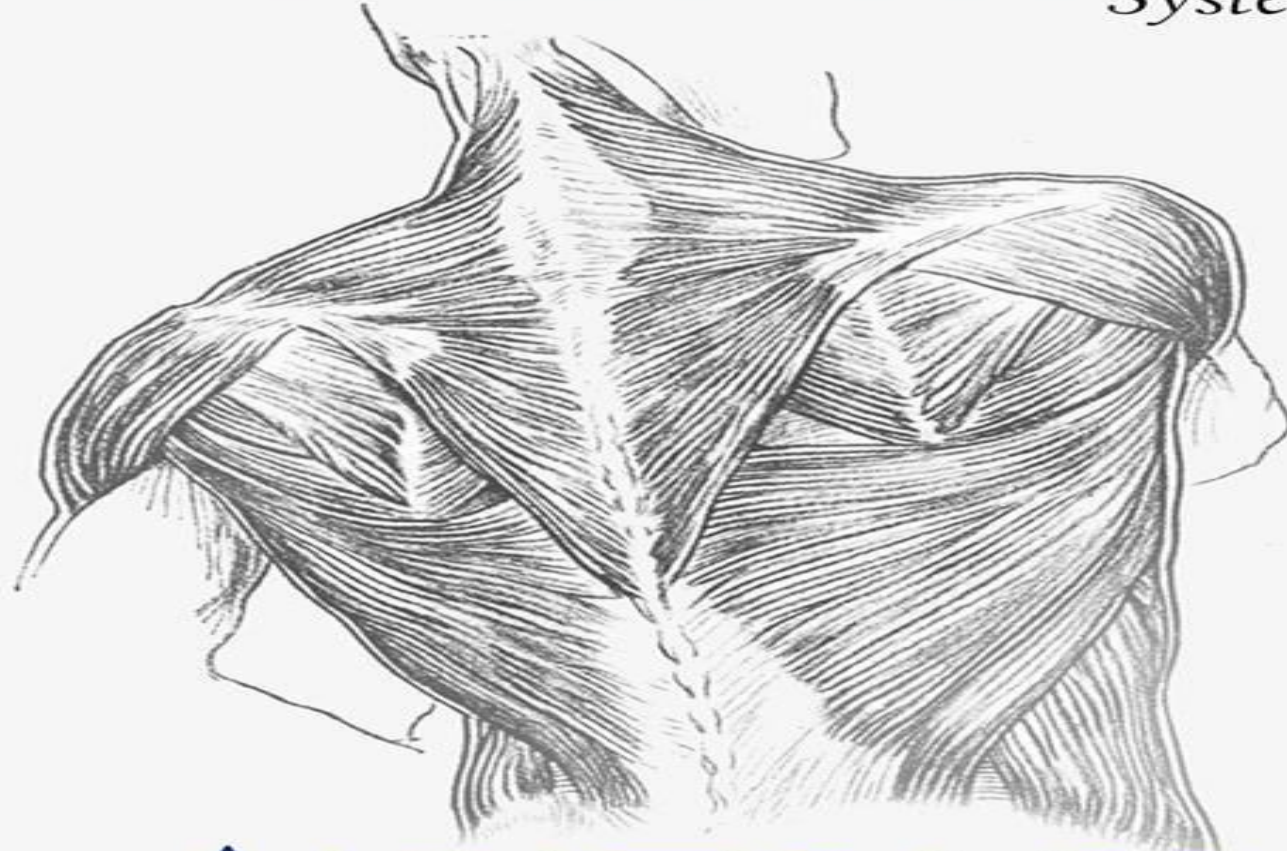


The Skin and
MUSCULOSKELETAL
System



ANATOMY

SLIDES 
SHEET

DOCTOR: **Dr. Amjad**
DONE BY:

Number # 1- LAB, Bones of Gluteal Region

BONES OF THE GLUTEAL REGION

THE HIP BONE

Hip (Coxal) Bone
Medial View

The hip bone is made of:

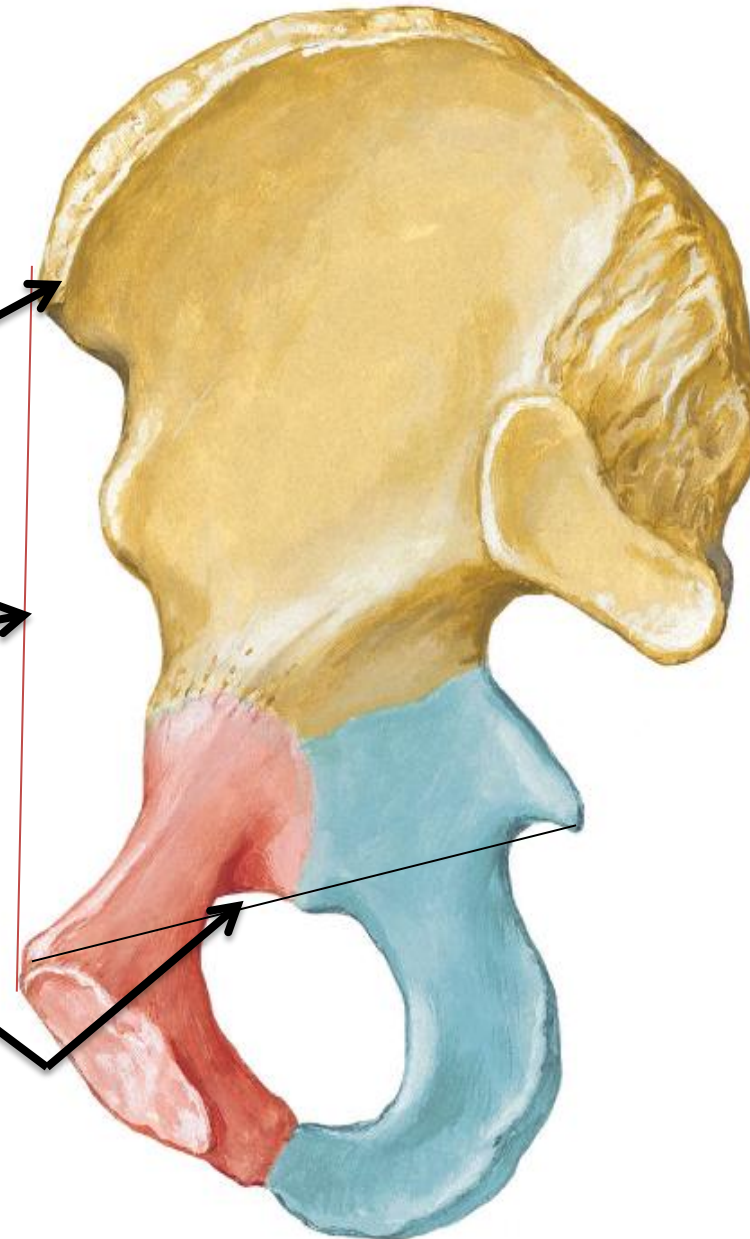
- 1-The ilium: superior in position →
- 2-The ischium: postero-inferior in position →
- 3-The pubis: antero-inferior in position →

Anatomical position of the hip bone

It is very important to understand the anatomical position of the hip bone, in anatomical position:

- 1-The **Anterior superior iliac spine** and the **pubic tubercle** **lie in the same vertical plane**.
- 2- The **ischial spine** and the **upper border of the symphysis pubis** **lie in the same horizontal plane**.

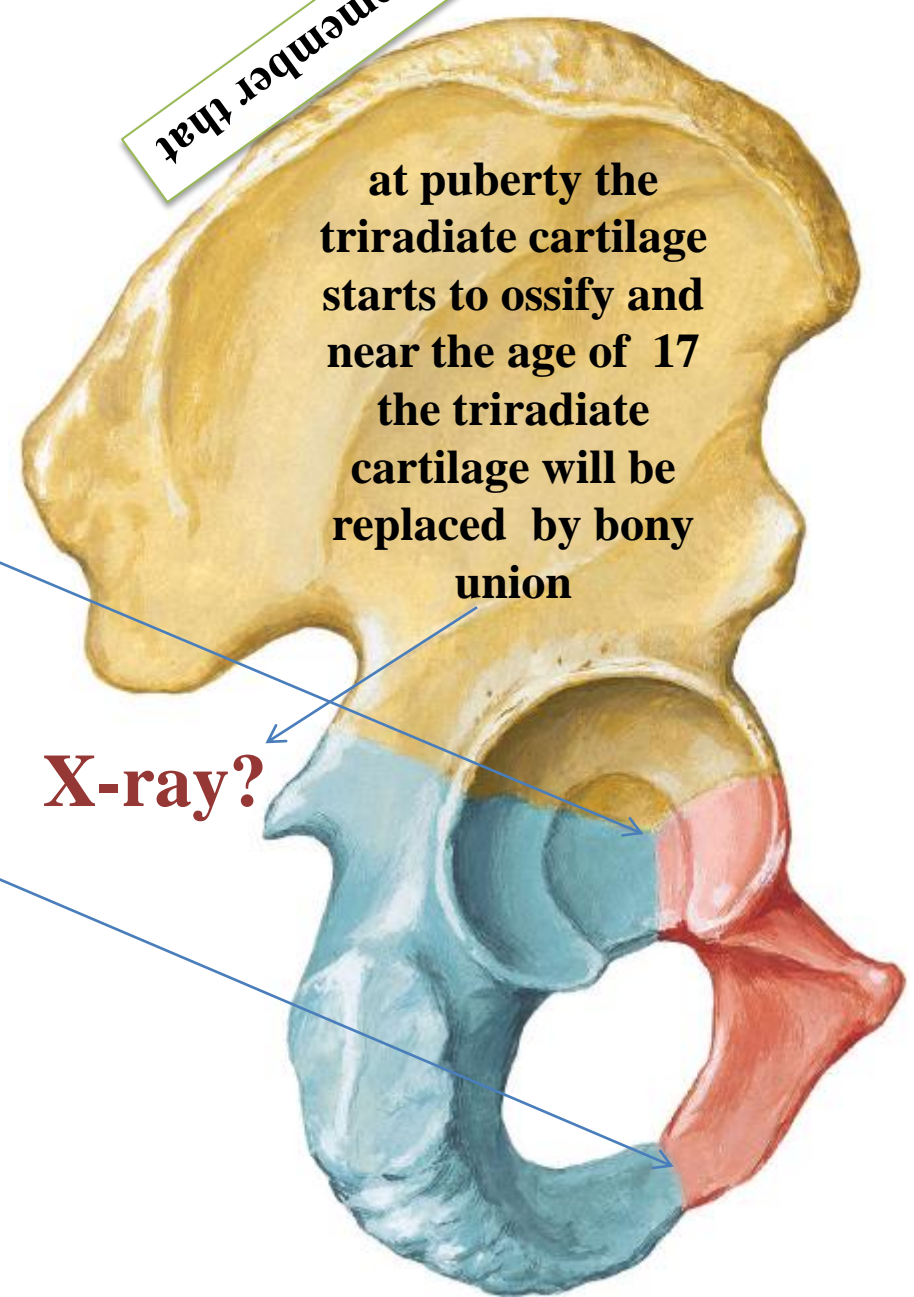
What does this mean?



