First practical session

2019

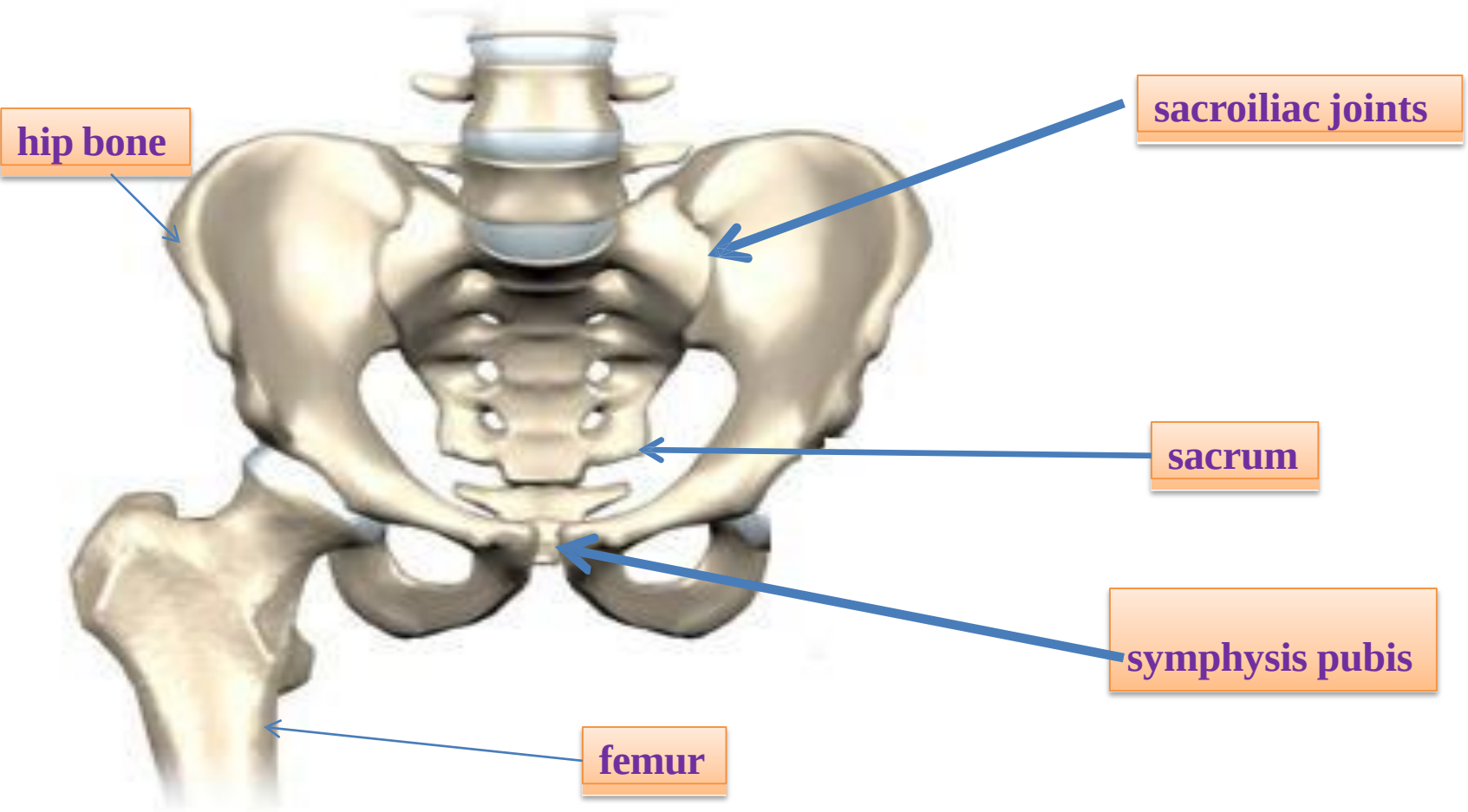
BONES OF THE GLUTEAL REGION

The *pelvic girdle*

The hip bones articulate with the **sacrum**

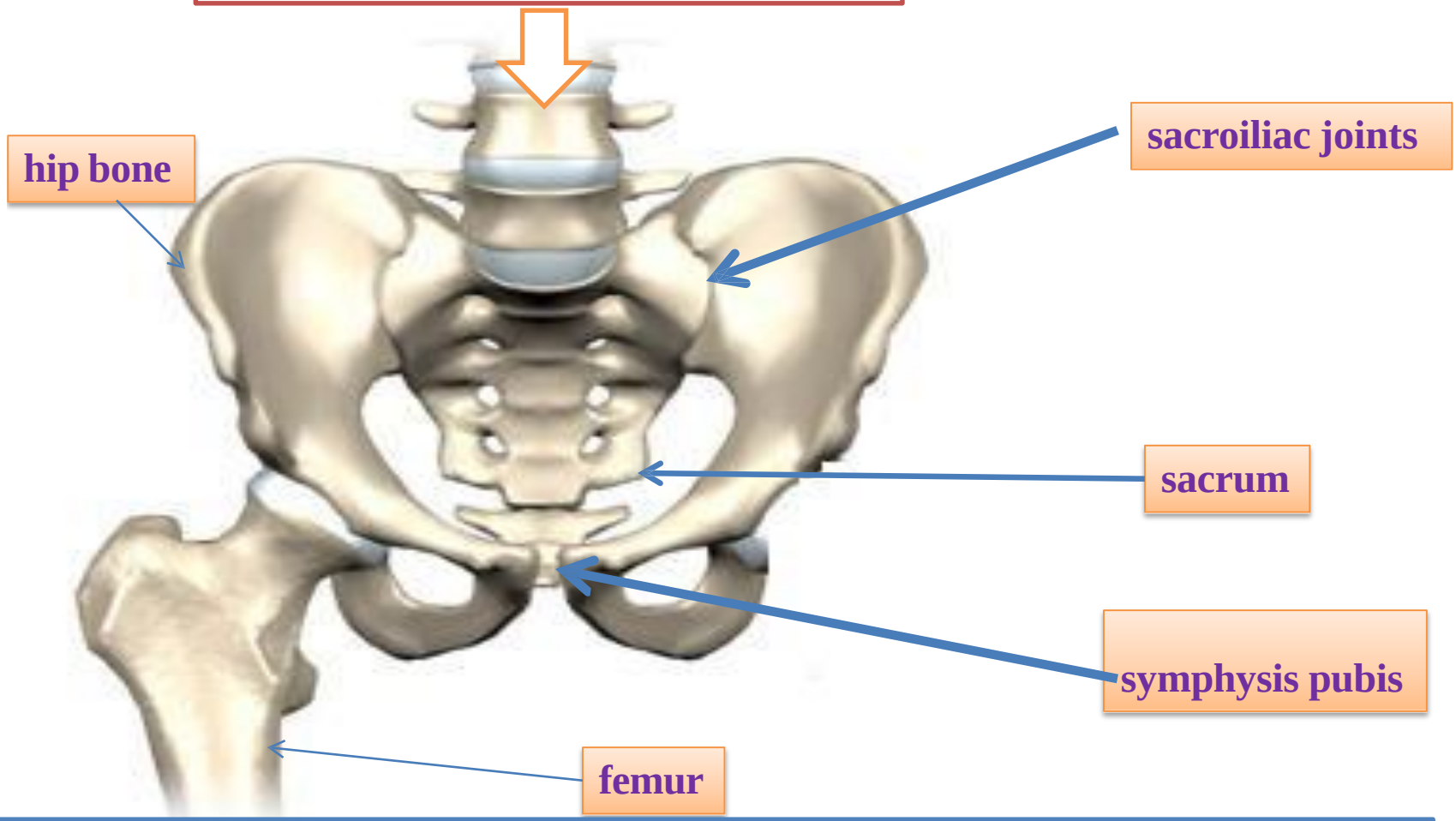
at the **sacroiliac joints posteriorly**

while **anteriorly** they articulate with one another at the **symphysis pubis**



The 2 hip bones with the sacrum form the pelvis

Now look! where does the pelvis look?
It is looking right at you! Never upwards



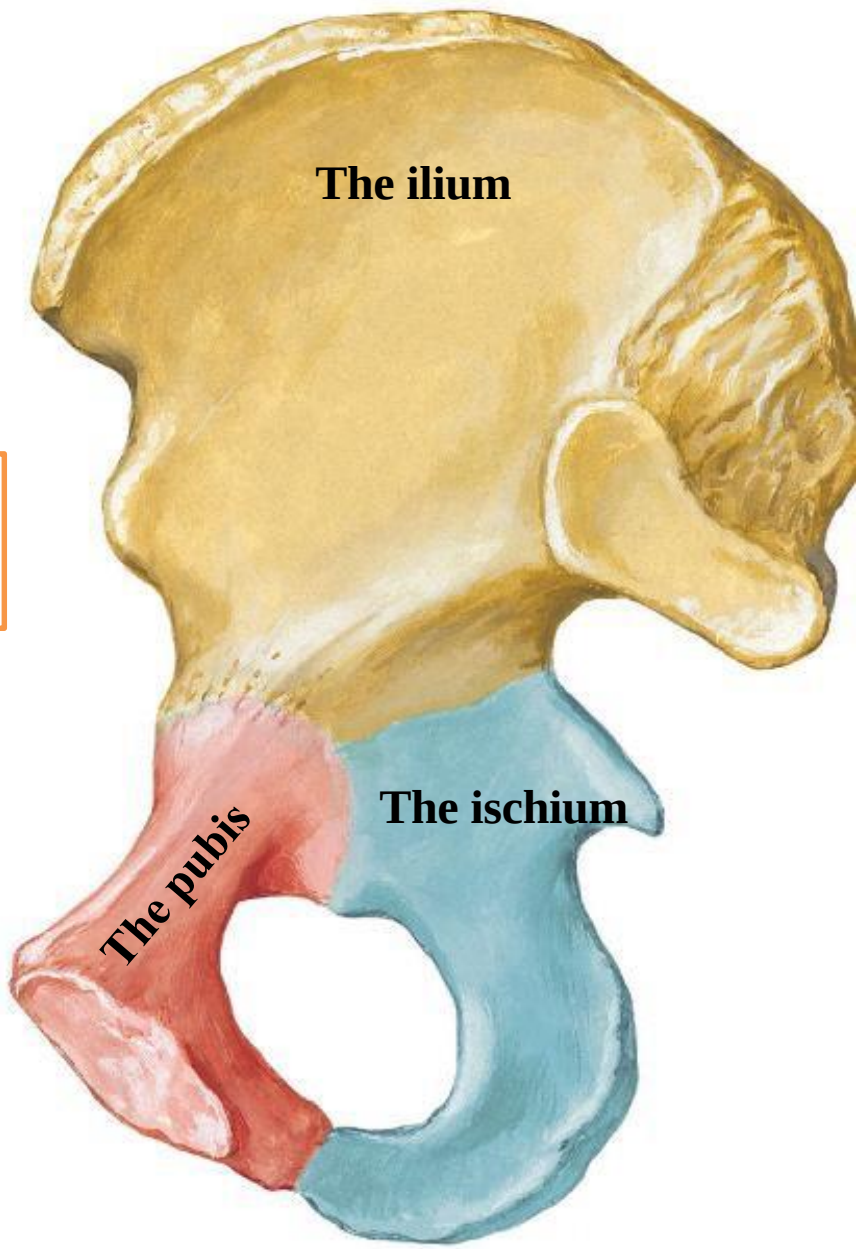
During your first practical session, make sure to have a look at the anatomical position of the pelvis

THE HIP BONE

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**

However!!!!!!!



