

# **ANTERIOR & MEDIAL COMPARTMENTS OF THIGH**

***Prof. Ahmed Fathalla Ibrahim  
Professor of Anatomy  
College of Medicine  
King Saud University  
E-mail: [ahmedfathala@gmail.com](mailto:ahmedfathala@gmail.com)***

# OBJECTIVES

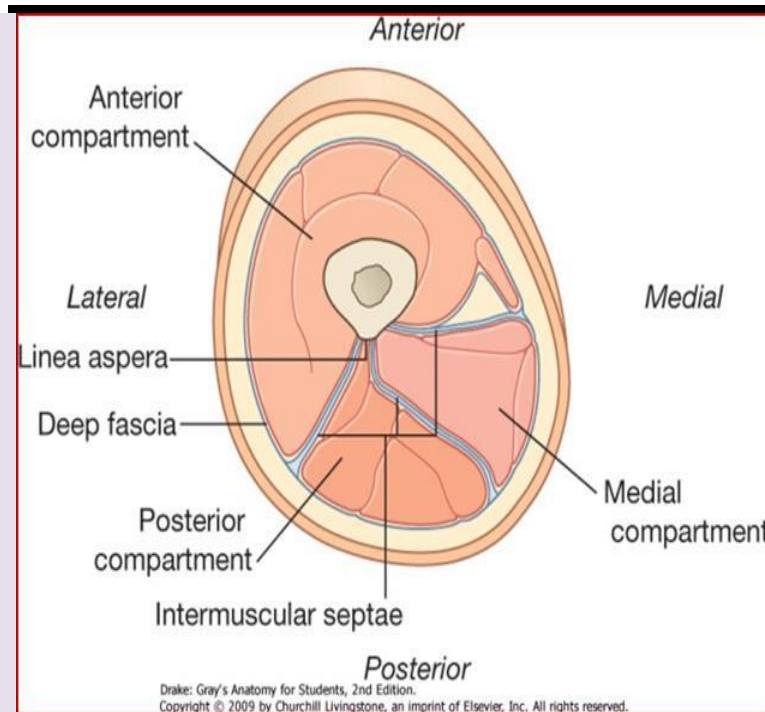
At the end of the lecture, students should:

- *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

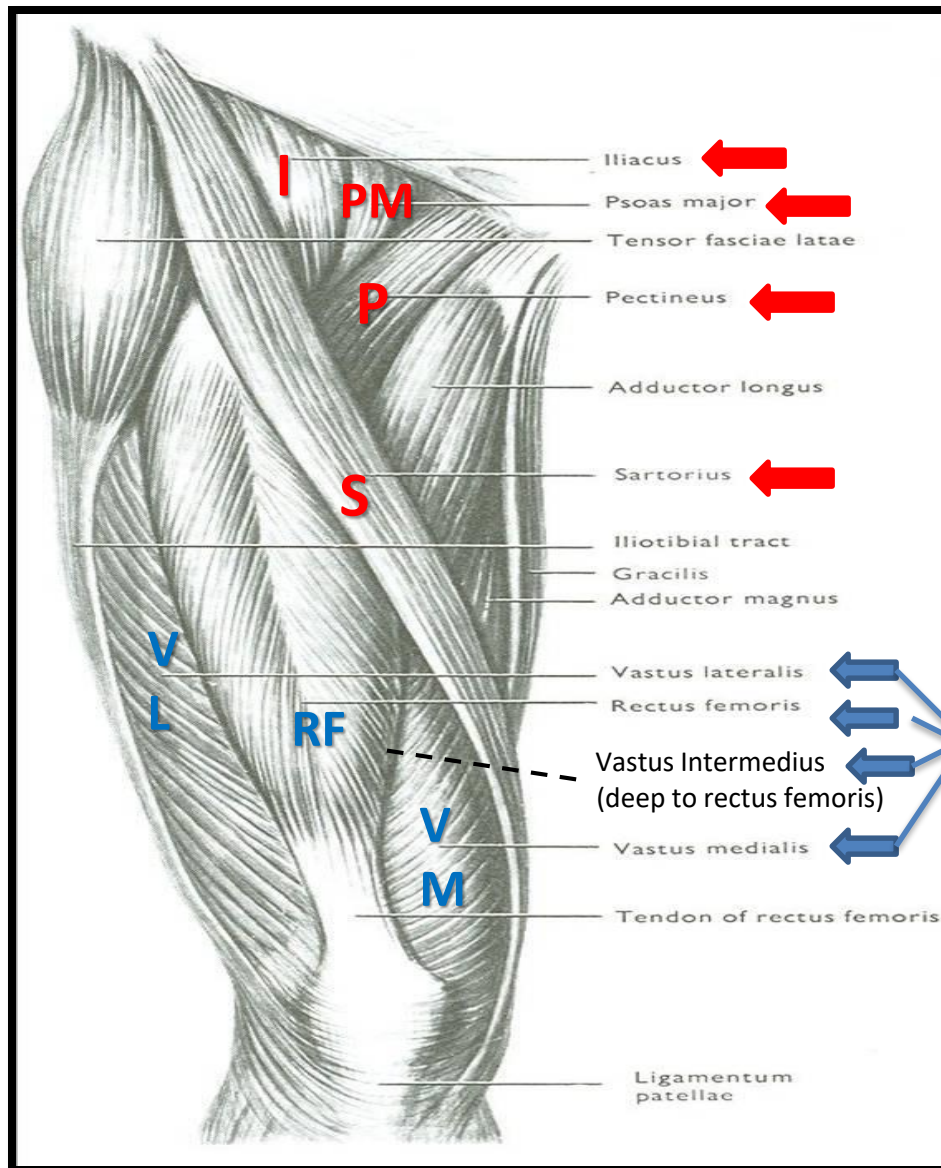
- ❑ Adductors of hip:
  1. Adductor longus
  2. Adductor brevis
  3. Adductor magnus (adductor part)
  4. Gracilis
- ❖ Nerve supply:  
Obturator nerve