Remember that

at puberty the triradiate cartilage starts to ossify and near the age of 17 the triradiate cartilage will be replaced by bony union

X-ray?



The ilium , ischium and pubis

meet one another by means of triradiate (Y-shaped) cartilage at the Acetabulum.

While *the inferior ramus of the pubis meets with the ramus*

of the ischium by cartilaginous union

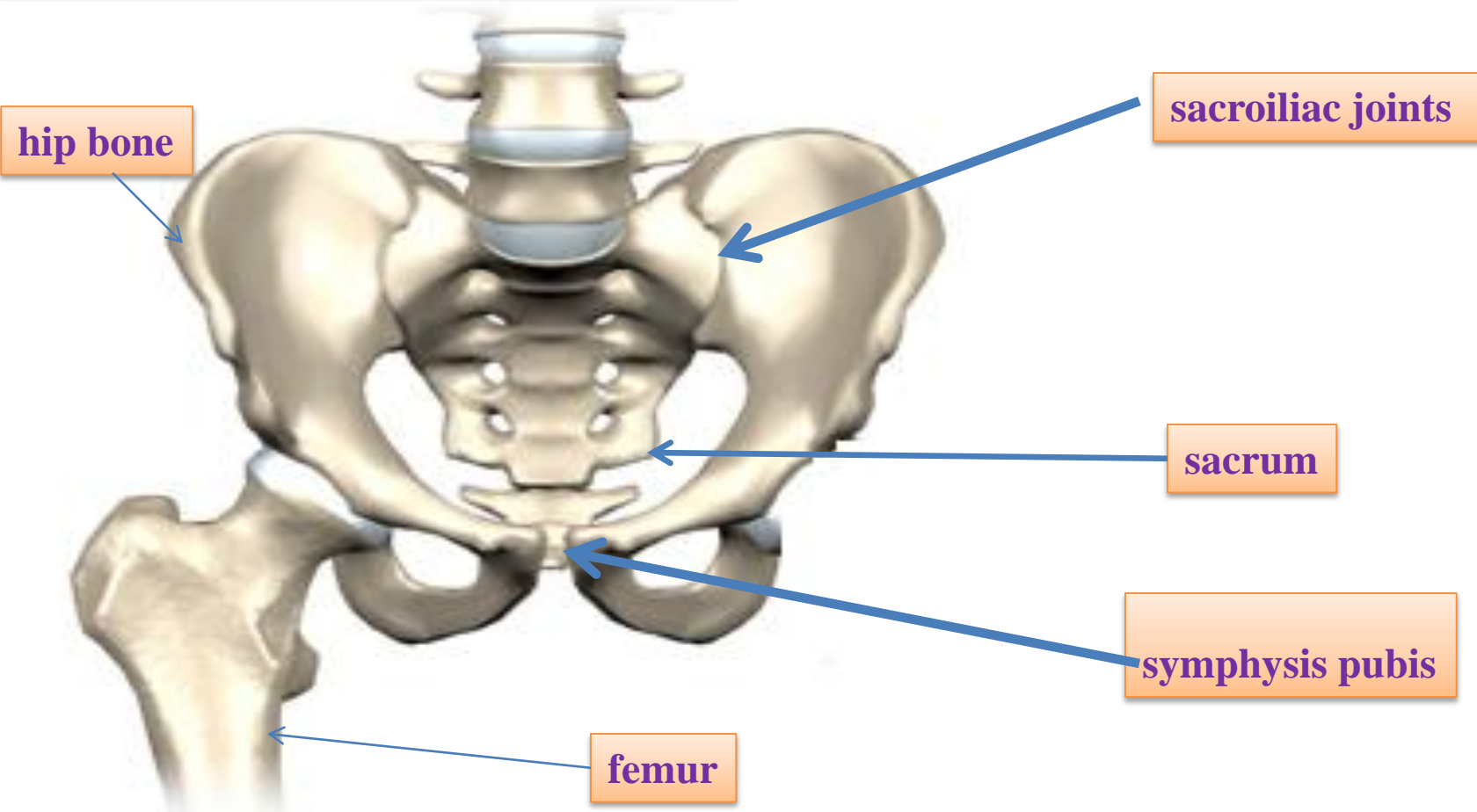
Ossifies near the age of 7 years

What is the idea here?

The hip bones articulate with the **sacrum** at the **sacroiliac joints posteriorly** while **anteriorly** they articulate with one another at the **symphysis pubis**.



Thus the two hip bones form the *pelvic girdle* where the ilium corresponds to the scapula in the upper limb, the pubis corresponds to the clavicle while the ischium corresponds to the coracoid process



Hip (Coxal) Bone
Lateral View

1-The Ilium

Two parts:
1- Ala
2- Body

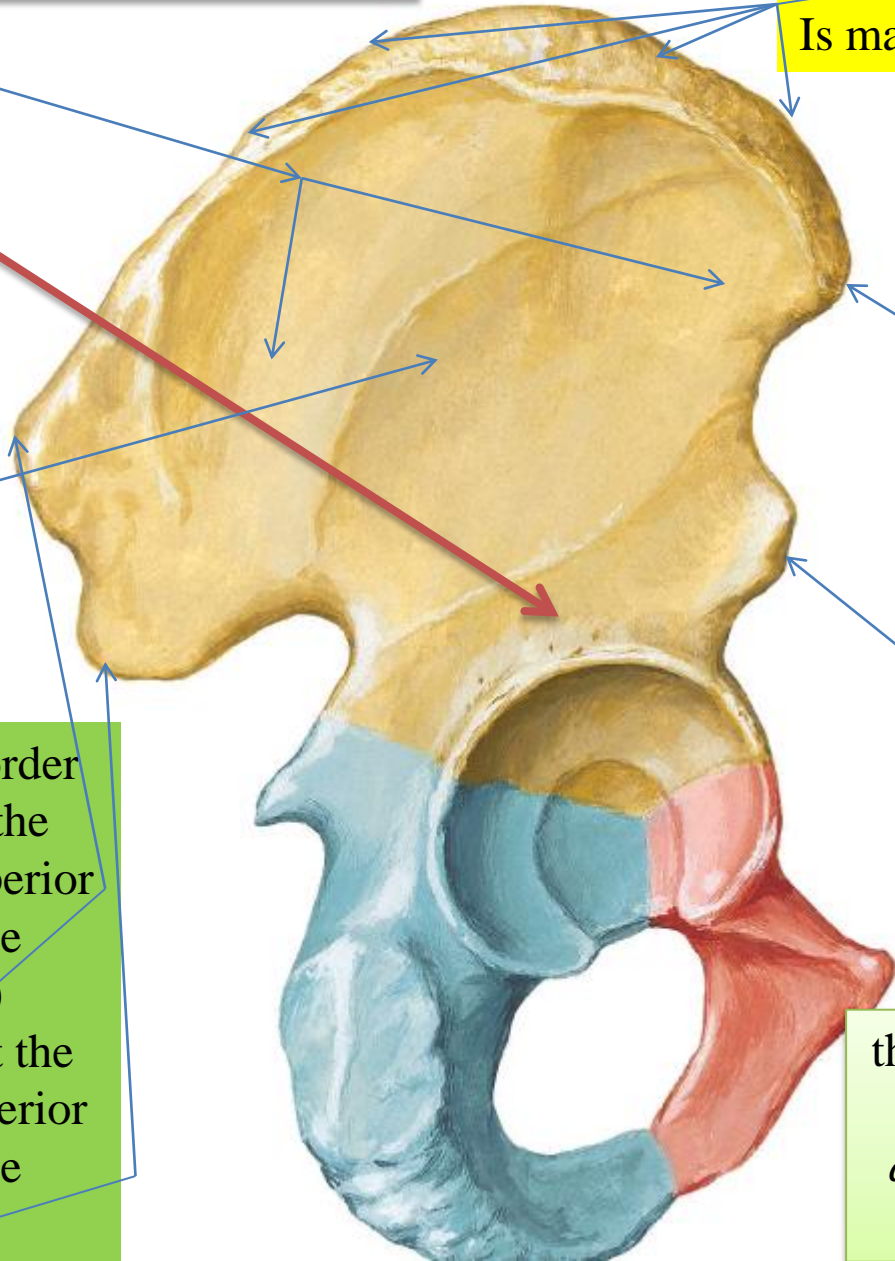
Superior border
Is made by the iliac crest

Anterior border
Begins at the
anterior
superior iliac
spine
(A.S.I.S)
and
ends at the
anterior
inferior iliac
spine
(A.I.I.S)

Three surfaces
1- gluteal surface
2- iliac fossa
3- sacropelvic surface

Posterior border
Begins at the
posterior superior
iliac spine
(P.S.I.S)
And ends at the
posterior inferior
iliac spine
(P.I.I.S)

*the anterior superior spine
of the ilium is easily felt
and may be visible in the
thin subject*



