



ANATOMY TEAM

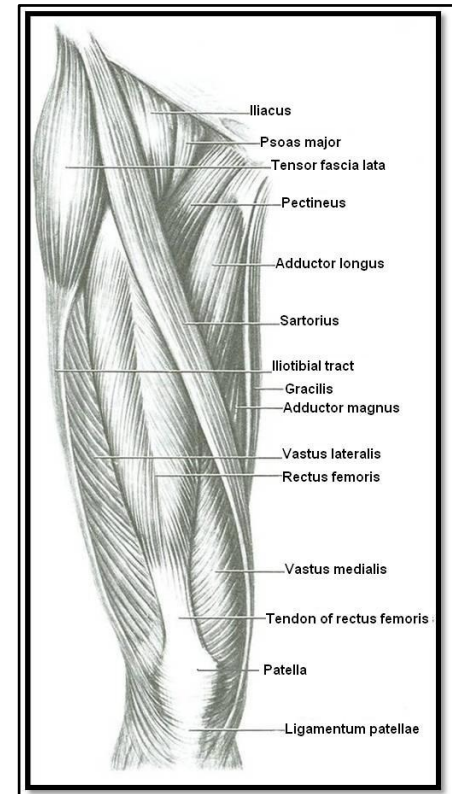
LECTURE (15)
MEDIAL AND ANTERIOR
COMPARTMENTS OF THE
THIGH

Medial and anterior Compartments of the Thigh

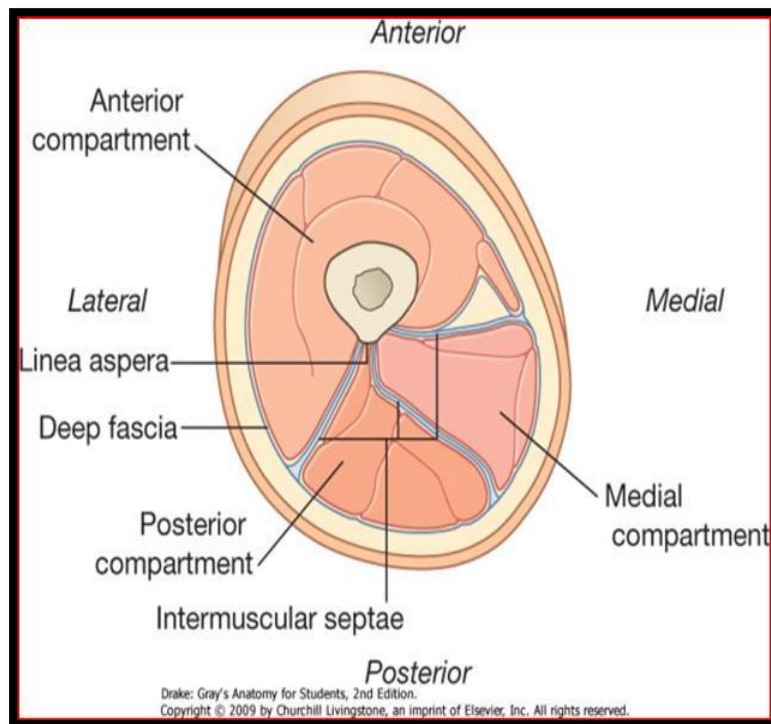
تنويه / هذا العمل لا يعتبر مصدر أساسي للمذاكرة وإنما هو للمراجعة فقط والمصدر الأساسي هو السلايدز ، وقد تم التأكد بأنه لا يوجد أي اختلاف بين سلايدز الأولاد والبنات "ماعدا بعض النقاط وسيتم ذكرها"

At the end of this lecture, the student should be able to:

- 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.



Deep fascia of the femur extends to form three intramuscular septa. The septa divide the thigh into three compartments: **Anterior, Posterior, and Medial**.

