

# BONES OF THE GLUTEAL REGION

# THE HIP BONE

Hip (Coxal) Bone  
Medial View

The hip bone is made of:

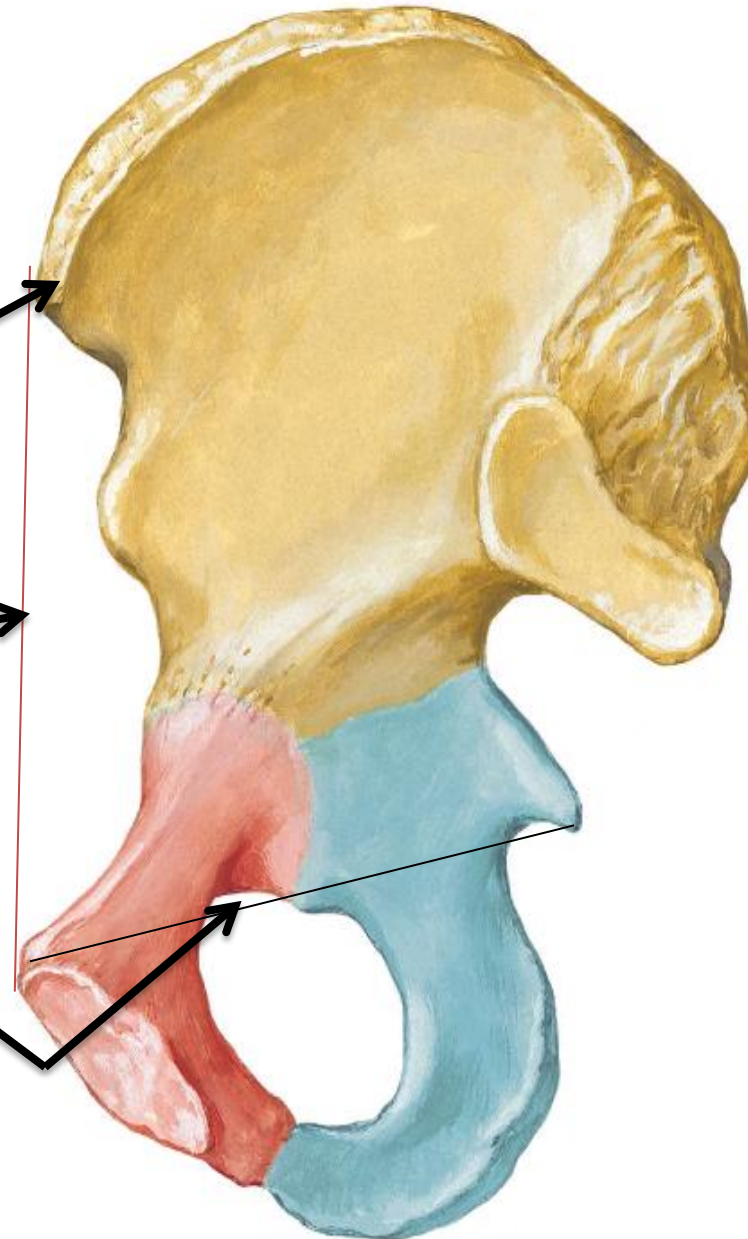
- 1-The ilium: superior in position →
- 2-The ischium: postero-inferior in position →
- 3-The pubis: antero-inferior in position →

## 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**.

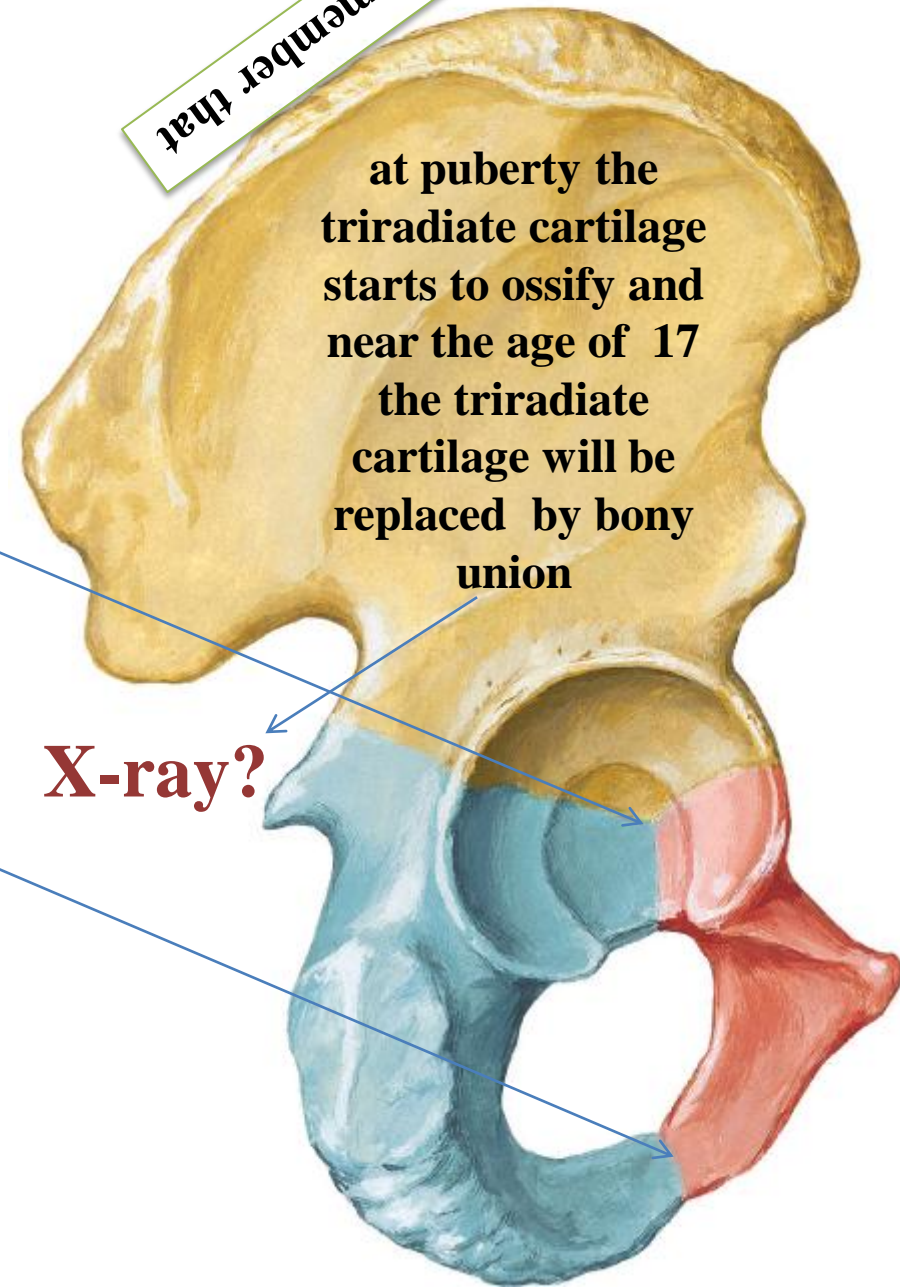
What does this mean?