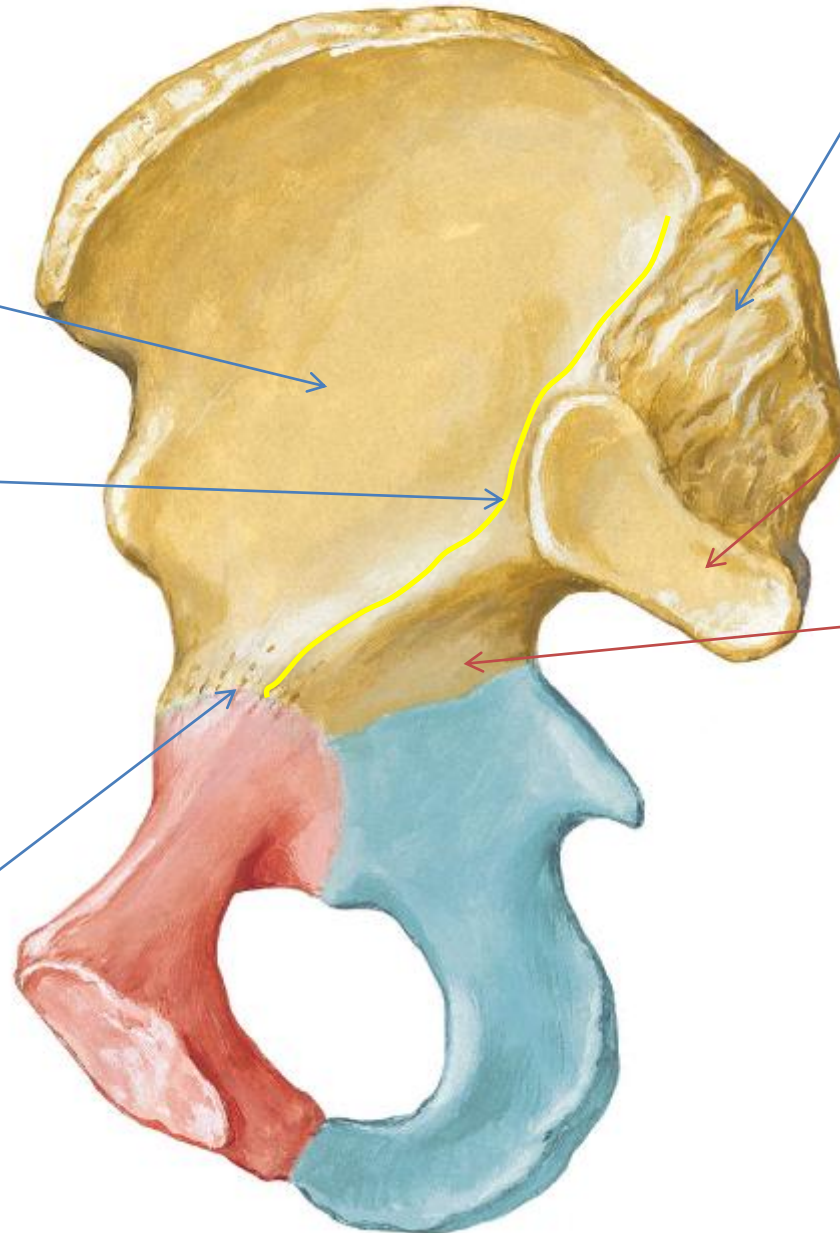
Hip (Coxal) Bone Medial View

The sacropelvic surface presents:

- 1- Iliac tuberosity: rough area that gives attachment to the interosseous and dorsal sacroiliac ligaments
- 2- auricular surface: Smooth area articulates with the sacrum to form the sacroiliac joint
- 3- pelvic surface: Smooth area

Iliac fossa

Medial border
Forms the arcuate line
Which extends to the ilio-pubic eminence



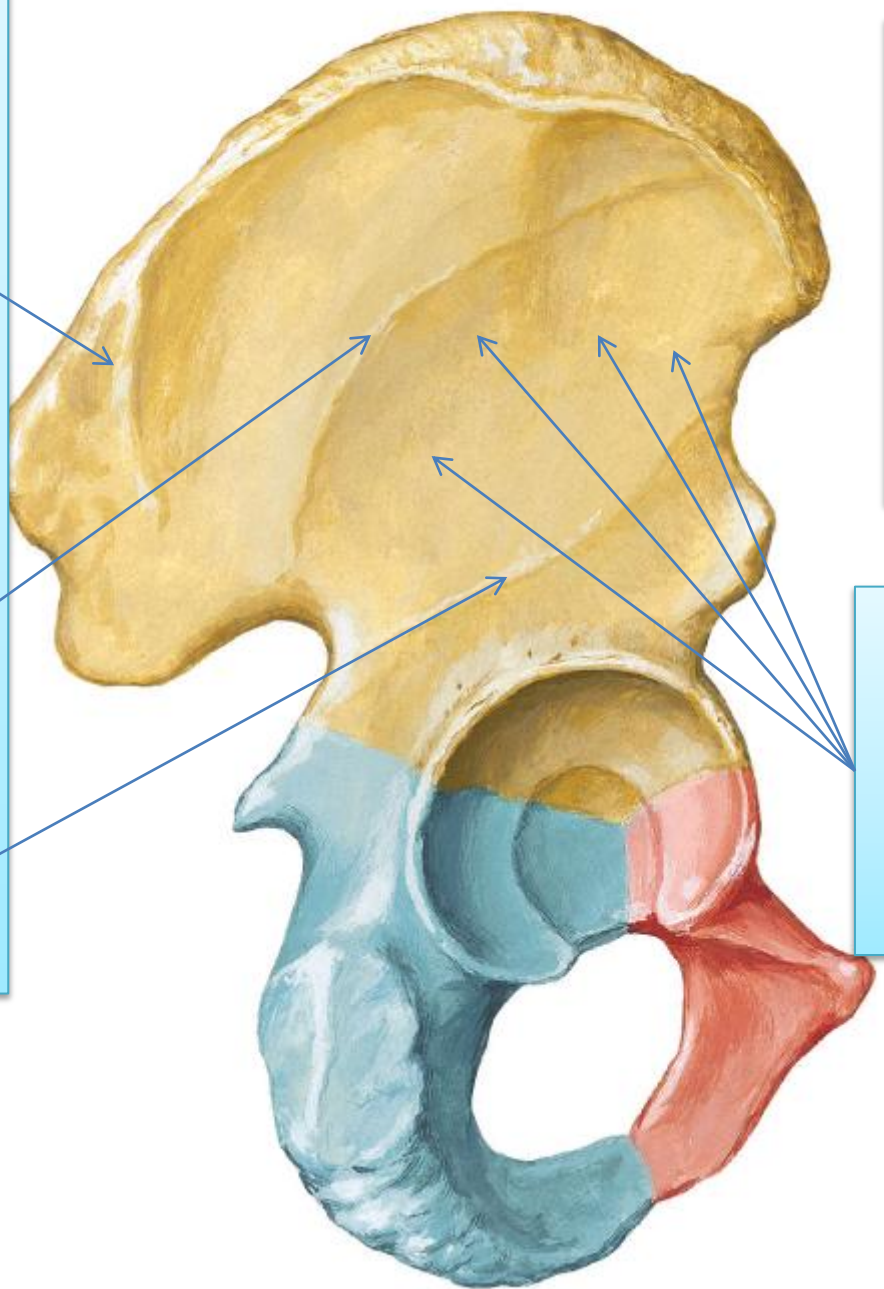
Hip (Coxal) Bone Lateral View

The gluteal surface is divided into 4 parts by three lines:

1- Posterior gluteal line

2- Middle gluteal line
Or anterior

3- Inferior gluteal line



MAKE SURE
you know the names of the muscles that are attached to the areas between these lines



Which muscle is attached to the area between the inferior and middle gluteal lines?

Hip Joint
Anterior View

Pubic bone

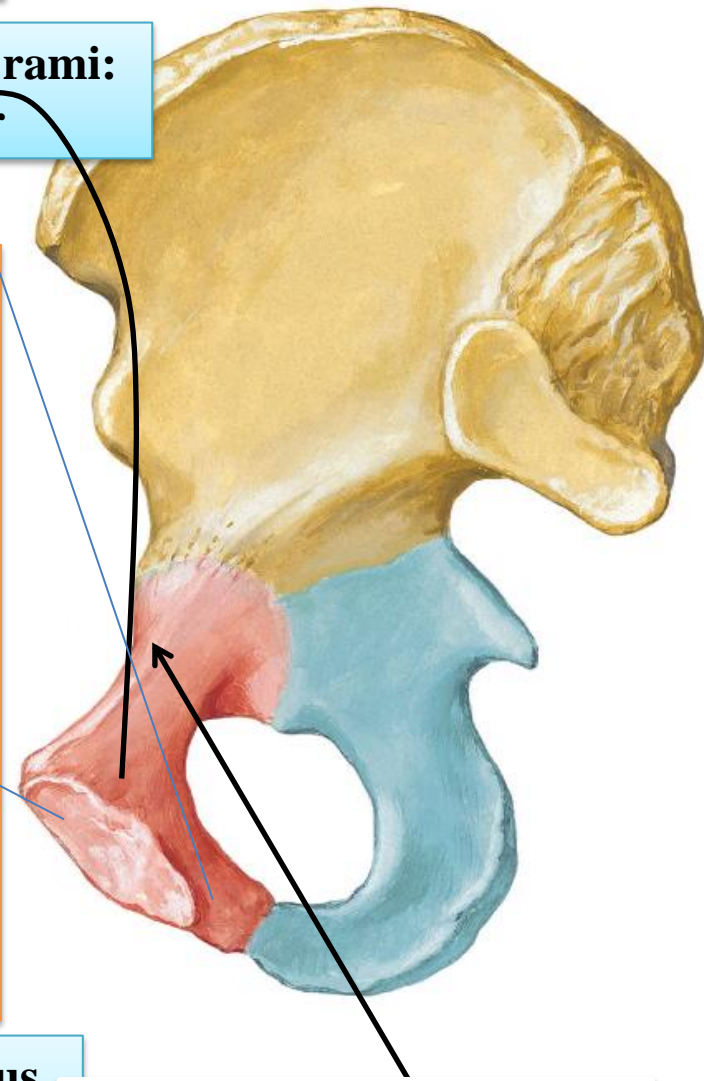
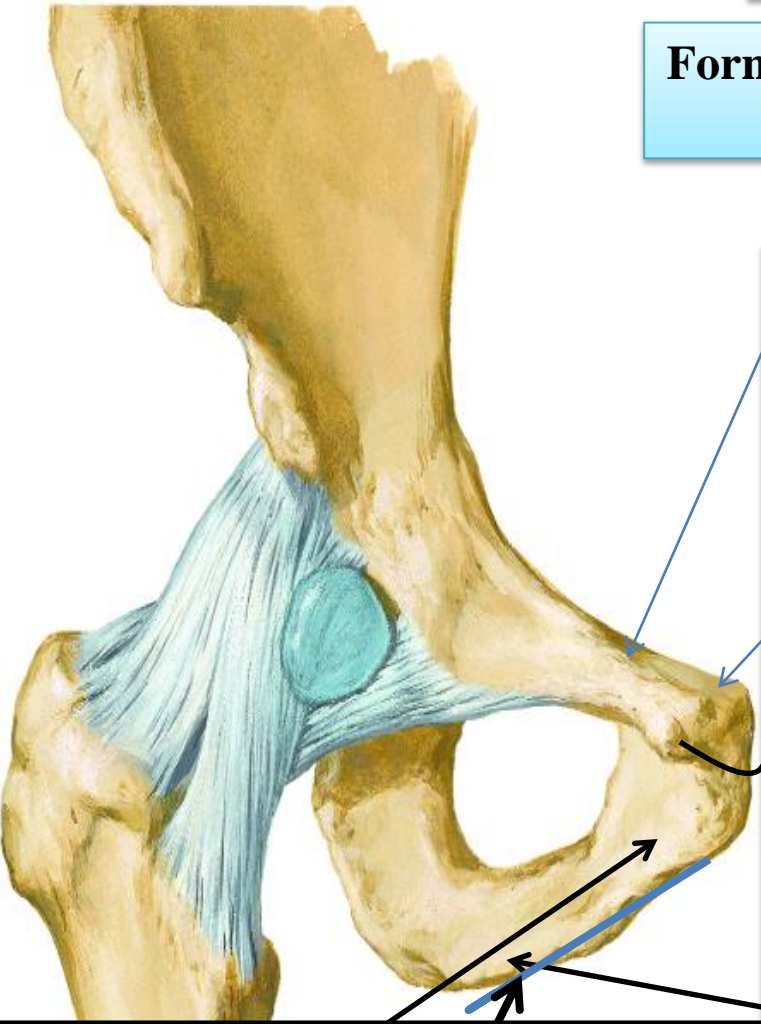
Hip (Coxal) Bone
Medial View