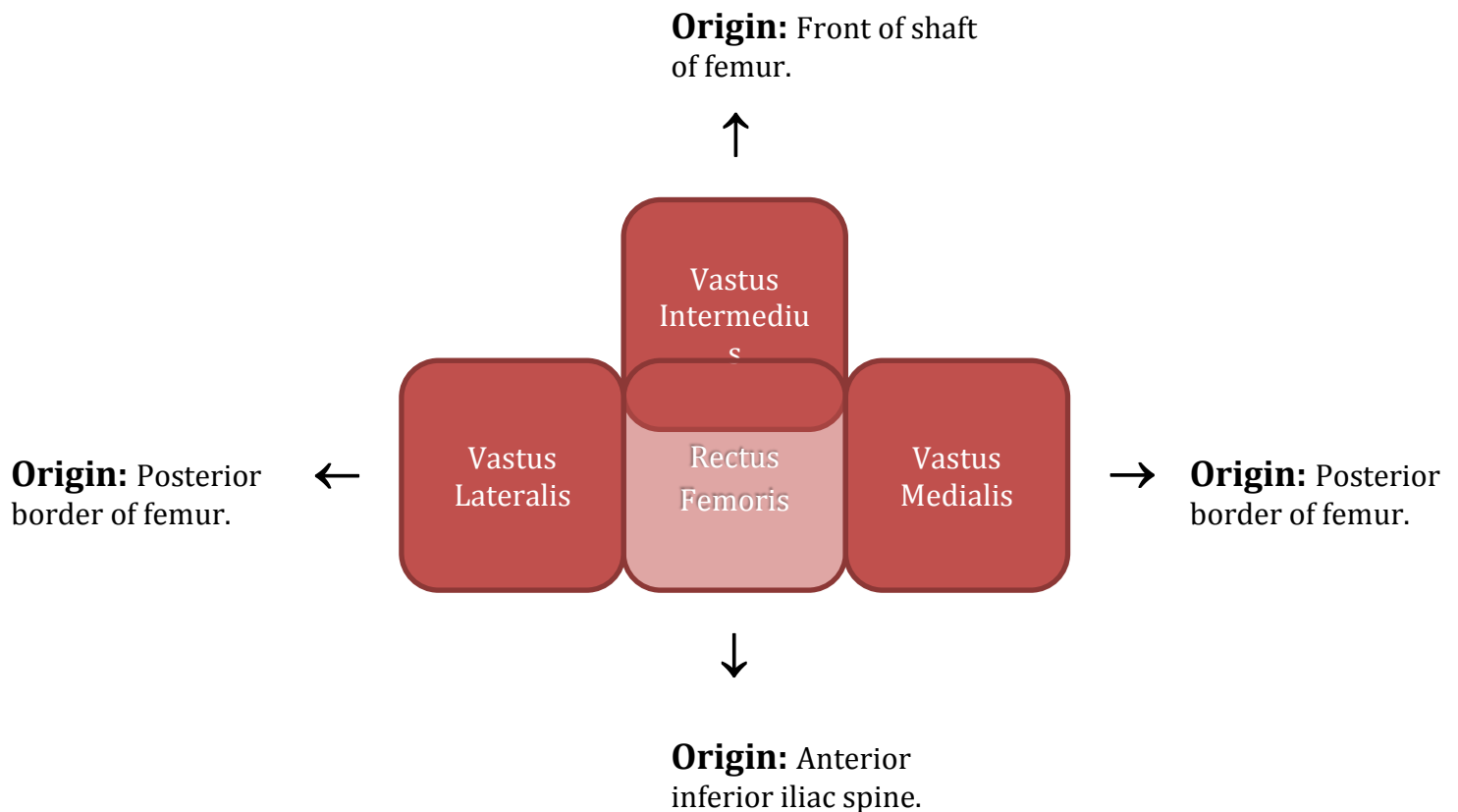


Posterior Compartment: Hamstring, (Flex the knee and extend the hip).
Supplied by **Sciatic Nerve**.

◆ The Anterior Compartment of the Thigh

Supplied by the Femoral Nerve

1. *Knee Extensors: (Quadriceps Femoris)*



Insertion of Quadriceps Femoris: Into patella to the tuberosity of the tibia through **ligamentum patellae**

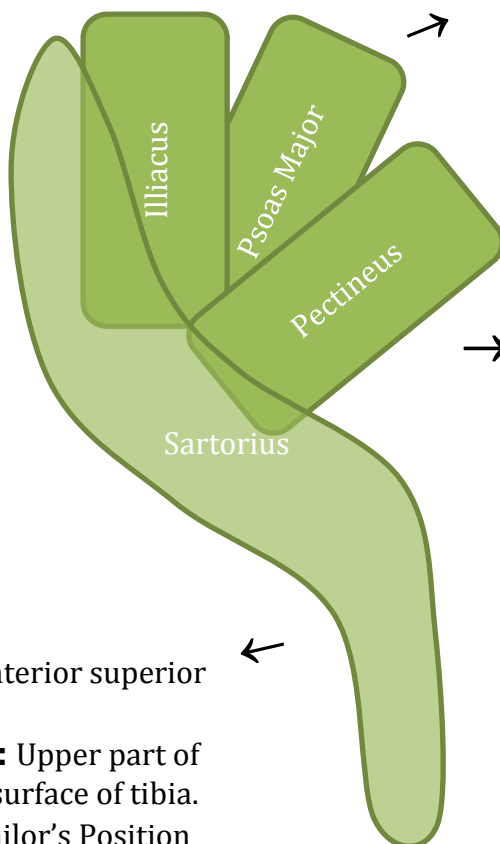
Action: Extension of the hip.

