

# **ANTERIOR & MEDIAL COMPARTMENTS OF THIGH**

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# OBJECTIVES

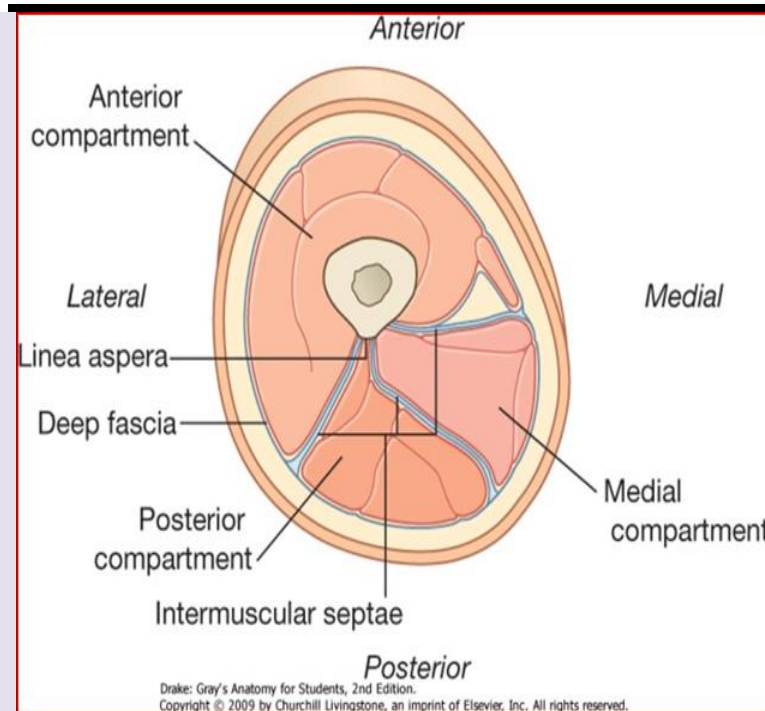
At the end of the lecture, students should:

- *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.*

# 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
  2. Pectineus
  3. psoas major
  4. Iliacus
- ❖ Nerve supply:  
Femoral nerve



## Medial Compartment

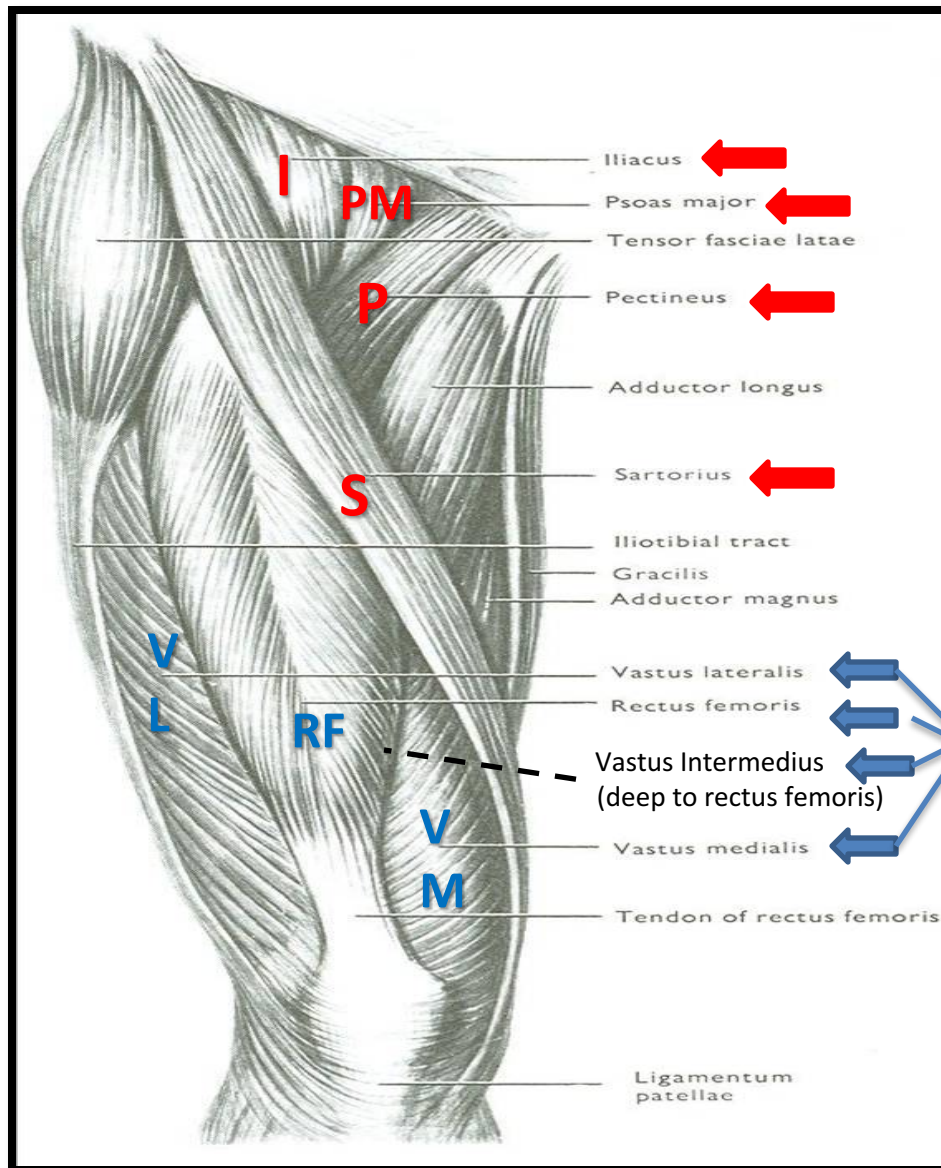
- ❑ Adductors of hip:
  1. Adductor longus
  2. Adductor brevis
  3. Adductor magnus (adductor part)
  4. Gracilis
- ❖ Nerve supply:  
Obturator nerve