Formed of a body and two rami:
superior and inferior

The body is flattened and has:
1- an upper border called pubic crest that ends laterally by the pubic tubercle
2- symphyseal surface which articulates with the opposite pubis to form the pubic symphysis

Pectineal line

The inferior ramus of the pubic bone joins the ischial ramus to form the conjoined tendon.
The superior pubic ramus has a pectineal line on its medial surface



The ischium

Hip (Coxal) Bone
Lateral View

Body

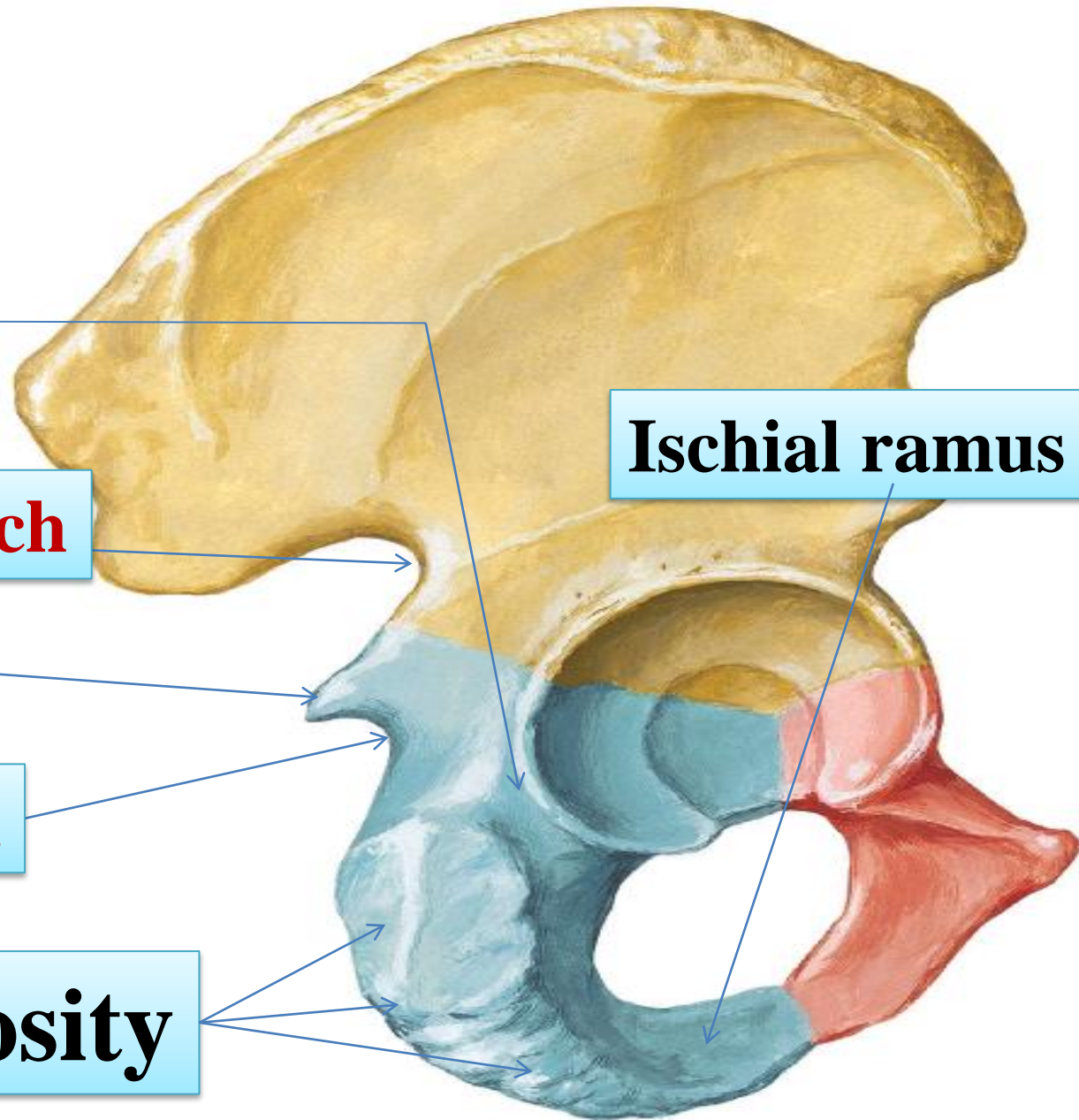
Ischial ramus

Greater sciatic notch

Ischial spine

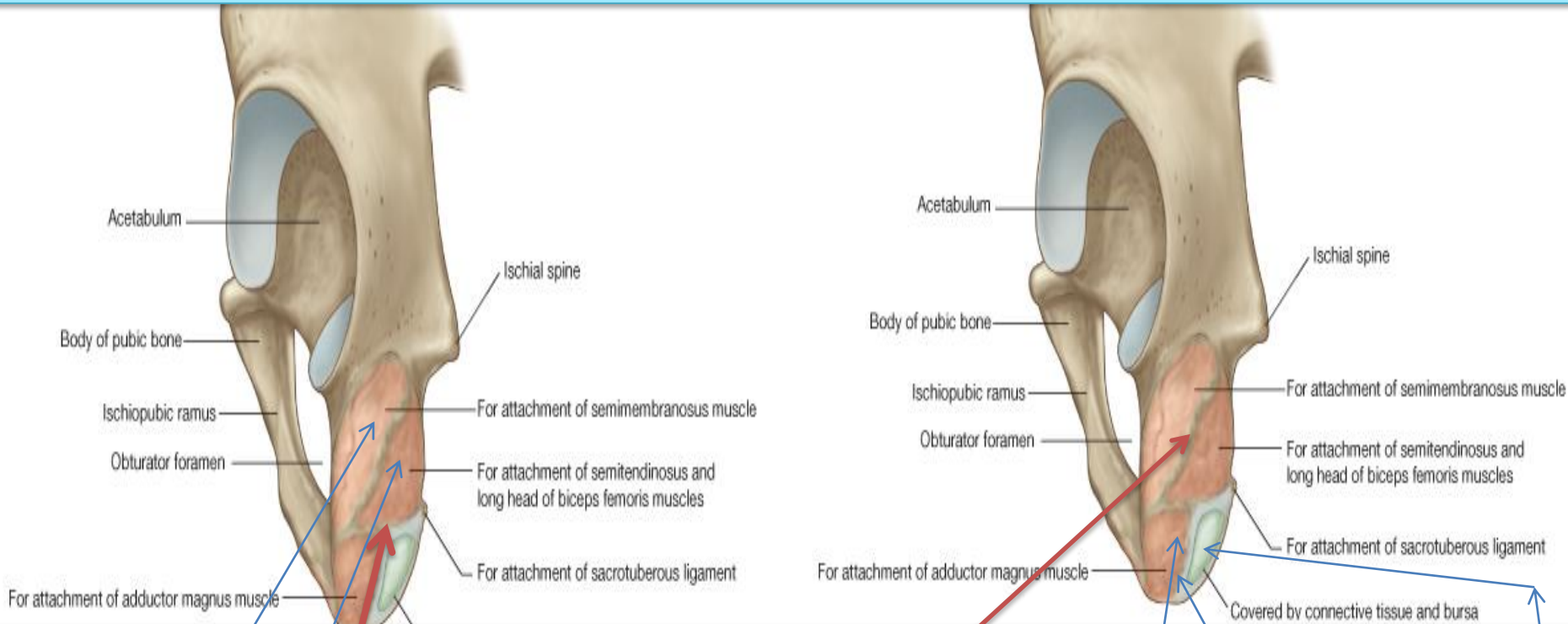
lesser sciatic notch

Ischial tuberosity



The *ischial tuberosity* is covered by *gluteus maximus* when one stands.

In the **sitting position** the muscle slips away laterally. To palpate this bony point, therefore, feel for it uncovered by *gluteus maximus* in **the flexed position** of the hip.