The ilium , ischium and pubis

meet one another by means of

triradiate (Y-shaped)

cartilage at the **Acetabulum.**

While *the inferior ramus of the*

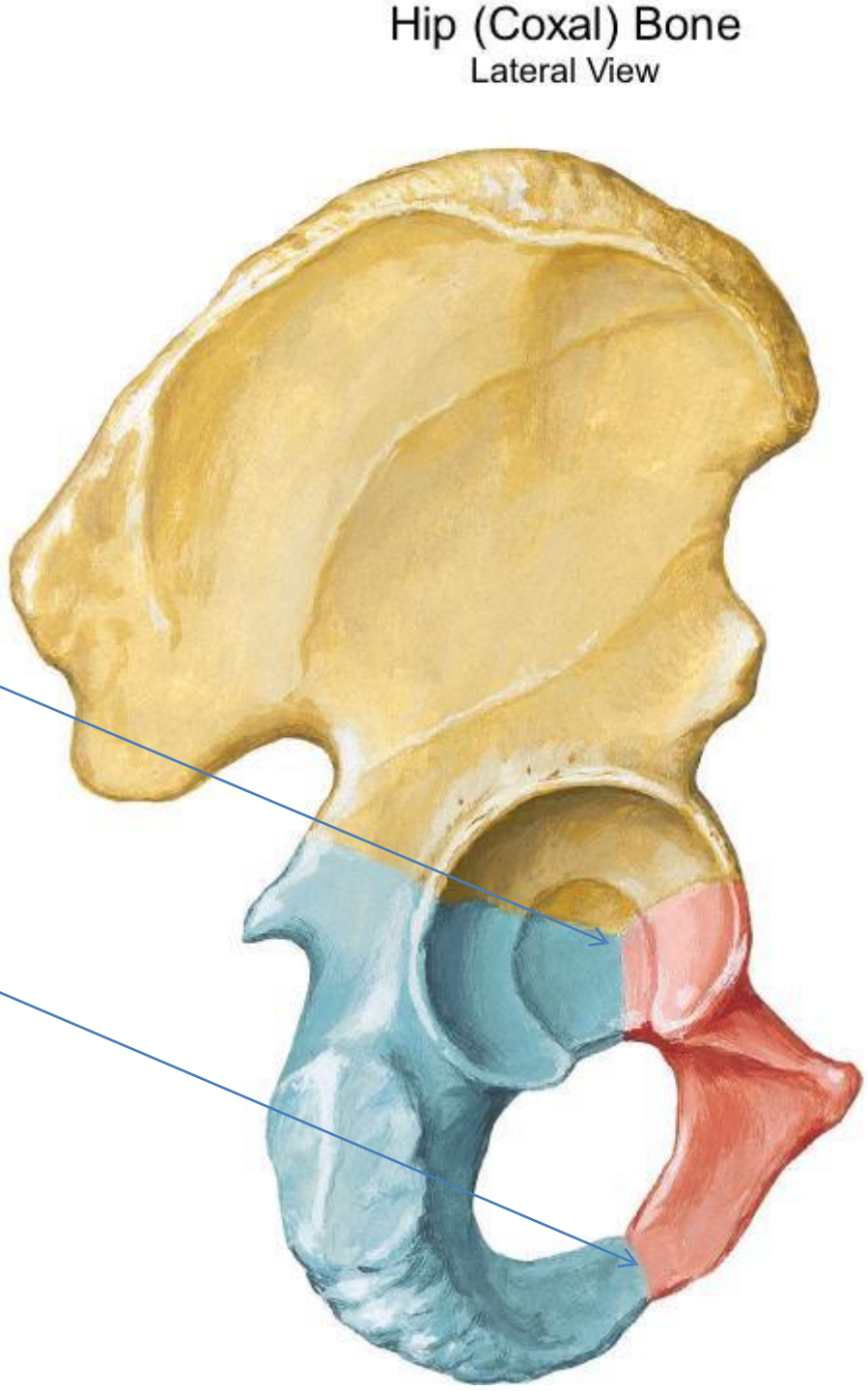
pubis meets with the ramus

of the ischium by

cartilaginous union

Ossifies near the age of 7 years

What is the idea here?



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

All three bones are connected to each other by **triradiate** cartilage

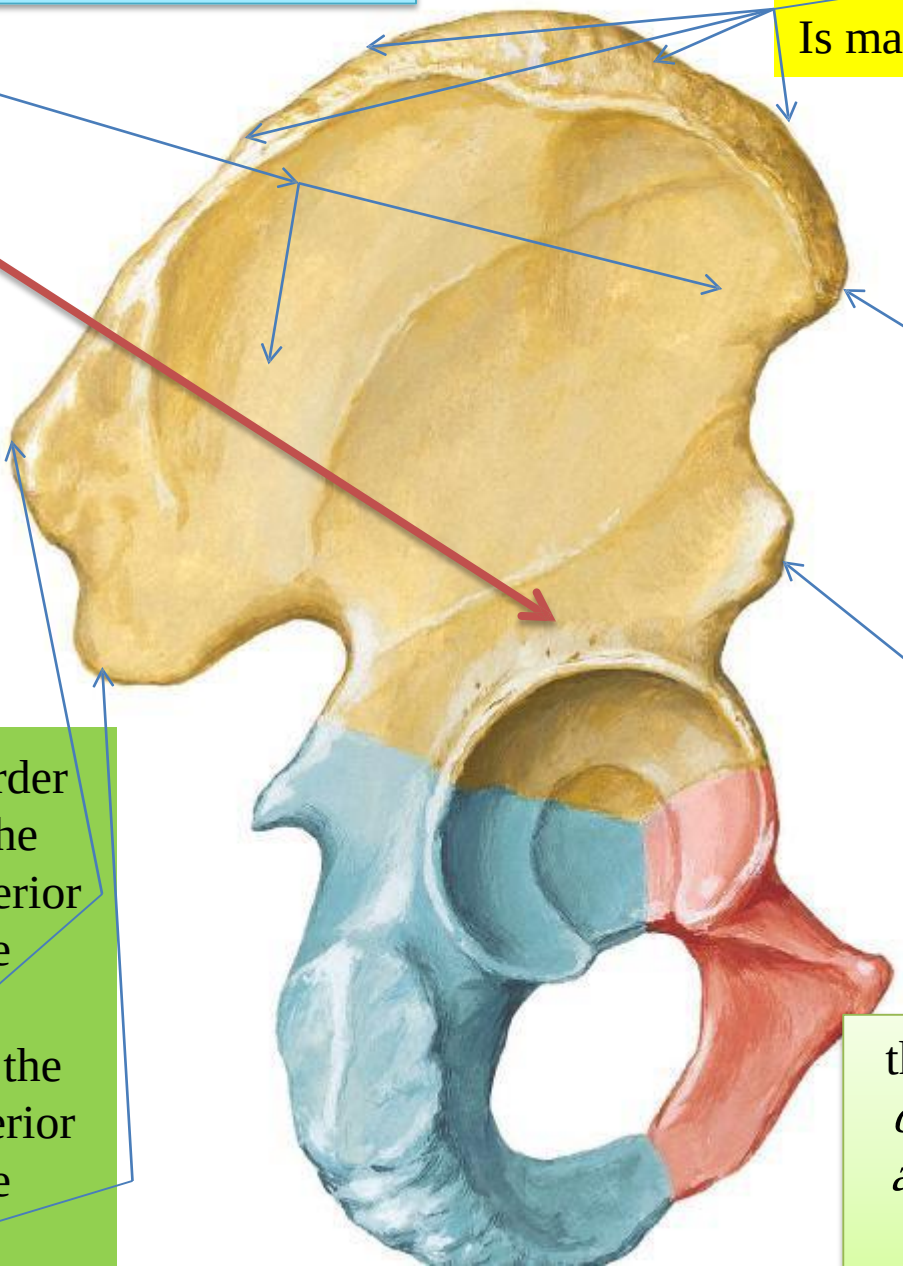
Read only

Anteroposterior radiograph of the pelvis of a boy aged 7.
1. Ilium. 2. Part of triradiate growth cartilage. 3. Superior femoral epiphysis. **4. Cartilaginous growth plates. 5. Ossifying greater trochanter.6. Ischium. 7. Pubis. 8. Cartilage between pubic and ischial rami.**

1-The Ilium

Two parts:
1- Ala
2- Body

Hip (Coxal) Bone
Lateral View



Right hip bone

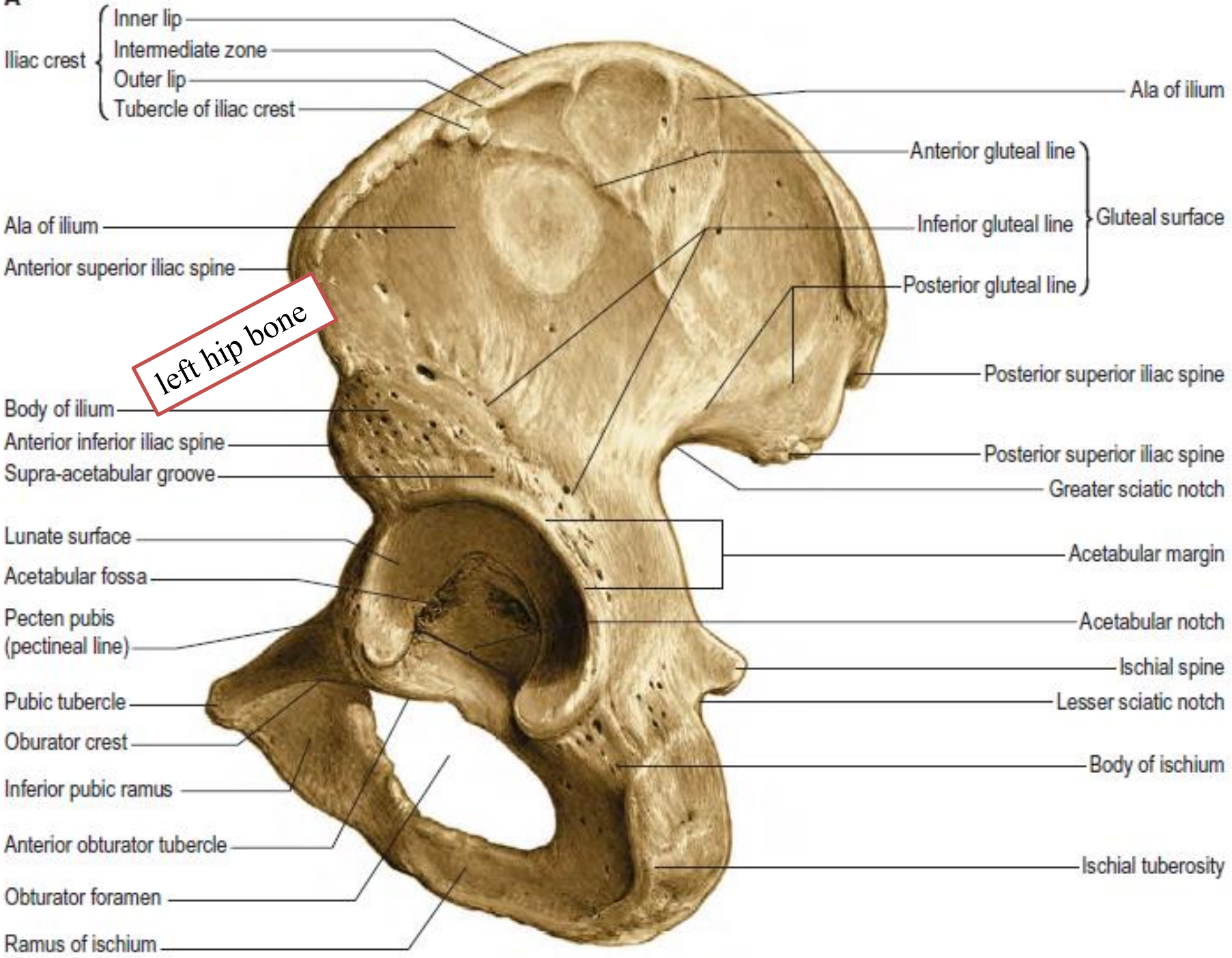
Superior border
Is made by the iliac crest