## 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

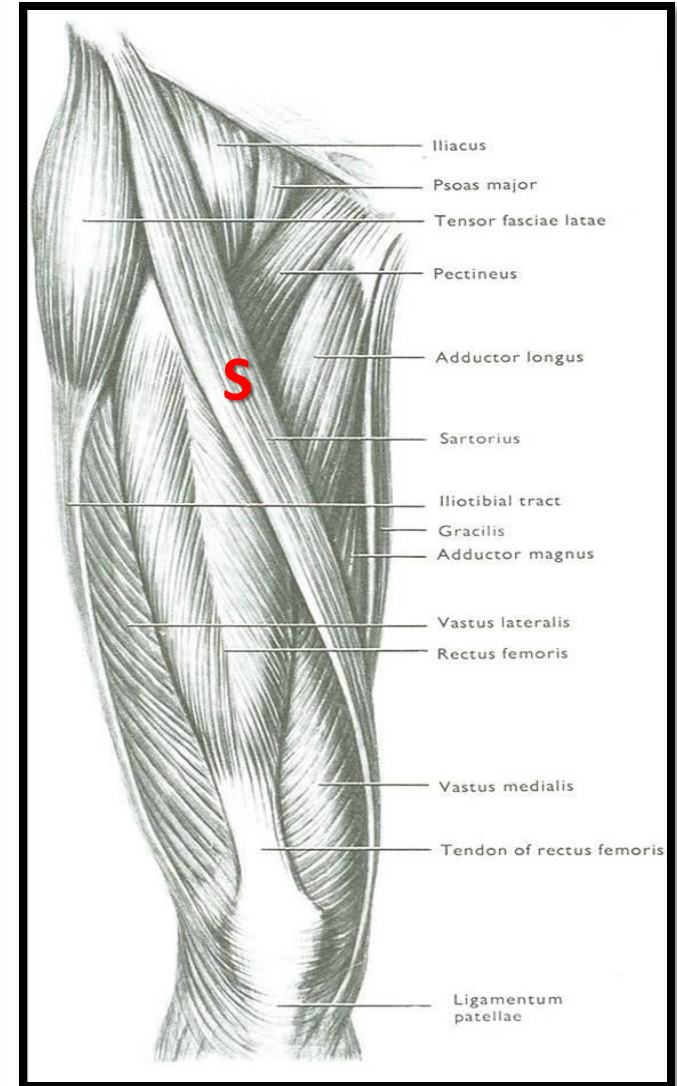
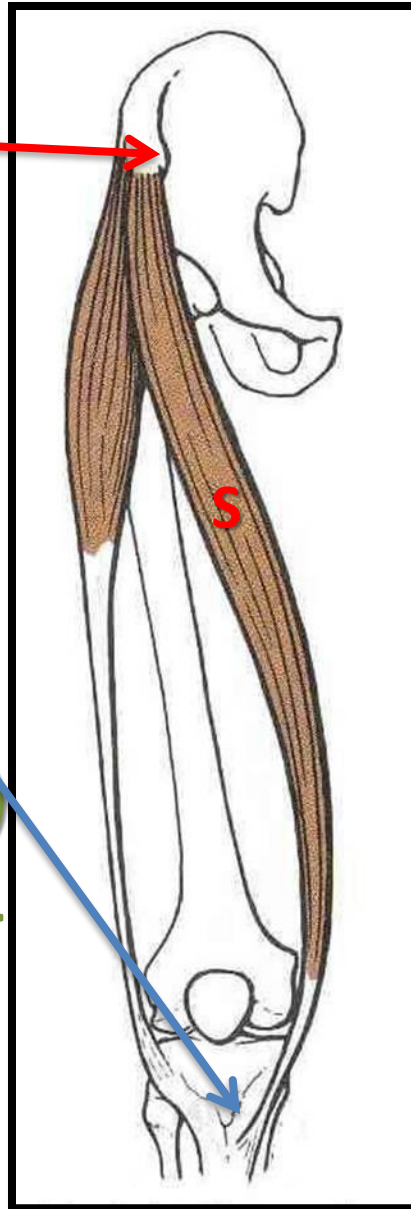
Upper part of medial surface of tibia

## ACTION

(TAILOR'S POSITION)