## Posterior Compartment

- ❑ Flexors of knee & extensors of hip:  
Hamstrings
- ❖ Nerve supply:  
Sciatic nerve

# ANTERIOR COMPARTMENT OF THIGH

**NERVE SUPPLY:**  
**Femoral nerve**



**Quadriceps femoris**

# SARTORIUS

## ORIGIN

Anterior superior iliac spine

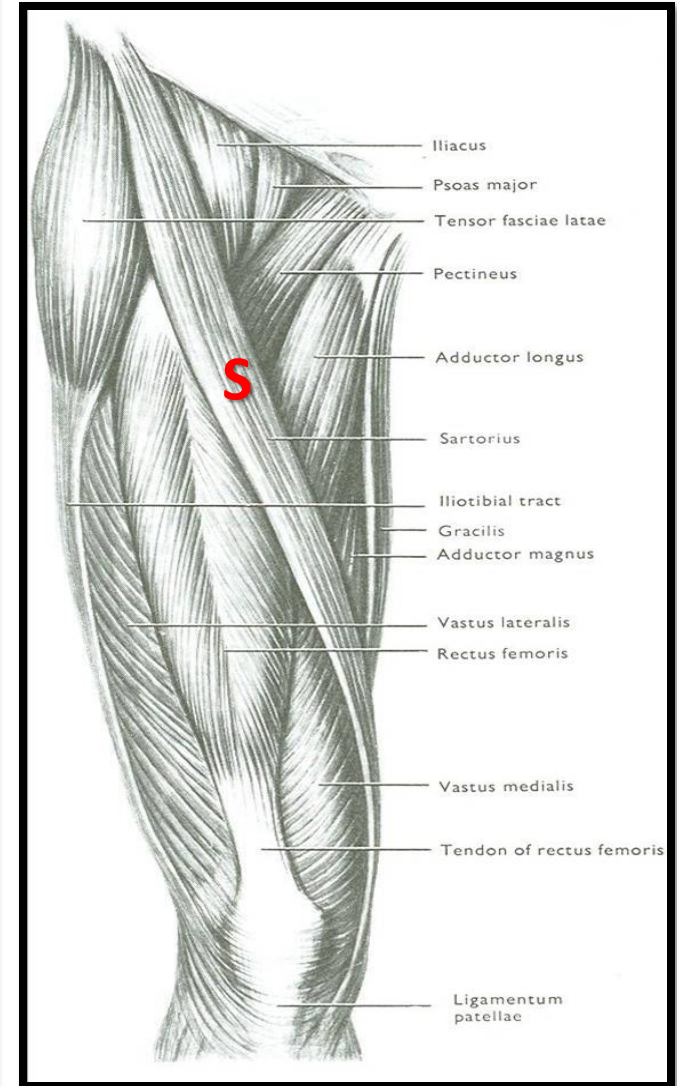
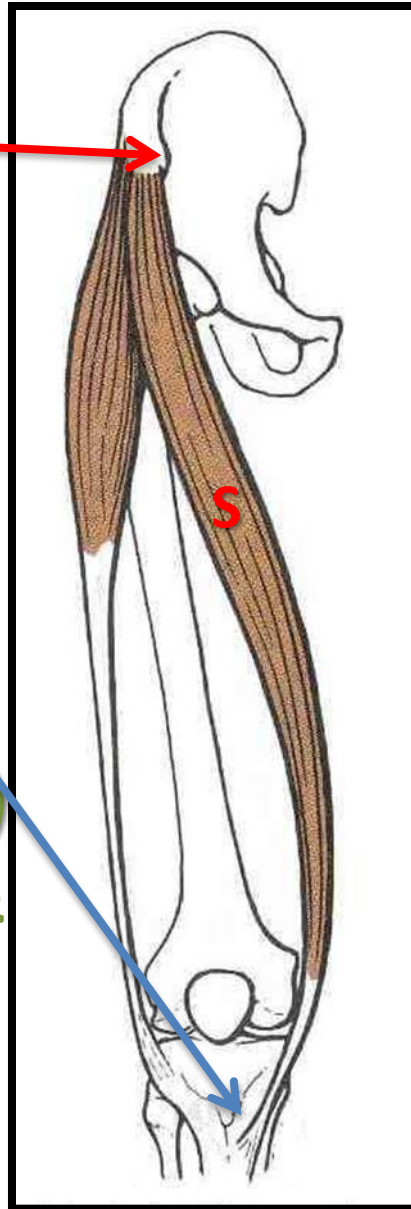
## INSERTION

Upper part of medial surface of tibia

## ACTION

(TAILOR'S POSITION)