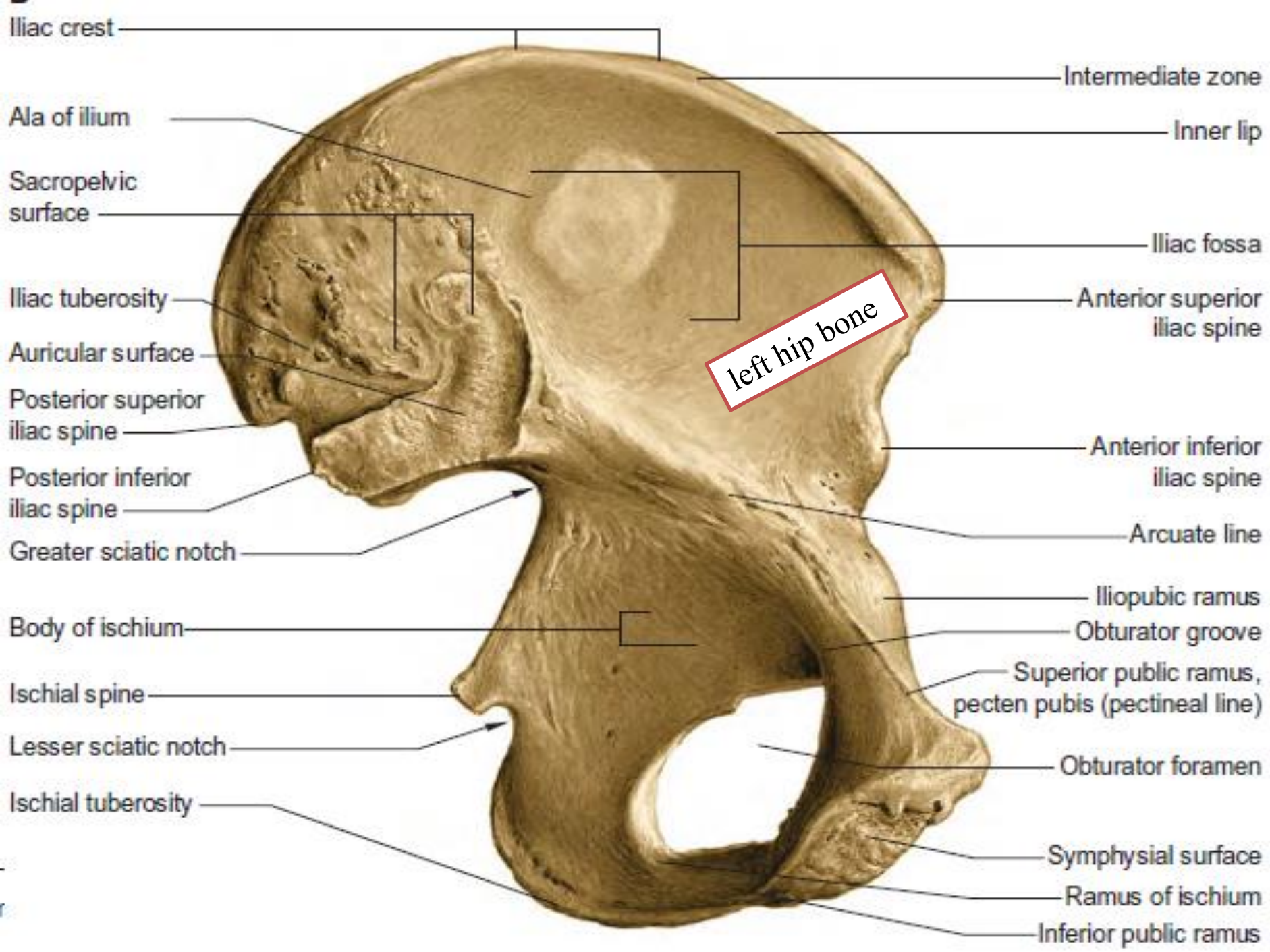
Anterior border
Begins at the anterior superior iliac spine (A.S.I.S) and ends at the anterior Inferior iliac spine (A.I.I.S)

Three surfaces
١ gluteal surface
٢ iliac fossa
٣ 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


Iliac crest
Inner lip
Intermediate zone
Outer lip
Tubercle of iliac crest
Ala of ilium
Anterior gluteal line
Inferior gluteal line
Posterior gluteal line
Gluteal surface
Ala of ilium
Anterior superior iliac spine
left hip bone
Posterior superior iliac spine
Body of ilium
Anterior inferior iliac spine
Supra-acetabular groove
Posterior superior iliac spine
Greater sciatic notch
Lunate surface
Acetabular fossa
Acetabular margin
Pecten pubis
(pectineal line)
Acetabular notch
Ischial spine
Pubic tubercle
Lesser sciatic notch
Oburator crest
Body of ischium
Inferior pubic ramus
Anterior obturator tubercle
Ischial tuberosity
Obturator foramen
Ramus of ischium

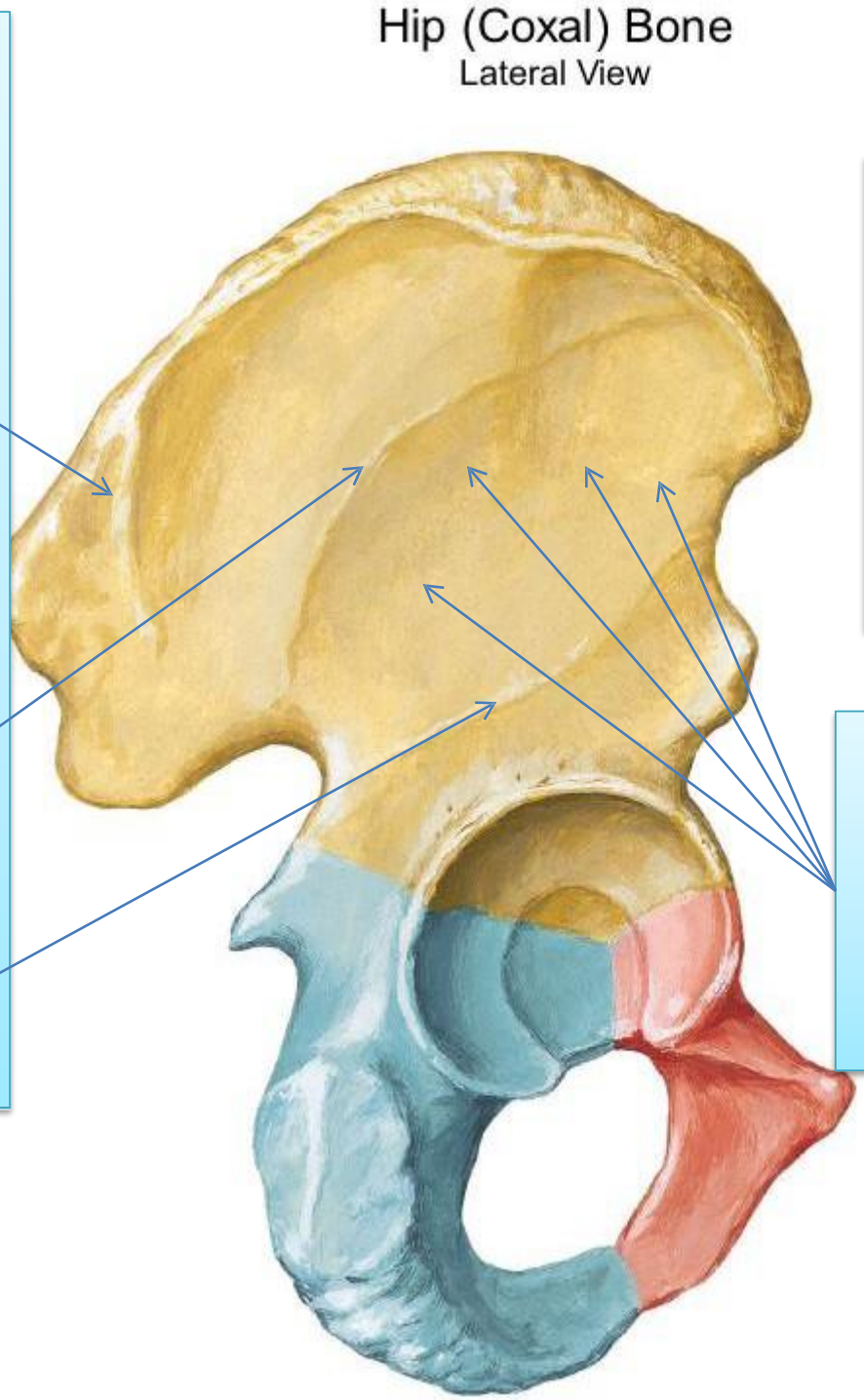

Iliac crest
Ala of ilium
Sacropelvic surface
Iliac tuberosity
Auricular surface
Posterior superior iliac spine
Posterior inferior iliac spine
Greater sciatic notch
Body of ischium
Ischial spine
Lesser sciatic notch
Ischial tuberosity
Intermediate zone
Inner lip
Iliac fossa
Anterior superior iliac spine
left hip bone
Anterior inferior iliac spine
Arcuate line
Iliopubic ramus
Obturator groove
Superior public ramus, pecten pubis (pectineal line)
Obturator foramen
Symphysial surface
Ramus of ischium
Inferior public ramus

