



MED437
KING SAUD UNIVERSITY



Frontal and the Medial Compartments of Thigh

Lecture 16



Please check our [Editing File](#).

هذا العمل لا يغني عن المصدر الأساسي للمذاكرة

{ وَمَنْ يَتَوَكَّلْ عَلَى اللَّهِ فَهُوَ حَسْبُهُ }

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 anatomy of **femoral triangle & adductor canal regarding: site, boundaries and contents.**

- Text in **BLUE** was found only in the boys' slides
- Text in **PINK** was found only in the girls' slides
- **Text in RED is considered important**
- Text in **GREY** is considered extra notes

POSSIBLE HIP MOVEMENTS

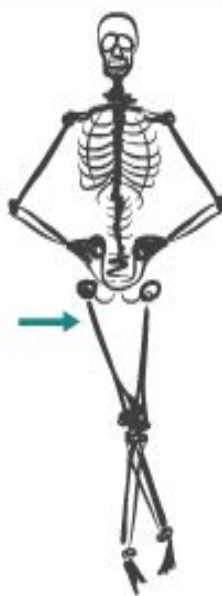
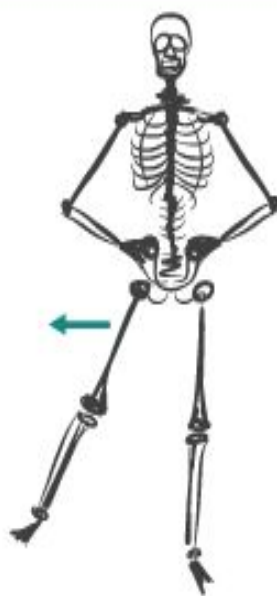
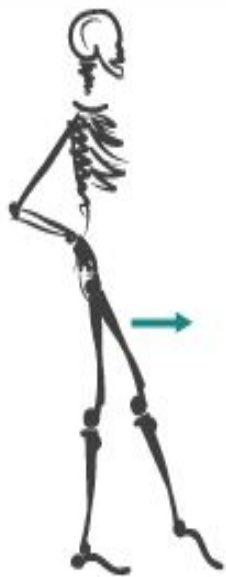
FLEXION

EXTENSION

ABDUCTION

ADDUCTION

EXTERNAL / INTERNAL ROTATION
Or lateral Or medial



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

Anterior Compartment:

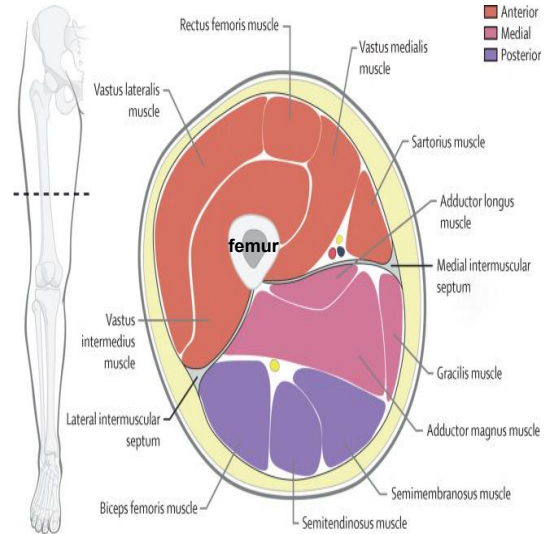
- **Extensors of knee:**
Quadriceps femoris.
- **Flexors of hip:**
1- Sartorius muscle.
2- Pectineus muscle.
3- psoas major muscle.
4- Iliacus muscle.
- **Nerve supply:**
Femoral nerve.

Medial Compartment:

- **Adductors of hip:**
1- Adductor longus muscle.
2- Adductor brevis muscle.
3- Adductor magnus (**adductor part**) muscle.
4- Gracilis muscle.
- **Nerve supply:**
Obturator nerve.

Posterior Compartment:

- **Flexors of knee & extensors of hip:**
Hamstrings muscle.
- **Nerve supply:**
Sciatic nerve.