Ischial tuberosity

Divided by a transverse ridge into:

An upper quadrangular and a lower triangular parts

The upper quadrangular part is divided by an oblique ridge into:

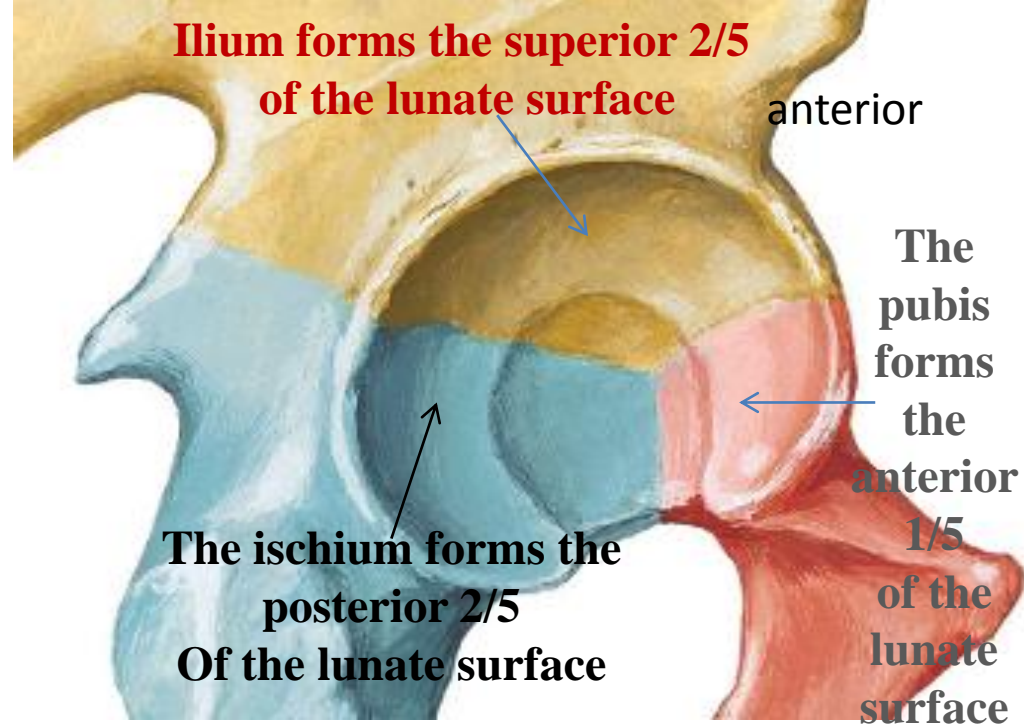
- 1-Upper lateral part for the attachment of semimembranosus
- 2-lower Medial for the attachment of semitendinosus and long head of biceps

The lower triangular part is divided by a longitudinal ridge into:

- 1-lateral part that gives attachment to the adductor part of the adductor magnus muscle
- 2-medial part (subcutaneous part)

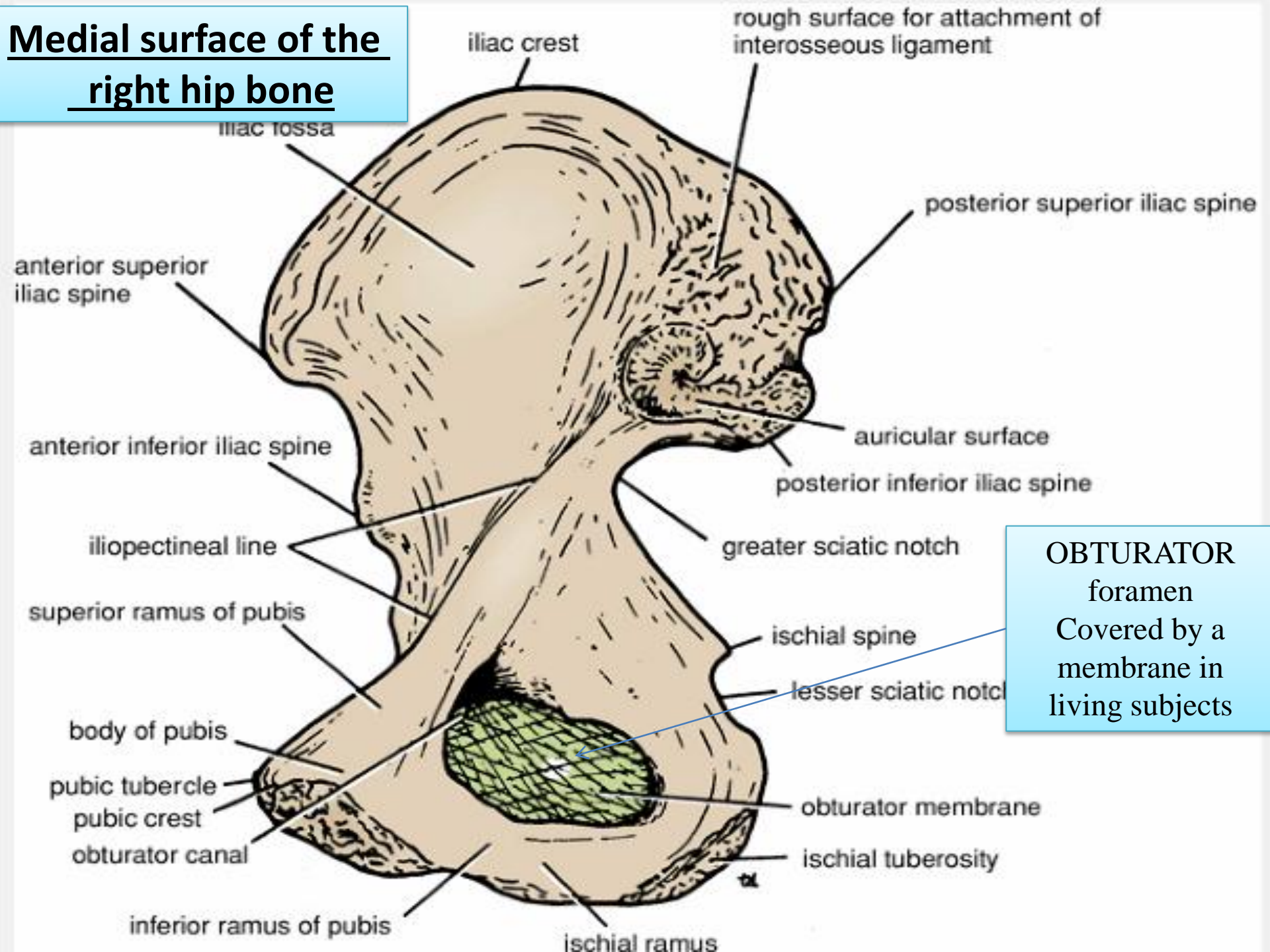
The Acetabulum

- It is a C-shaped cavity located on the lateral aspect of the hip bone
- directed *laterally, downwards and forwards*
- It is notched inferiorly by the acetabular notch which is bridged by the *transverse acetabular ligament* (part of the acetabular labrum)

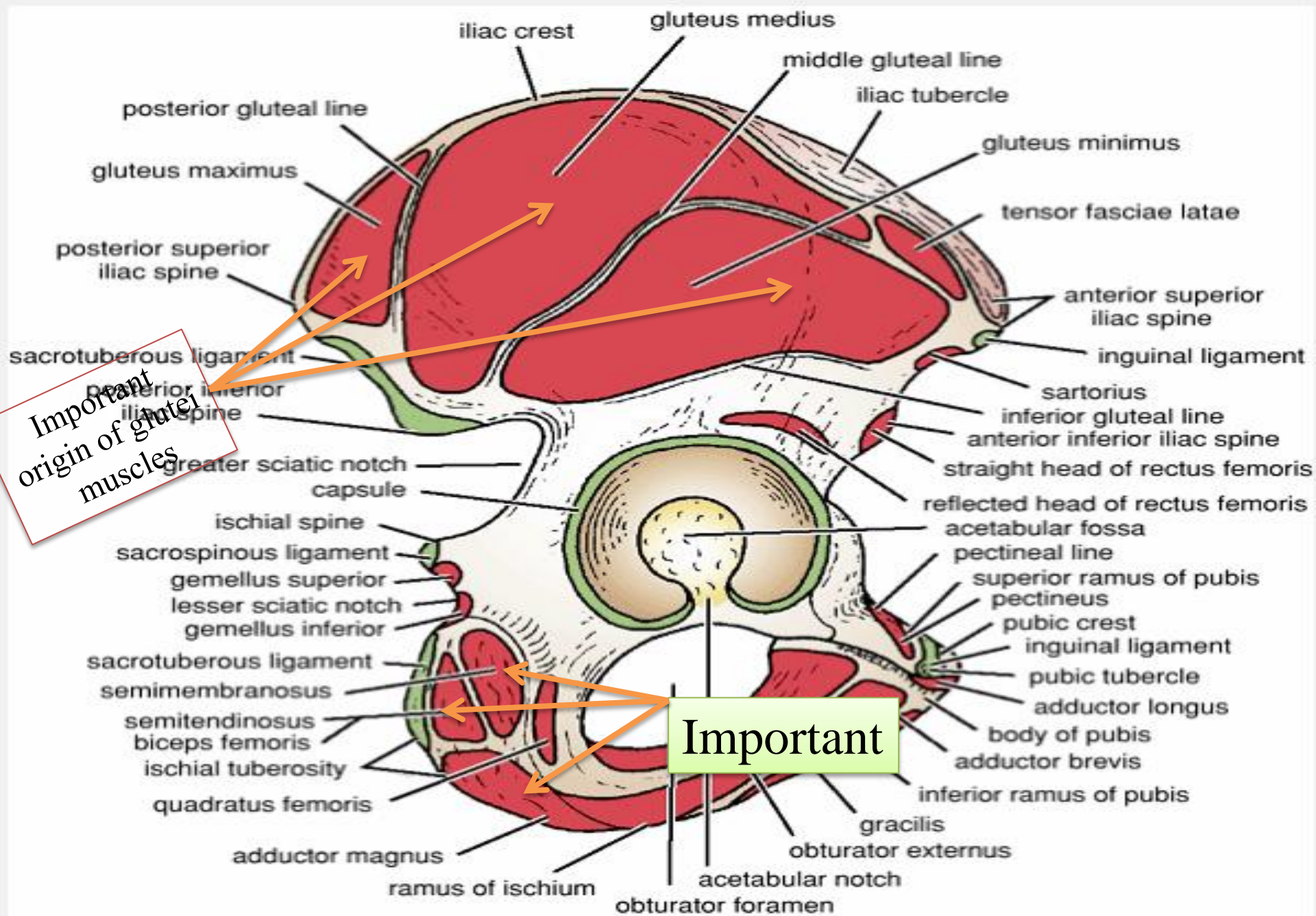


- The *acetabular ligament converts the acetabular notch into foramen*
- Its cavity presents a **horse-shoe shaped articular surface called Lunate surface**
- The Lunate surface surrounds a non articular depression called **acetabular fossa** which is occupied by fat tissue in living

