



Anatomy Team
433

**King Saud University
College of medicine
Musculoskeletal block**

17 ANTERIOR & MEDIAL COMPARTMENTS OF THIGH

For any comments

Please don't hesitate to
contact with us by

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Done by: **RawanAlotaibi &**

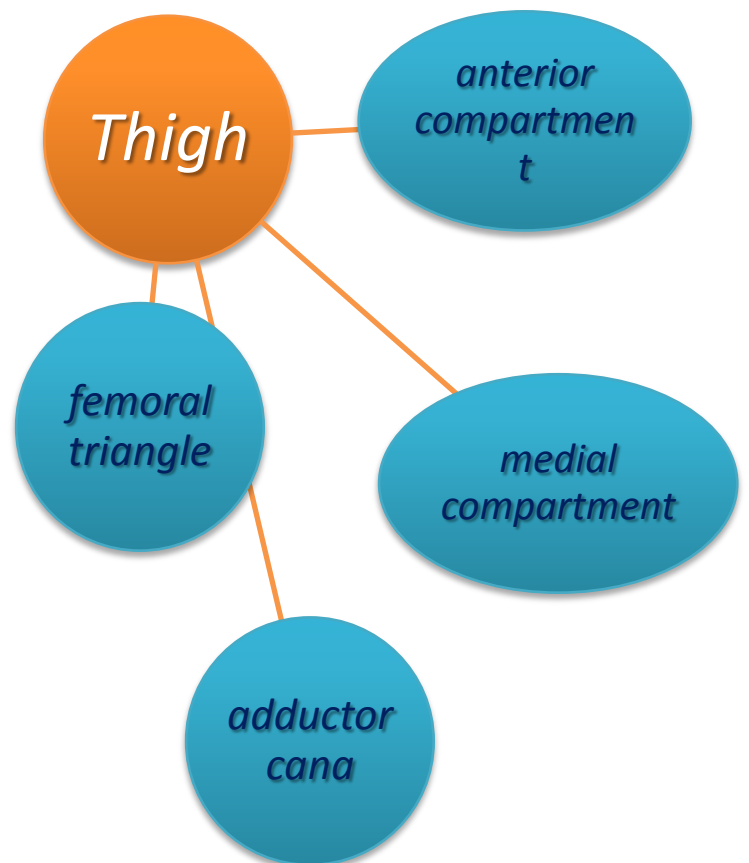
Malak alAboudi

Revised by: **AbdulazizAlsudairi**

Objectives

- ❖ *List the name of muscles of anterior compartment of thigh.*
- ❖ *Describe the anatomy of muscles of anterior compartment of thigh regarding: origin, insertion, nerve supply and actions.*
- ❖ *List the name of muscles of medial compartment of thigh.*
- ❖ *Describe the anatomy of muscles of medial compartment of thigh regarding: origin, insertion, nerve supply and actions.*
- ❖ *Describe the location, boundaries and contents of femoral triangle & adductor canal*

Mind Map

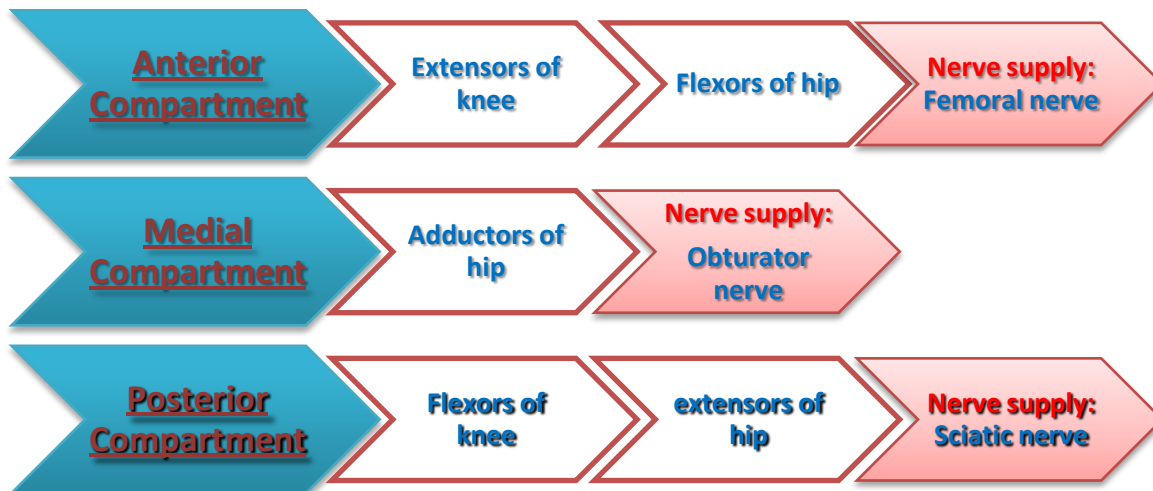
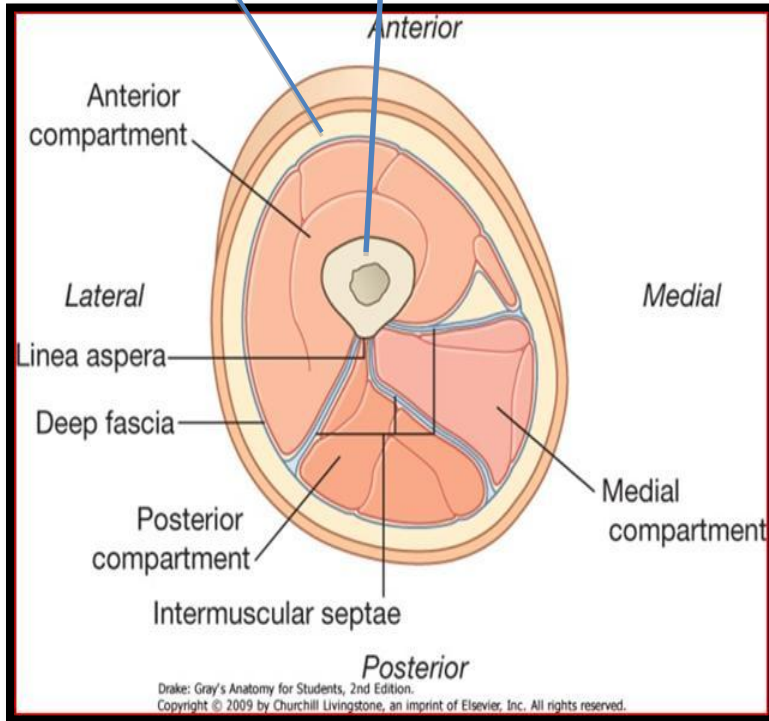