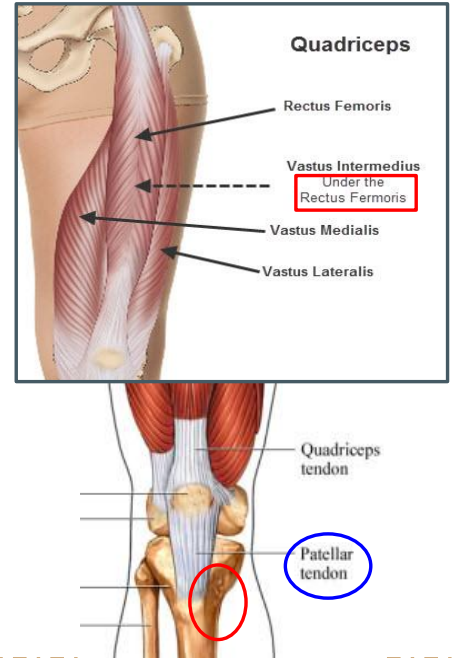


Longus = Long
Brevis = Short
Magnus = Big

Anterior compartment

1- Quadriceps femoris (4 muscles):

	Rectus femoris	Vastus intermedius	Vastus medialis	Vastus lateralis
origin	Anterior inferior iliac spine (Hip bone)	Front of shaft of femur	Posterior border of femur "linea aspera"	Posterior border of femur "linea aspera"
insertion	Into PATELLA (is a sesamoid bone) <small>*final insertion (Tuberosity of tibia)</small> *From patella into TUBEROSITY OF TIBIA through ligamentum patellae (patellar ligament)			
Nerve supply	Femoral nerve			
Action	<u>Extension</u> of knee joint			



Anterior compartment

2- Sartorius

origin

Anterior superior iliac spine.

insertion

Upper part of medial surface of tibia

SGS: same insertion
S: sartorius
G: gracilis
S: semitendinosus

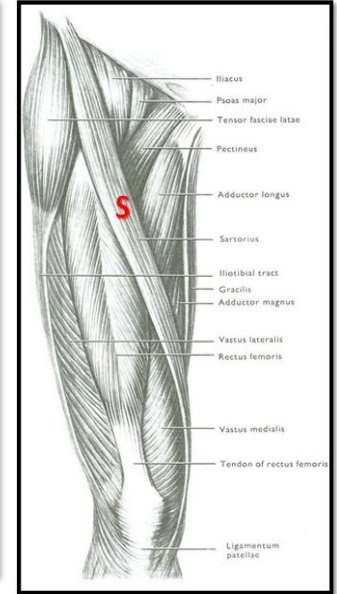
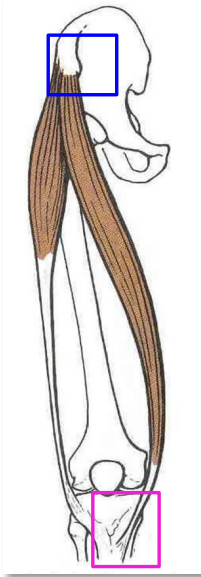
Nerve supply

Femoral nerve

Action

Hip joint: Flexion, Abduction and Lateral rotation. **(Tailor's position)**
Knee joint: Flexion.

لما تقرب على الأرض



Anterior compartment

3- pectineus

origin

Superior pubic ramus

insertion

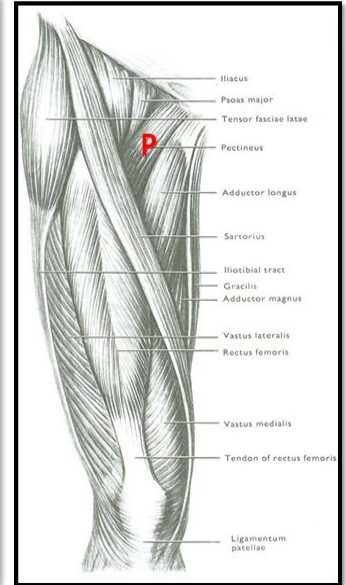
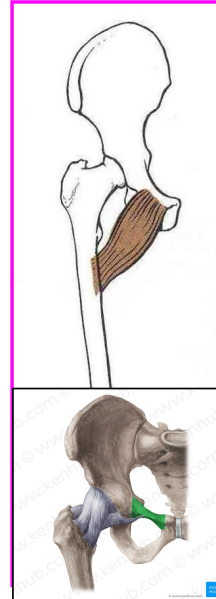
Back of femur (below lesser trochanter)

Nerve supply

Femoral nerve

Action

Flexion & adduction of Hip joint.