☐ Flexion, abduction & lateral rotation of hip joint

☐ Flexion of knee joint



# PECTINEUS

## ORIGIN:

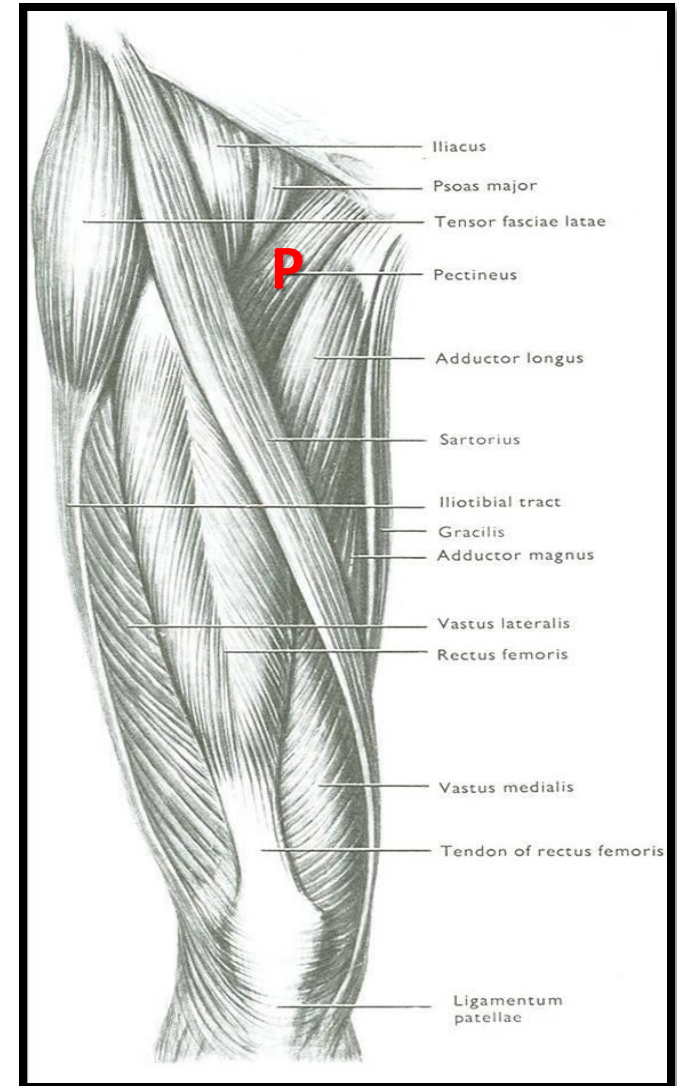
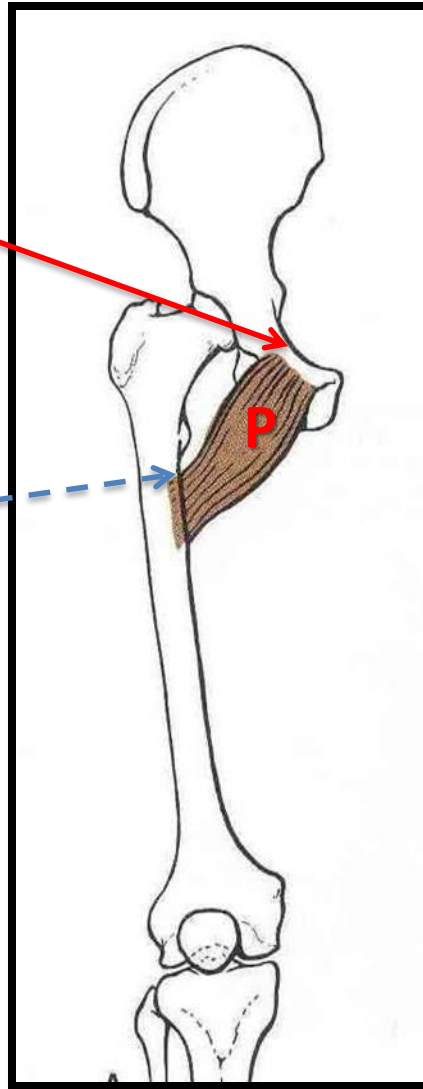
Superior pubic ramus

## INSERTION:

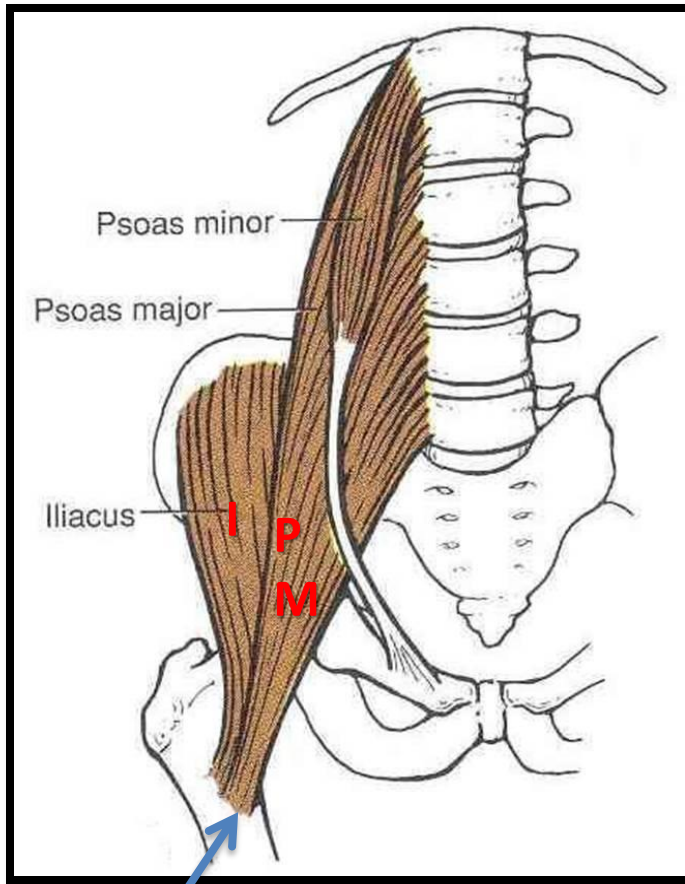
Back of femur  
(below lesser trochanter)