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?



What is the idea here?

# 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*

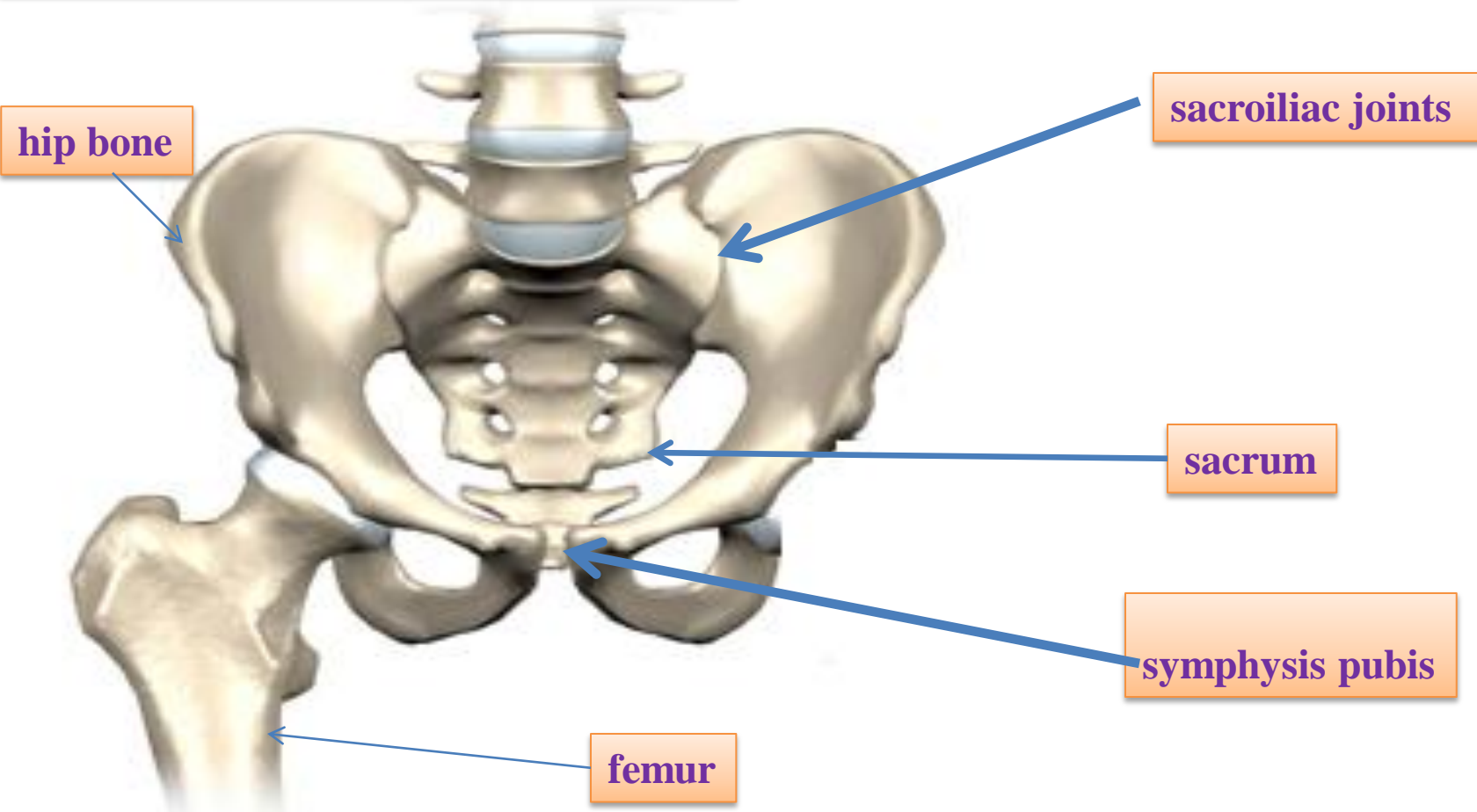
*of the ischium by*

cartilaginous union  
Ossifies near the age of 7 years

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

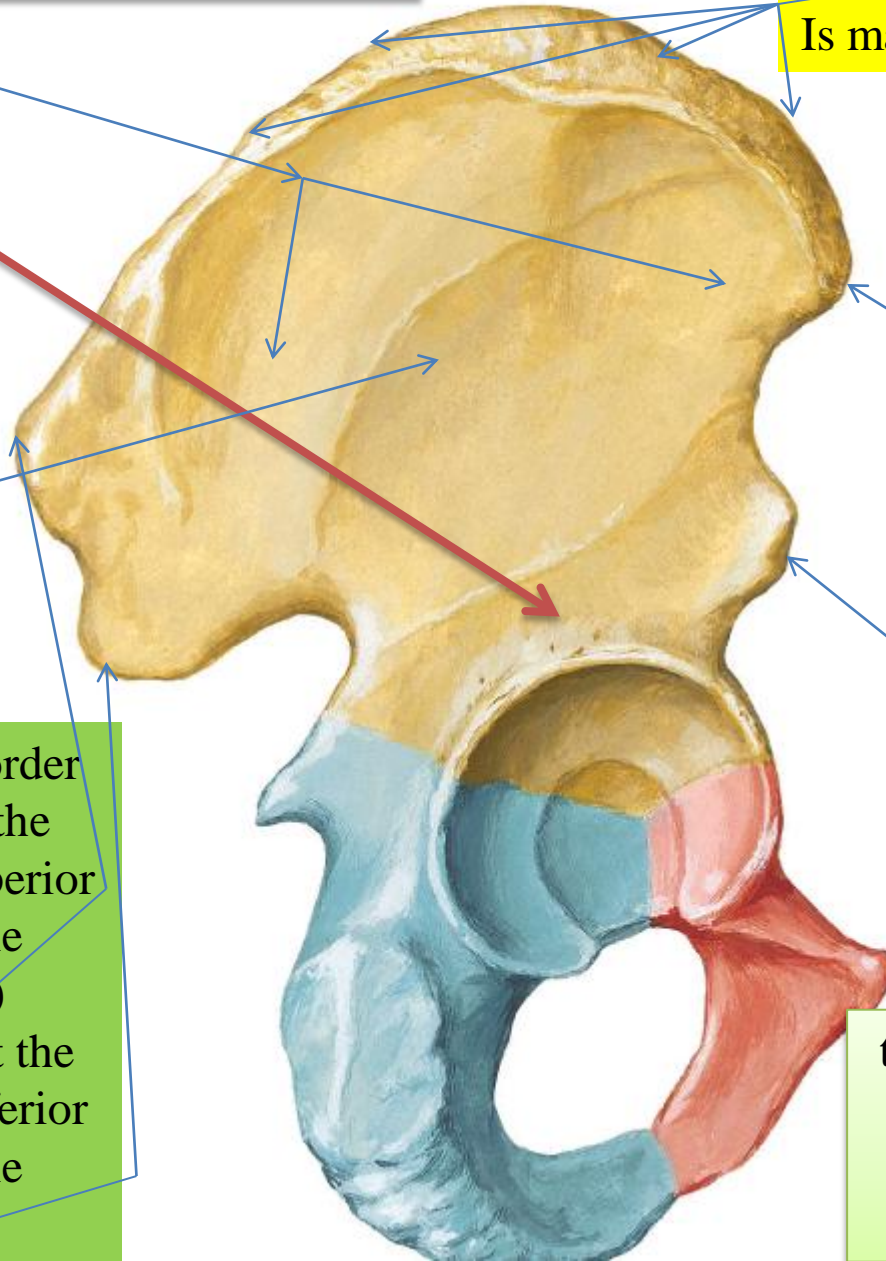
Superior border  
Is made by the iliac crest