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

1- Posterior gluteal line

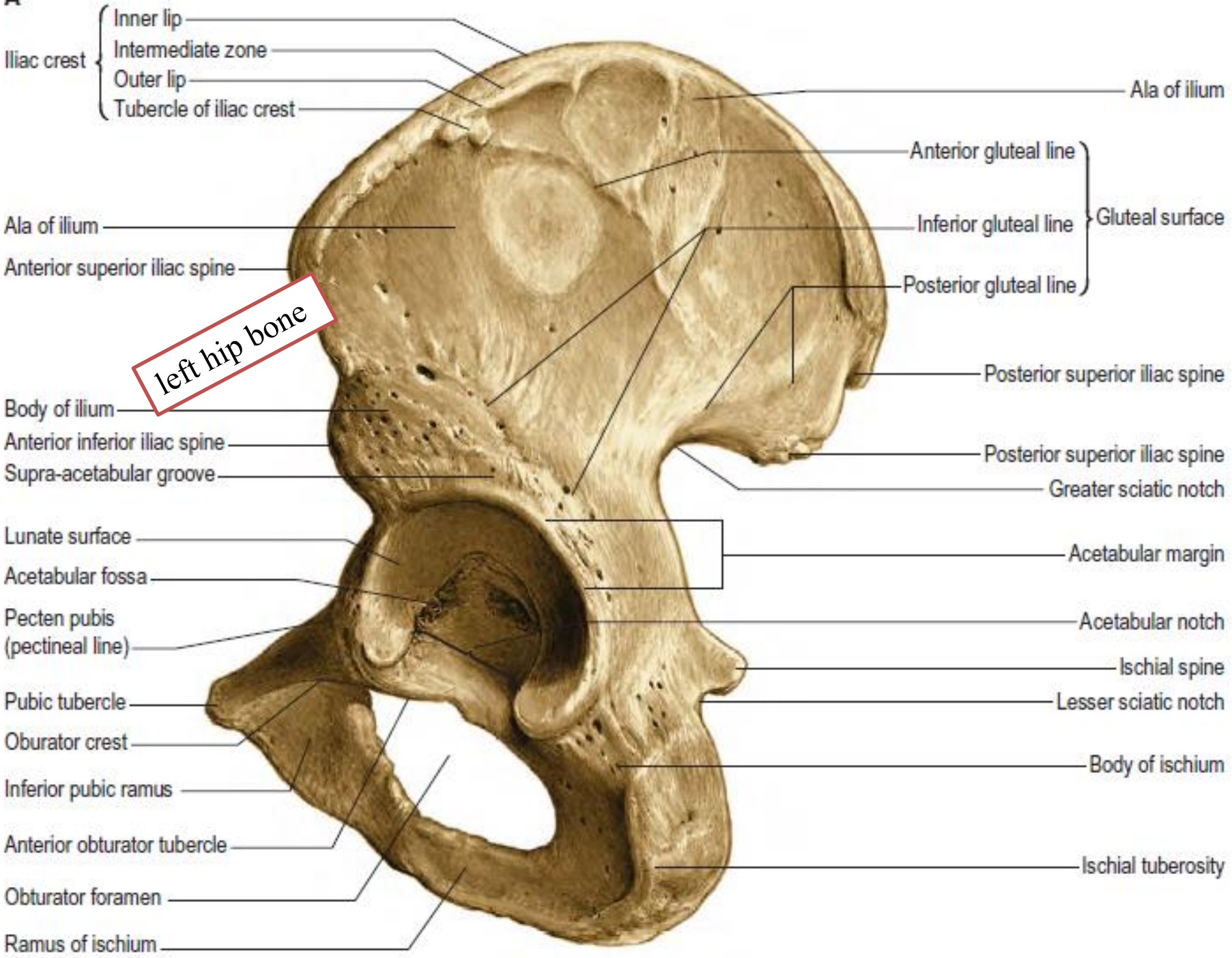
2- Middle gluteal line
Or anterior

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?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Body of ischium
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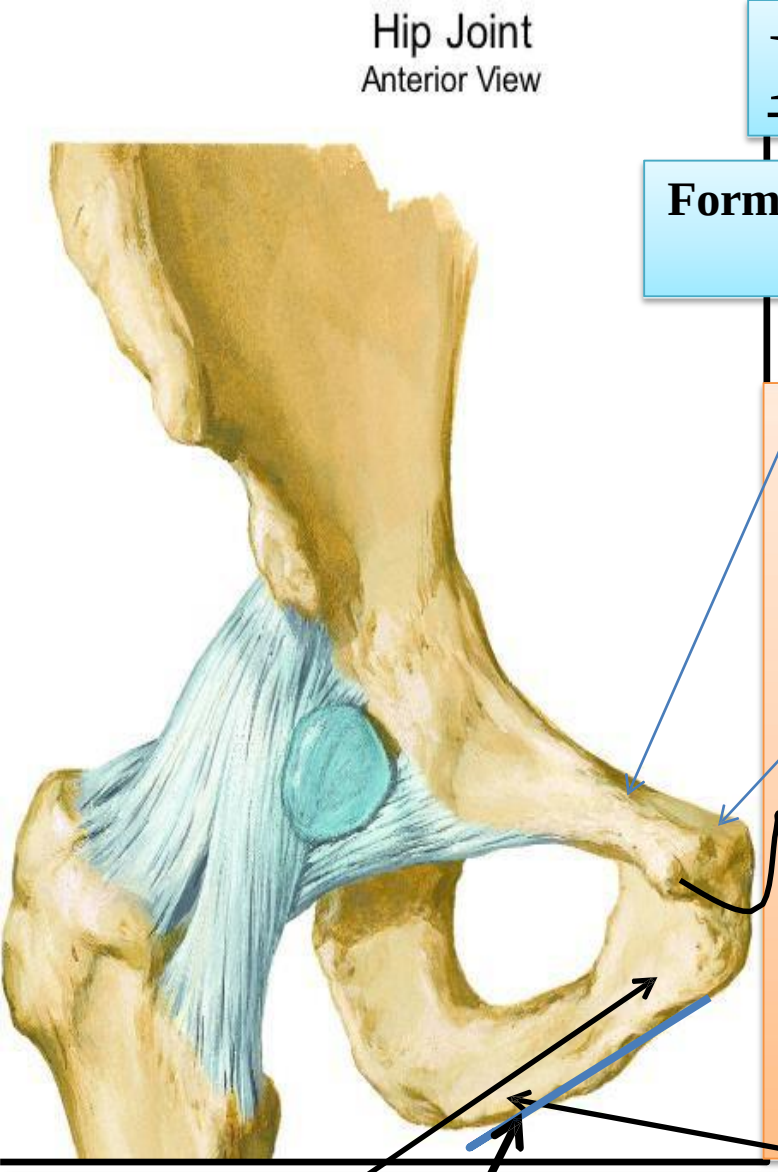
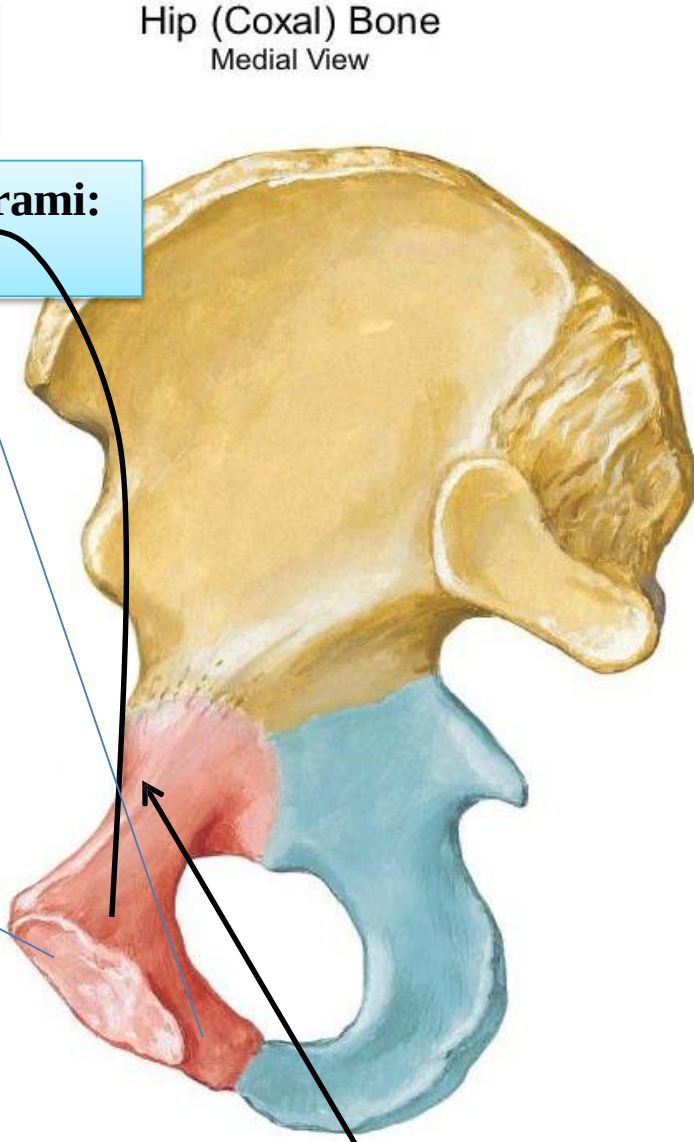
Ischial tuberosity
Obturator foramen
Ramus of ischium