- ❑ Flexion, abduction & lateral rotation of hip joint
- ❑ Flexion of knee joint



# PECTINEUS

## ORIGIN:

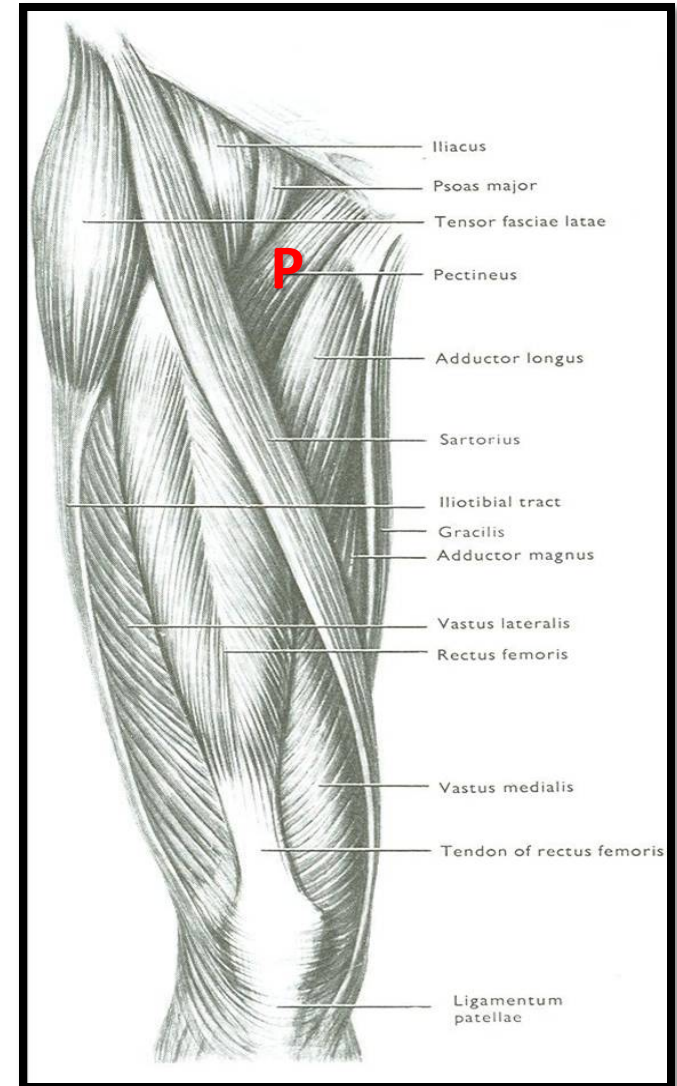
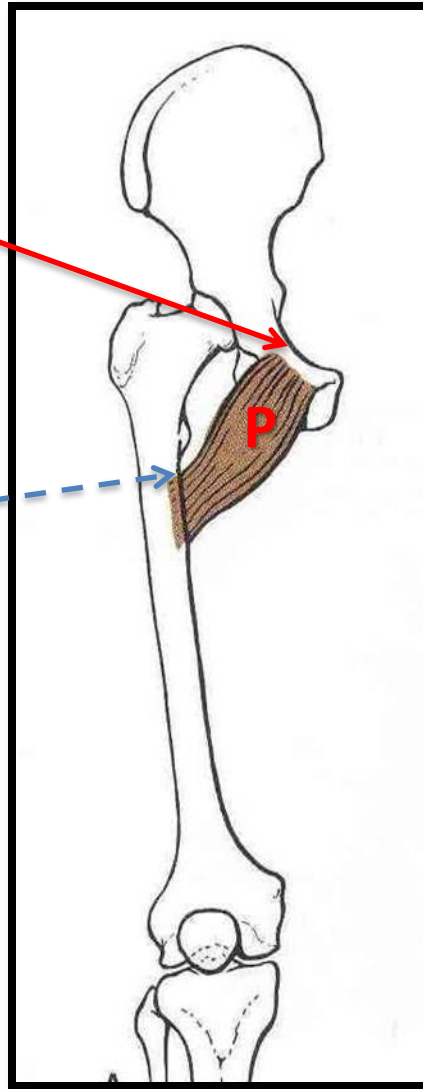
Superior pubic ramus

## INSERTION:

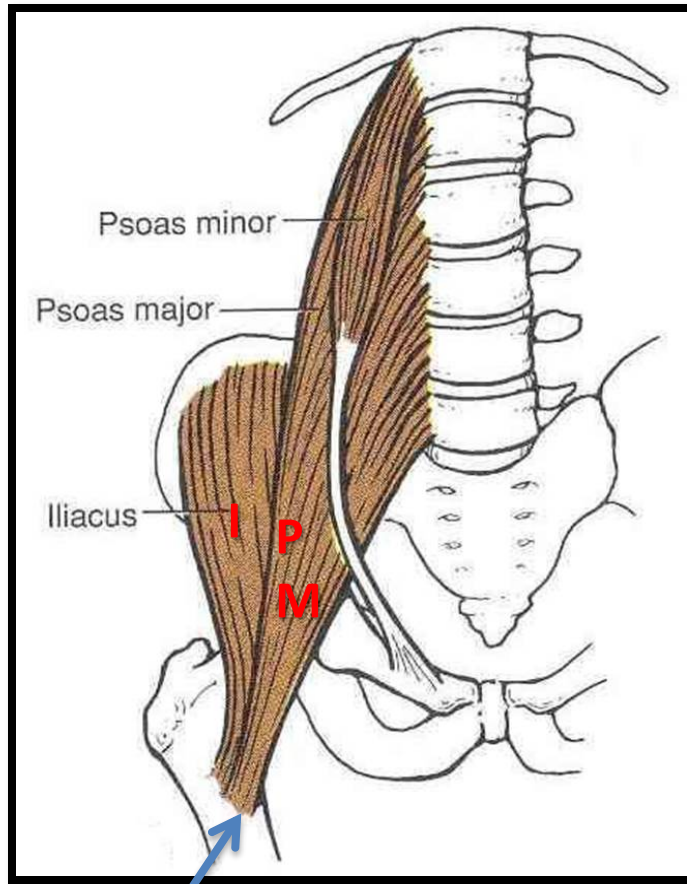
Back of femur  
(below lesser trochanter)

