

MEDIAL FASCIAL COMPARTMENT OF THE THIGH

Why do we need adductors for the hip joint !

Can you think of a bone that can be suitable to provide an origin for an adductor muscle of the hip joint?

The Pubic bone

Why?

Would you be able to think of a bone that can be a good insertion FOR the adductor muscles ?

The femur

Why?

Contents of the medial fascial compartment

1-Muscles

GRACILIS

ADDUCTOR LONGUS

ADDUCTOR BREVIS

ADDUCTOR MAGNUS

OBTURATOR EXTERNUS

In the practical sessions

Remember that the adductor muscles are arranged in three layers in similar way to that of the pages of the book .

The first layer (page) contains: pectineus
and adductor longus

The second layer contains: add. Brevis only

The third layer contains: add. Magnus only

2-Nerve supply: *Obturator nerve*

3-blood supply: *Profunda femoris artery* *and obturator artery*

Muscles of the Medial Fascial Compartment of the Thigh

Adductor longus

Origin: *Body of pubis, medial to pubic tubercle*

Insertion: *Posterior surface of shaft of femur (linea aspera)*

Nerve supply: *Obturator nerve*

Actions: *Adducts thigh at hip joint*

Adductor brevis

Origin: *Inferior ramus of pubis*

Insertion: *Posterior surface of shaft of femur (linea aspera)*

Nerve supply: *Obturator nerve*

Actions: *Adducts thigh at hip joint*

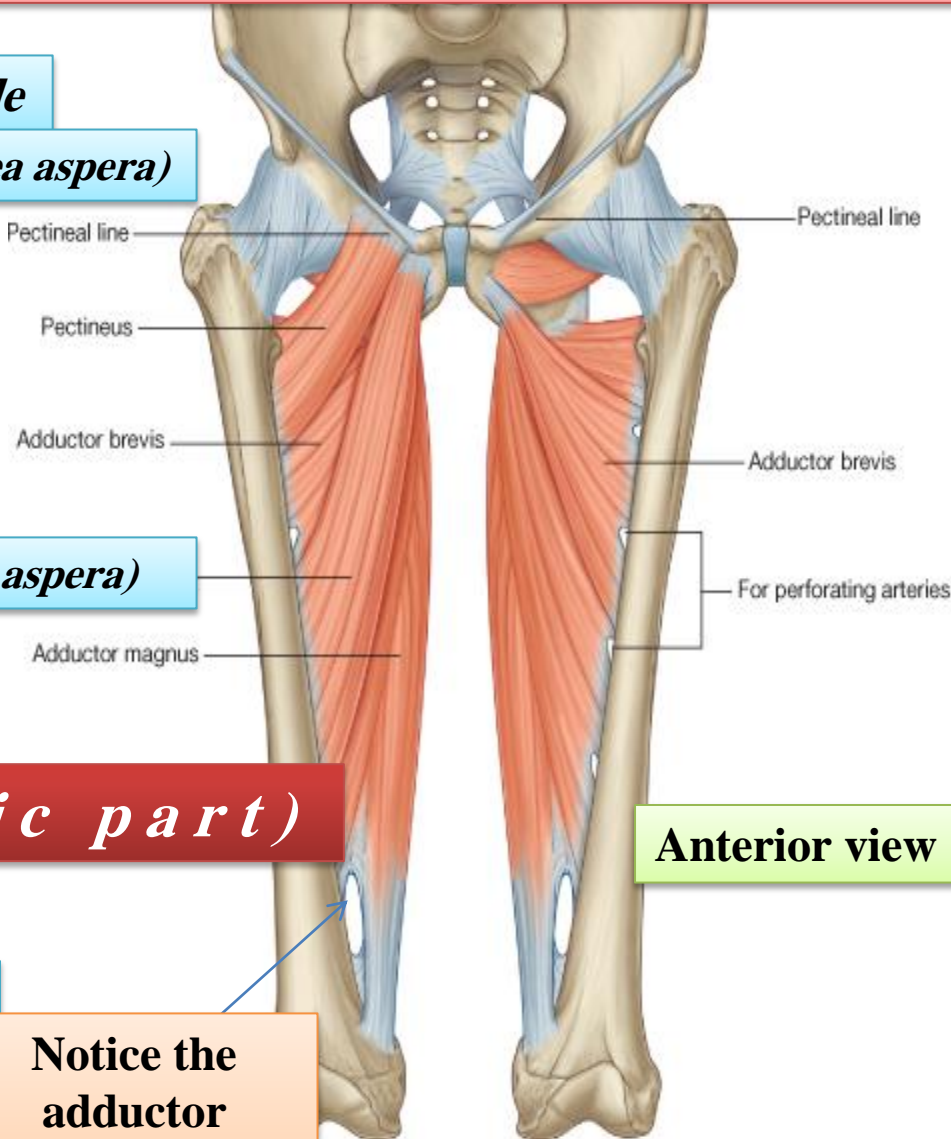
Adductor magnus (pubic part)

Origin: *Ischio-pubic ramus*

Insertion: *mainly linea aspera, gluteal tuberosity and medial supracondylar line*

Nerve supply: *obturator nerve*

Actions: *Adducts thigh at hip joint*



Anterior view

Notice the adductor hiatus. Which structures pass through it?