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)

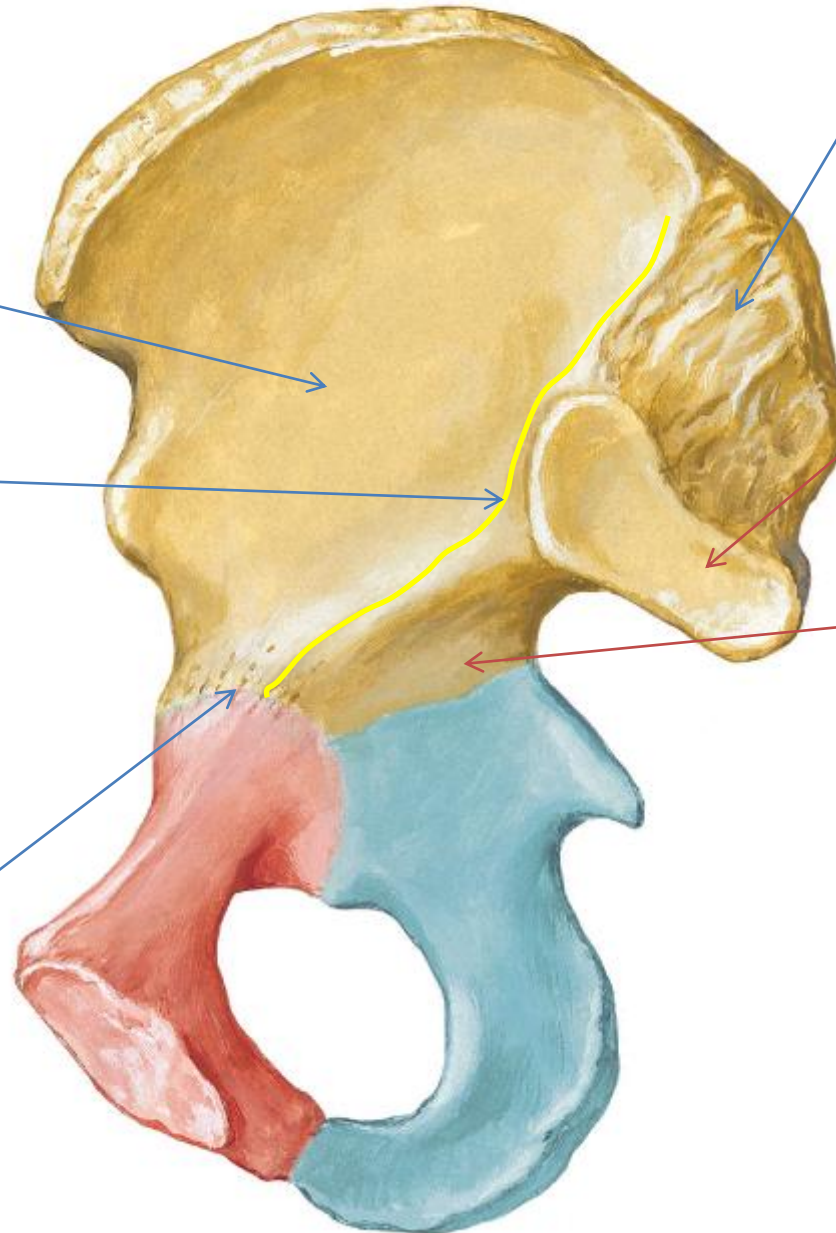
*the anterior superior spine  
of the ilium is easily felt  
and may be visible in the  
thin subject*



