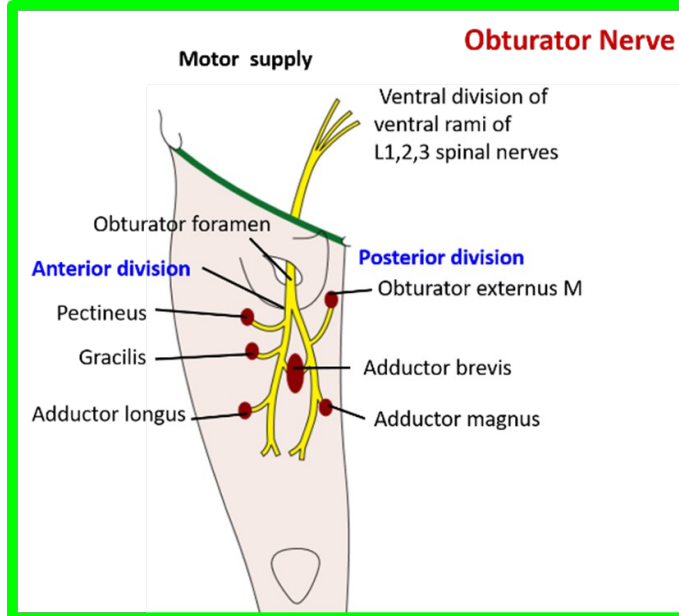
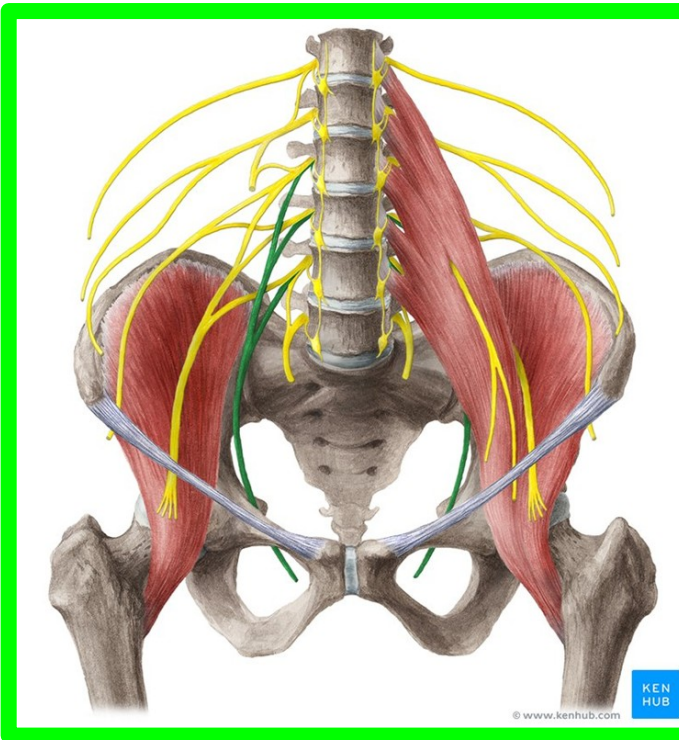
❖ **Muscular to:**

➤ Adductor brevis

➤ Obturator externus

➤ Adductor Magnus

❖ **Articular To: knee joint**



Accessory obturator Nerve (in 12%)