2. Hip Flexors:

Origin: Iliac fossa.

Insertion: Lesser trochanter of the femur.

Action: Flexion of the hip joint.



Origin: T12 and lumbar vertebrae.

Insertion: Lesser trochanter of the femur.

Action: flexion of hip joint.

Origin: Superior pubic ramus.

Insertion: Back of femur (below lesser trochanter).

Action: Flexion and adduction of the hip joint.

Origin: Anterior superior iliac spine.

Insertion: Upper part of the medial surface of tibia.

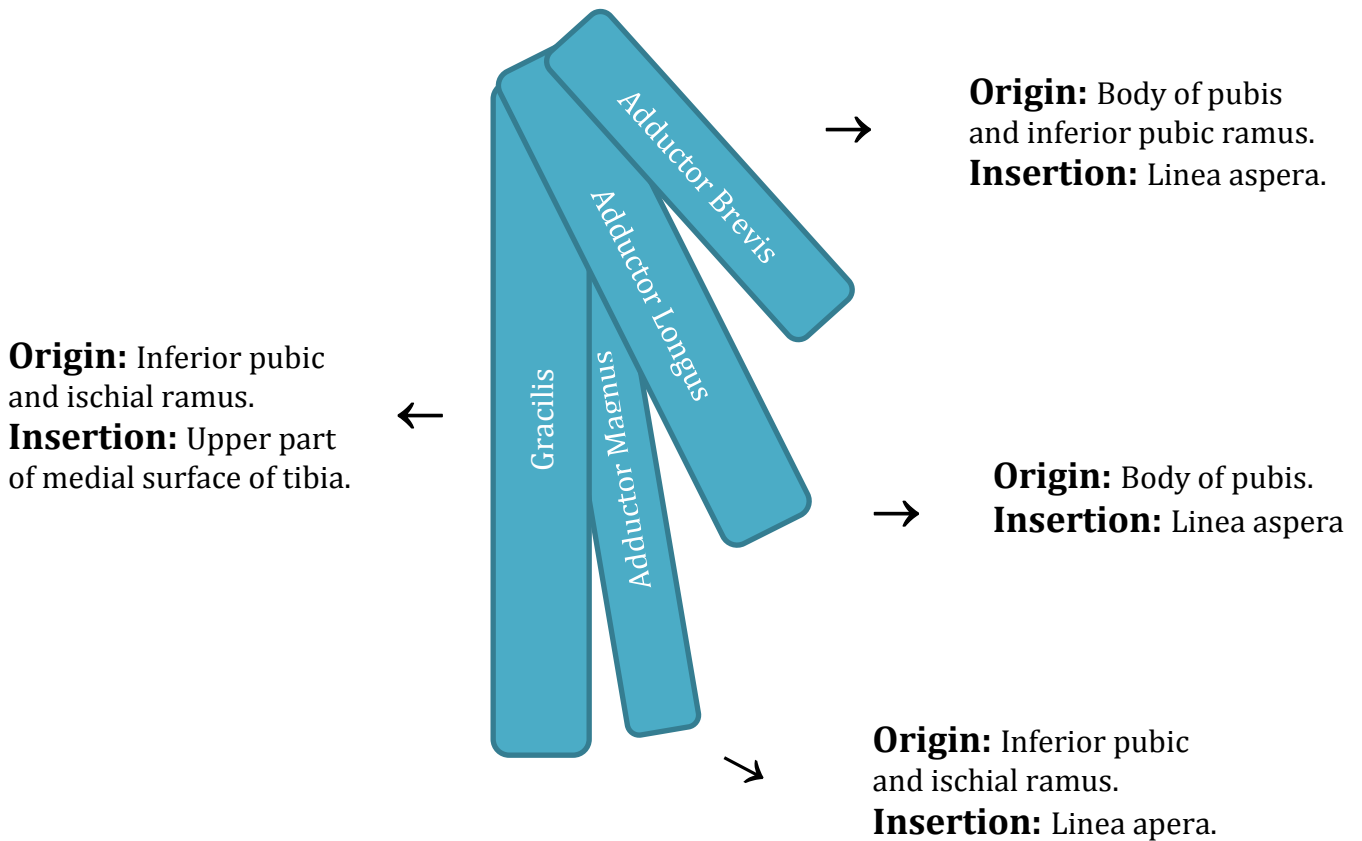
Action: Tailor's Position

→ Hip flexed and abducted, Knee is flexed.