# Hip (Coxal) Bone Medial View

Iliac fossa

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



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

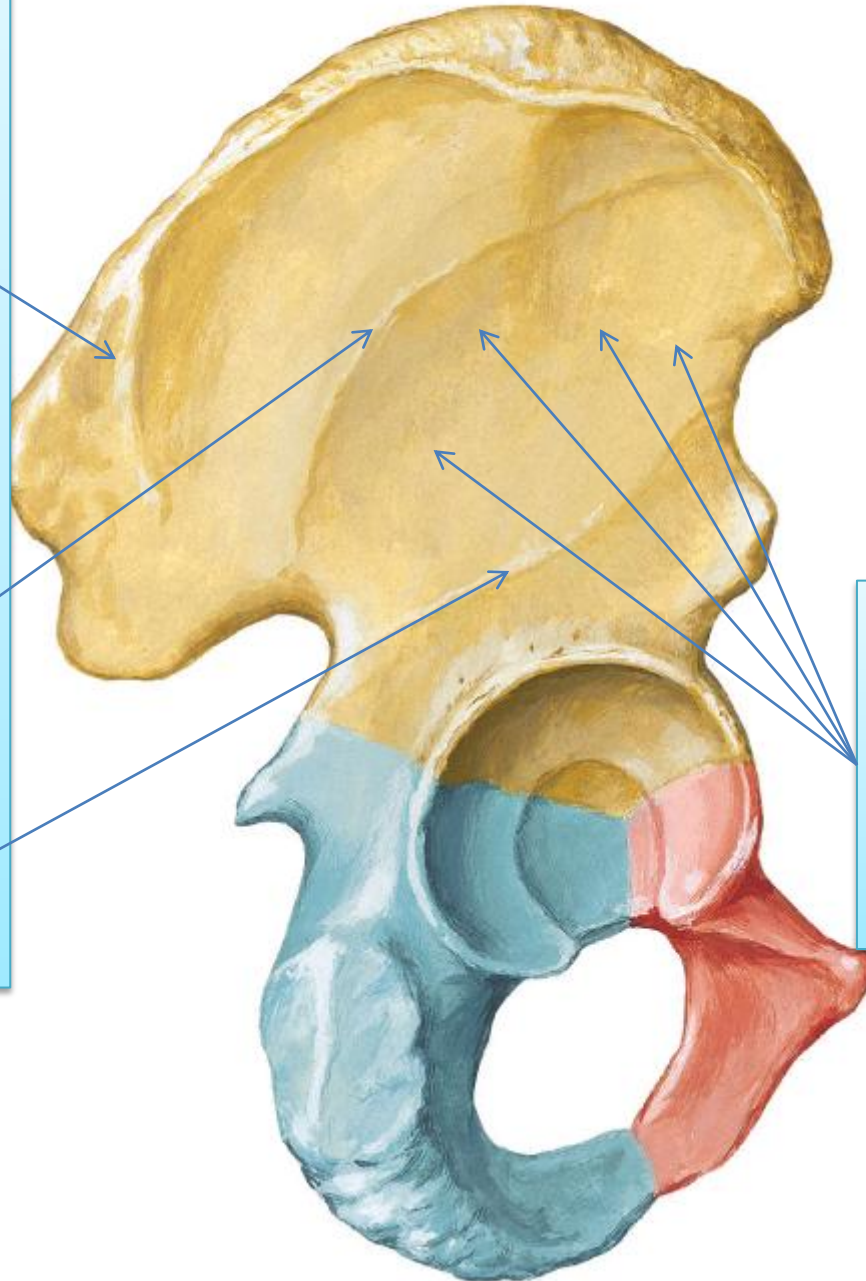
## Hip (Coxal) Bone Lateral View

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

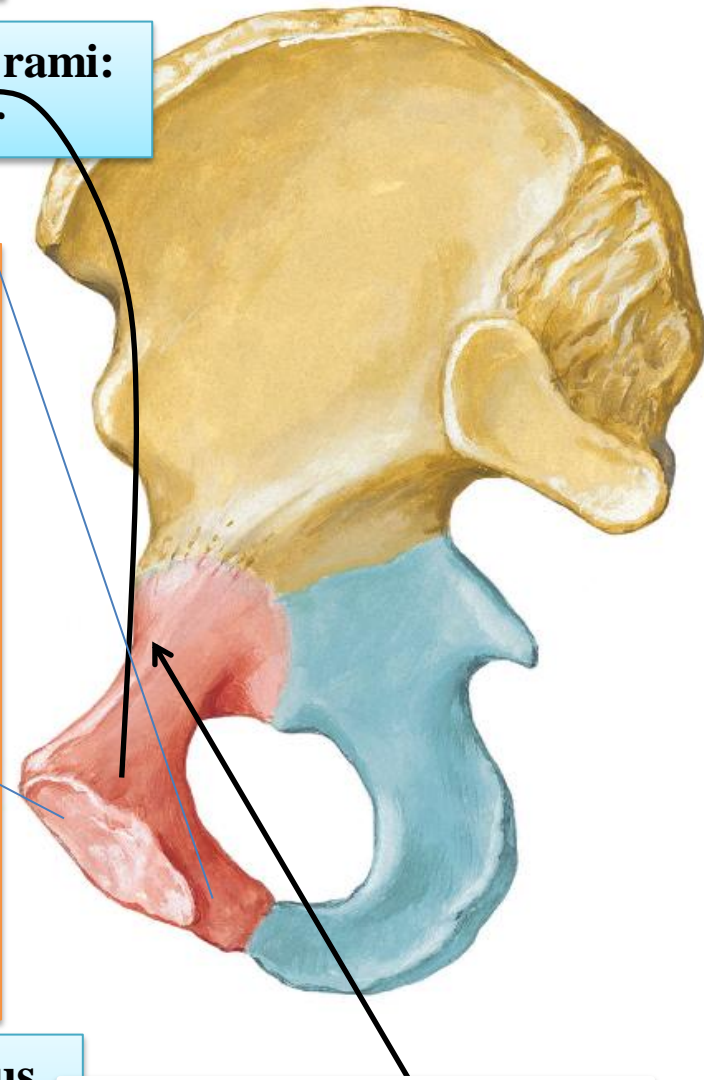
# Pubic bone

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 conjoint tendon.  
The superior pubic ramus has a pectineal line on its medial surface