Pubic bone



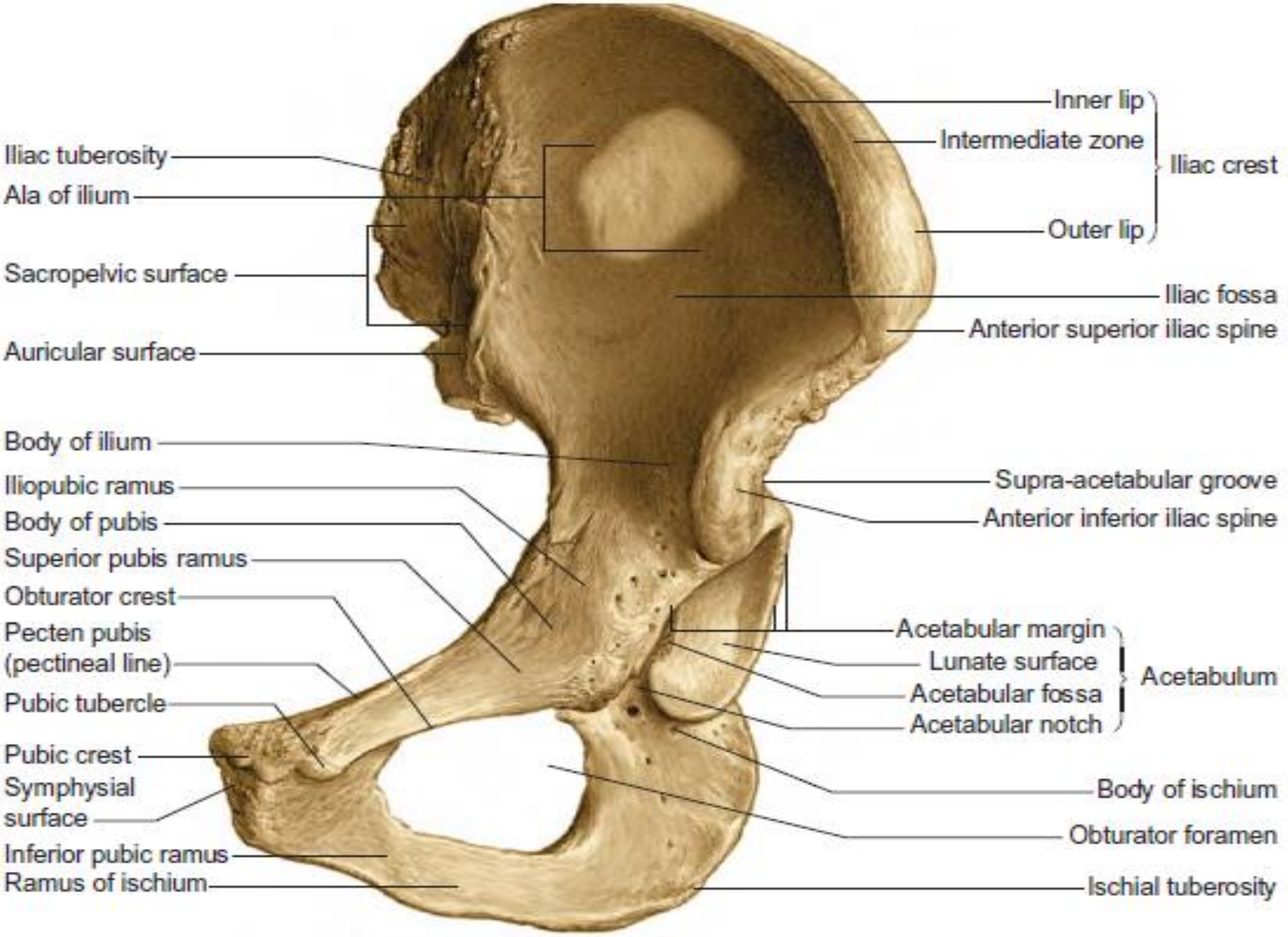


Formed of a body and two rami: superior and inferior

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

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

Pectineal line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Ala of ilium
Sacropelvic surface
Auricular surface
Iliac fossa
Anterior superior iliac spine
Body of ilium
Iliopubic ramus
Body of pubis
Superior pubis ramus
Obturator crest
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(pectineal line)
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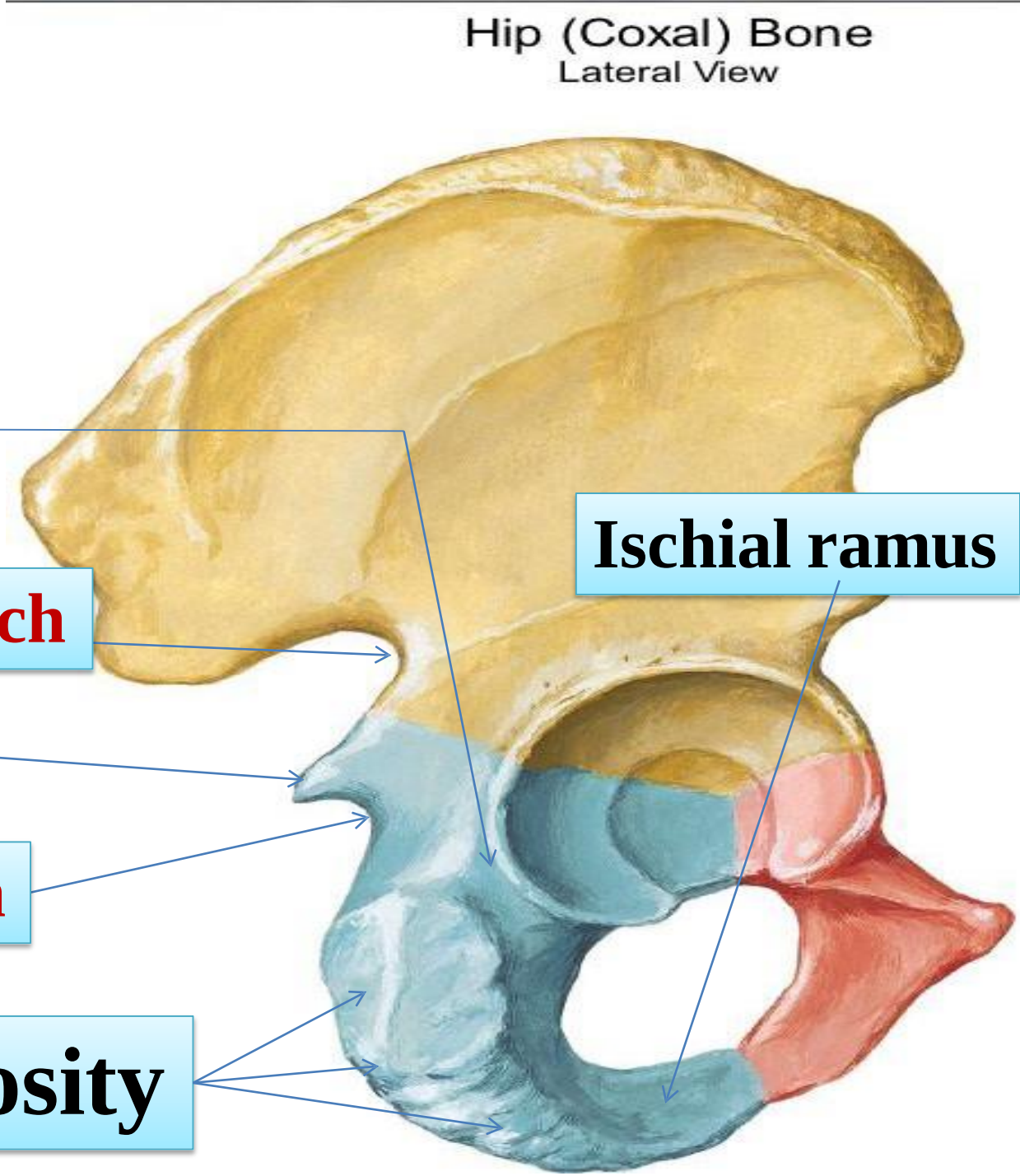
Acetabular notch
Acetabulum
Pubic crest
Symphysial
surface
Inferior pubic ramus
Ramus of ischium
Body of ischium
Obturator foramen
Ischial tuberosity

The ischium



Body

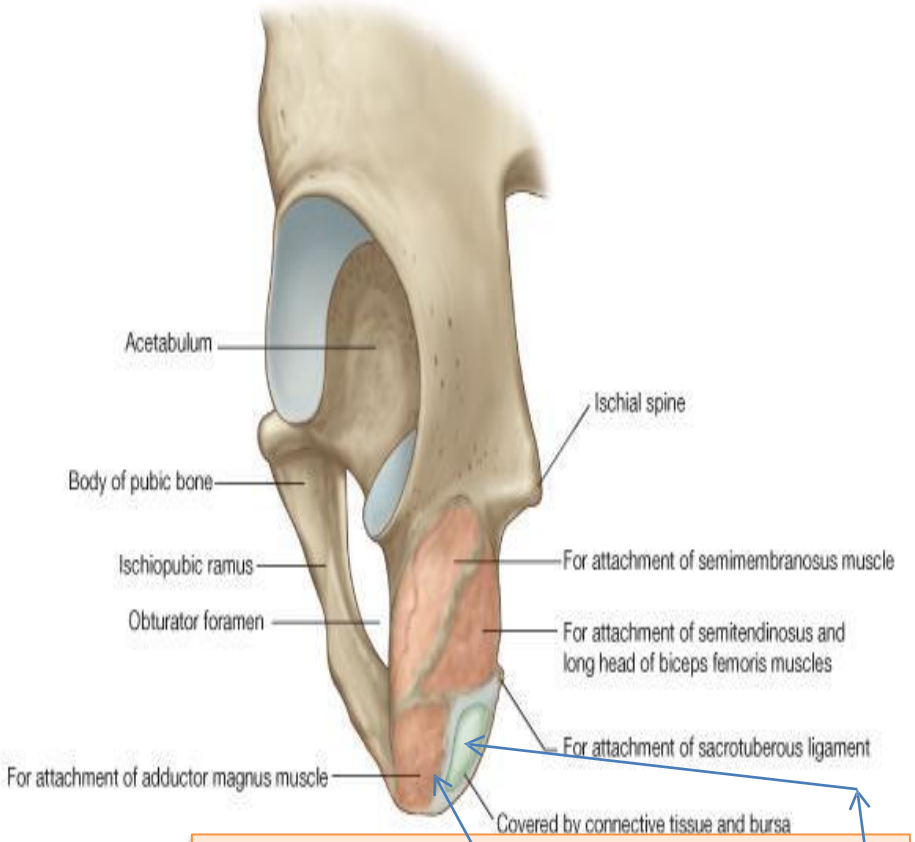
Ischial ramus

Greater sciatic notch

Ischial spine

lesser sciatic notch

Ischial tuberosity



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)

Ischial tuberosity

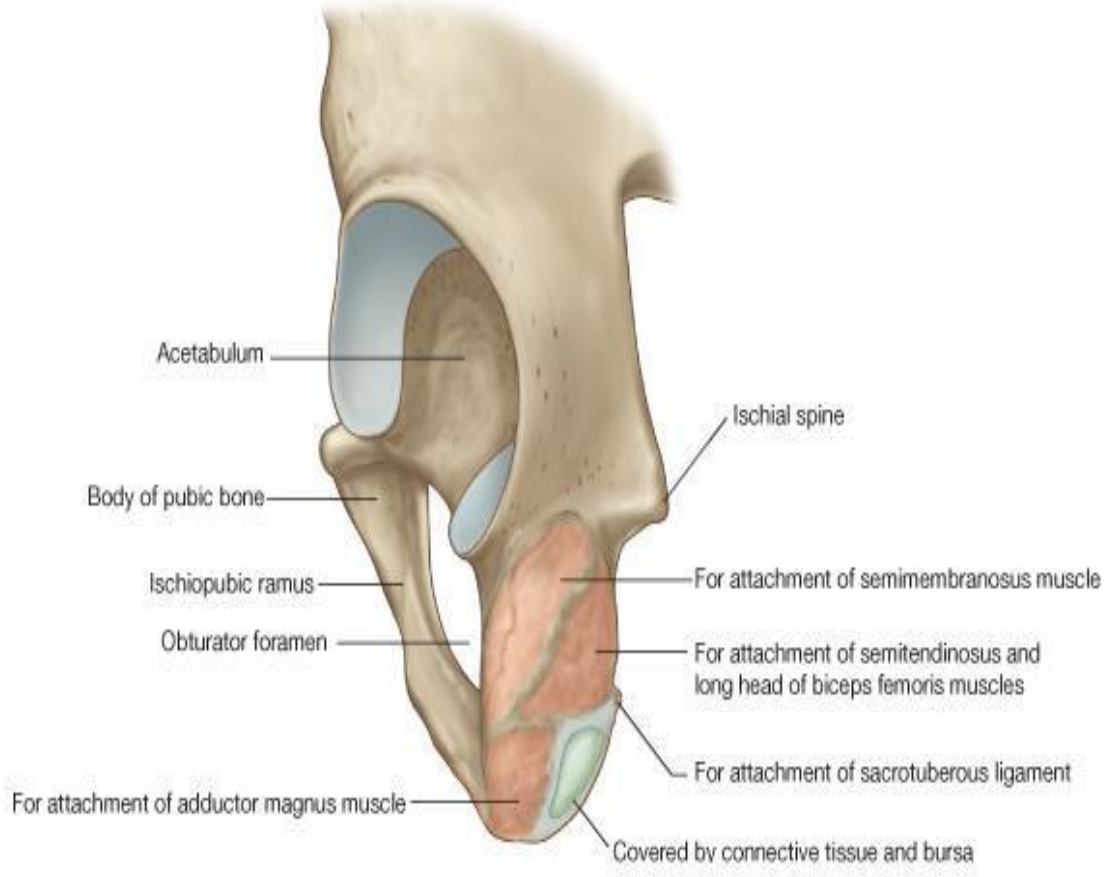
Divided by a transverse ridge into:

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 semimembranousus

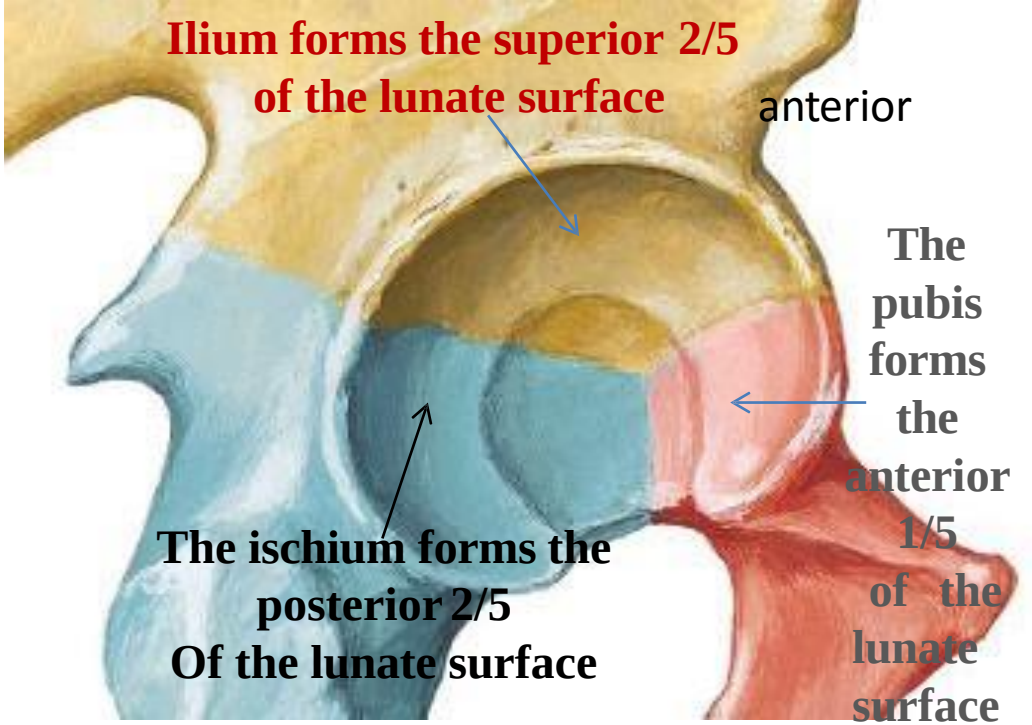
2 lower Medial for the attachment of semitendinosus andlong head of biceps



The Acetabulum

- It is a C-shaped cavity located on the lateral aspect of the hip bone

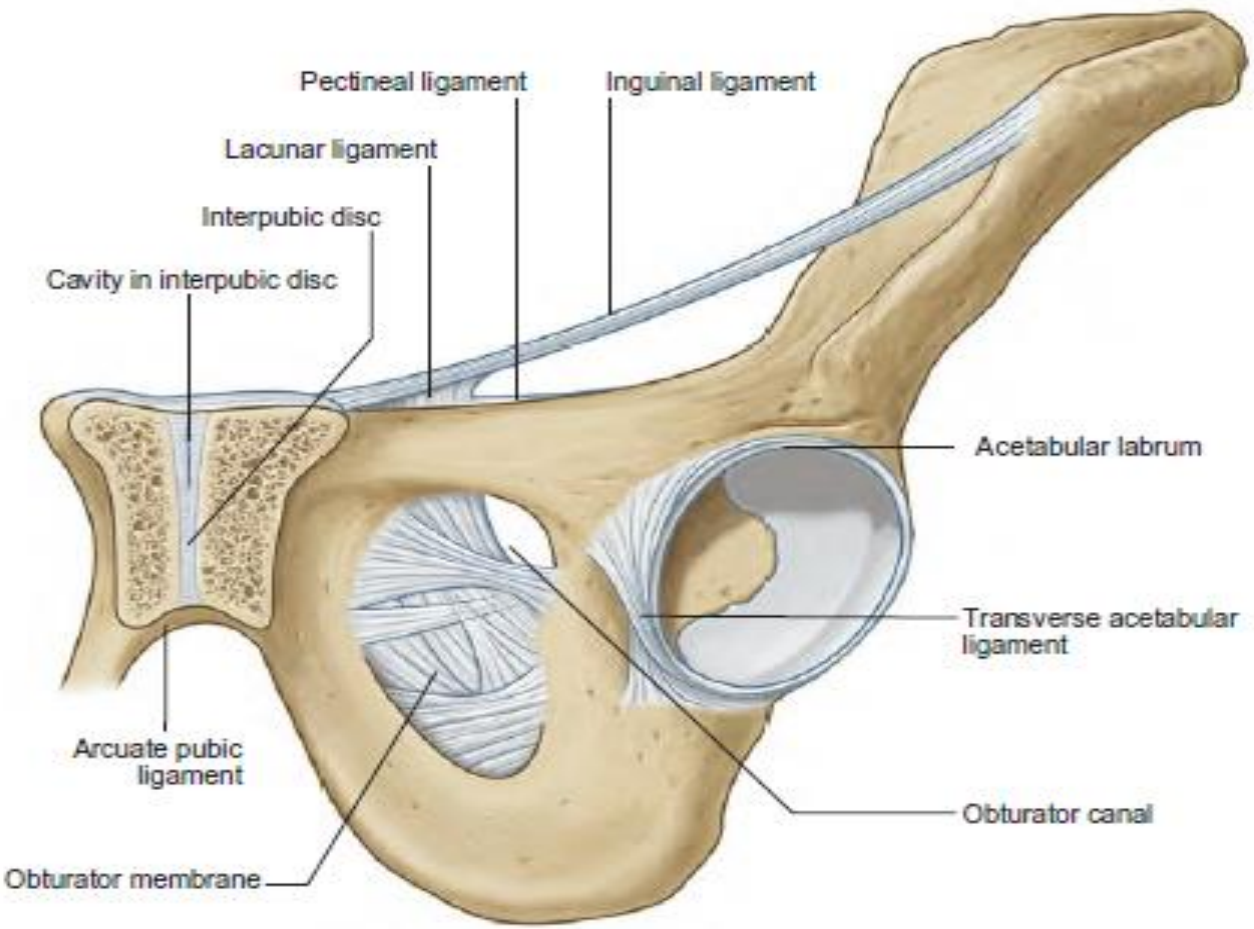
- It is notched inferiorly by the acetabular notch which is bridged by the ***transverse acetabular ligament*** (part of the acetabular labrum)



- 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



OBTURATOR foramen Covered by a membrane in living subjects

THE HIP BONE

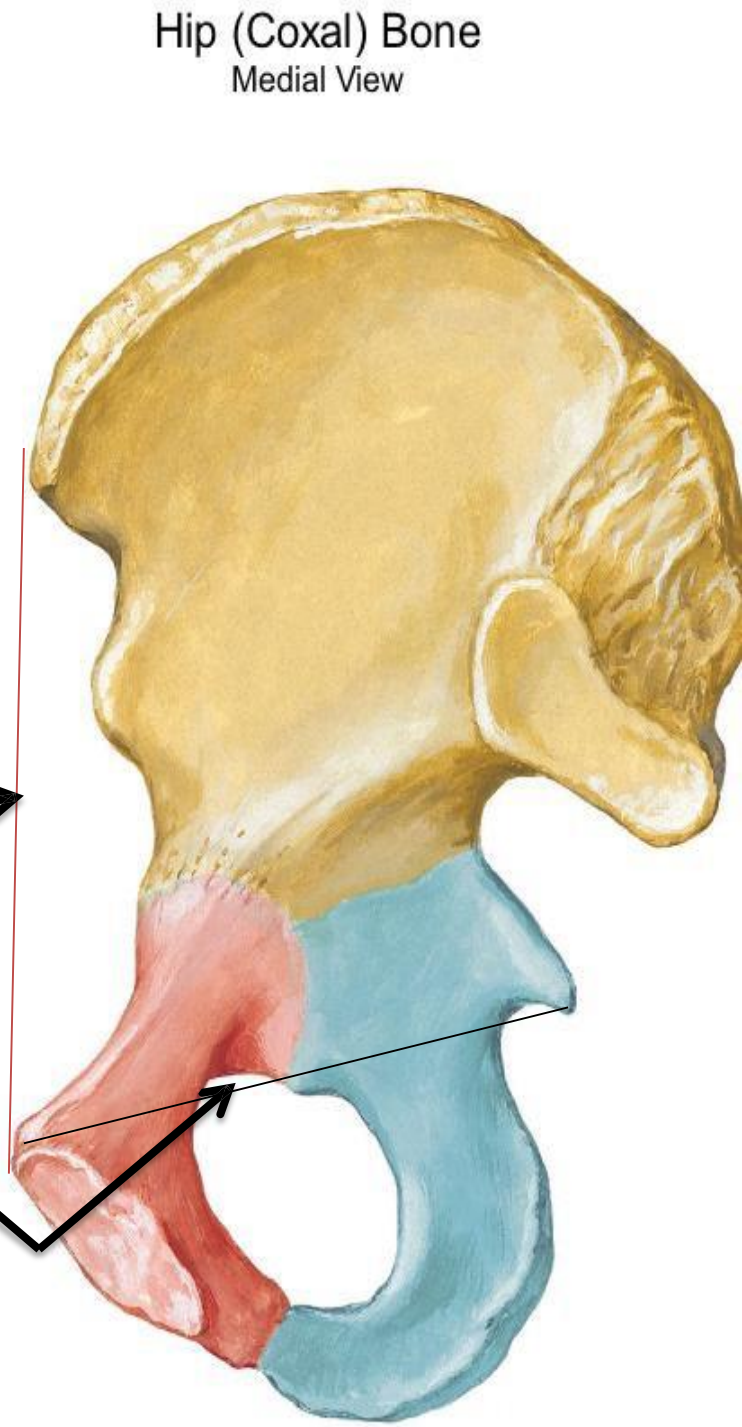
Anatomical position of the hip bone

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*.



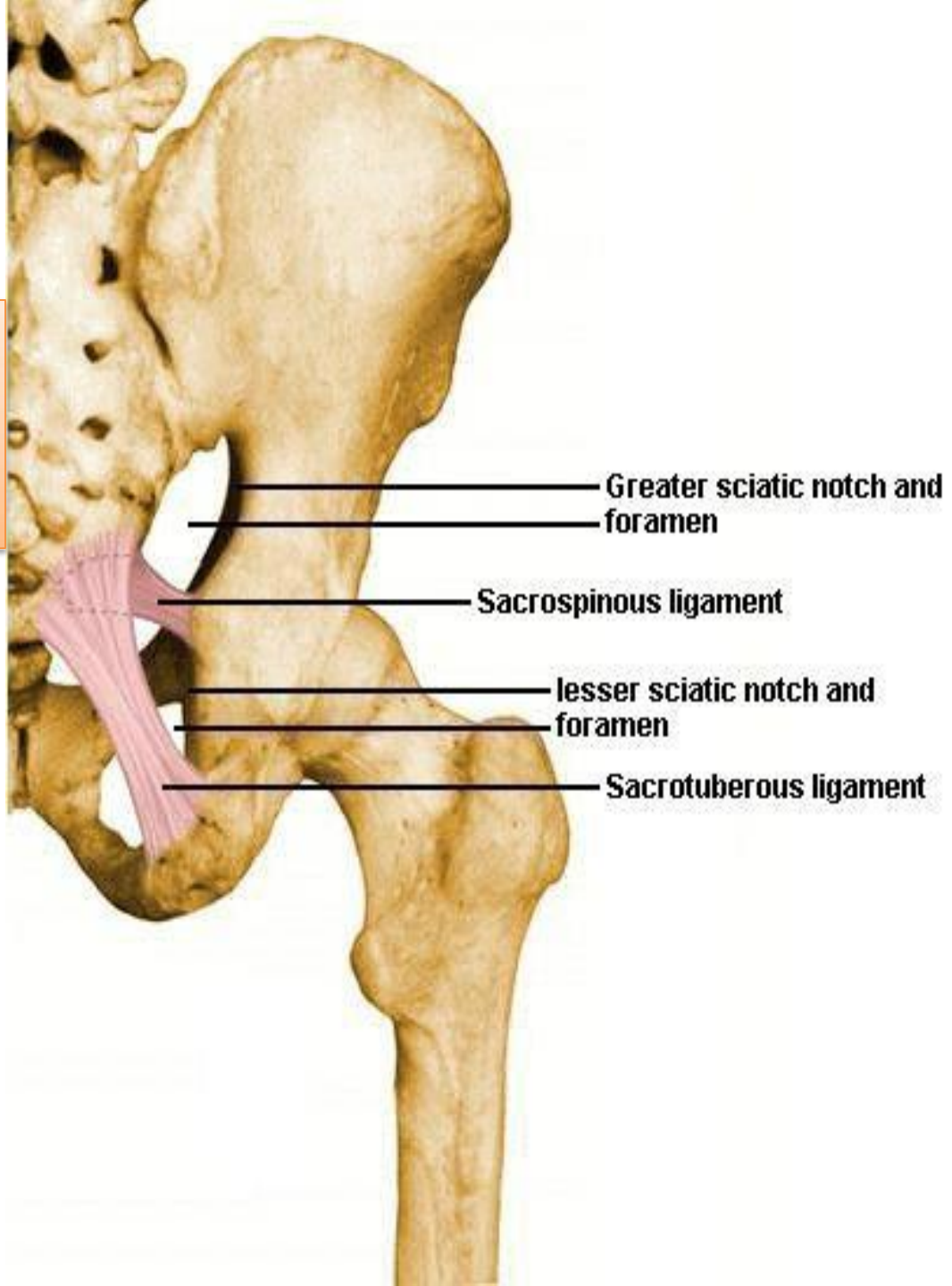
What does this mean?