## ACTION:

□ Flexion & adduction of hip joint

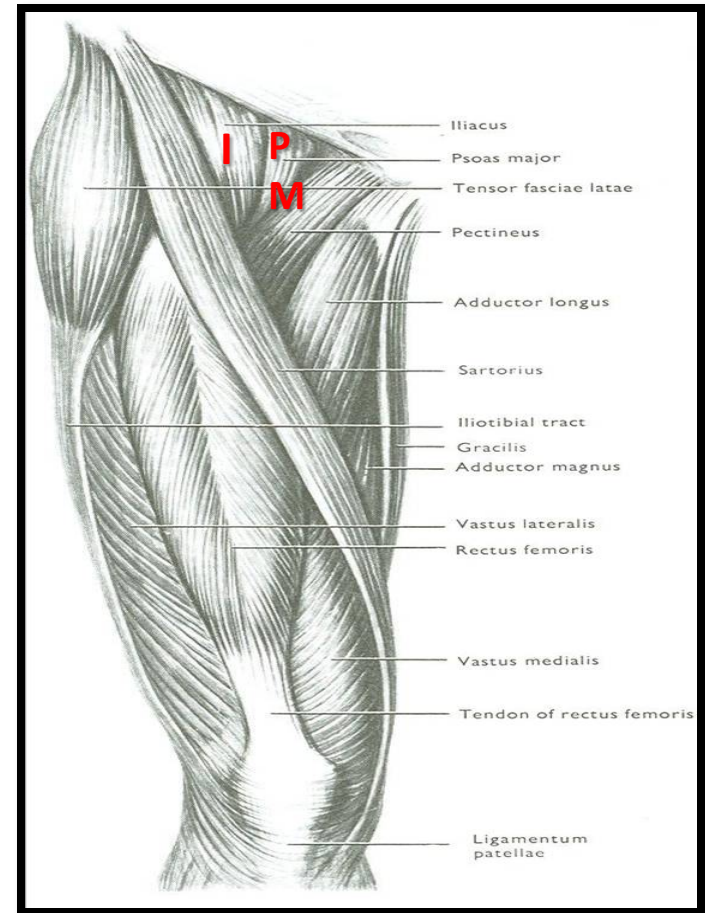


# ILIOPSOAS: ILIACUS & PSOAS MAJOR



**INSERTION:**

**Lesser trochanter of femur**



**ACTION:**

**Flexion of hip joint**

# QUADRICEPS FEMORIS

## ORIGIN:

### ☐ Rectus femoris:

Anterior inferior iliac spine (Hip bone)