The ischium

Hip (Coxal) Bone  
Lateral View

**Body**

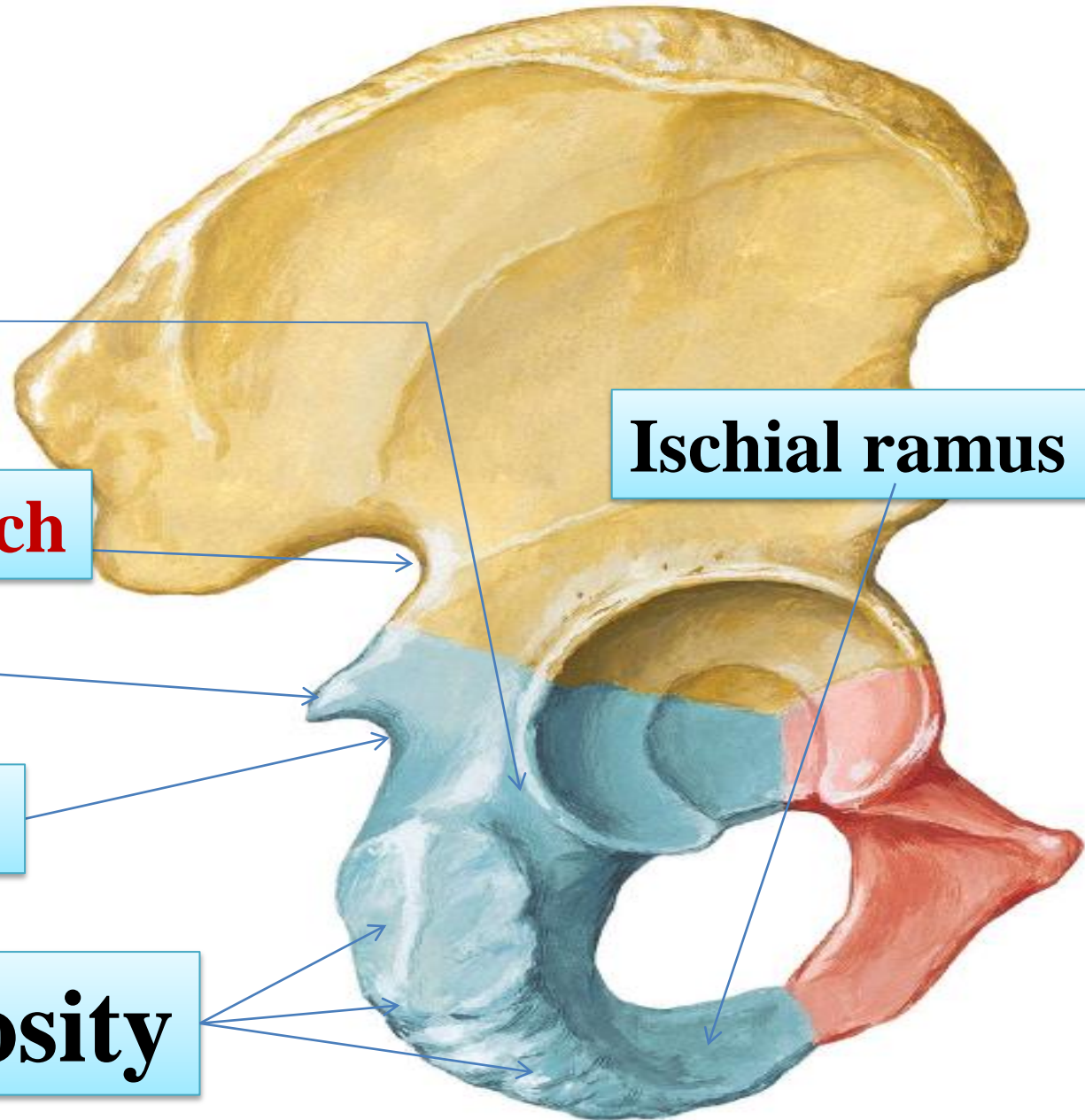
**Greater sciatic notch**

**Ischial spine**

**lesser sciatic notch**

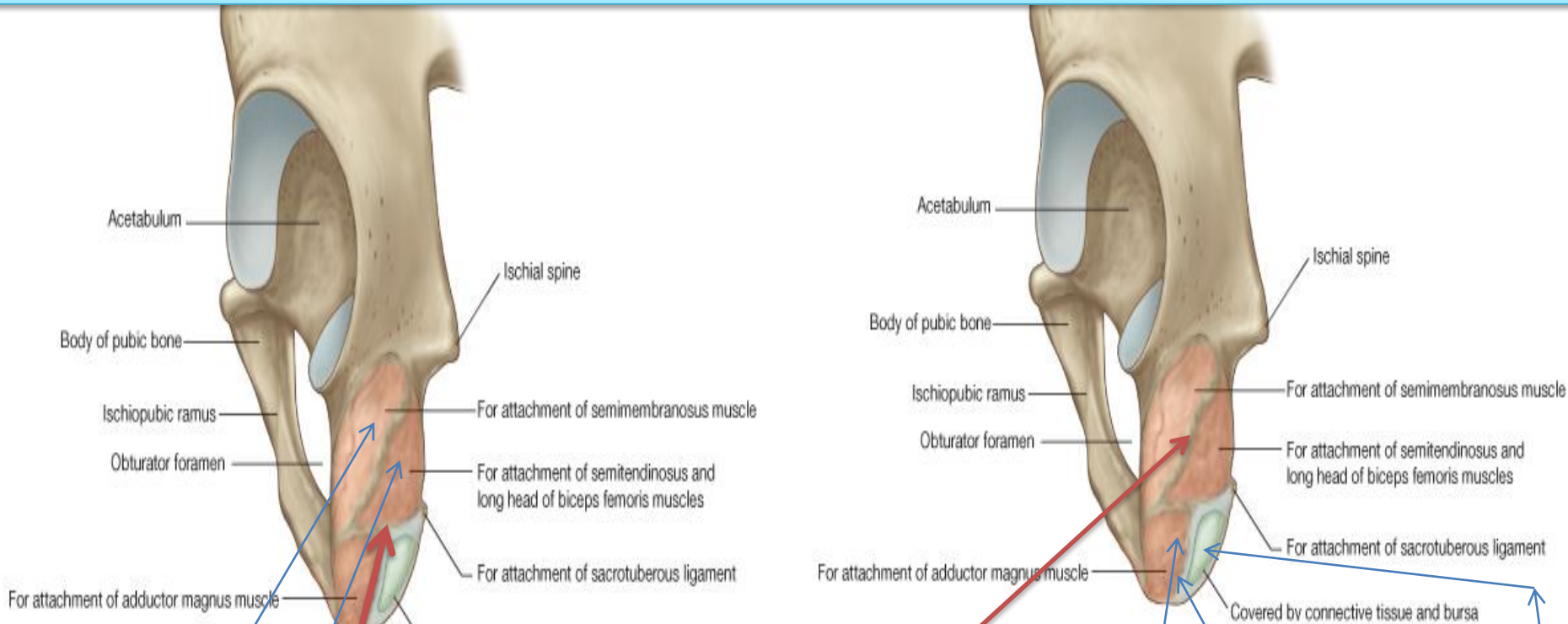
**Ischial tuberosity**

**Ischial ramus**



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:

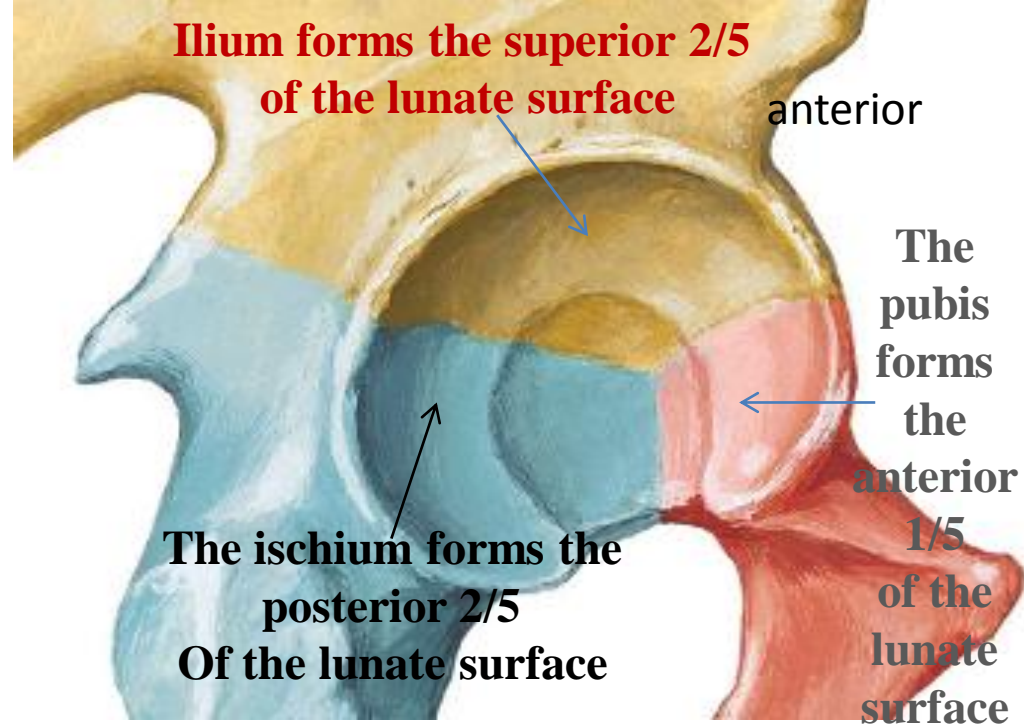
- 1-Upper lateral part for the attachment of semimembranosus
- 2-lower Medial for the attachment of semitendinosus and long head of biceps