## ACTION:

□ Flexion & adduction of hip joint

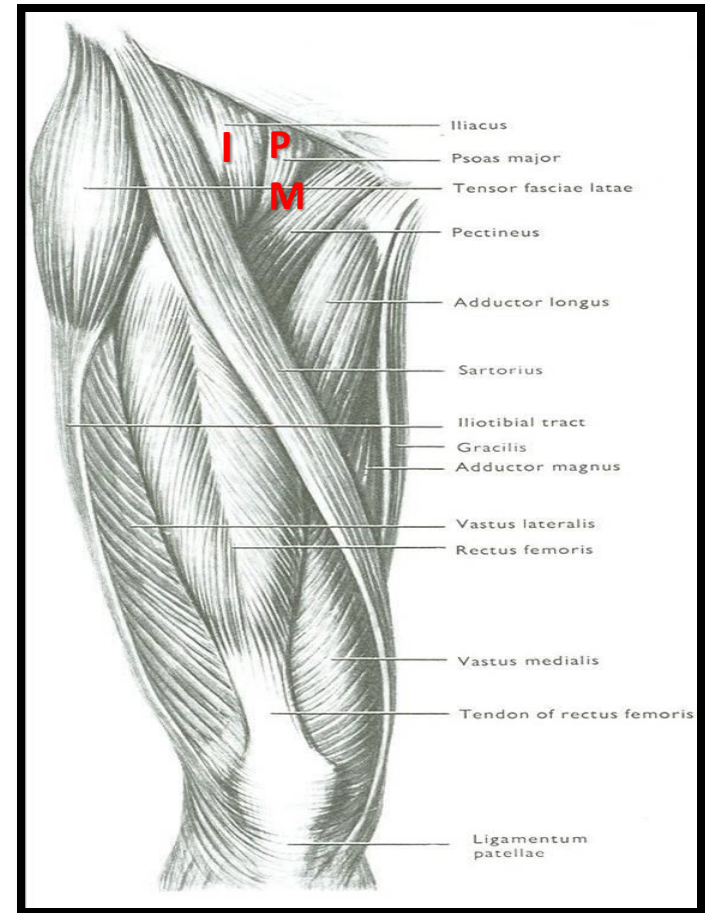


# ILIOPSOAS: ILIACUS & PSOAS MAJOR



**INSERTION:**

**Lesser trochanter of femur**



**ACTION:**

**Flexion of hip joint**

# QUADRICEPS FEMORIS

## ORIGIN:

### ☐ Rectus femoris:

Anterior inferior iliac spine (Hip bone)