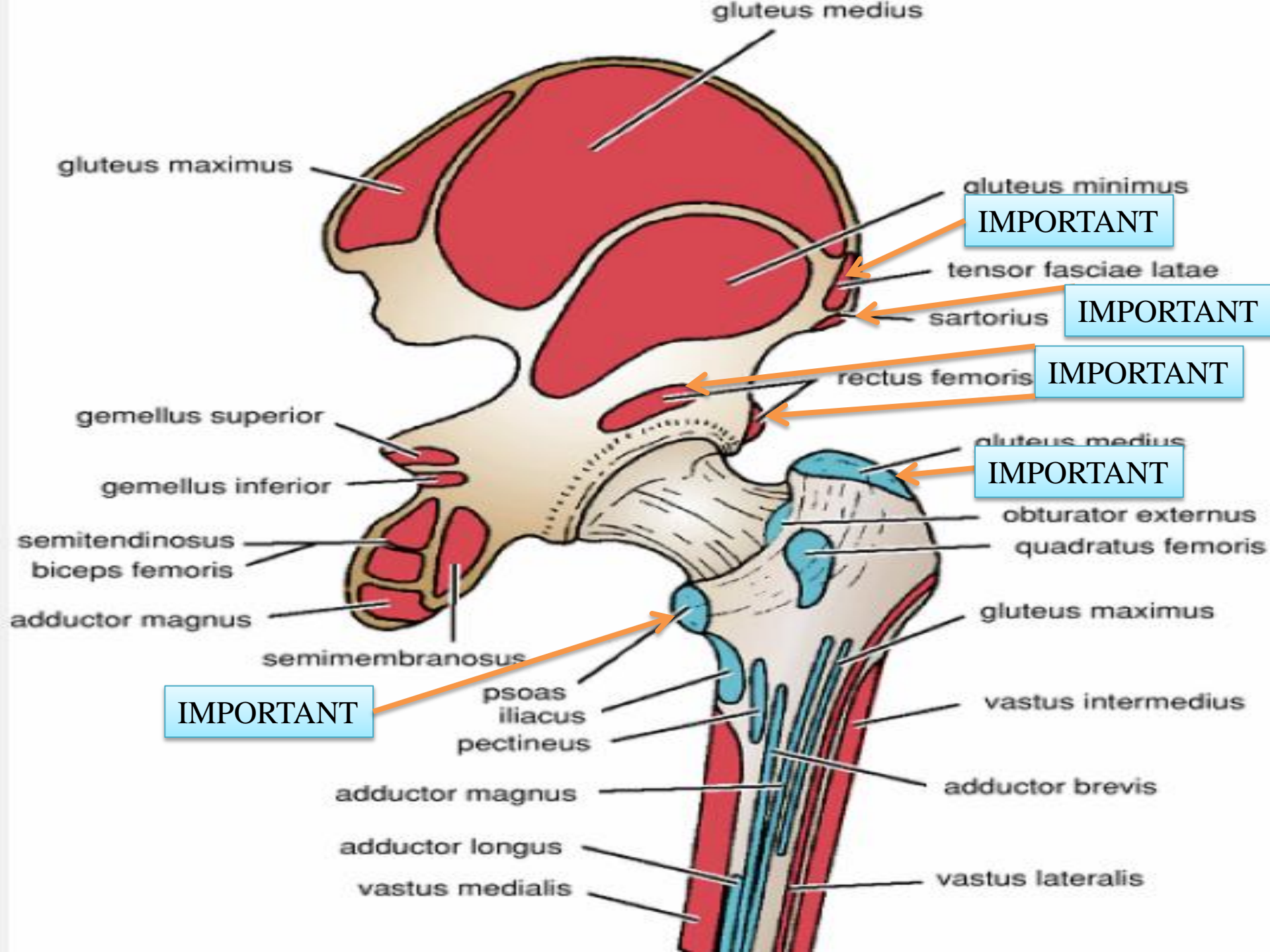
Medial surface of the right hip bone

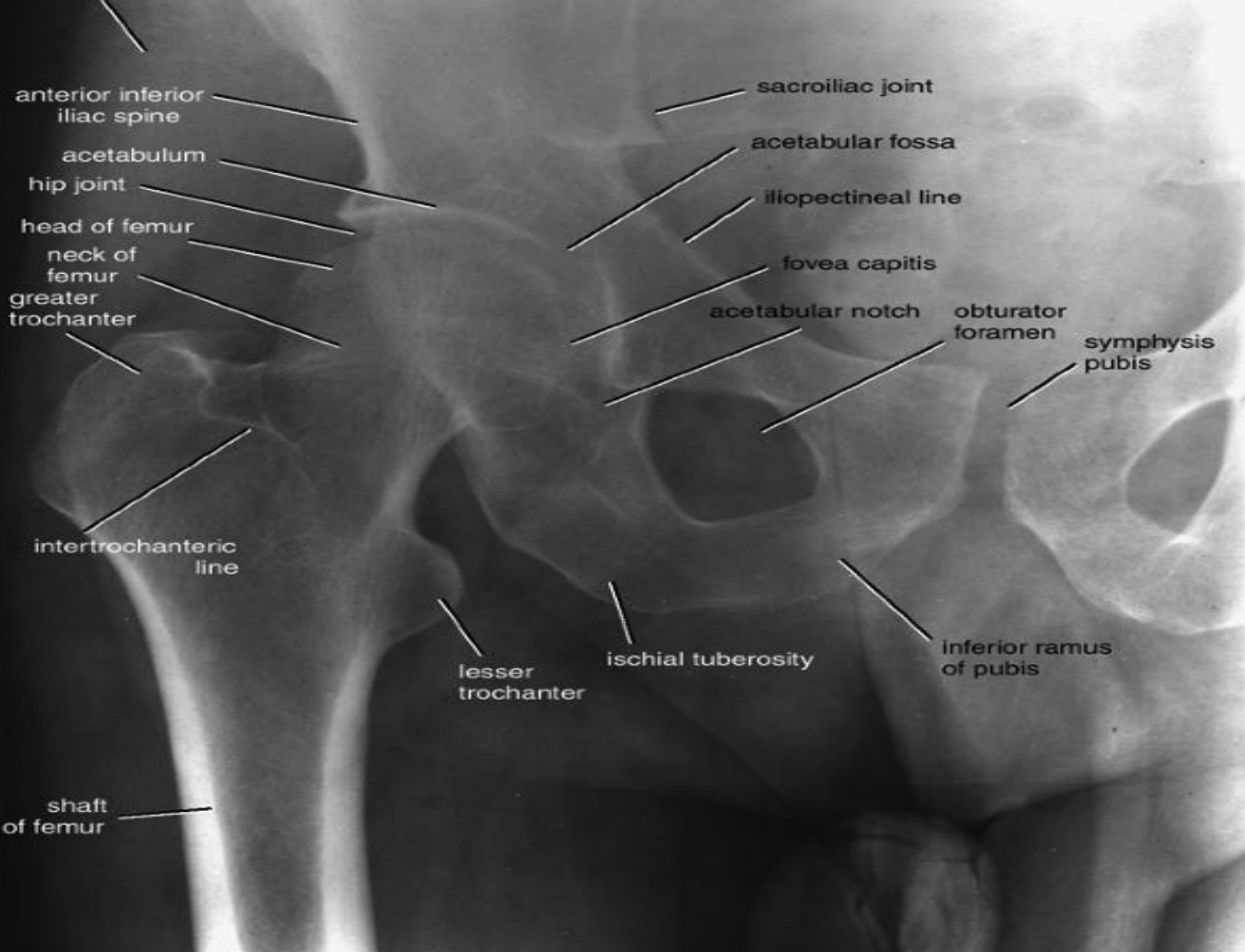


OBTURATOR foramen
Covered by a membrane in living subjects



Muscles and ligaments attached to the external surface of the right hip bone





anterior inferior
iliac spine

acetabulum

hip joint

head of femur

neck of
femur

greater