It means that the pelvis is looking forward in the anatomical position

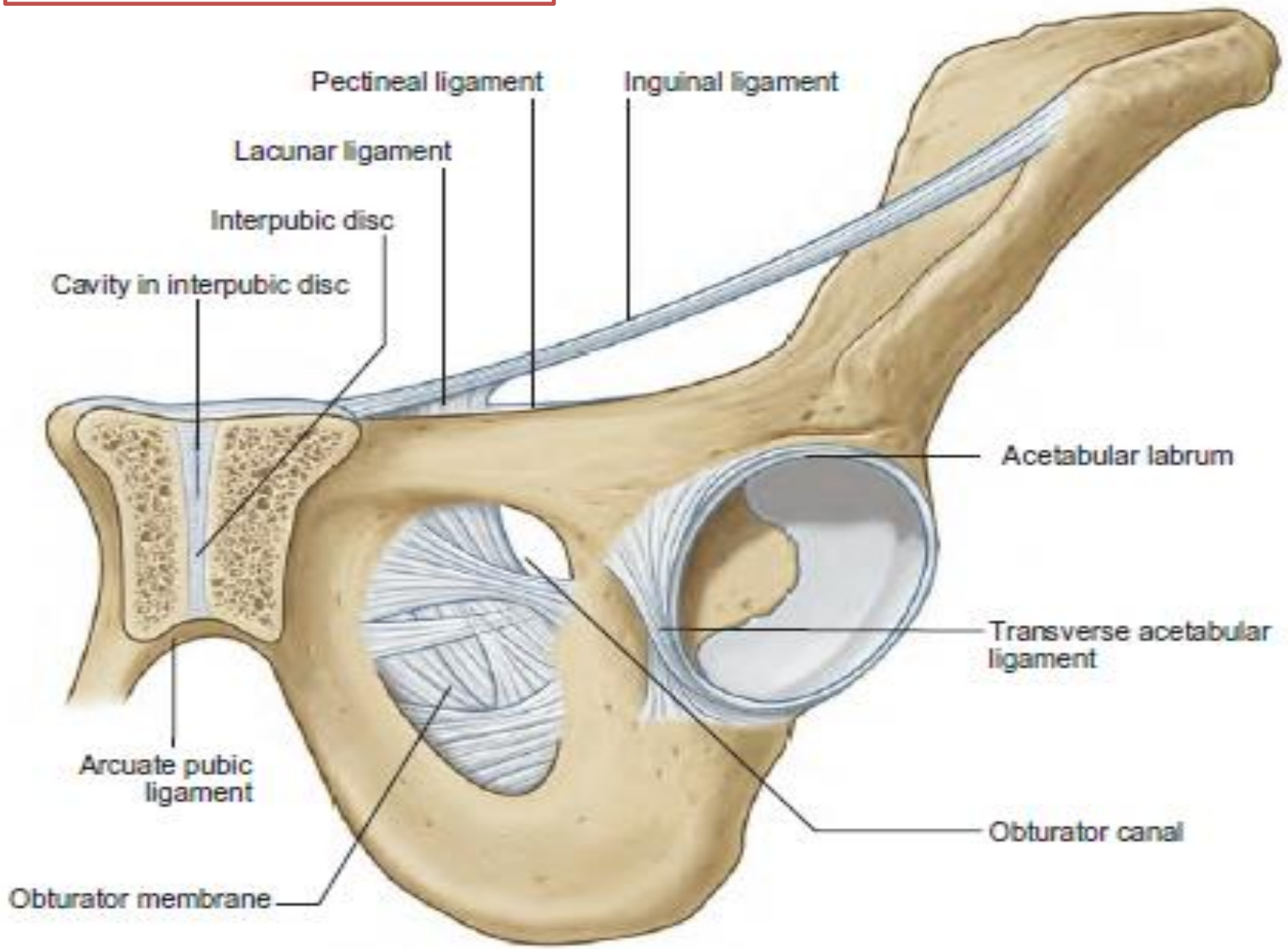
ligaments in the gluteal region

1- SACROTUBEROUS LIGAMENT

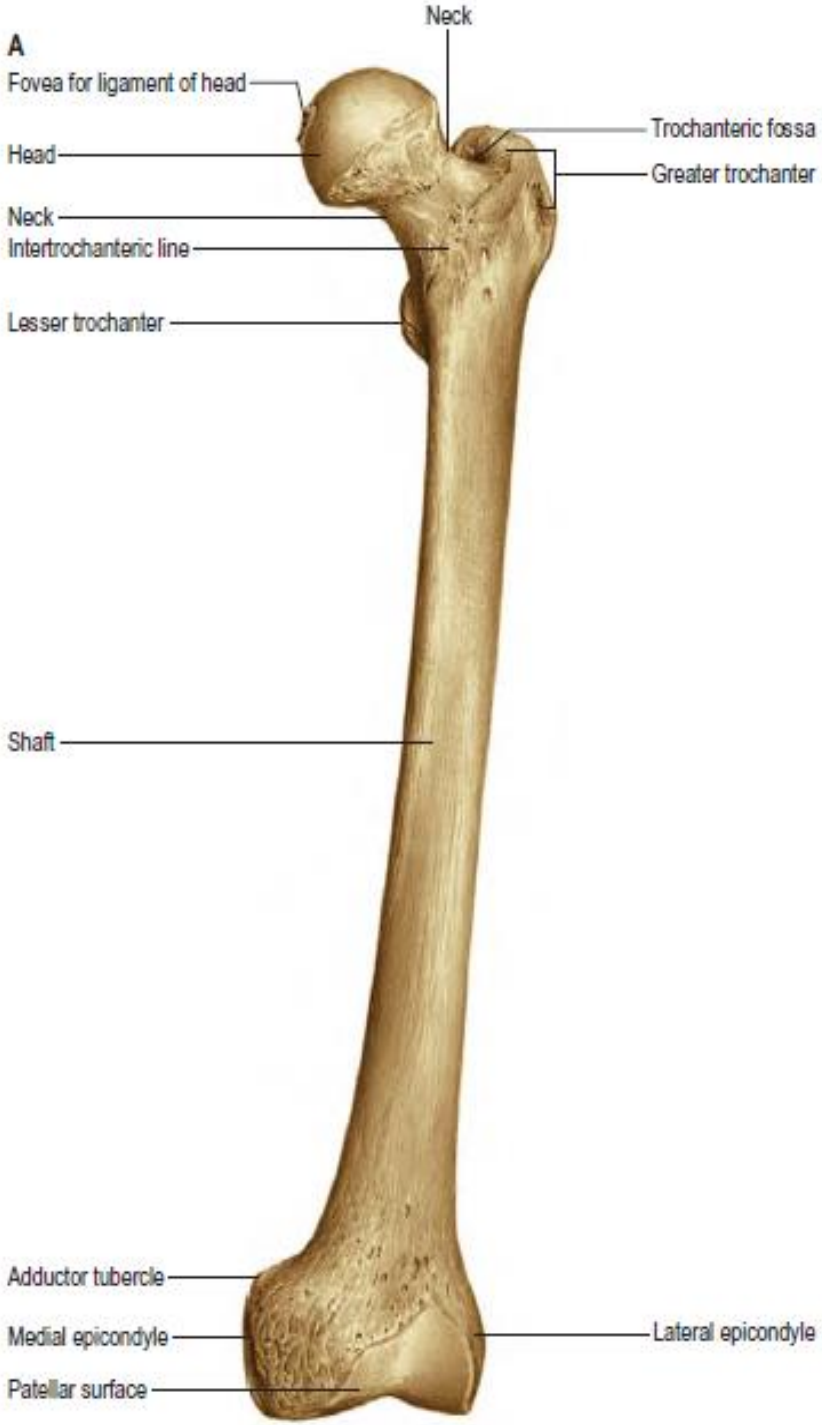
2- SACROSPINOUS LIGAMENT



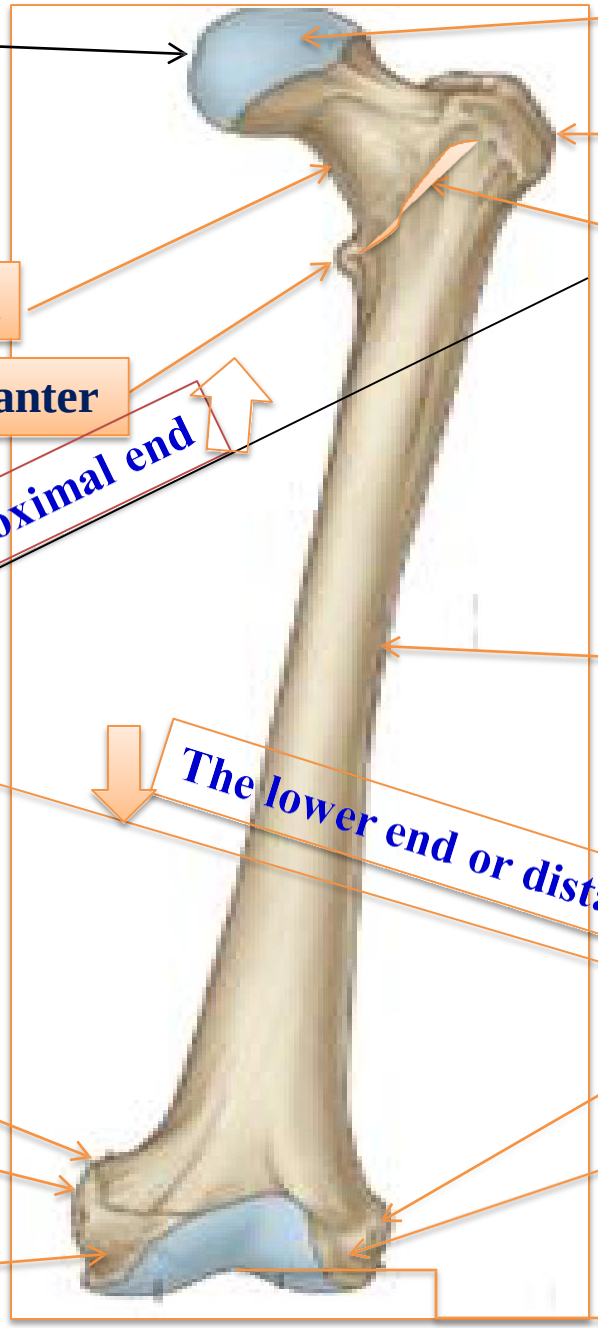
Attachment of the inguinal ligament



BONES THE THIGH


A
Neck
Fovea for ligament of head
Trochanteric fossa
Head
Greater trochanter
Neck
Intertrochanteric line
Lesser trochanter
Shaft
Adductor tubercle
Medial epicondyle
Lateral epicondyle
Patellar surface