### ☐ Vastus intermedius:

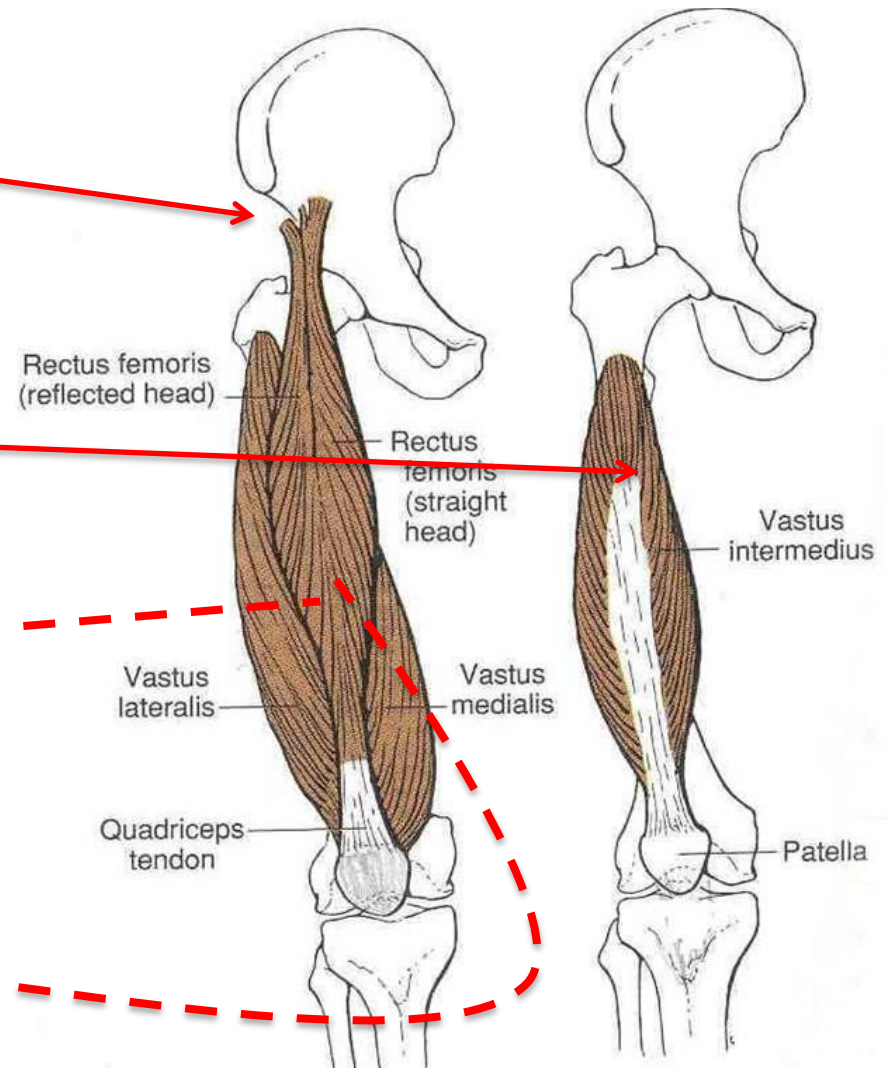
Front of shaft of femur

### ☐ Vastus lateralis:

Posterior border of femur

### ☐ Vastus medialis:

Posterior border of femur





# QUADRICEPS FEMORIS

## INSERTION:

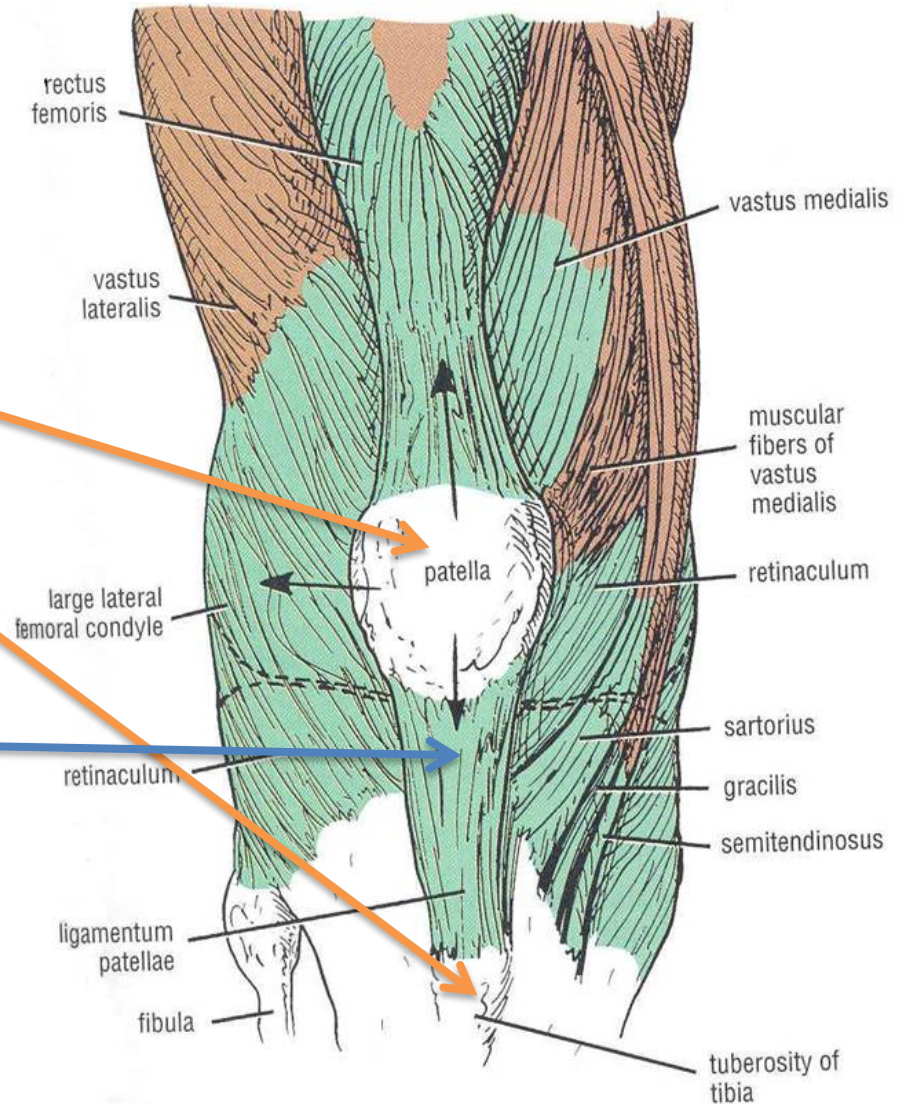
□ Into **PATELLA**

(Patella is a sesamoid bone)

□ From patella into **TUBEROSITY OF TIBIA** through **LIGAMENTUM PATELLAE (PATELLAR LIGAMENT)**