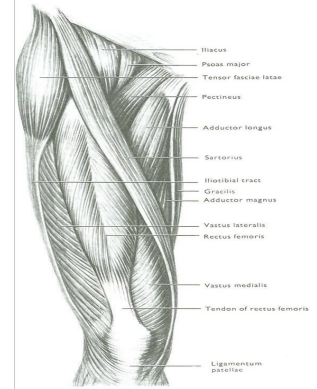
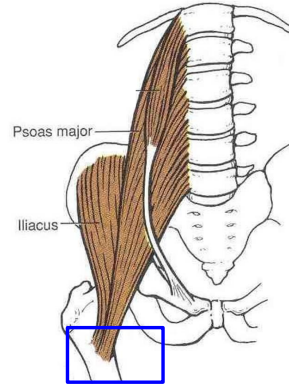


Anterior compartment

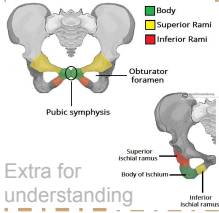
4- ILIOPSOAS: ILIACUS & PSOAS MAJOR

الأورجن يختلف بس لهم نفس الانسیرشن

origin	Iliacus: ilium of hip bone Psoas: transverse process of lumbrical vertebral
insertion	Lesser trochanter of femur
Nerve supply	Femoral nerve
Action	<u>Flexion</u> of hip joint



Medial compartment



Adductor longus

Body of pubis

origin

insertion

Posterior border of femur (Linea Aspera)

Nerve supply

Obturator nerve

Action

Adduction of hip joint

N.B.: Gracilis also flexes knee joint + adduction of thigh

Adductor brevis

1-Body of pubis
2- inferior pubic ramus

Adductor magnus (adductor part)

1-Inferior pubic ramus
2- ischial ramus

Gracilis

(The most medial)

Upper part of medial surface of tibia *SGS* (behind sartorius)

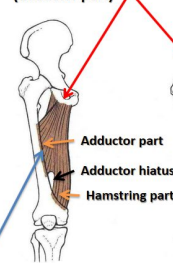
Adductor longus



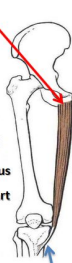
Adductor brevis



Adductor magnus (adductor part)



Gracilis



Origins are shown in red arrows
Insertions are shown in blue arrows

Note that Adductor magnus and Gracilis have the same origin as mentioned in the boys slides, according to Gray's Anatomy for Students

Extra notes:

- Adductor magnus is greater than longus
- Gracilis muscle is the second one from SGS which share the same insertion ((Upper part of medial surface of tibia))

FEMORAL TRIANGLE

- **Site:**

Upper 1/3 of front of thigh.

- **BOUNDARIES:**

- **Base:** inguinal ligament.
- **Lateral:** medial border of sartorius.
- **Medial:** medial border of adductor longus.

- **ROOF:**

- Skin.
- Fasciae*: superficial & deep.

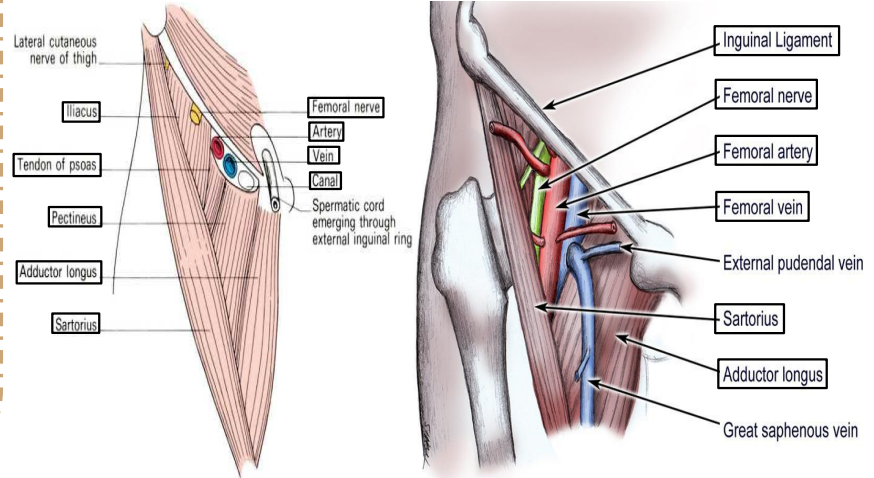
- **FLOOR:** From medial to lateral

- Adductor longus muscle.
- Pectineus muscle.
- Psoas major muscle.
- Iliacus muscle.

*fasciae = connective tissue

- **CONTENTS:**

- Femoral vein
 - Femoral artery
 - Femoral nerve
 - Deep inguinal lymph nodes.
- Both vein & artery are enclosed in a fascial envelope (Femoral sheath).
"the nerve is outside femoral sheath".



ADDUCTOR CANAL (Subsartorial canal)

(Deep to Sartorius muscle) اسم آخر لها ، لأنها تقع



• DEFINITION:

intermuscular passage of A fascial envelope for **femoral artery & vein** to become **the popliteal vessels** in the popliteal fossa at the back of knee.

• **Team 436:** (Other def: it is an aponeurotic tunnel of femoral artery & vein) .

• SITE:

In middle 1/3 of front of thigh.