trochanter

intertrochanteric
line

shaft
of femur

sacroiliac joint

acetabular fossa

iliopectineal line

fovea capitis

acetabular notch

obturator
foramen

symphysis
pubis

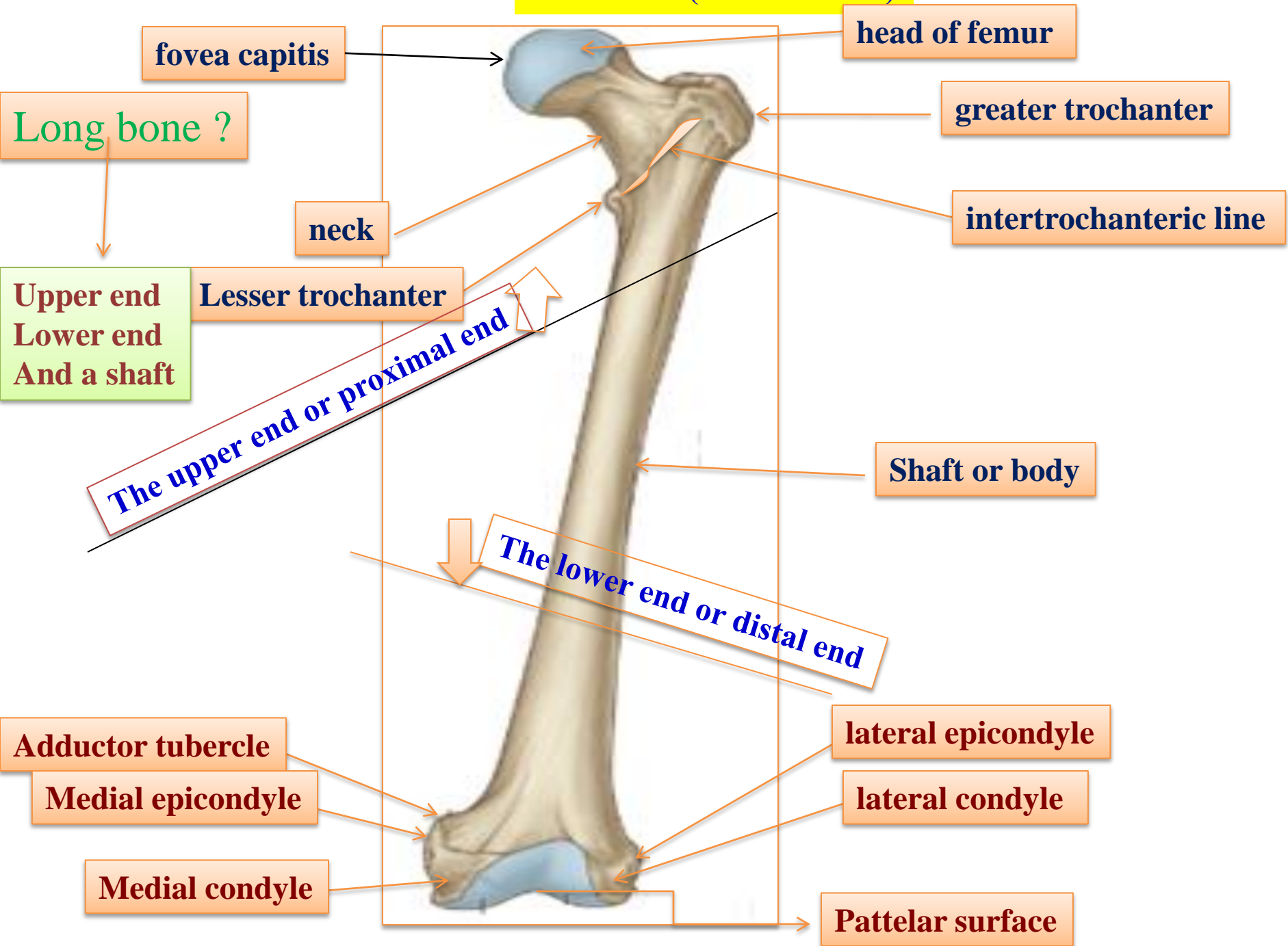
inferior ramus
of pubis

lesser
trochanter

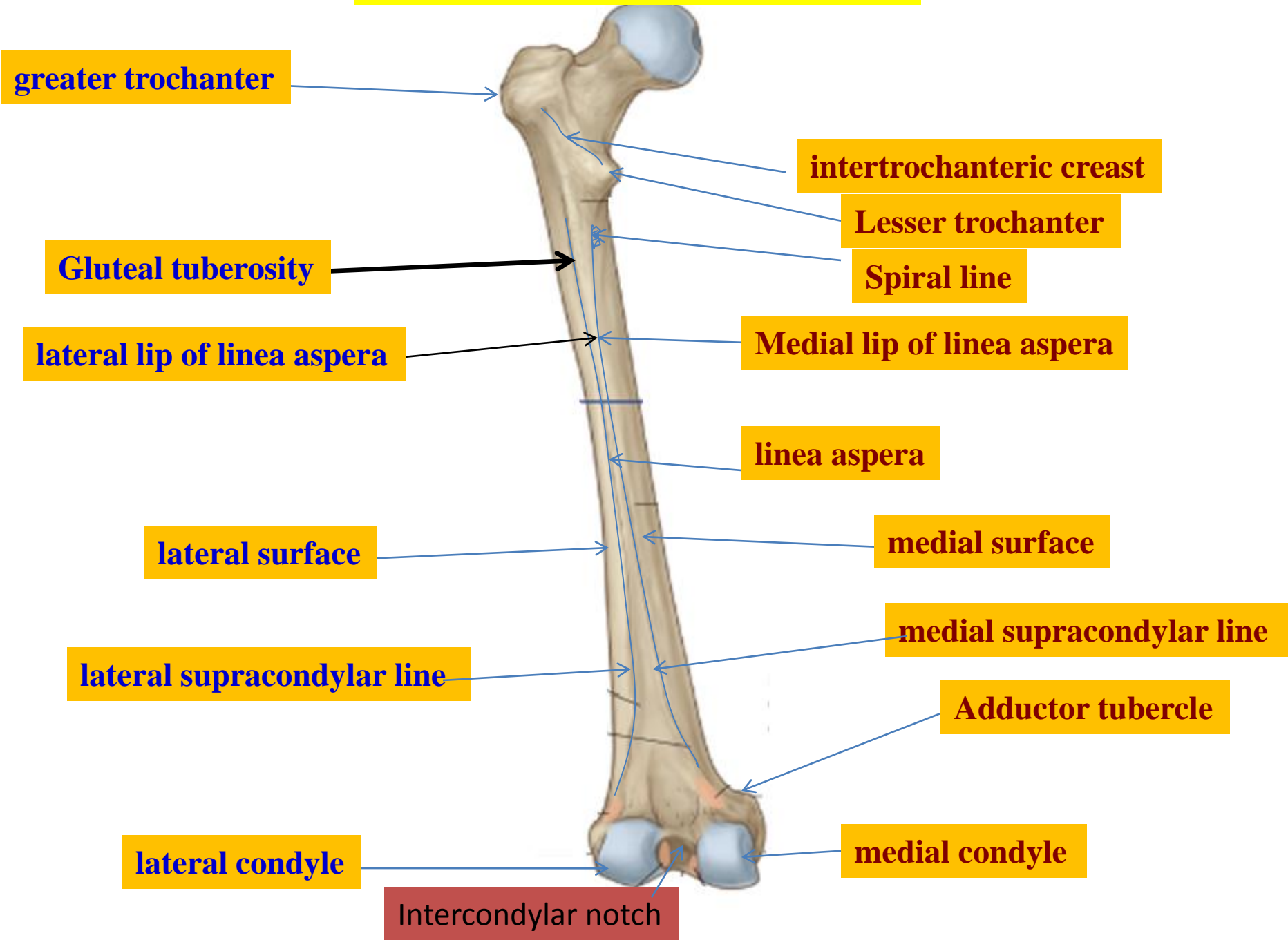
ischial tuberosity

BONES THE THIGH

Left femur (anterior view)