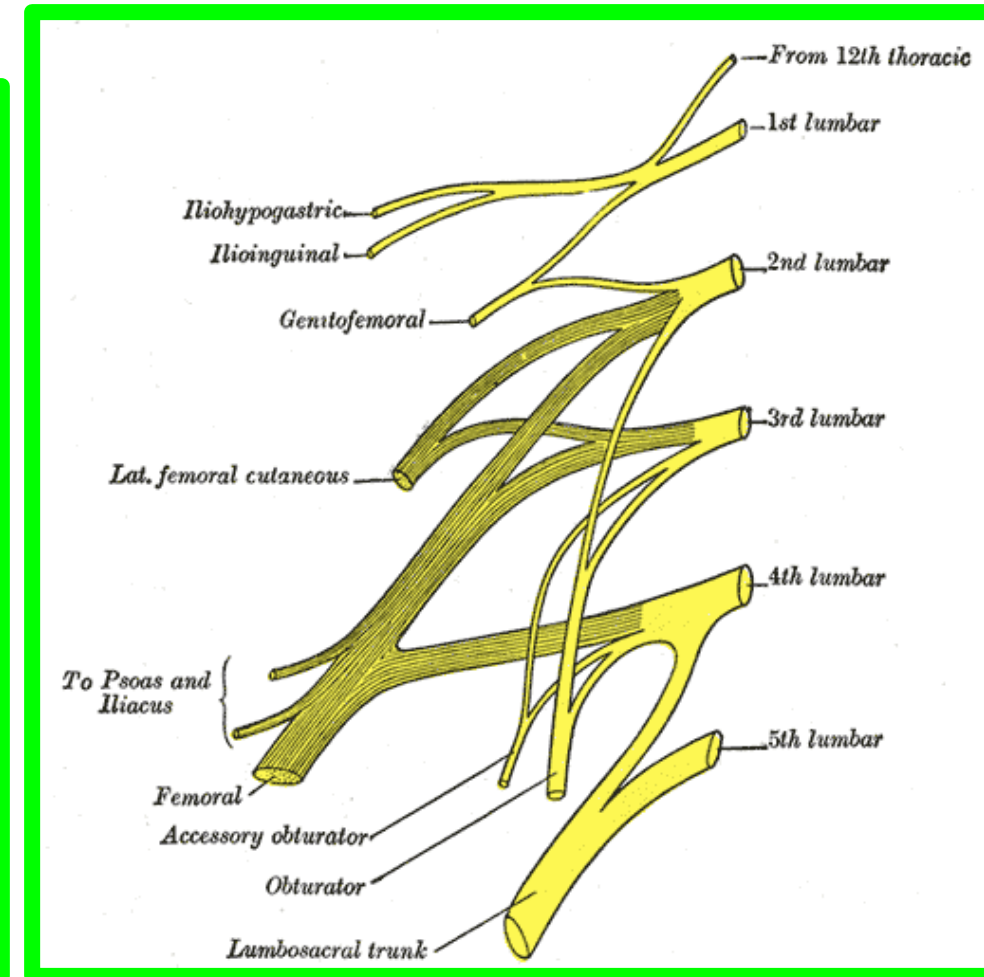
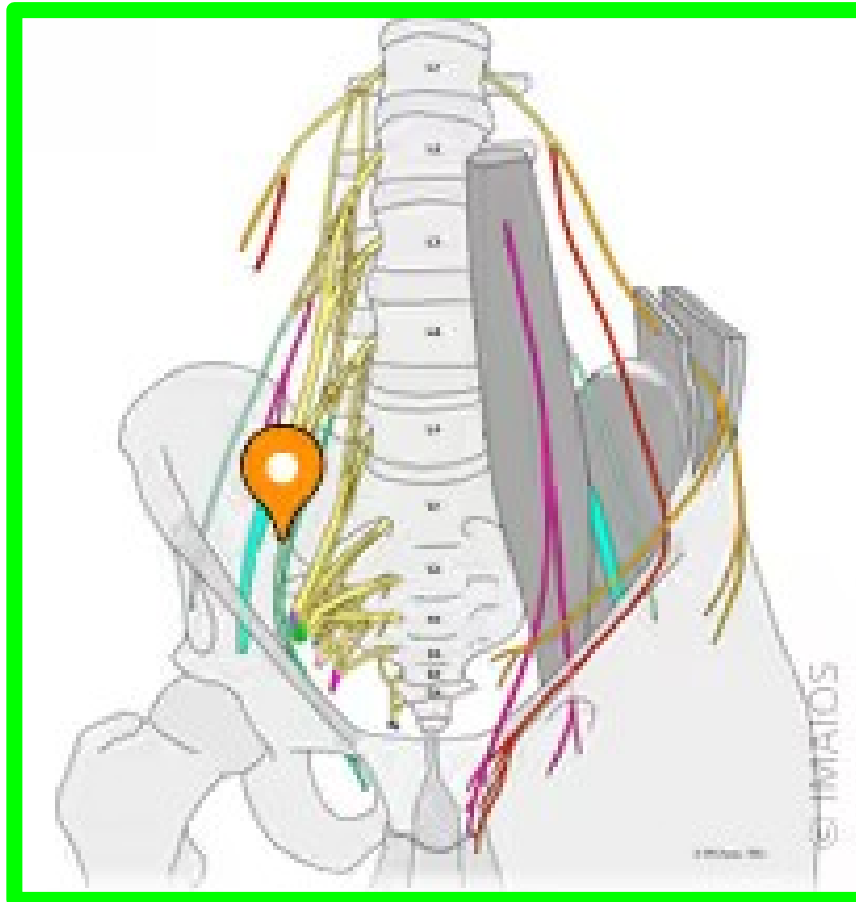
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Origin: inside psoas major from lumbar plexus (L 3, 4 nerves)

❖ Pass in front superior pubic ramus , deep to pectineus

❖ Branches to: **pectineus** & **hip joint**



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