Color Index

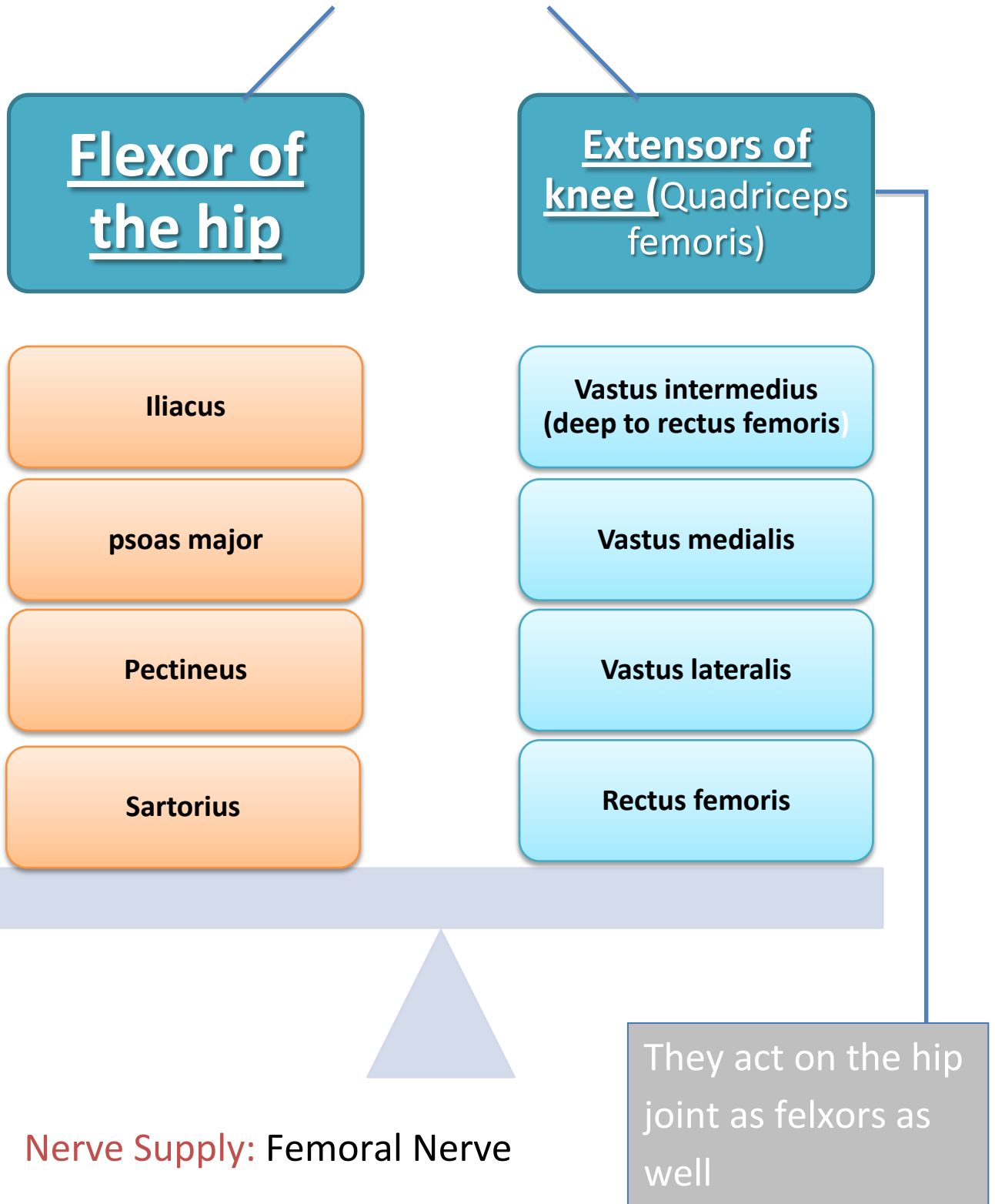
- Red :Important.
- Violet: Explanation.
- Gray: Additional Notes.