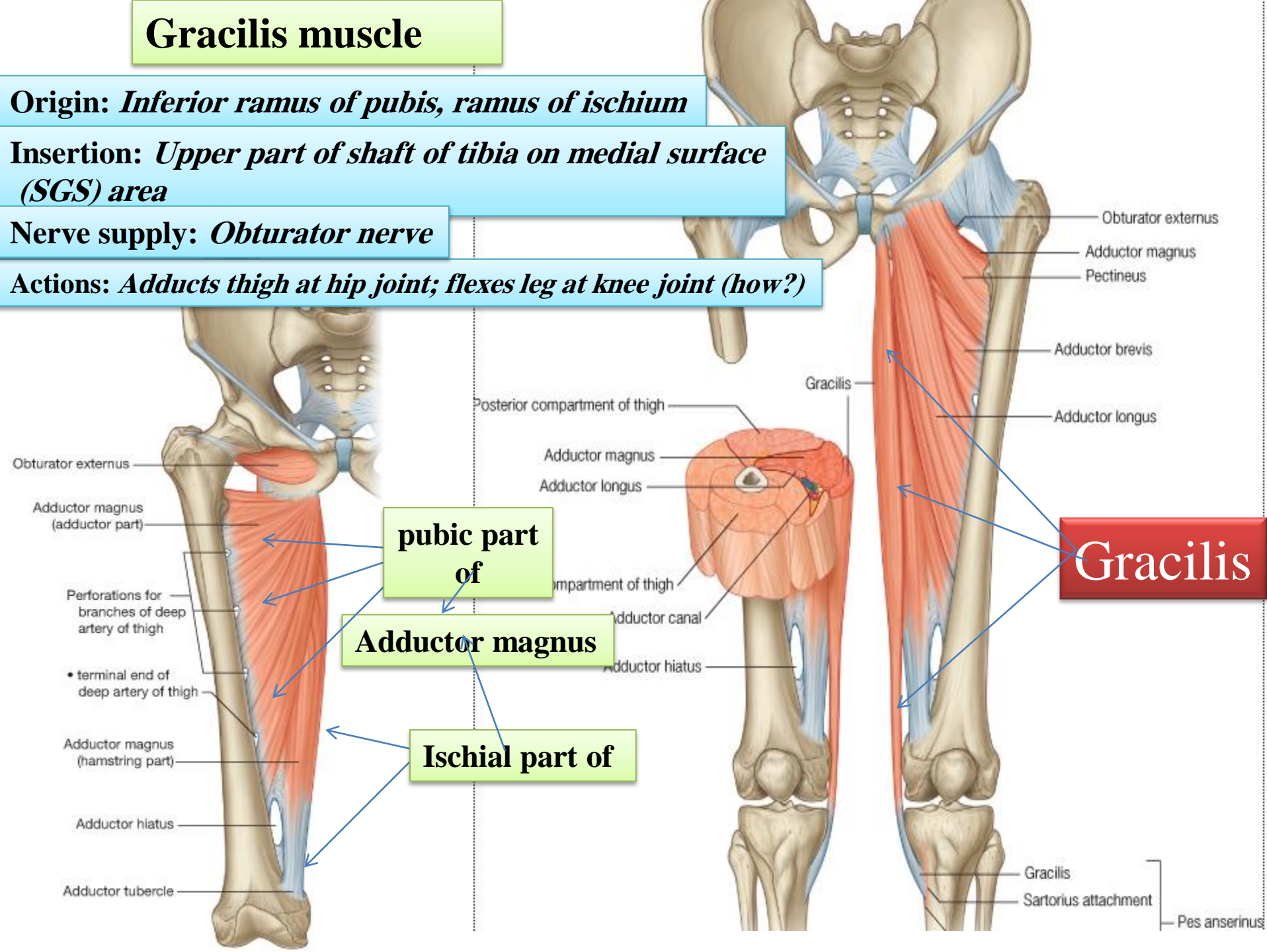
Gracilis muscle

Origin: *Inferior ramus of pubis, ramus of ischium*

Insertion: *Upper part of shaft of tibia on medial surface (SGS) area*

Nerve supply: *Obturator nerve*

Actions: *Adducts thigh at hip joint; flexes leg at knee joint (how?)*



Obturator externus

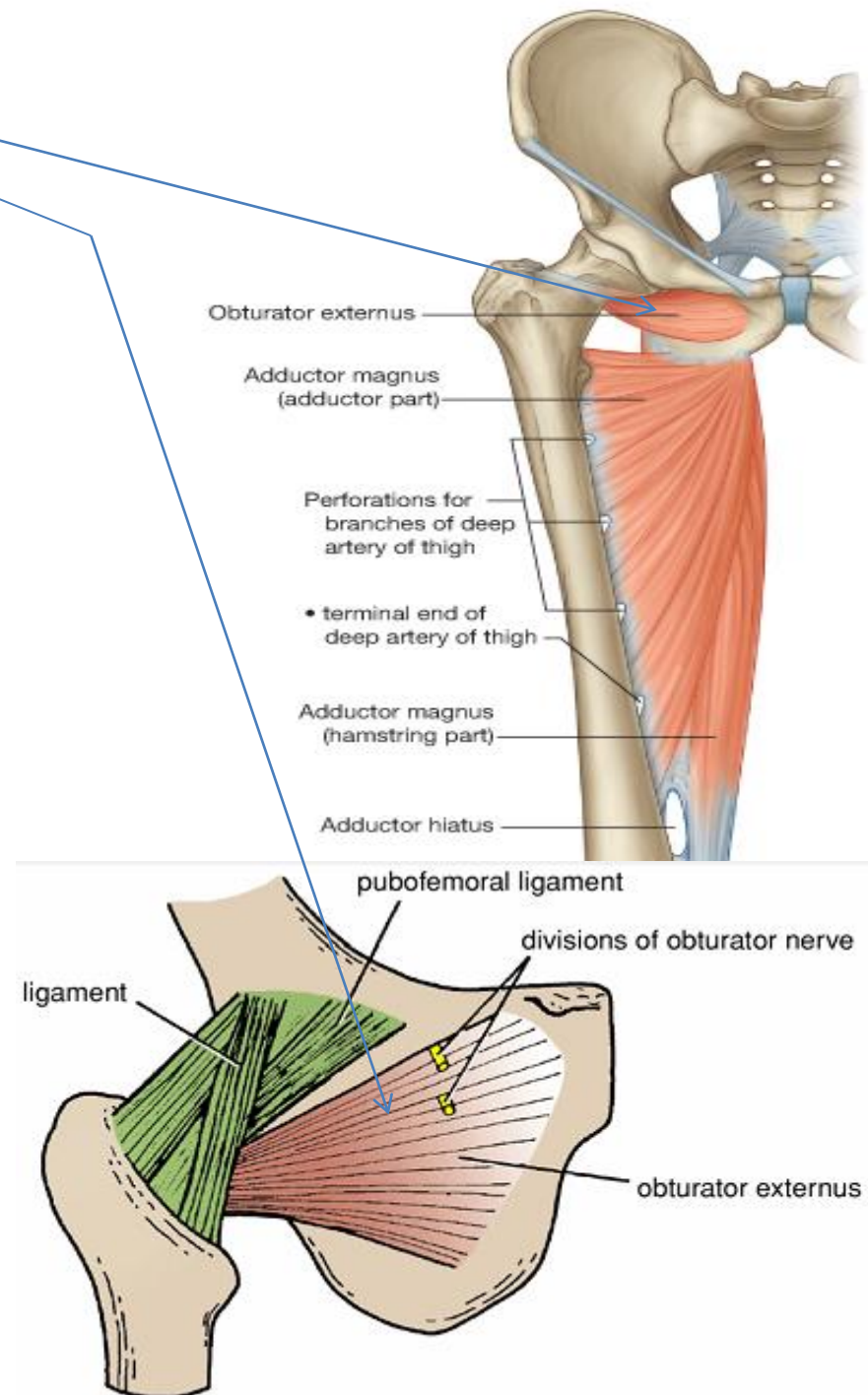
Origin: Outer surface of obturator membrane and pubic and ischial rami

Insertion: Medial surface of greater trochanter

Nerve supply: Obturator nerve

Action: Laterally rotates thigh at hip joint

One of the short lateral rotator muscles of the hip joint



Action of the adductor muscles as a group

1) Adduct the thigh although adduction of the thigh is not important in the mechanism of walking and standing

**2-Because their origin is in front of the hip joint
(in a plane that is in front of the hip joint)
they can flex the thigh at the hip joint**

**3- Because their origin
is from the medial Side of the hip while their insertion
is on the back of the thigh
They can assist in lateral rotation of the thigh**

Obturator Nerve

- Arises from the lumbar plexus (L2, 3, and 4) anterior divisions
- Emerges on the **medial border of the psoas muscle**

➤ *It divides into anterior and posterior divisions*

➤ The anterior division
(**Motor**) it gives muscular branches to :