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

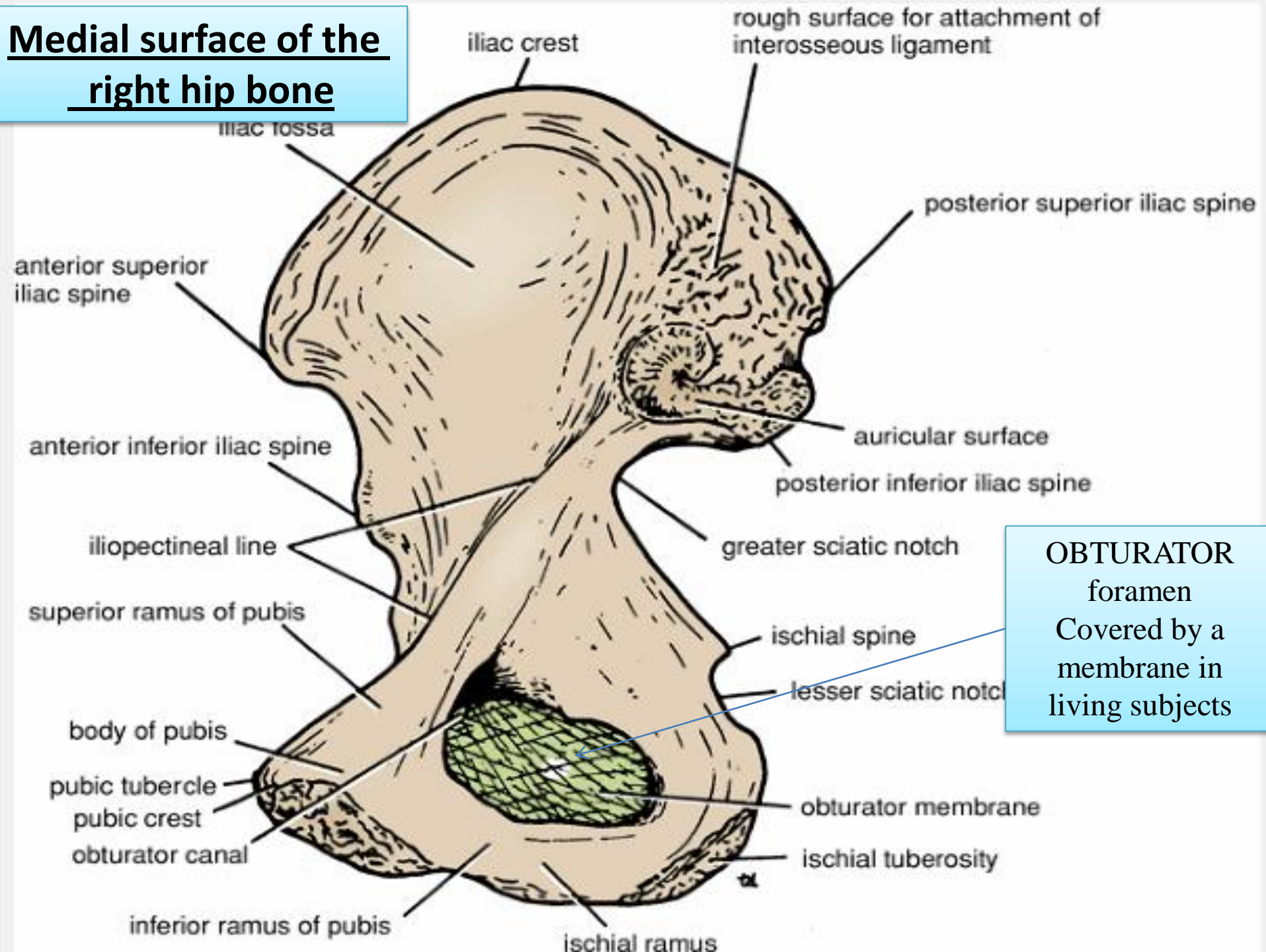
- It is a C-shaped cavity located on the lateral aspect of the hip bone
- directed **laterally, downwards and forwards**
- It is notched inferiorly by the acetabular notch which is bridged by the **transverse acetabular ligament** ( part of the acetabular labrum)



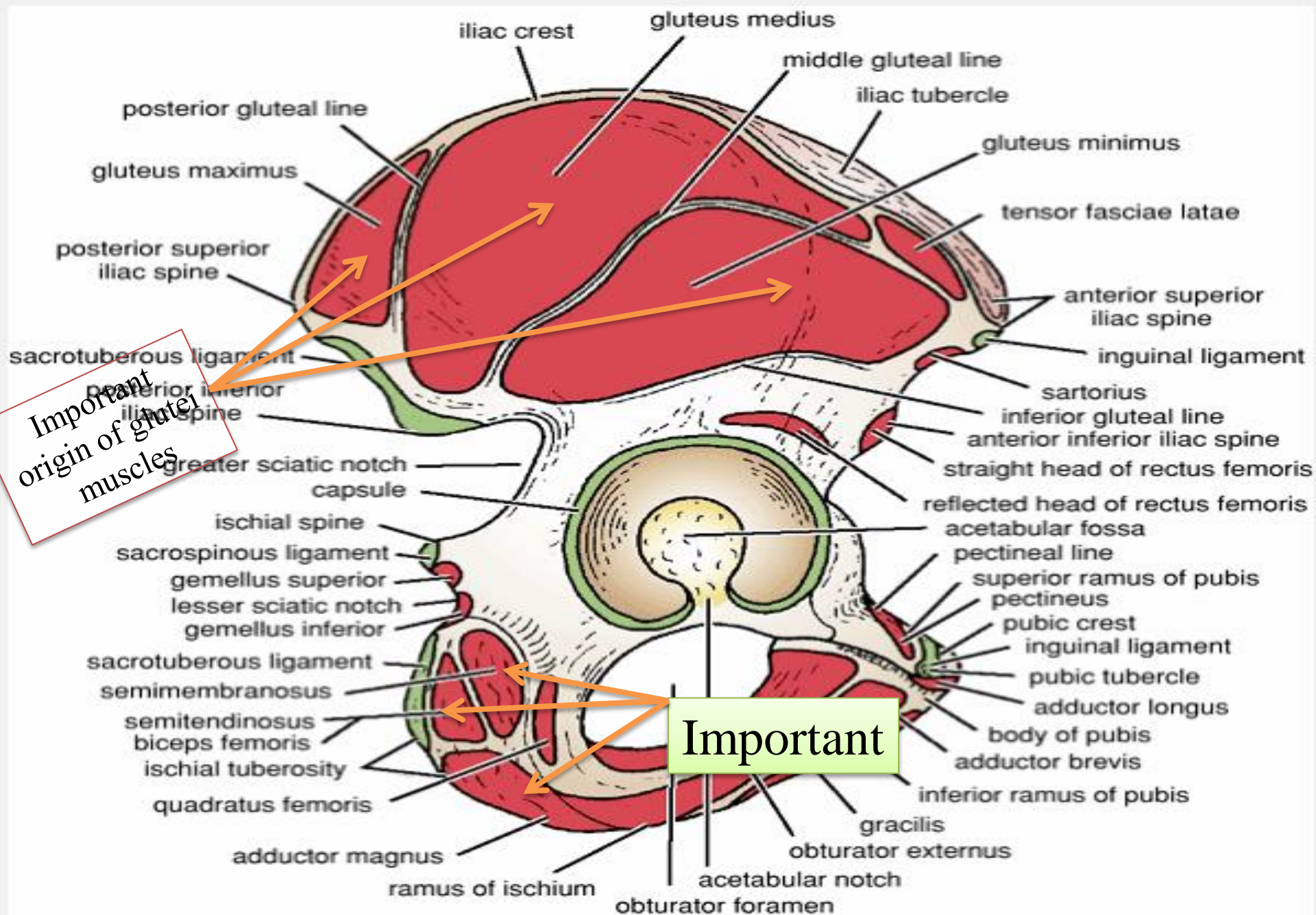
- The ***acetabular ligament converts the acetabular notch into foramen***
- Its cavity presents a **horse-shoe shaped articular surface called Lunate surface**
- The Lunate surface surrounds a non articular depression called **acetabular fossa** which is occupied by fat tissue in living