Other colors are for
Coordination

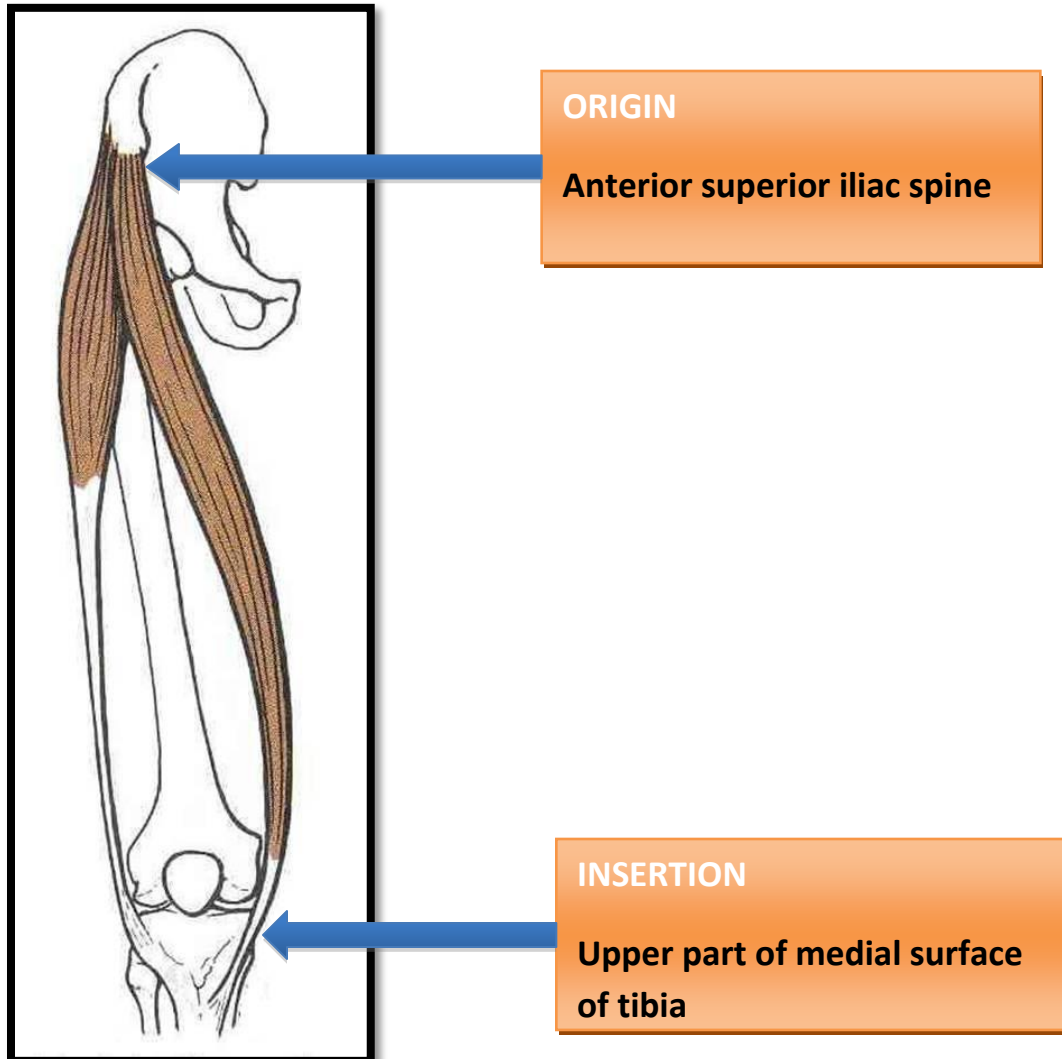
The thigh is divided into 3 compartments by 3 intermuscular septa (extending from deep fascia into femur)