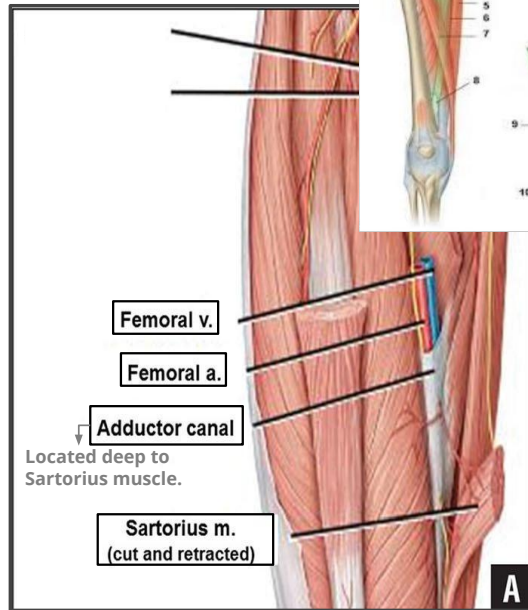
• EXTENT:

From **apex of femoral triangle** to **adductor hiatus (in adductor magnus)**.

• BOUNDARIES:

Roof: Sartorius muscle.

Floor: Adductor longus & magnus muscles.



MCQs

(1) the thigh is divided into?

- A- 2 compartments
- B- 3 compartments
- C- 4 compartments

(2) flexor of the hip?

- A- sartorius
- B- adductor longus
- C- adductor brevis

(3) the origin of sartorius ?

- A- anterior superior iliac spine
- B- anterior inferior iliac spine
- C- front of the shaft of femur

(4) the insertion of adductor longus?

- A- posterior border of femur (linea aspera)
- B- upper part of medial surface of tibia
- C- front of shaft of femur

(5) the base of femoral triangle?

- A- medial border of adductor longus
- B- medial border of sartorius
- C- inguinal ligament

SAQ

(1) Where is the femoral triangle located?

(2) What's the content of the femoral triangle floor from medial to lateral?

(3) Name 3 muscles that are supplied by femoral nerve?

Answers (MCQs)

1-B

2-A

3-A

4-A

5-C

Answers (SAQ)

(1) Upper 1/3 of front of thigh.

(2) Adductor longus muscle.

- Pectineus muscle.
- Psoas major muscle.
- Iliacus muscle

(3)

1-Sartorius muscle.

2-Pectineus muscle.

3- psoas major muscle.

4- Iliacus muscle.

Team Members

Lamia Abdullah Alkuwaiz (Team Leader)

Rawan Mohammad Alharbi

Abeer Alabduljabbar

Afnan Abdulaziz Almustafa

Ahad Algrain

Alanoud Almansour

Albandari Alshaye

AlFhadah abdullah alsaleem

Arwa Alzahrani

Dana Abdulaziz Alrasheed

Dimah Khalid Alaraifi

Ghada Alhaidari

Ghada Almuhanana

Ghaida Alsanad

Hadeel Khalid Awartani

Haifa Alessa

Khulood Alwehabi

Layan Hassan Alwatban

Lojain Azizalrahman

Lujain Tariq AlZaid

Maha Barakah

Majd Khalid AlBarrak

Norah Alharbi

Nouf Alotaibi

Noura Mohammed Alothaim

Rahaf Turki Alshammari

Reham Alhalabi

Rinad Musaed Alghoraiby

Sara AlSultan

Shahad Alzahrani

Wafa Alotaibi

Wejdan Fahad Albadrani

Wjdan AlShamry

Faisal Fahad Alsaif (Team Leader)

Abdulaziz Al dukhayel

Fahad Alfaiz

Akram Alfandi

Saad Aloqile

Saleh Almoaiqel

Abdulaziz Alabdulkareem

Abdullah Almeaither

Yazeed Aldossari

Muath Alhumood

Abdulrahman Almotairi

Abdulelah Aldossari

Abdulrahman Alduhayyim

Hamdan Aldossari

Abdullah Alqarni

Mohammed Alomar

Abdulrahman Aldawood

Saud Alghufaily

Hassan Aloraini

Khalid Almutairi

Abdulmajeed

Alwardi

Abdulrahman Alageel

Rayyan Almousa

Sultan Alfuhaid

Ali Alammari

Fahad alshughaihithry

Fayez Ghiyath

Aldarsouni

Mohammed Alquwayfili

Abduljabbar Al-yamani

Sultan Al-nasser

Majed Aljohani

Zeyad Al-khenaizan

Mohammed Nouri

Abdulaziz Al-drgam

Fahad Aldhowaihy

Omar alyabis