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

◆ The Medial Compartment of the Thigh

Supplied by the Obturator Nerve



Action: Adduction of the hip joint
* Gracilis also flexes the knee joint.

◆ Femoral Triangle

A deep hollow in the upper third of the front of the thigh, inferior to the **inguinal ligament**.

Boundaries:

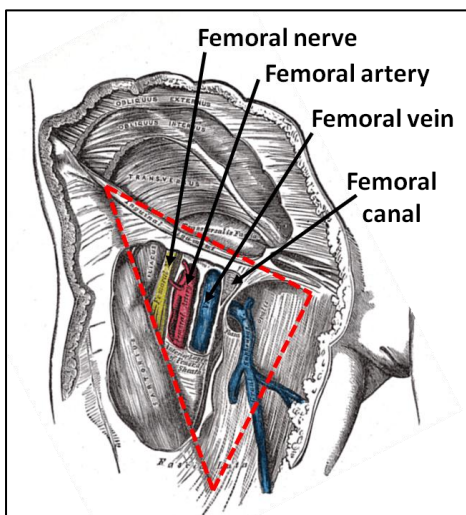
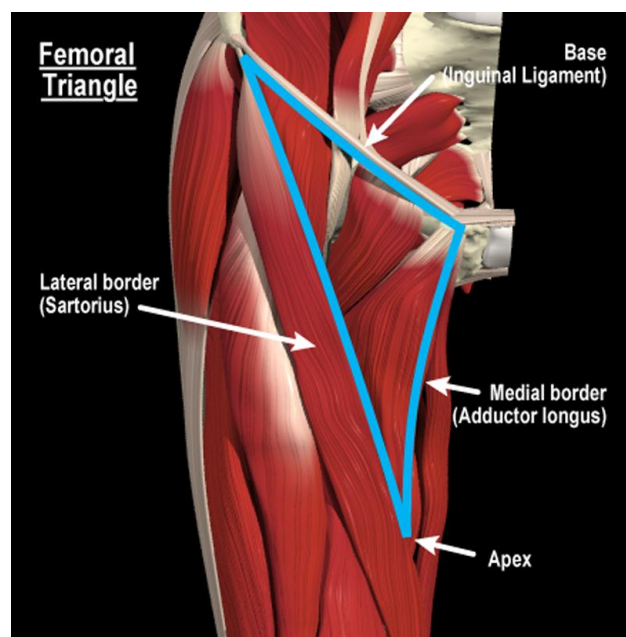
Base: Inguinal ligament

Medial: Medial border of the adductor longus muscle

Lateral: Medial border of Sartorius muscle

Floor: Adductor longus, pectineus, psoas major, iliacus
(MEDIAL TO LATERAL).

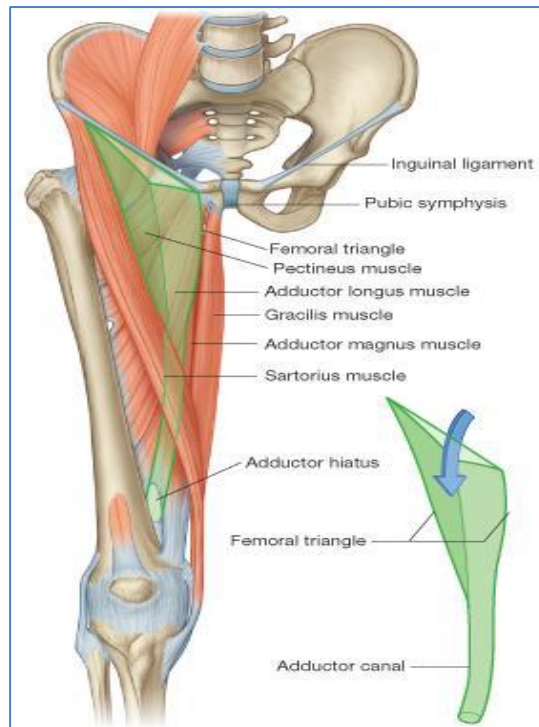
Roof: Skin, superficial and deep fascia.



Contents of the triangle:

1. Femoral Nerve and its branches.
2. Femoral sheath: (lateral to medial)
 - Femoral artery.
 - Femoral vein .
 - Femoral canal (lymphatic vessels and some deep inguinal lymph nodes).