## ACTION:

□ Extension of knee joint



# MEDIAL COMPARTMENT OF THIGH

## MUSCLES:

1. Adductor longus
2. Adductor brevis
3. Adductor magnus (Adductor part)
4. Gracilis

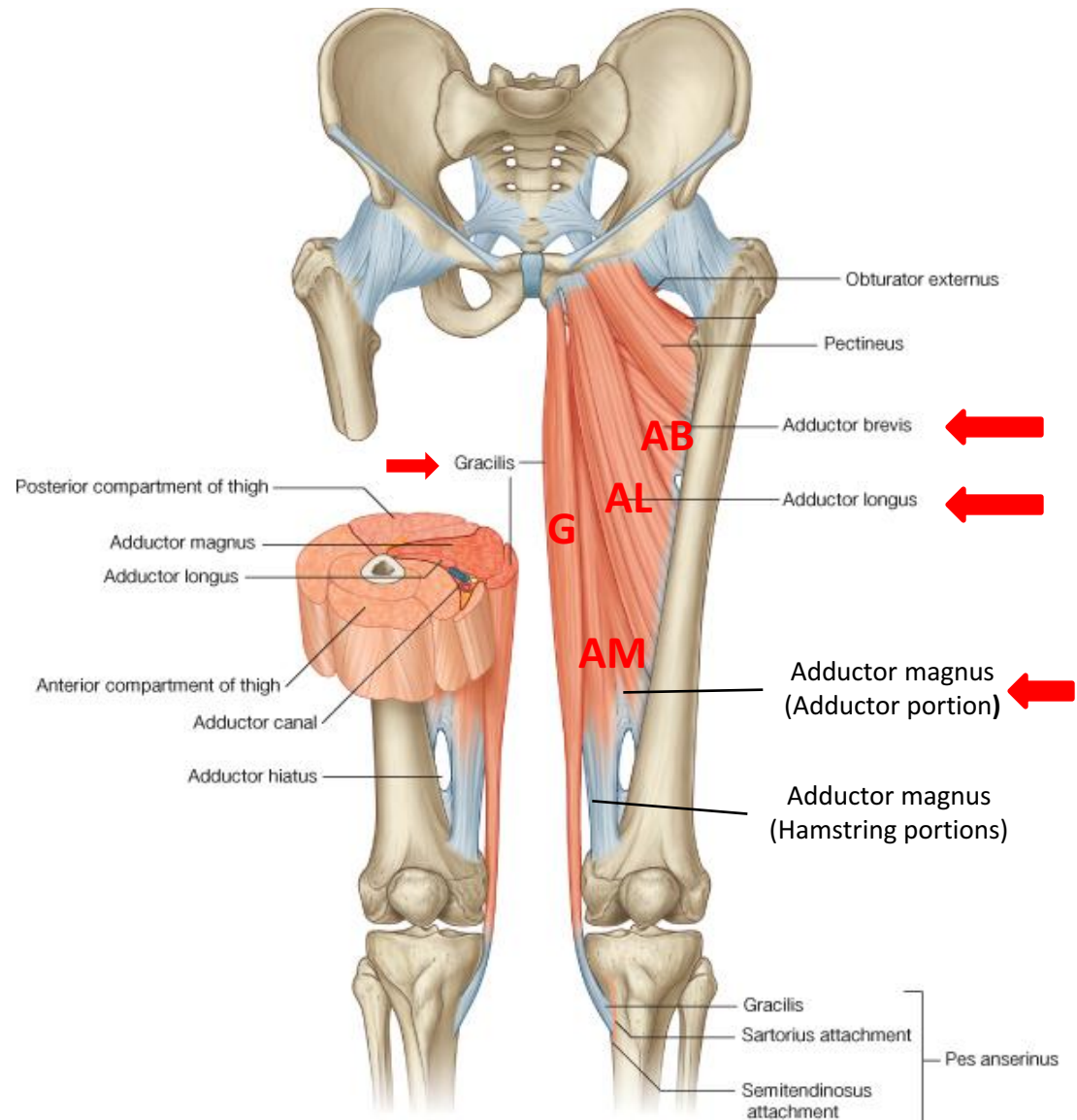
## ACTION:

**ADDUCTION OF HIP JOINT**

**N.B.: Gracilis also flexes knee joint**

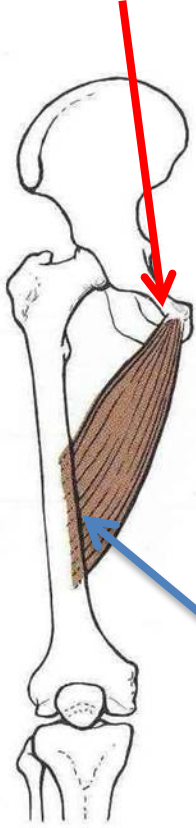
## NERVE SUPPLY:

**OBTURATOR NERVE**



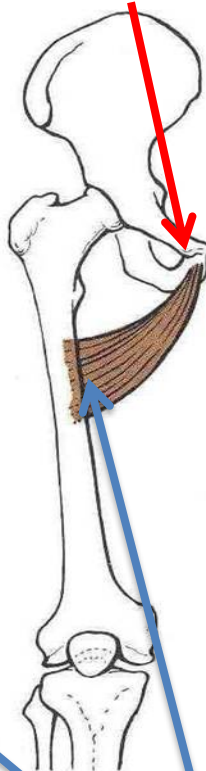
# Origin

▪ Body of pubis



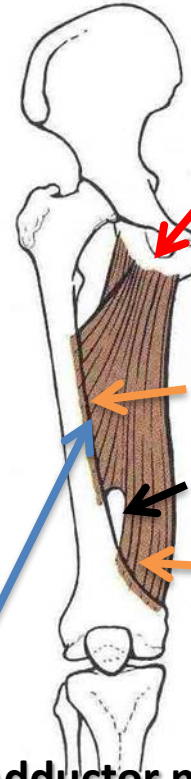
Adductor longus

▪ Body of pubis  
▪ Inferior pubic ramus

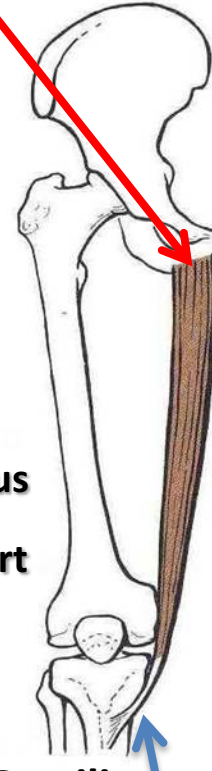


Adductor brevis

▪ Inferior pubic ramus  
▪ Ischial ramus



Adductor magnus  
(adductor part)



Gracilis

# Insertion

▪ Posterior border of femur (Linea Aspera)

▪ Upper part of medial surface of tibia  
(behind sartorius)

## SITE:

- Upper third of front of thigh

## BOUNDARIES:

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

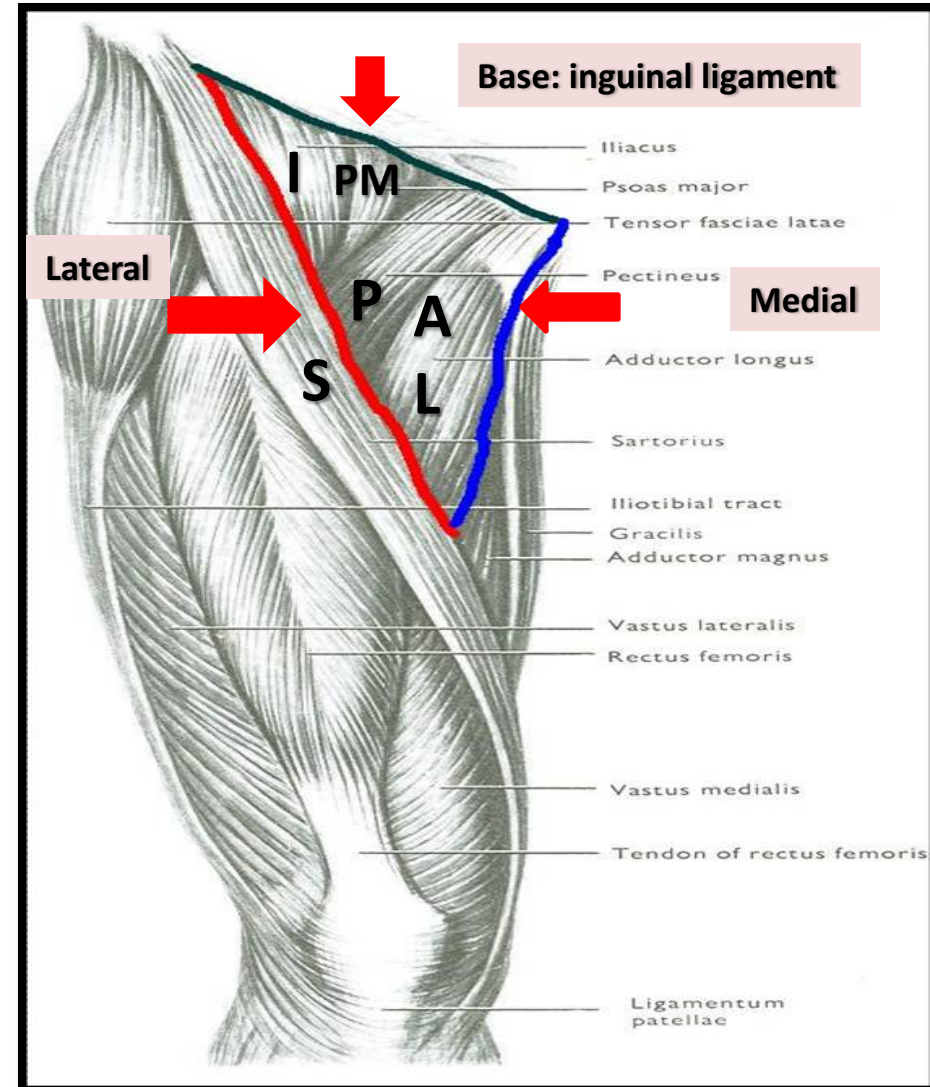
## ROOF:

- Skin
- Fasciae: superficial & deep

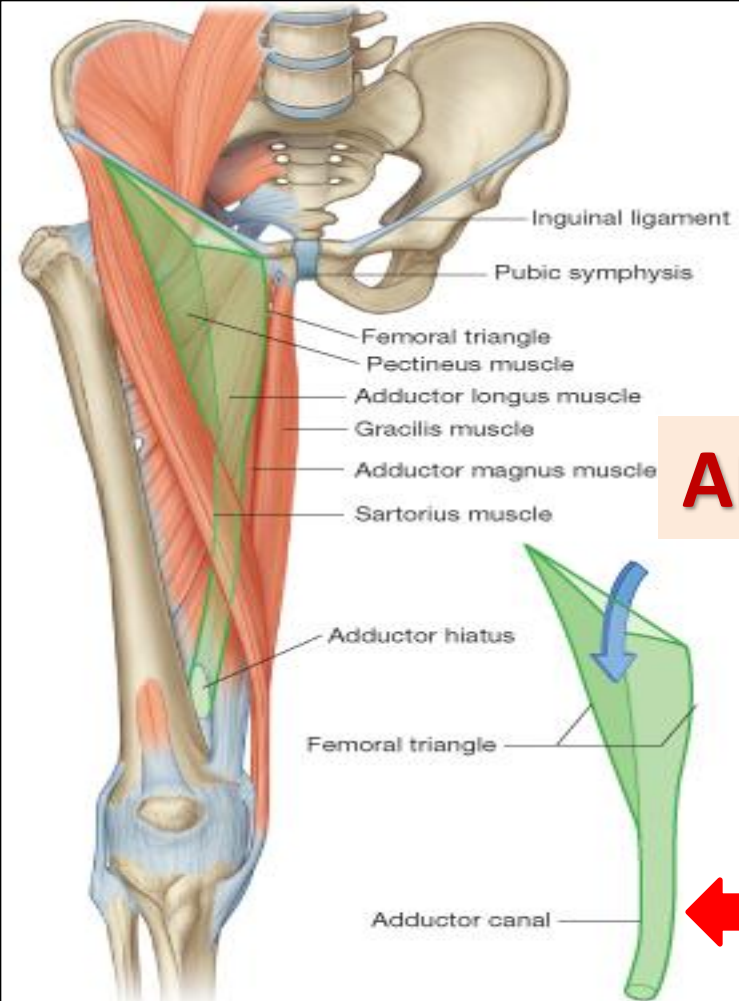
## FLOOR: *From medial to lateral*

- Adductor longus
- Pectineus
- Psoas major
- Iliacus

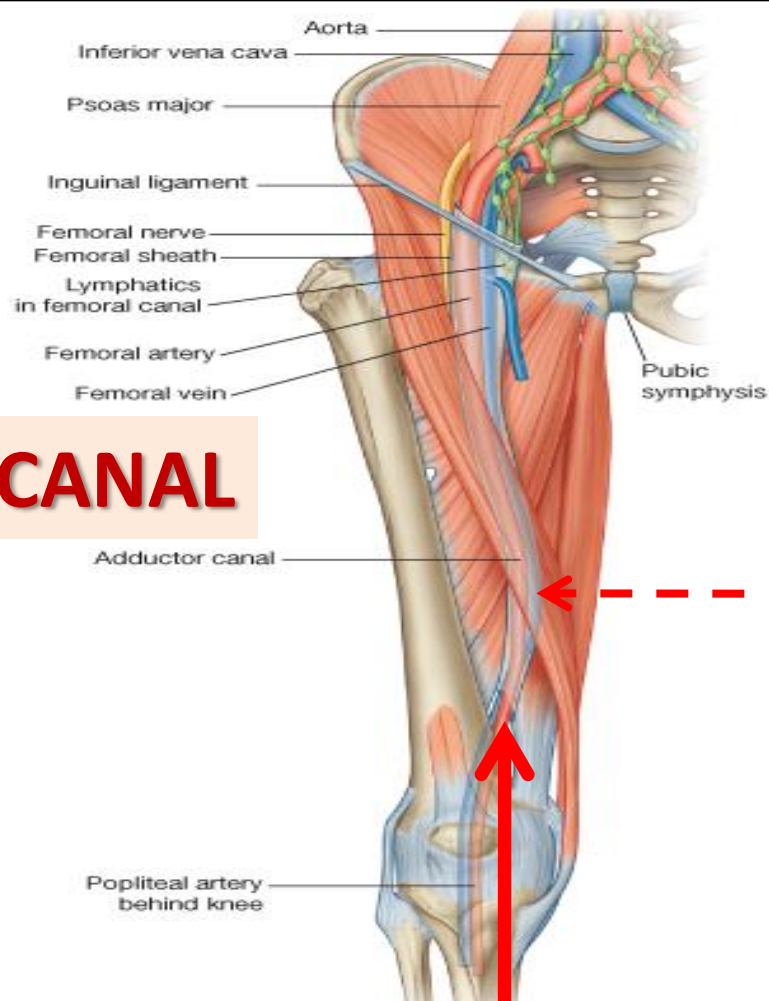
# FEMORAL TRIANGLE







# ADDUCTOR CANAL



- ❑ **DEFINITION:** A fascial envelope for femoral artery & vein
- ❑ **SITE:** In middle third of front of thigh
- ❑ **EXTENT:** From apex of femoral triangle to adductor hiatus
- ❑ **BOUNDARIES:** \*Roof: Sartorius  
\*Floor: Adductor longus & magnus

# 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

# SUMMARY

## 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




# QUESTION 1

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

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

## QUESTION 2

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

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

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**THANK YOU**