Left femur (anterior view)



fovea capitis

head of femur

Long bone ?

greater trochanter

neck

intertrochanteric line

Upper end
Lower end
And a shaft

Lesser trochanter

The upper end or proximal end

Shaft or body

The lower end or distal end

Adductor tubercle

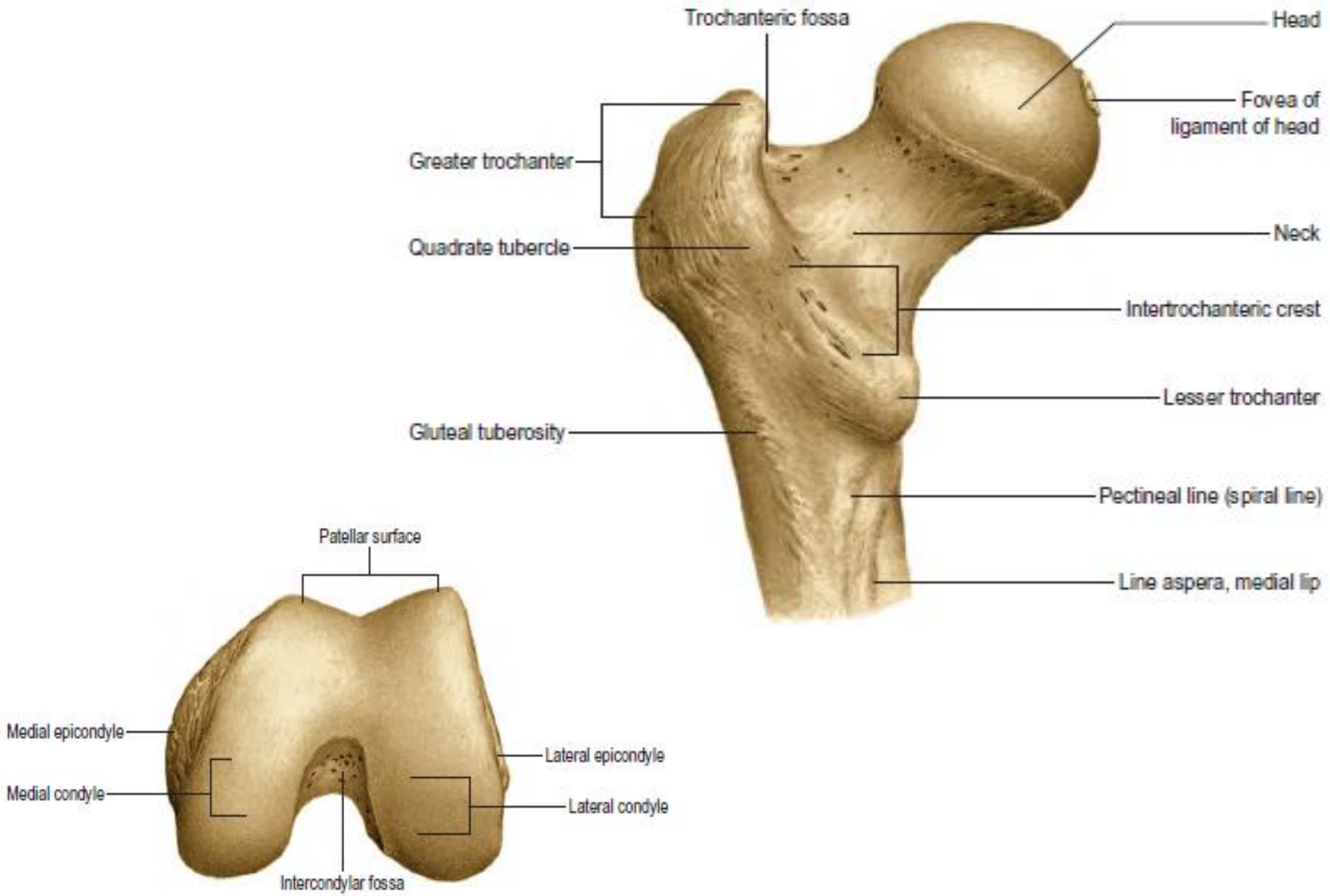
lateral epicondyle

Medial epicondyle

lateral condyle

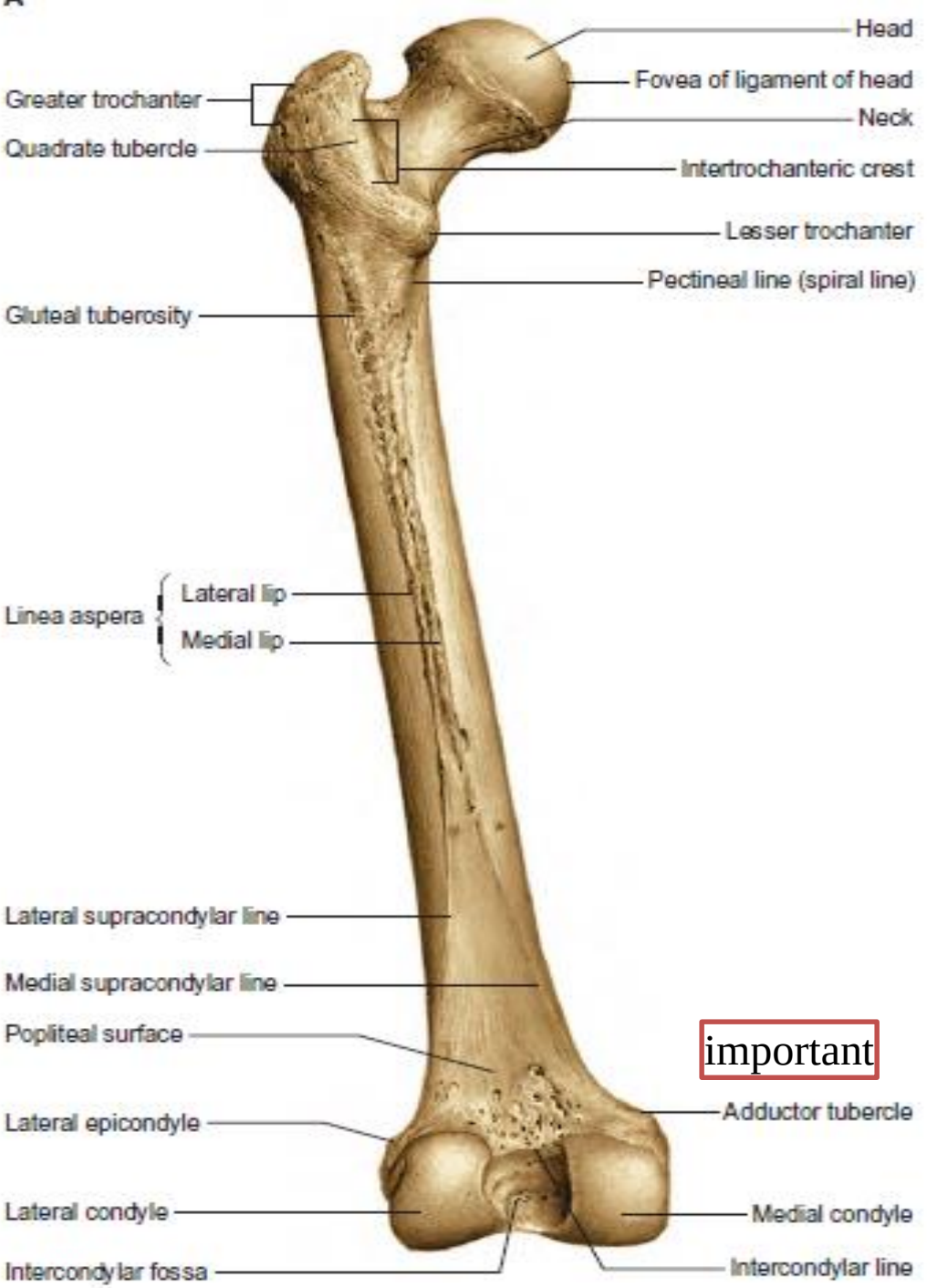
Medial condyle

Pattelar surface



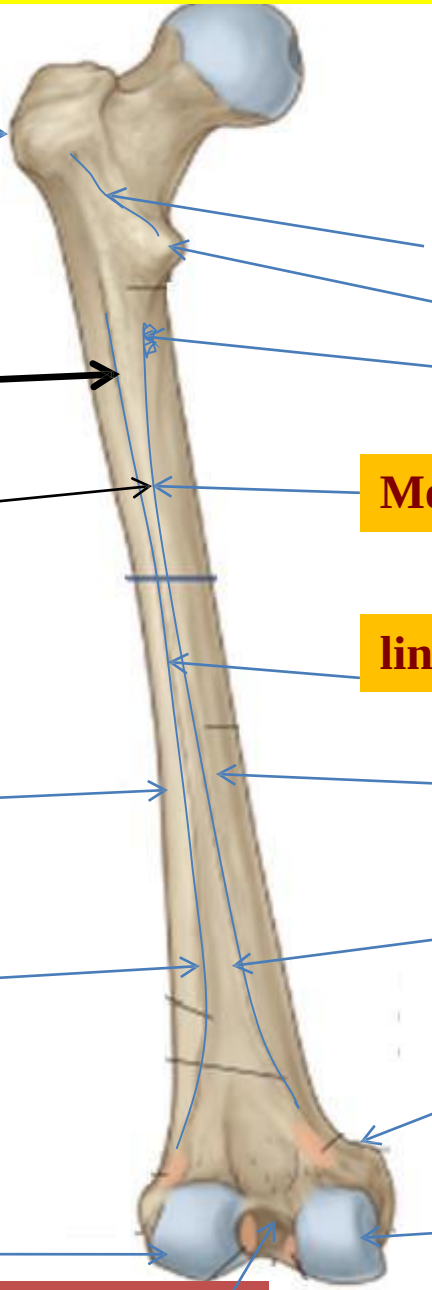
Distal end of femur: articular surface.

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



important

Left femur (posterior view)



greater trochanter

intertrochanteric creast

Lesser trochanter

Gluteal tuberosity

Spiral line

lateral lip of linea aspera

Medial lip of linea aspera

linea aspera

lateral surface

medial surface

medial supracondylar line

lateral supracondylar line

Adductor tubercle

lateral condyle

medial condyle

Intercondylar notch