◆ Adductor Canal



An aponeurotic tunnel for femoral artery and vein **in** the middle of front of thigh, deep to Sartorius muscle. It **extends** from the apex of the femoral triangle to adductor hiatus.
***Also called Subsartorila or Hunter's Canal.**

Boundaries:

Roof (Anterior): Sartorius, medially, and vastus medialis, laterally.

Floor (Posterior): Adductor longus and magnus.

موجود عند البنات فقط

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*.

ORIGIN:

Psoas major: T12 & lumbar vertebrae

Iliacus: Iliac fossa

- **Femoral triangle is :** It is a deep hollow in the Upper third of front of thigh inferior to the inguinal ligament
- **Adductor canal is also called** (subsartorial/hunter's canal)

موجود عند الأولاد فقط

ORIGIN OF Rectus femoris: Anterior inferior iliac spine (Hip bone)

Which one of the following muscles is inserted into the tibia?

1. **Sartorius**
2. **Pectineus**
3. **Iliacus**
4. **Adductor longus**

Which one of the following muscles is supplied by femoral nerve?

1. **Sartorius**
2. **Gracilis**
3. **Adductor longus**
4. **Adductor brevis**

SUMMARY

MUSCLES OF ANTERIOR COMPARTMENT OF THIGH:

- ❑ Flexors of hip: Sartorius, pectineus, psoas major & iliacus (all are inserted into femur EXCEPT: Sartorius: inserted into tibia)

N.B.: Tailor's position performed by sartorius: flexion, abduction & lateral rotation of hip + flexion of knee.

- ❑ Extensors of knee: Quadriceps femoris
 1. All parts originate from femur EXCEPT: Rectus femoris: from hip
 2. All parts are inserted into patella
- ❑ NERVE SUPPLY: femoral nerve

MUSCLES OF MEDIAL COMPARTMENT OF THIGH:

- ❑ ACTION:
 1. All muscles adduct hip joint.
 2. Gracilis also flexes knee joint.
- ❑ ATTACHMENTS:
 1. All muscles originates from pubic bone.
 2. All muscles are inserted into posterior border of femur EXCEPT: gracilis: into tibia (as sartorius)
- ❑ NERVE SUPPLY: Obturator nerve

Very helpful link:

<http://home.comcast.net/~wnor/tableofmuscles.htm>

Quiz

1. What muscle is responsible for Tailor's position?
 - a. Rectus Femoris
 - b. Sartorius
 - c. Gracilis
 - d. Pectineus

2. Vastus medialis is supplied by:
 - a. Obturator Nerve
 - b. Sciatic Nerve
 - c. Axillary Nerve
 - d. Femoral Nerve

3. All the muscles listed below are inserted into Linea aspera EXCEPT:
 - a. Gracilis
 - b. Adductor brevis
 - c. Adductor longus
 - d. Adductor mungus

4. Which one forms the base of the femoral triangle?
 - a. Medial border of the Sartorius muscle
 - b. Inguinal ligament
 - c. Psoas major
 - d. Deep fascia

5. The muscle that originates from the superior pubic rami is:
 - a. Sartorius
 - b. Illiacus
 - c. Pectineus
 - d. Psoas major

6. The structure that contains the femoral nerve, artery, and vein is called:
- Femoral triangle
 - Obturator foramen
 - Adductor Canal
 - Iliac fossa
7. The muscles of Quadriceps Femoris are inserted into:
- Tuberosity of the tibia
 - Lesser trochanter of the femur
 - Below the lesser trochanter of the femur
 - Linea aspera
8. Medial thigh compartments are responsible for:
- Medial rotation of the femur
 - Adduction of the hip joint
 - Flexion of the knee
 - Extension of the knee
9. Nerve supply of the medial compartment of the thigh :
- Obturator nerve
 - Femoral nerve
 - Thoracodorsal artery
 - Sciatic nerve
10. Extensor of the knee :
- Sartorius
 - Pectineus
 - Iliacus
 - Quadriceps femoris

11- which one of the following has double nerve supply:

- Adductor magnus**
- Pectineus
- Gracilis**
- (A and B)

Question Number	Answer
1	b
2	d
3	a
4	b
5	c
6	a
7	a
8	B
9	A
10	d
11	d

NOTE :

- **Pectineu:** supply by [Femoral nerve](#), sometimes [obturator nerve](#)
- **Adductor magnus:** supply by obturator nerve and [sciatic nerve](#)

GOOD LUCK ;)