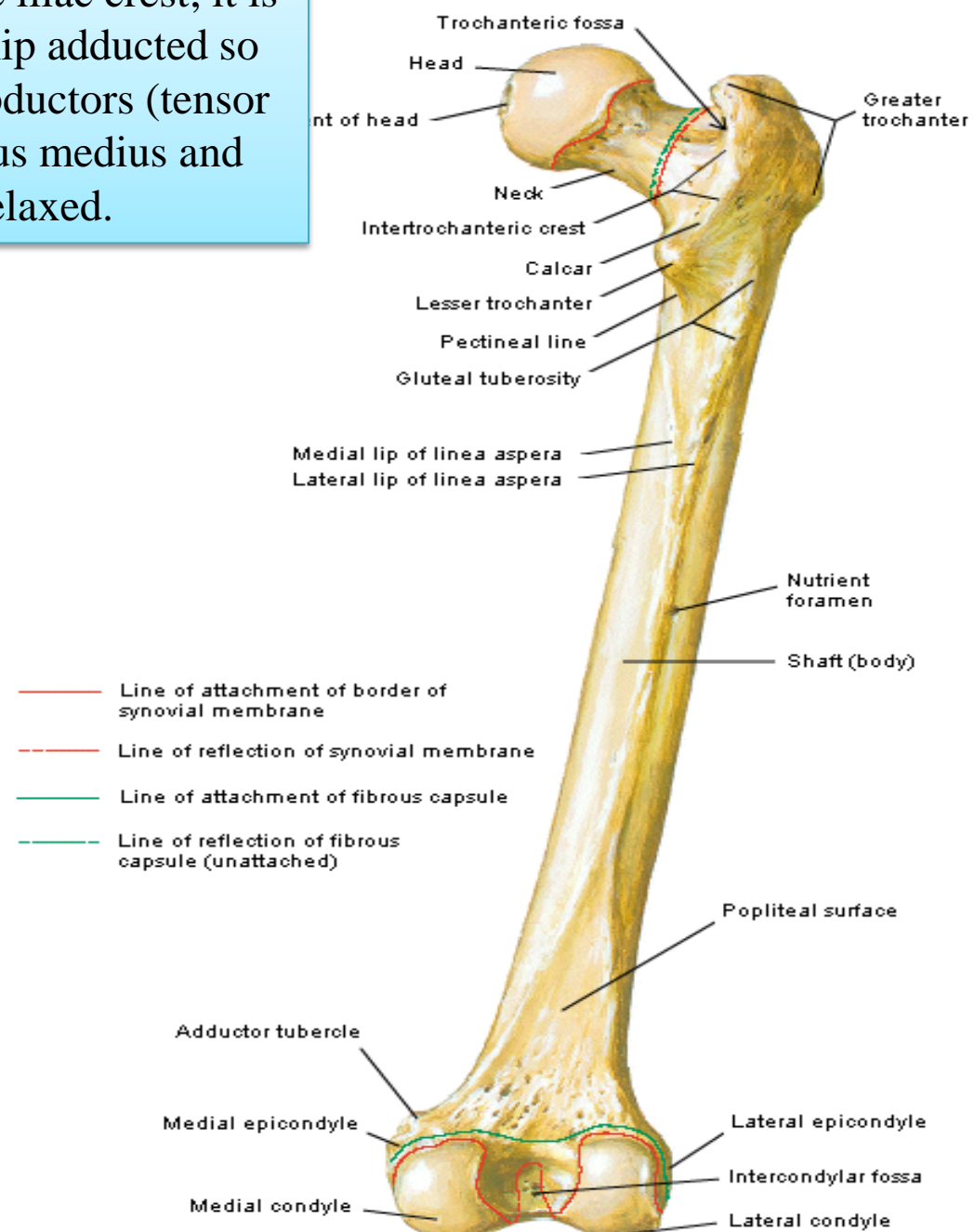


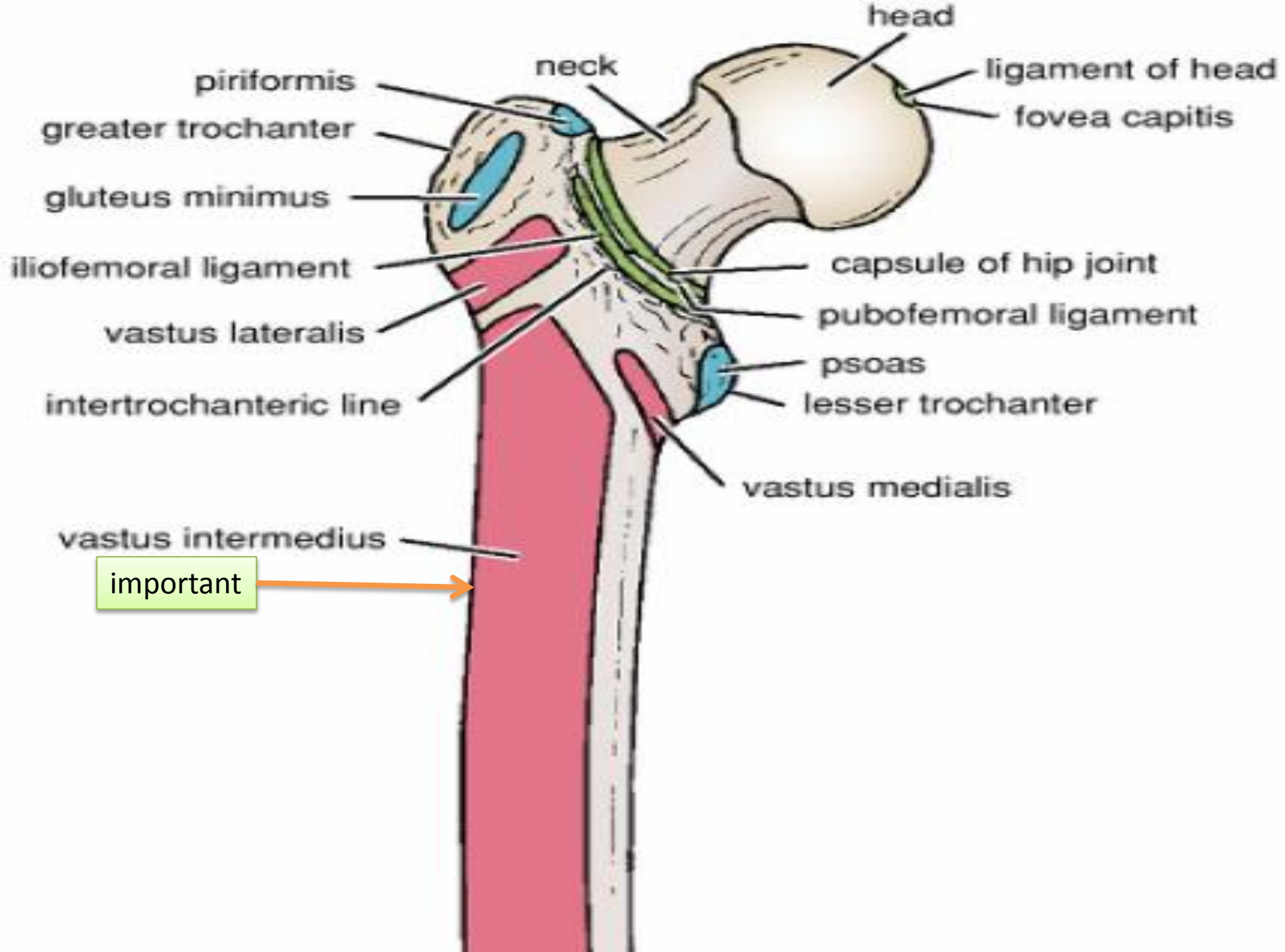
Left femur (posterior view)

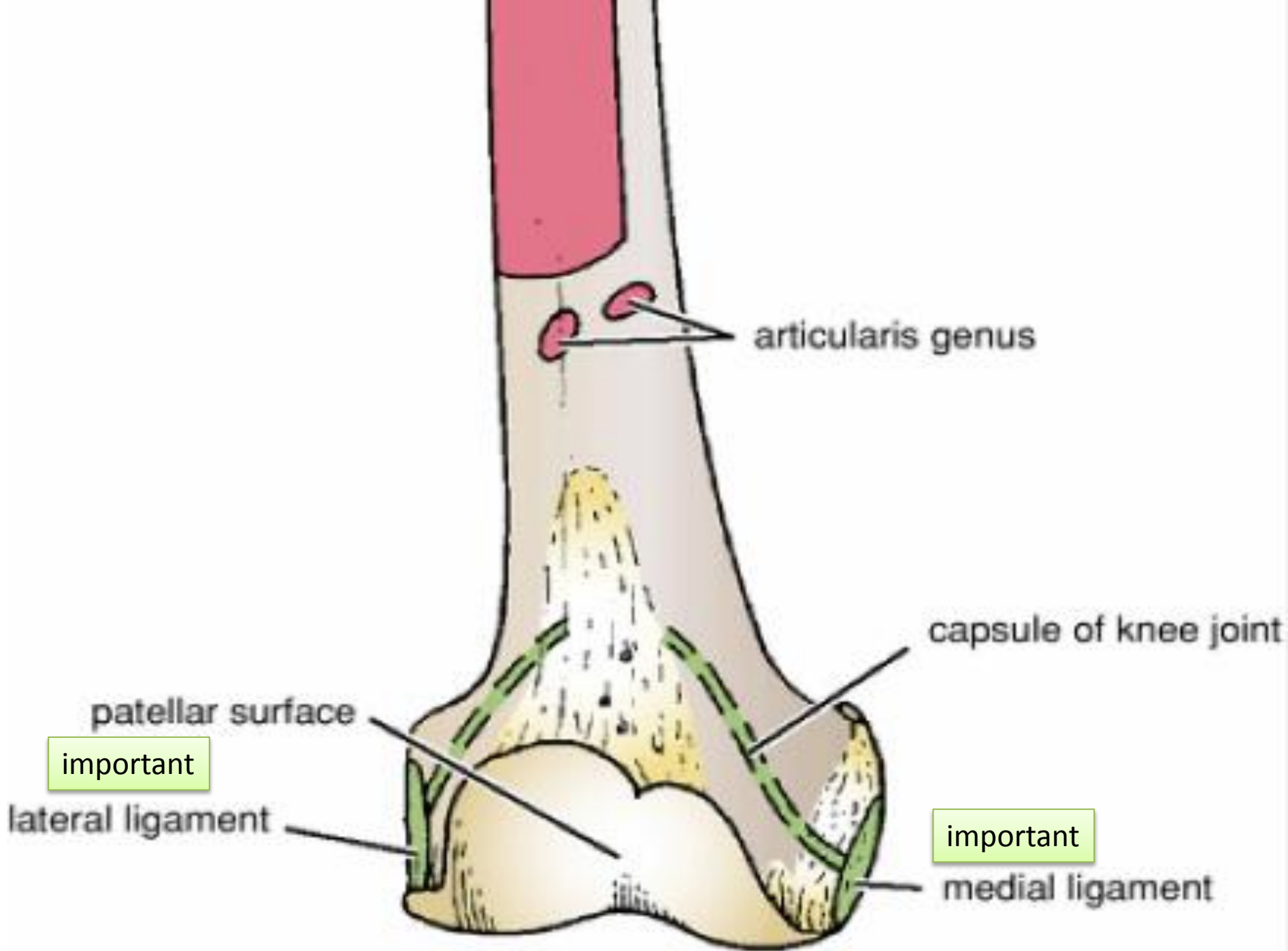


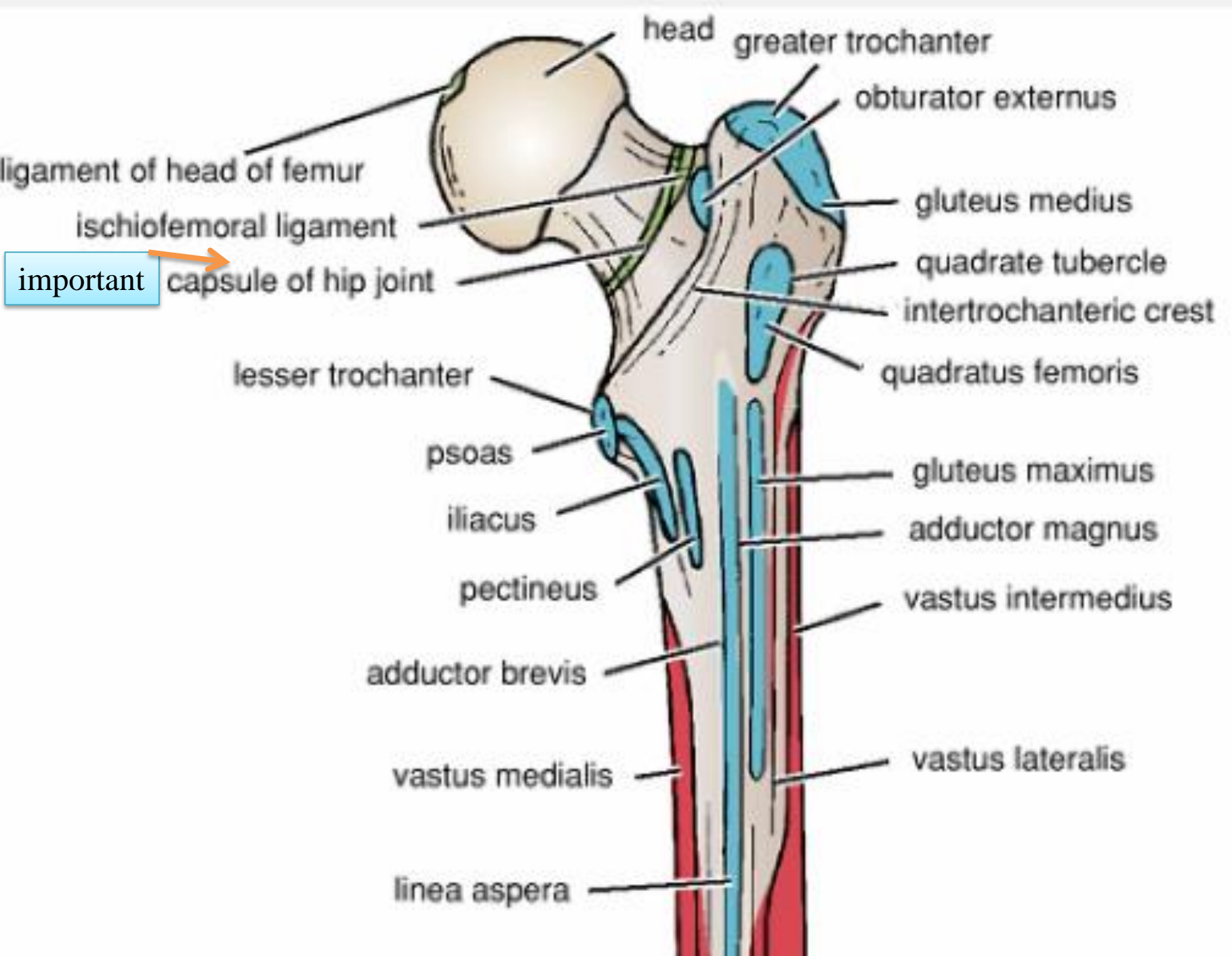
The greater trochanter of the femur lies a hand's breadth below the iliac crest; it is best palpated with the hip adducted so that the overlying hip abductors (tensor fasciae latae and gluteus medius and minimus) are relaxed.

Femur Posterior View









important →