Anterior Compartment of Thigh



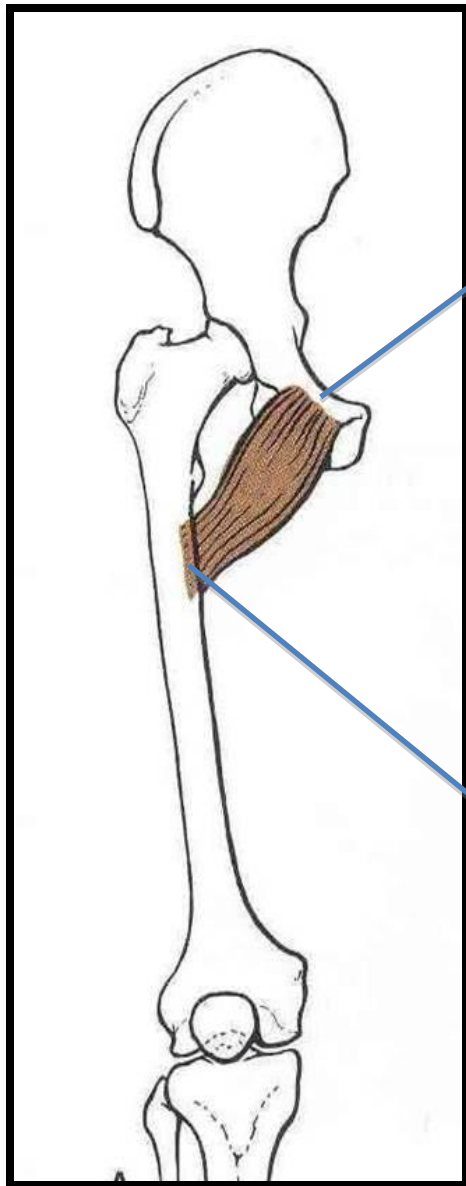
Sartorius



ACTION(TAILOR'S POSITION)(التربيعة):

- **On hip joint** Flexion, abduction & lateral rotation
- **On Knee Joint** Flexion

Pectineus



ORIGIN

Superior pubic ramus

INSERTION

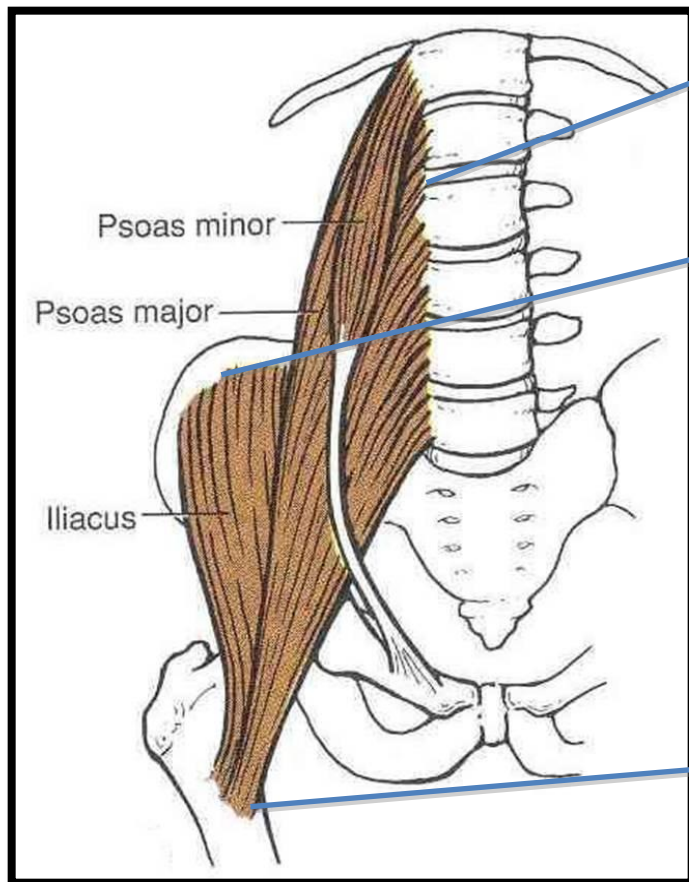
Back of femur (below lesser trochanter)

ACTION:

- Flexion & adduction of the hip joint

(It only acts on the hip joint)

Iliacus & Psoas major (Iliopsoas)



ORIGIN

Psoas major: T12 & lumbar vertebrae

Iliacus: Iliac fossa

INSERTION

Lesser trochanter of femur

ACTION:

- Flexion of the hip joint

(It only acts on the hip joint)

In less than 50 percent of humans the psoas major is accompanied by the *psoas minor*. It is located in front of the psoas major muscle.

Quadriceps Femoris

ORIGIN:

Rectus femoris: Anterior inferior iliac spine

Vastusintermedius: Front of shaft of femur

Vastusmedialis: Posterior border of femur

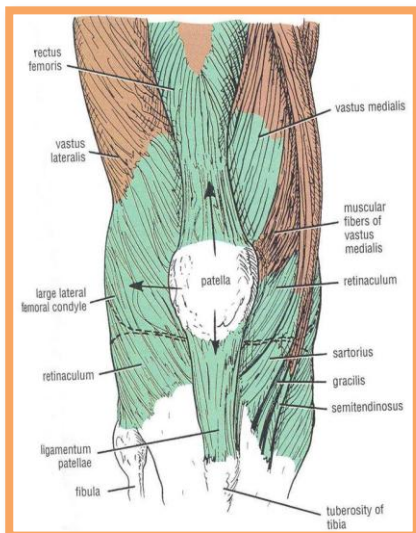
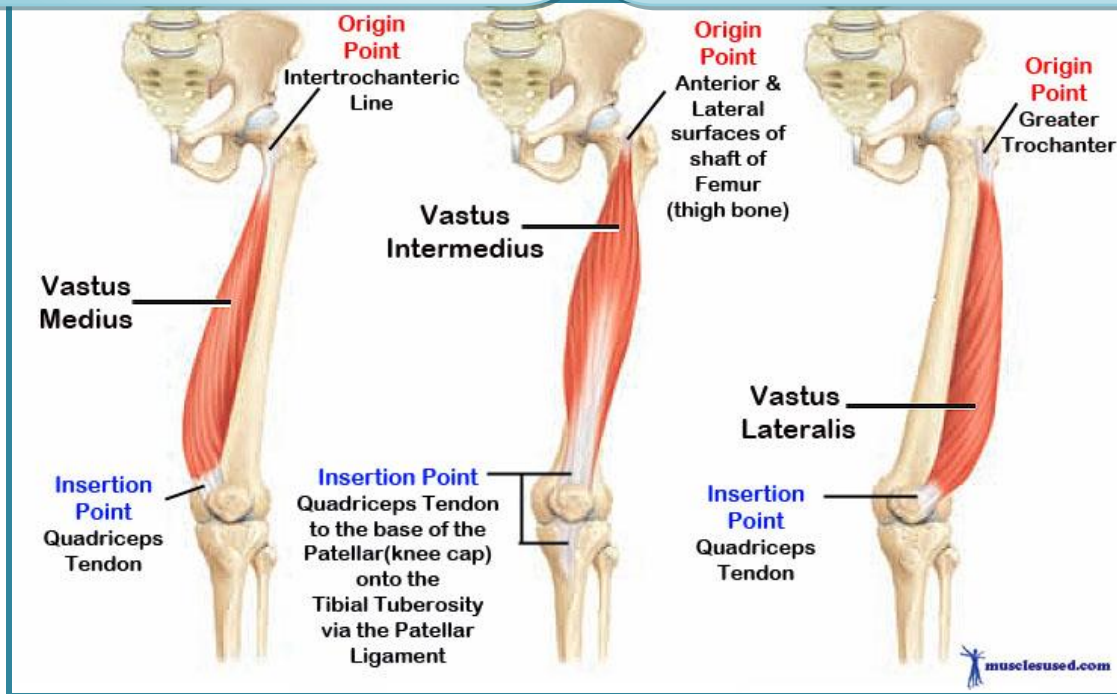
Vastuslateralis: Posterior border of femur

INSERTION(ALL FOUR):

- Into **PATELLA**

(**Patella is a sesamoid bone**)

- From patella into **TUBEROSITY OF TIBIA** through Ligamentum Patellae (Patellar Ligament)



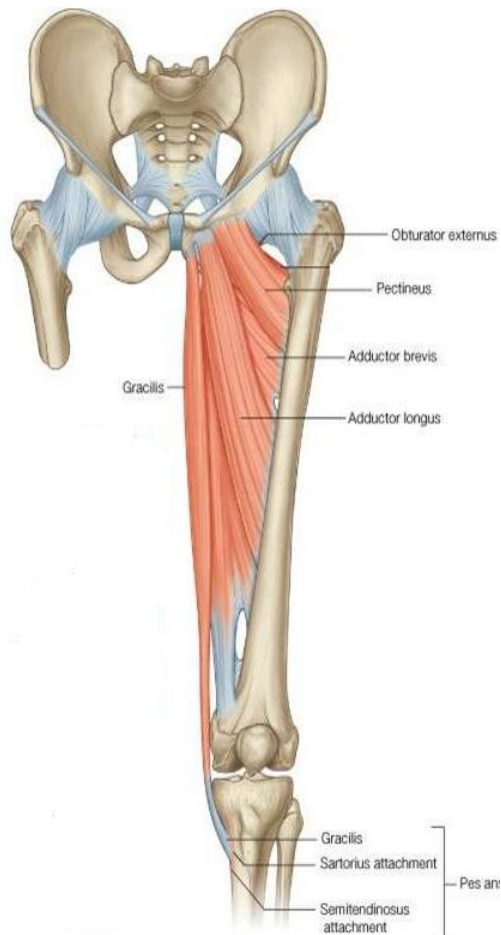
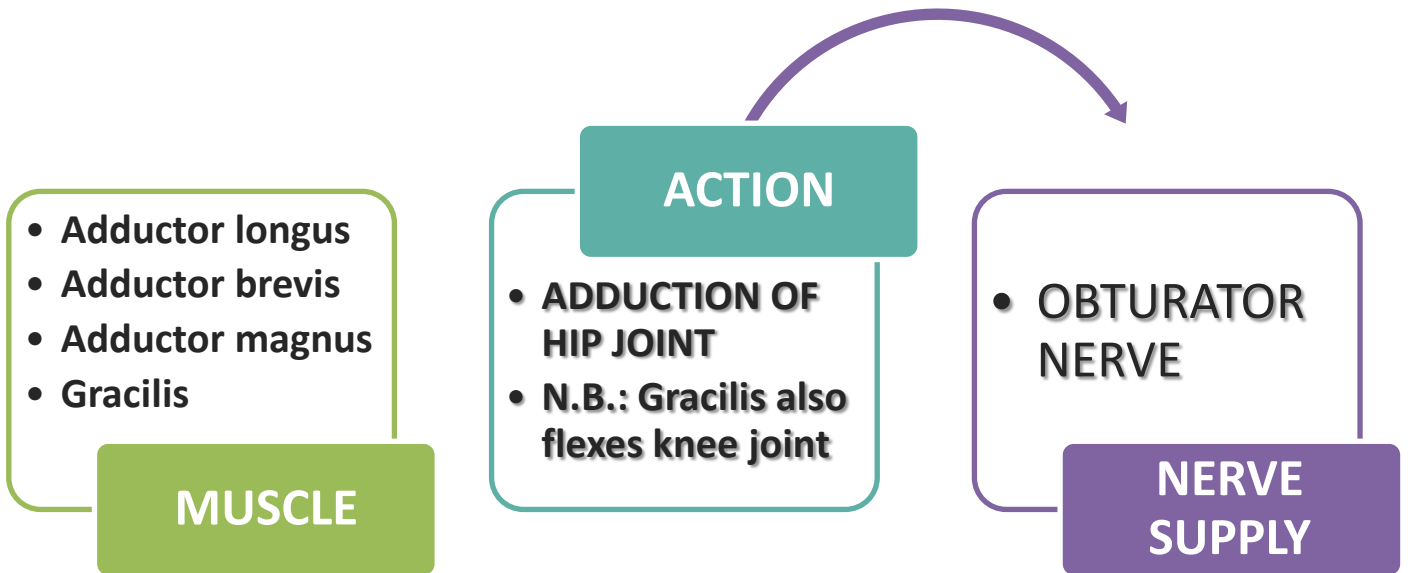
ACTION:

- On Knee Joint

Extension

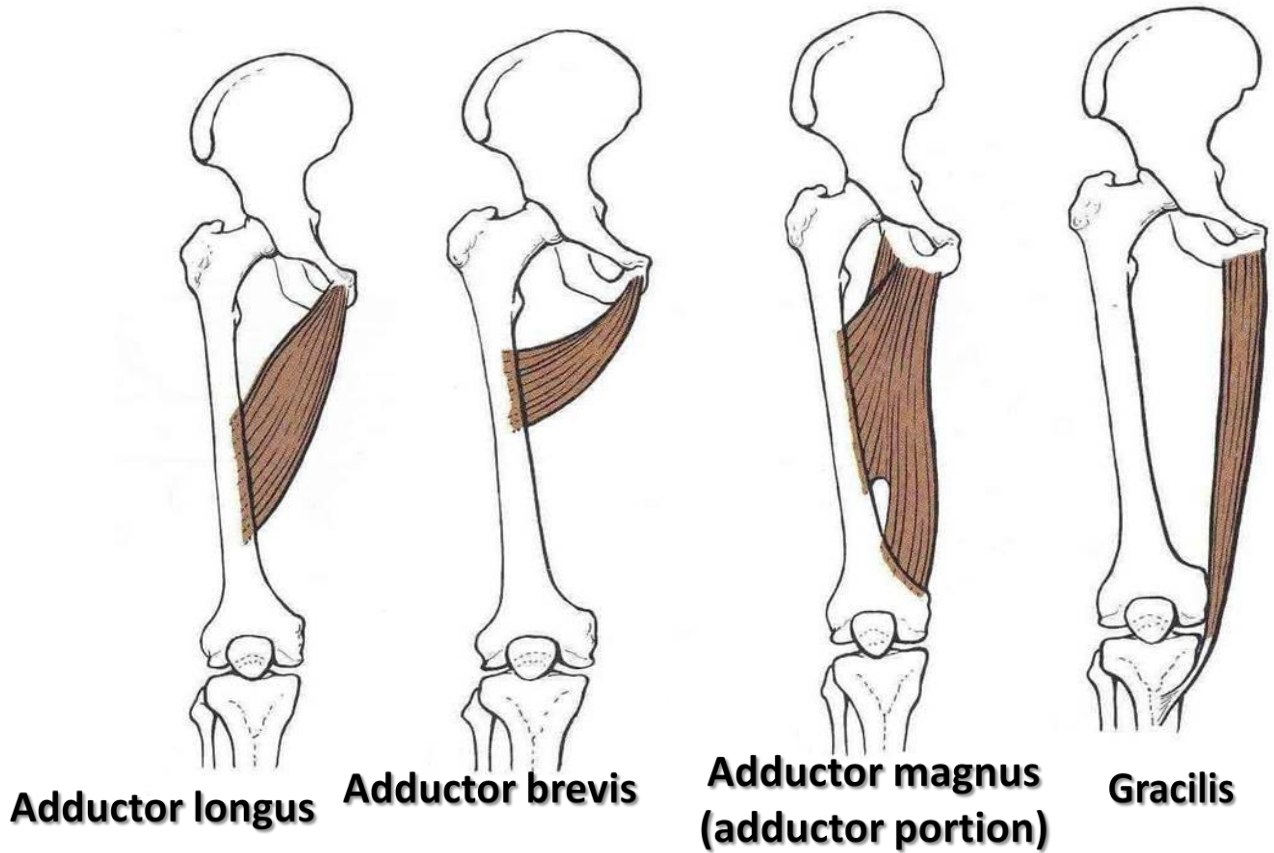
✓ **Sesamoid bone** is a bone embedded/developed within a tendon

Medial Compartment of Thigh



Medial Compartment of Thigh

#Origin & Insertion :



Origin	Body of pubis	-Body of pubis -Inferior pubic ramus.	-Inferior pubic ramus -Ischial ramus.
Insertion	Posterior border of femur (Linea Aspera)		Upper part of medial surface of tibia (behindsartorius)

Femoral Triangle

- It is a deep hollow in the Upper third of front of thigh inferior to the inguinal ligament.