### ☐ Vastus intermedius:

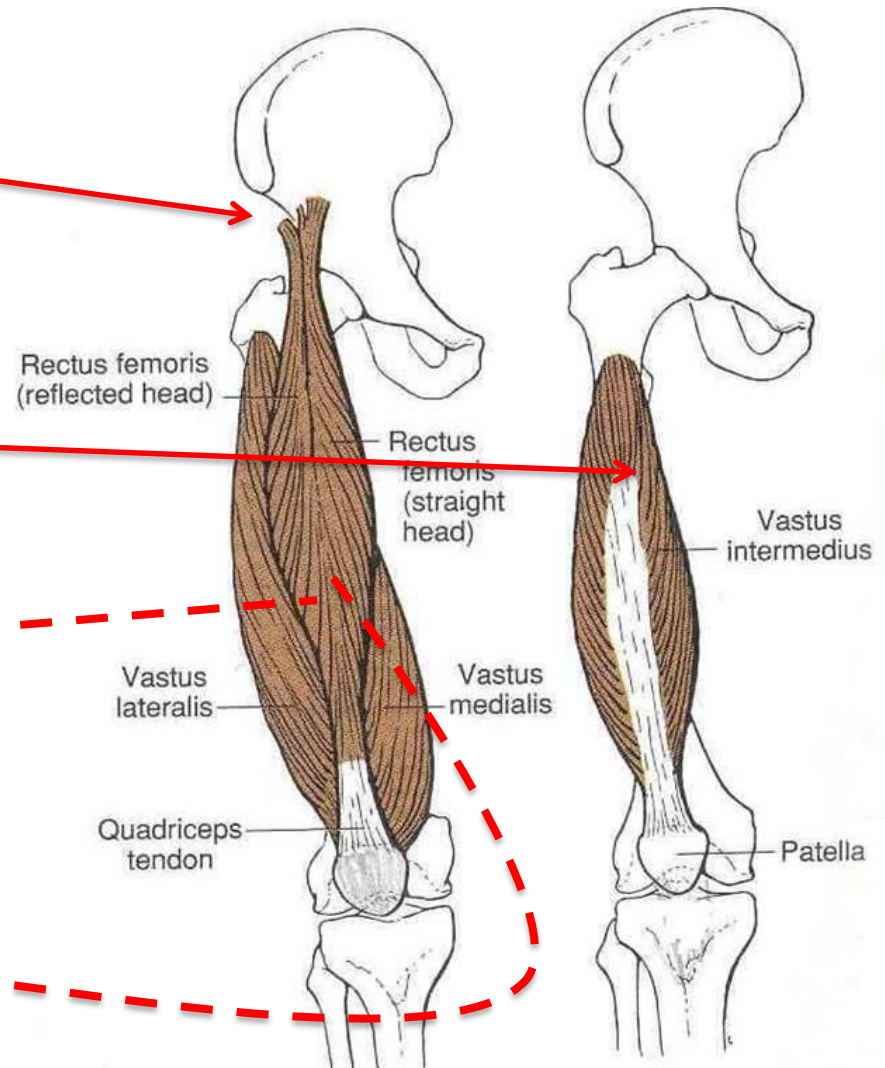
Front of shaft of femur

### ☐ Vastus lateralis:

Posterior border of femur

### ☐ Vastus medialis:

Posterior border of femur