Gracilis

Adductor brevis

Adductor longus

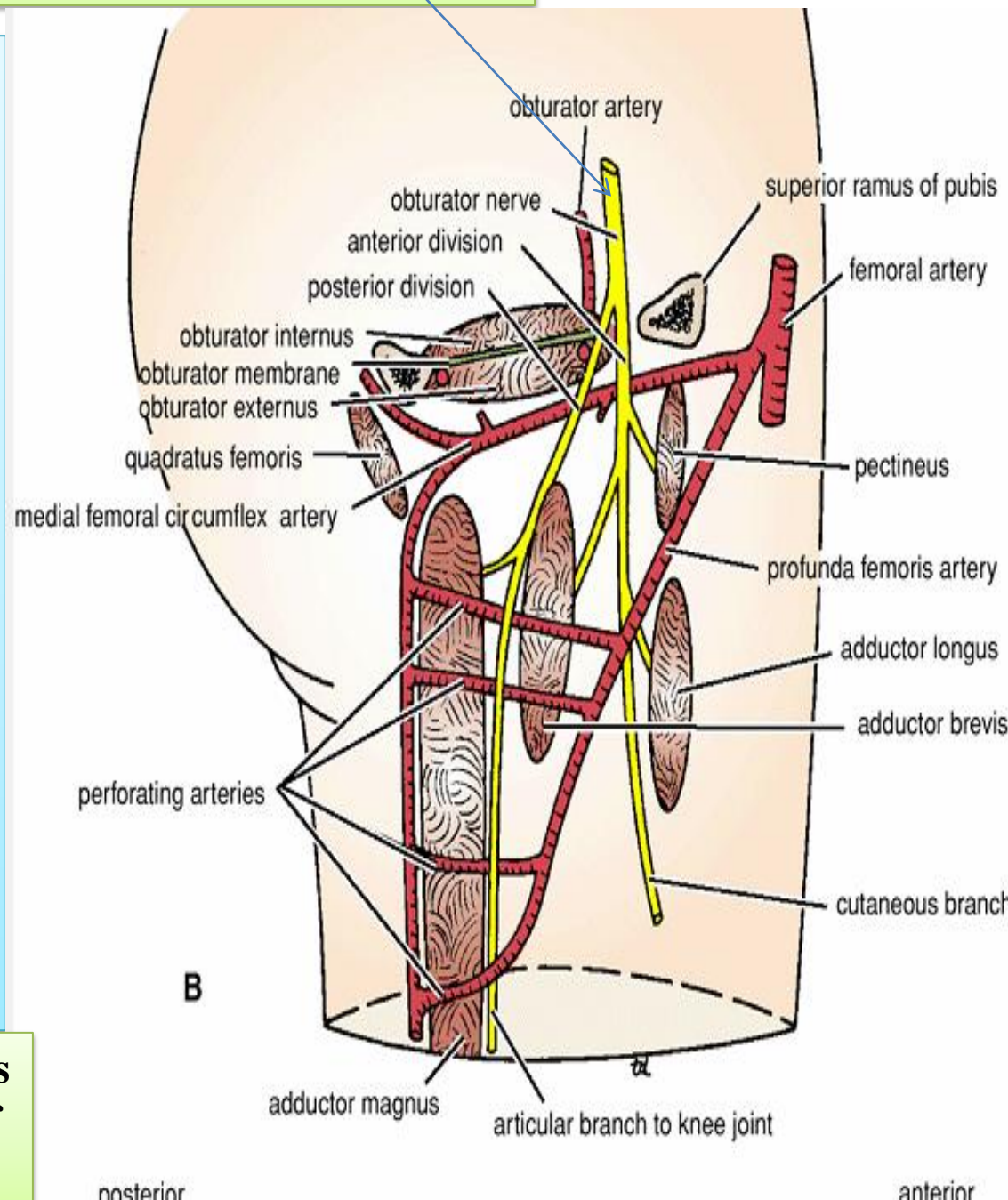
and occasionally to the

Pectineus.

Sensory

➤ It gives articular branches to the hip joint

➤ contributes to the **subsartorial plexus**
supplies the skin **on the medial side of the thigh.**



➤ *The posterior division*

It gives muscular branches (MOTOR) to the

Obturator externus

The adductor part of the adductor magnus

and occasionally to ***The adductor brevis***

It supplies **the knee joint (SENSORY).**

Referred pain

Is the pain perceived at a location other than the site of the painful stimulus.

Hilton's law states that the nerves crossing a joint supply

1- the muscles acting on it

2- the skin over the joint

3- the joint itself.

For example, The hip receives fibres from the **femoral, sciatic and obturator** nerves. It is important to note that these nerves also supply the **knee** joint and, for this reason, it is not uncommon for a patient, particularly a child, to complain bitterly of pain in the knee and for the cause of the mischief, the diseased hip, to be overlooked