Note: the inguinal region is the junction between the lower limbs and abdomen.

#Boundaries :

*Base:

Inguinal ligament

*Medial:

Medial border of the adductor longus muscle

*Lateral:

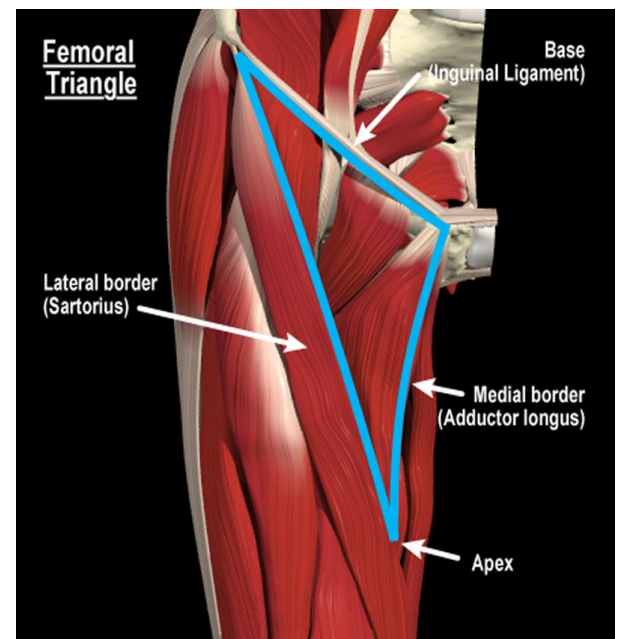
Medial border of the sartorius muscle

*Roof:

Skin, superficial & deep fascia.

*floor:(from media to lateral)

(adductor longus, Pectineus, Psoas major, Iliacus)

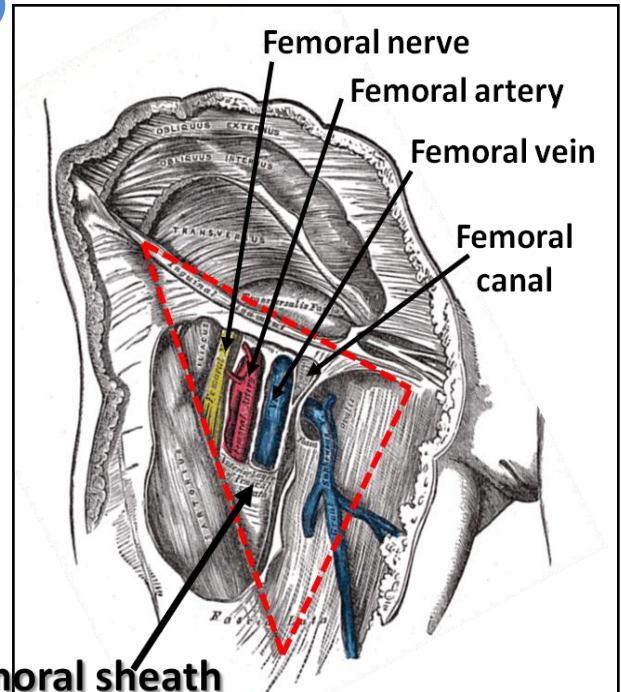


Femoral Triangle

(contents)

From lateral to medial:

1. Femoral nerve & its branches
2. Femora artery
3. Femoral vein
4. Lymphatic vessels and some deep inguinal lymph nodes.



The femoral artery, femoral vein and the lymph nodes lies within the fascial envelope, the Femoral sheath, occupying its lateral, intermediate and medial compartments respectively. The medial compartment is called the femoral canal.

ADDUCTOR CANAL (Subsartorial/Hunter's canal)

#DEFINITION:

anaponeurotic tunnel for femoral artery & vein

#SITE:

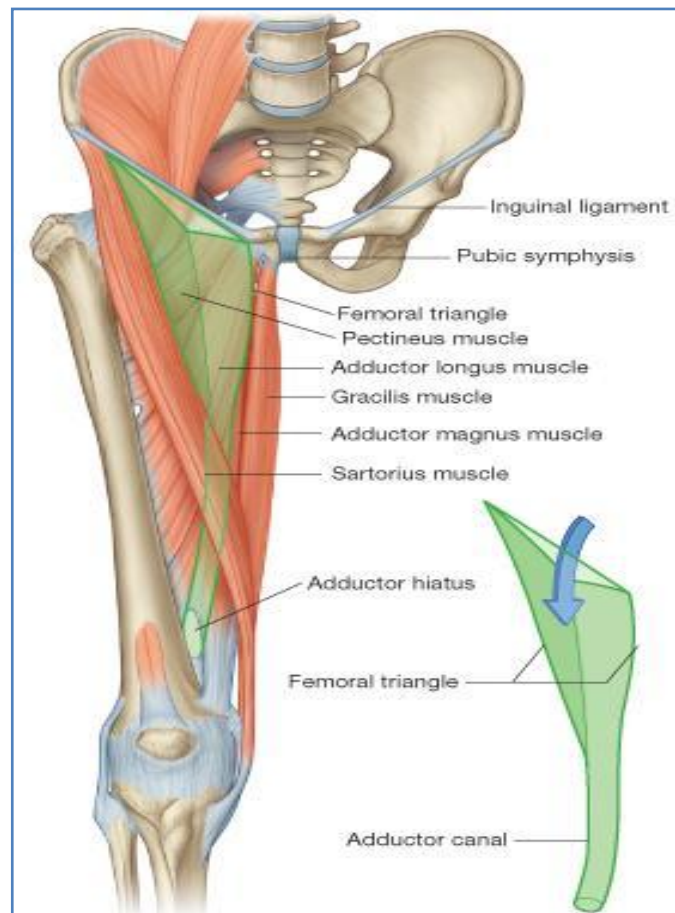
In middle third of front of thigh deep to sartorius