# QUADRICEPS FEMORIS

## INSERTION:

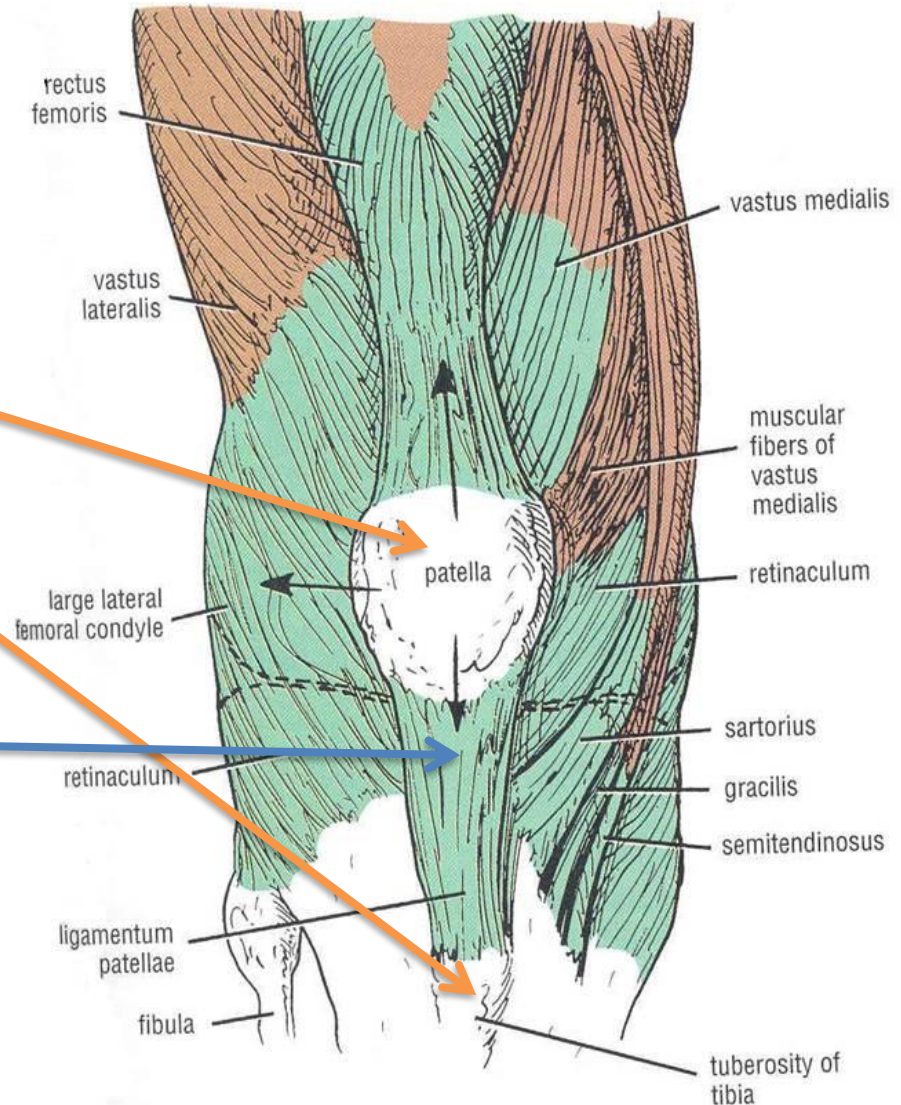
□ Into **PATELLA**

(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

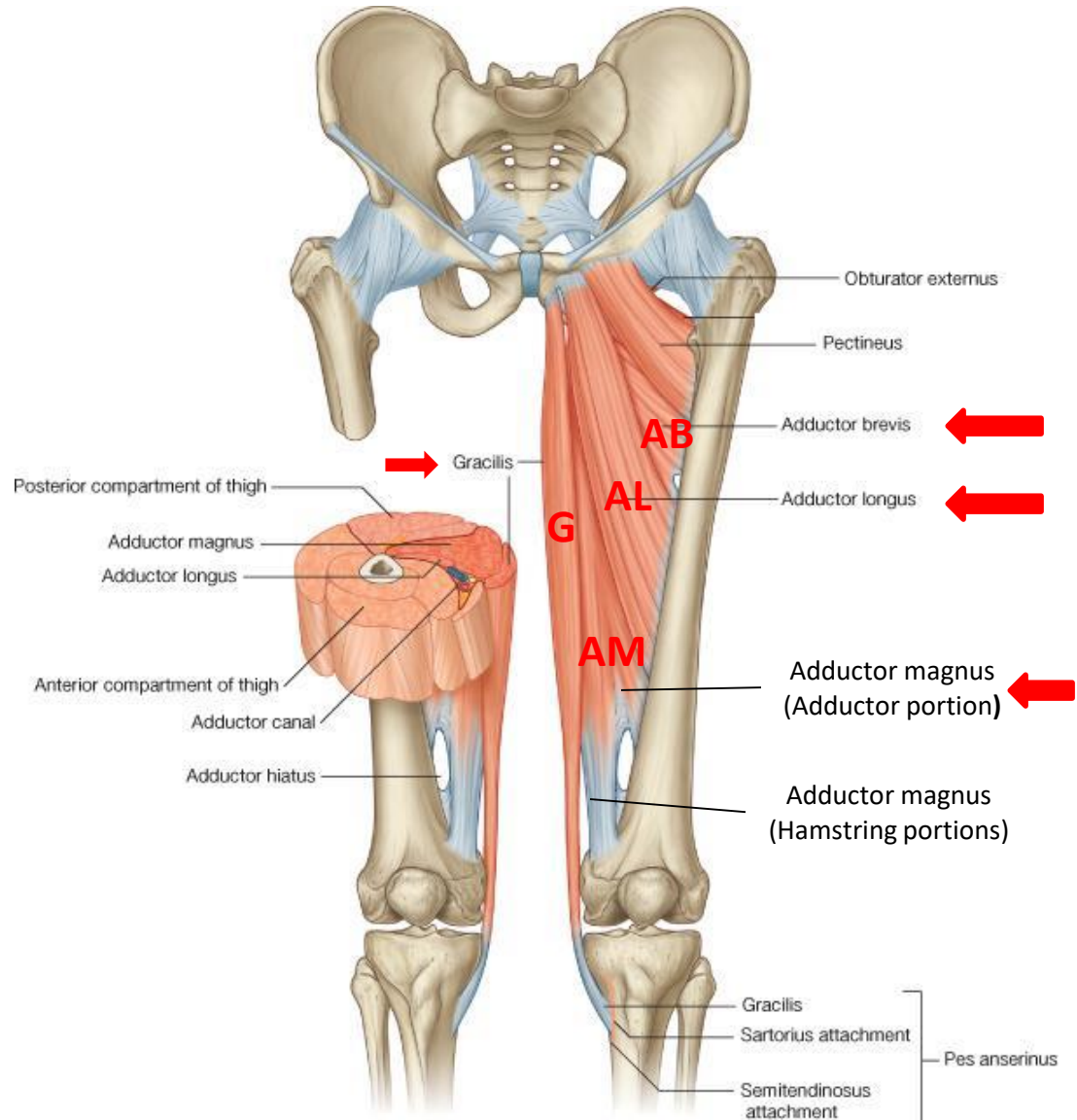
## ACTION:

**ADDUCTION OF HIP JOINT**

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

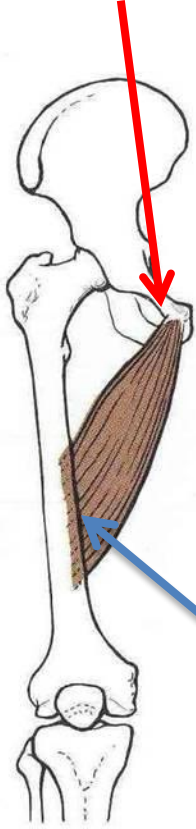
## NERVE SUPPLY:

**OBTURATOR NERVE**



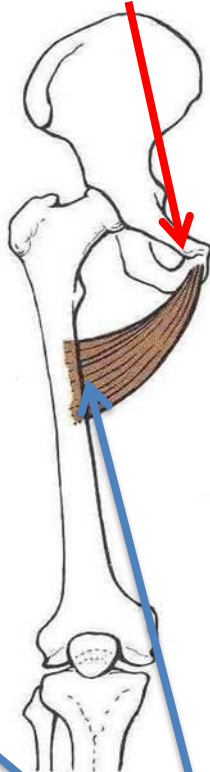
# Origin

▪ Body of pubis



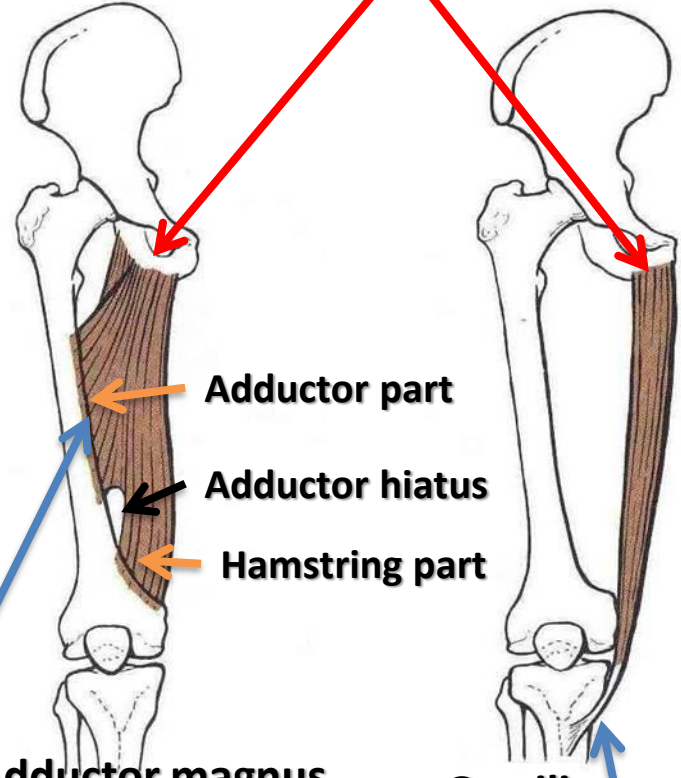
Adductor longus

▪ Body of pubis  
▪ Inferior pubic ramus

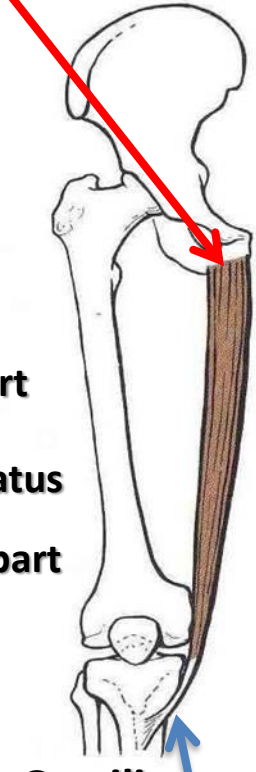


Adductor brevis

▪ 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

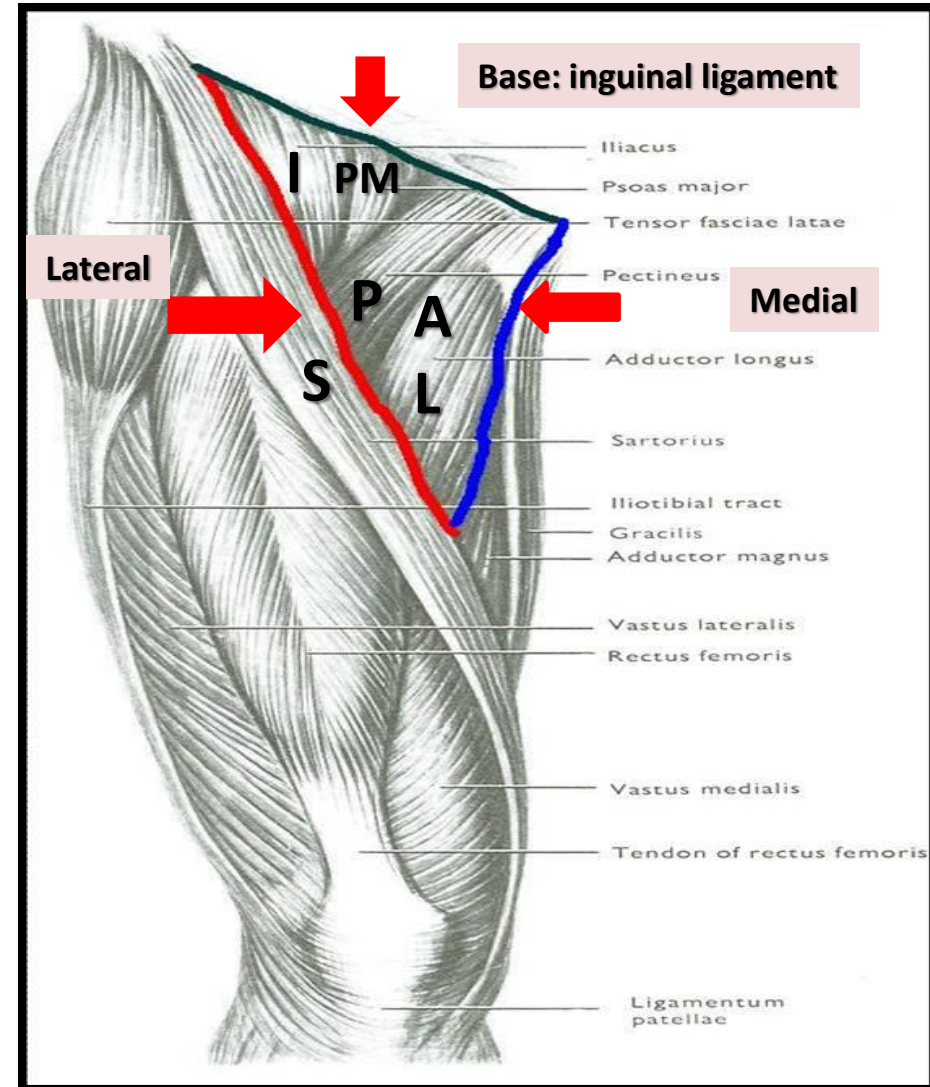
## ROOF:

- Skin
- Fasciae: superficial & deep

## FLOOR: *From medial to lateral*

- Adductor longus
- Pectineus
- Psoas major
- Iliacus

# FEMORAL TRIANGLE





# FEMORAL TRIANGLE

## CONTENTS:

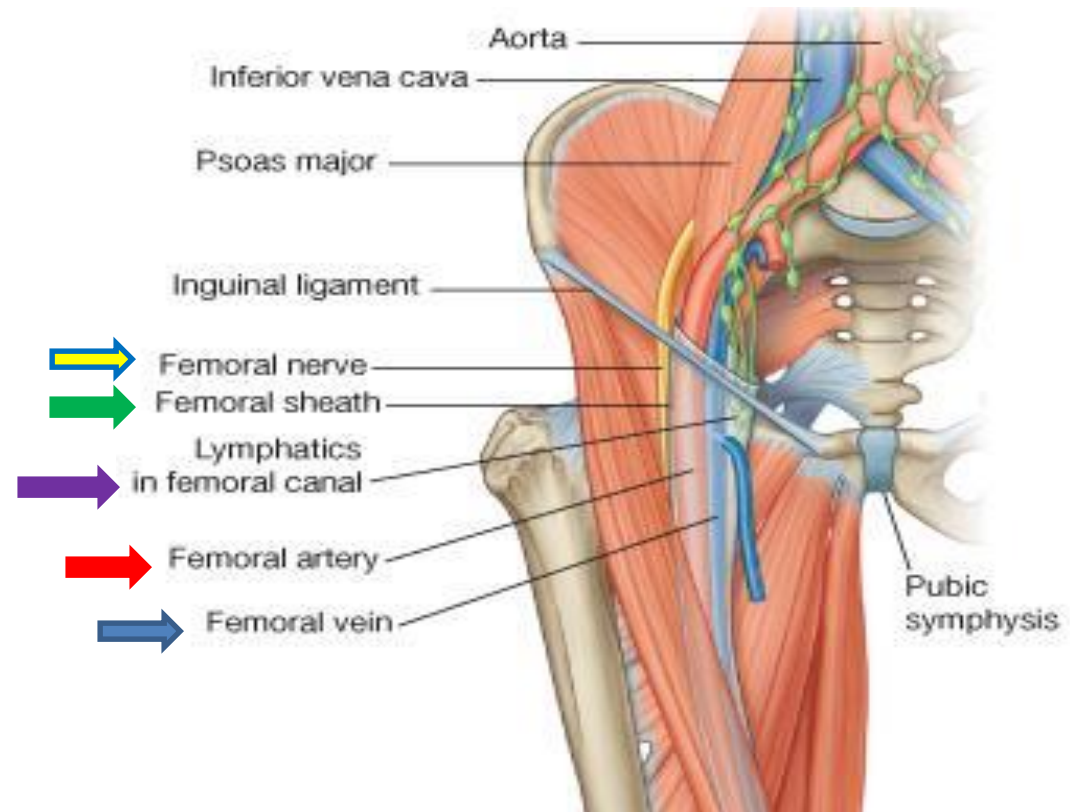
□ Femoral vein

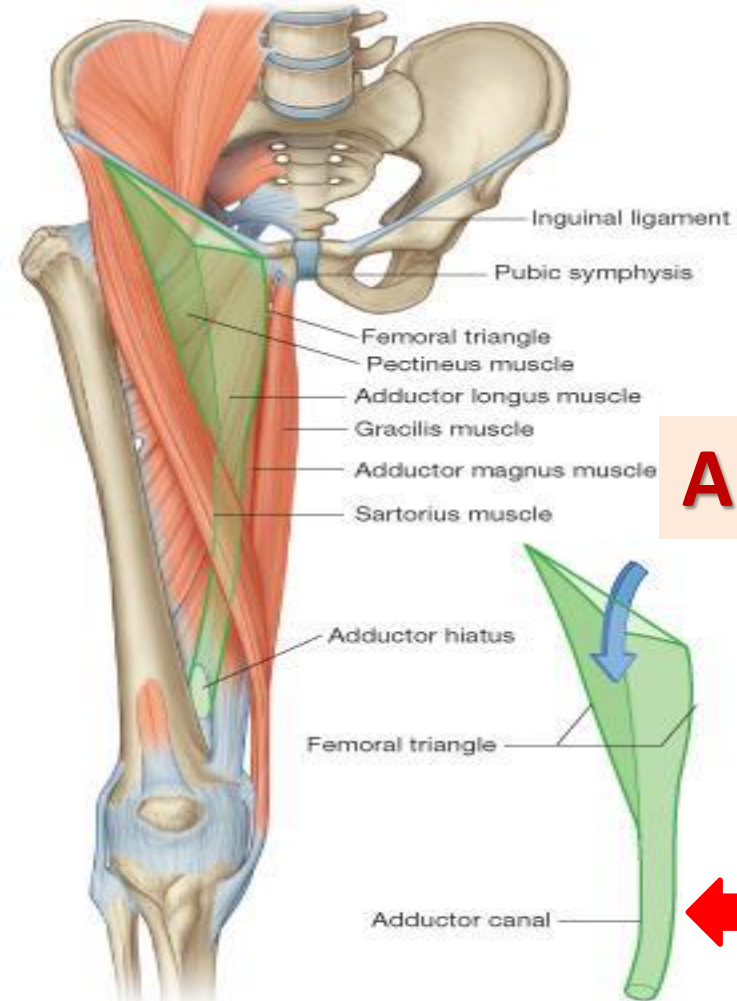
□ Femoral artery

Both vein & artery are enclosed in a fascial envelope (Femoral sheath)

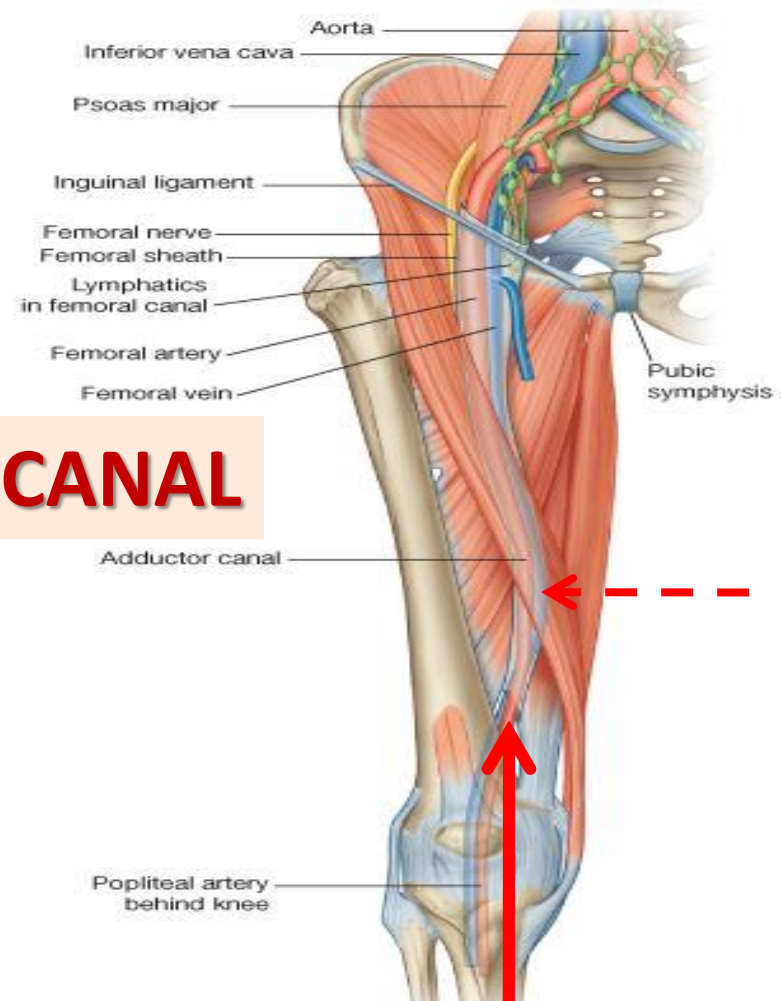
□ Femoral nerve

□ Deep inguinal lymph nodes





# 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

The image features two large, stylized yellow roses with white and light yellow petals, set against a teal background. The roses are positioned on the left and right sides of the frame. A dark red stem with several green leaves runs through the center. The text "THANK YOU" is written in a bold, blue, sans-serif font across the middle of the roses. The entire scene is enclosed in a thick orange border.

**THANK YOU**