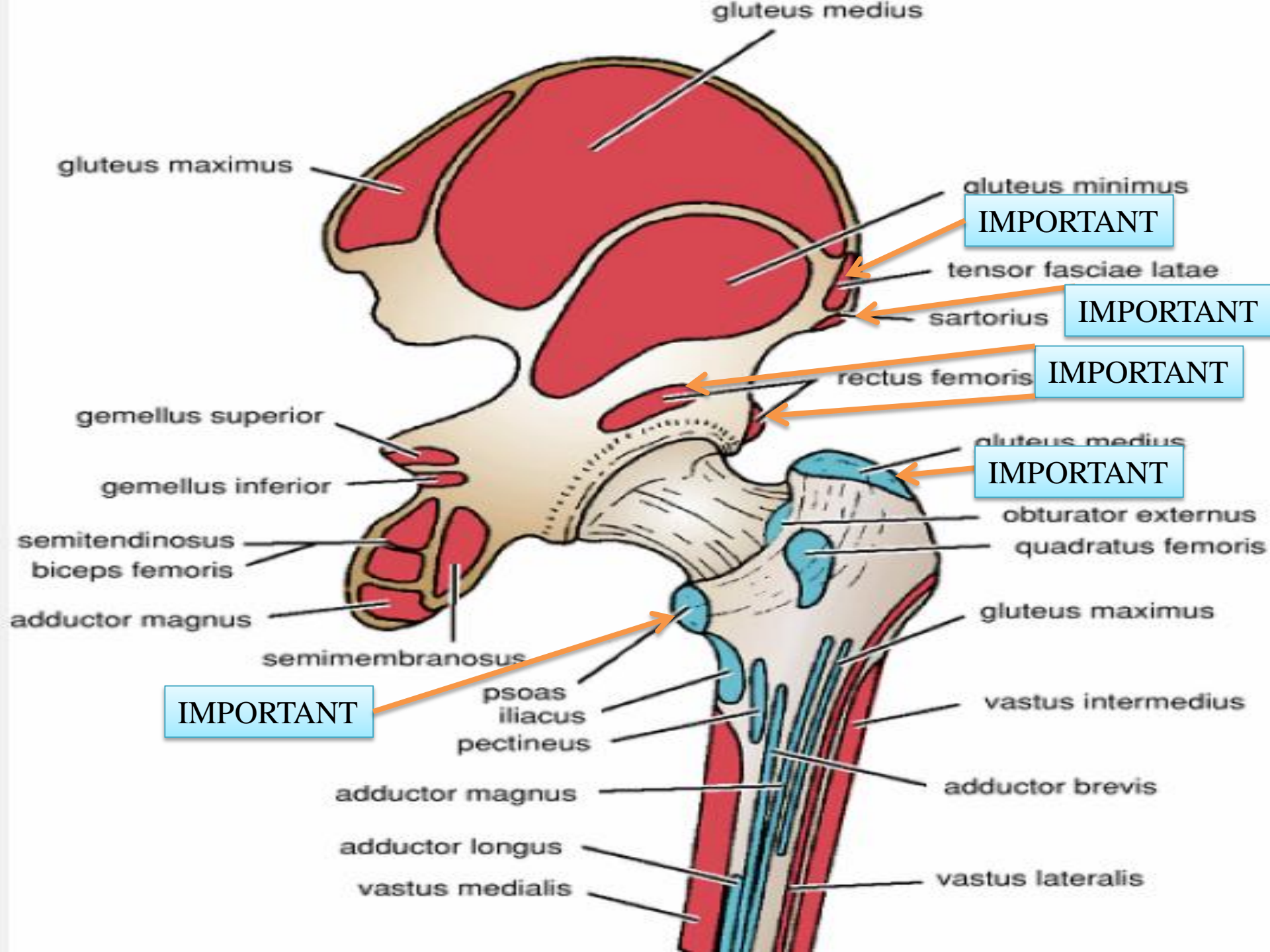
# Medial surface of the right hip bone







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