#EXTENT:

From apex of femoral triangle to adductor hiatus

#BOUNDARIES:

- ❑ **Roof (Anterior): Sartorius (medially) and vastusmedialis (laterally)**
- ❑ **Floor (Posterior): Adductor longus&magnus.**



SUMMARY

The thigh is divided into 3 compartments

1.MEDIAL 2.ANTERIOR 3.POSTERIOR

The anterior compartment is supplied Femoral nerve.

The posterior compartment is supplied by sciatic nerve.

The medial compartment is supplied by Obturator nerve.

The Femoral Triangle is located in the upper third of front of the thigh.

The Adductor canal is an aponeurotic tunnel for femoral artery & vein.

RememberThat:

Remember that the three Adductors (longus, brevis, magnus) have the same insertion area (the posterior border of the femur *Linea Aspera*).



These youtube videos can help :

Muscles of the Thigh Part 1 - Anterior Compartment - Anatomy Tutorial

<https://www.youtube.com/watch?v=8trLEtQYDGw>

Muscles of the Thigh Part 2 - Medial Compartment - Anatomy Tutorial

<https://www.youtube.com/watch?v=MjPAPTJdxa8>

Multiple Choice Questions

1. The nerve supply of the medial compartment is :

A. Sciatic nerve. B. Obturator nerve C. Median nerve.

2. The action of Iliacus & Psoas major (Iliopsoas) is :

A. flexion of the hip joint. B. Adduction of the hip joint. C. Extension of the knee joint.

3. The insertion of the Quadriceps Femoris is :

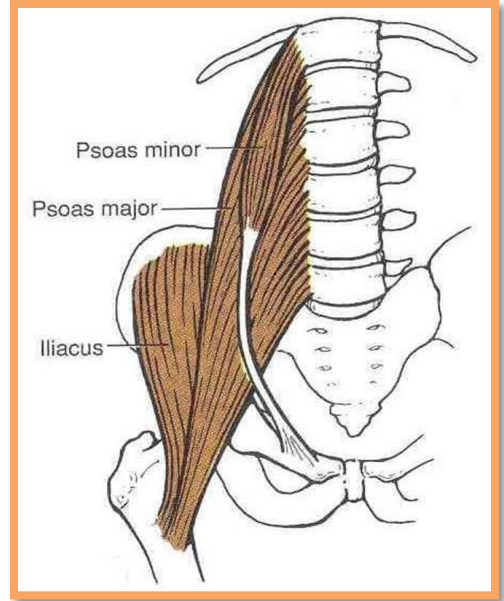
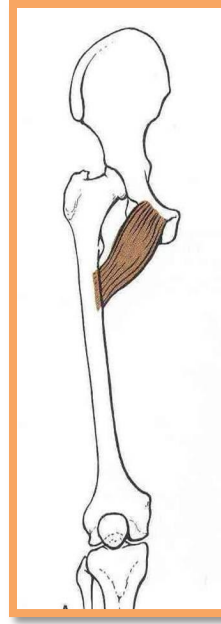
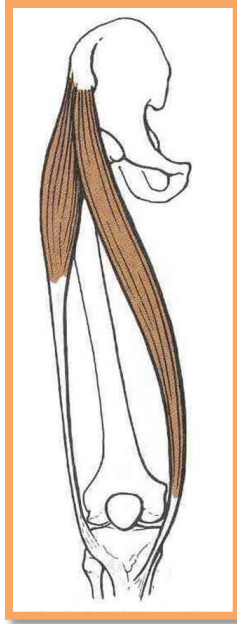
A. Lesser trochanter of femur B. medial surface of tibia C. Patella

4. One of the Gracilis actions is :

A. flexion of the knee joint. B. Extension of the knee joint. C. Rotation

{ Answers }

1. B 2.A 3.C 4.A



Muscle Name	Sartorius	Pectineus	Iliacus & Psoas major (Iliopsoas)
Origin	Body of pubis	- Superior pubic ramus	Psoas major: T12 & lumbar vertebrae Iliacus: Iliac fossa
Insertion	Upper part of medial surface of tibia	Back of femur (below lesser trochanter)	Lesser trochanter of femur
Action	TAILOR'S POSITION (التربيعية) On hip joint: Flexion, abduction & lateral rotation On Knee Joint: Flexion	Flexion & adduction of the hip joint	Flexion of the hip joint