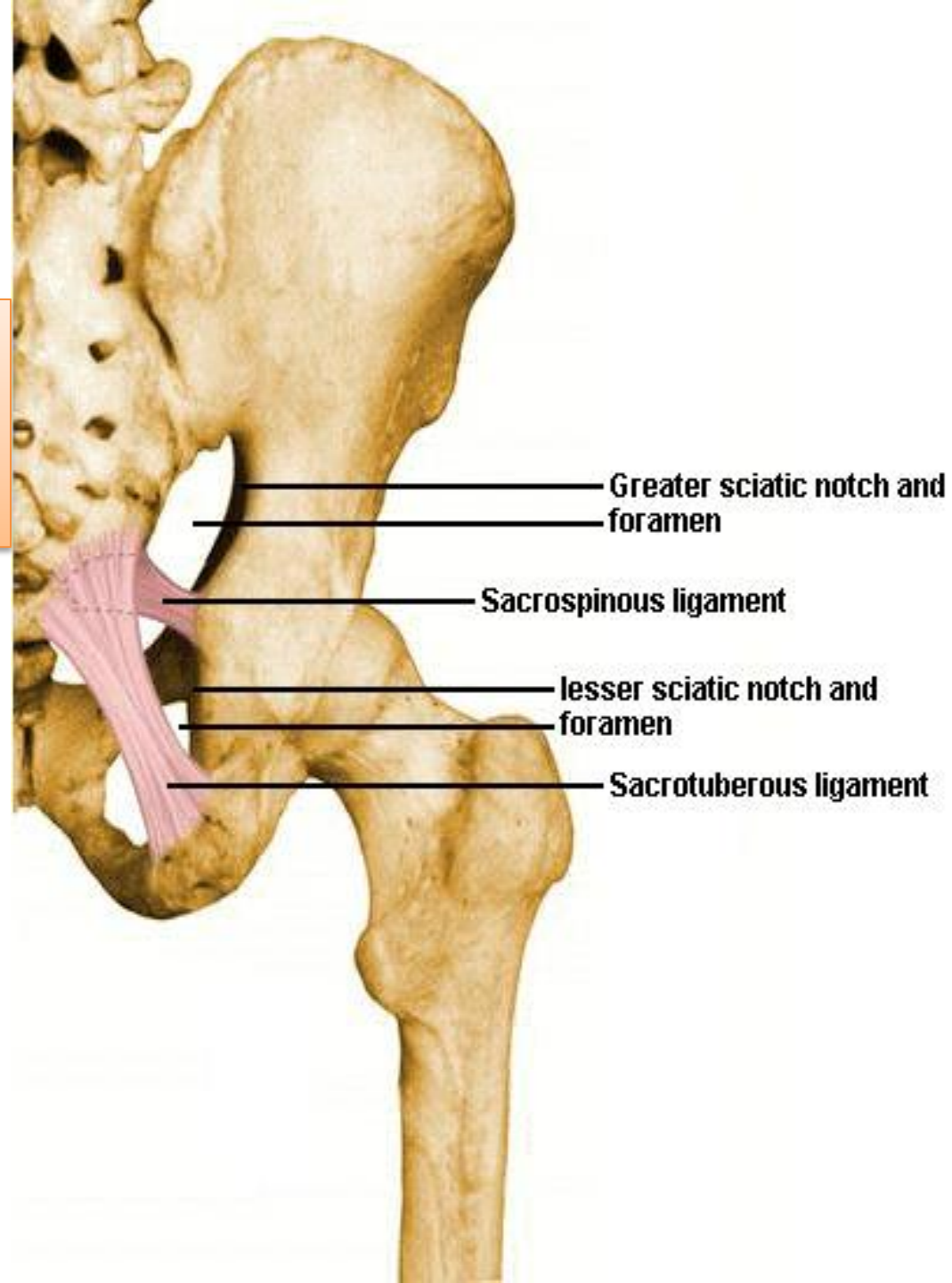


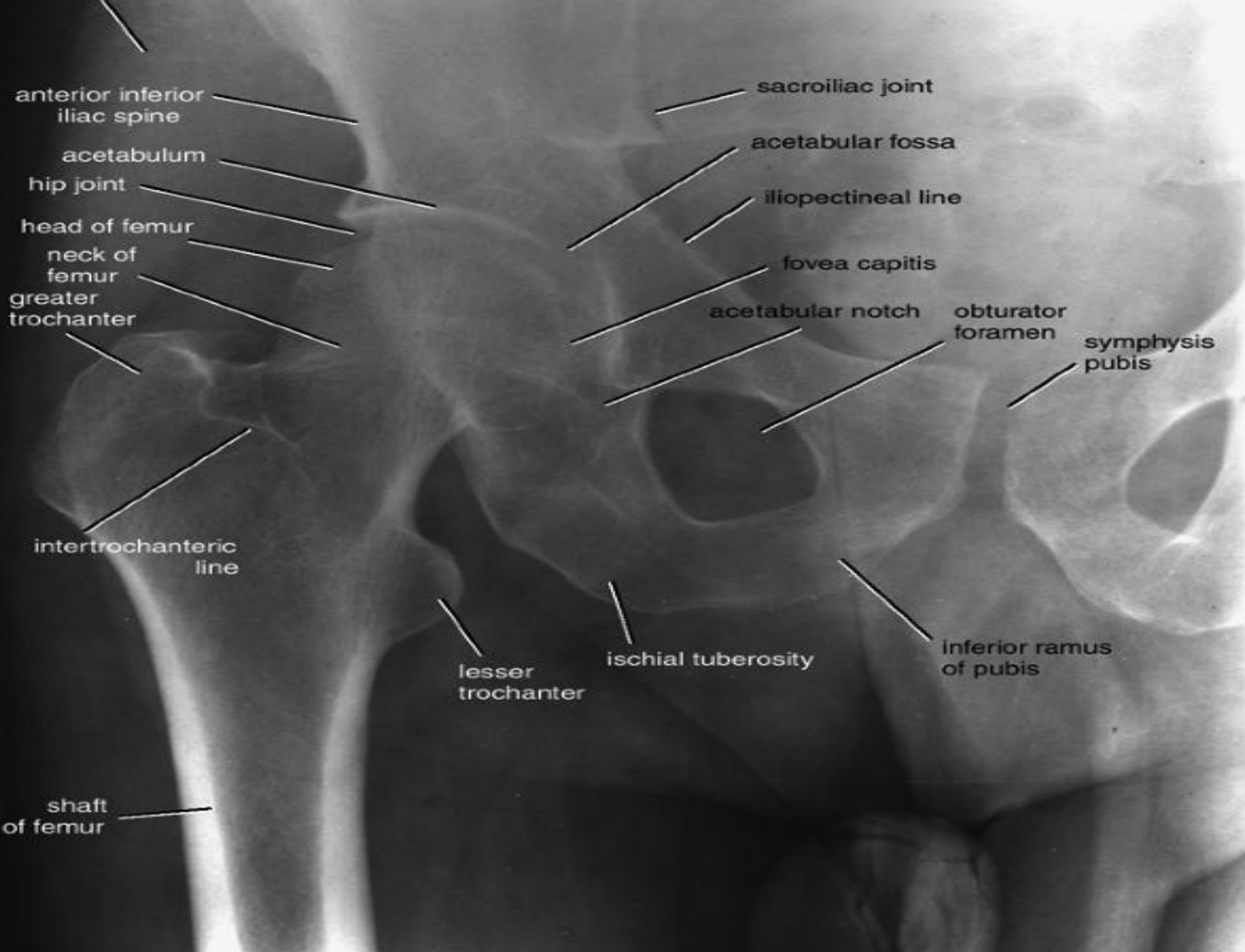


## ligaments in the gluteal region

### 1- SACROTUBEROUS LIGAMENT

### 2- SACROSPINOUS LIGAMENT

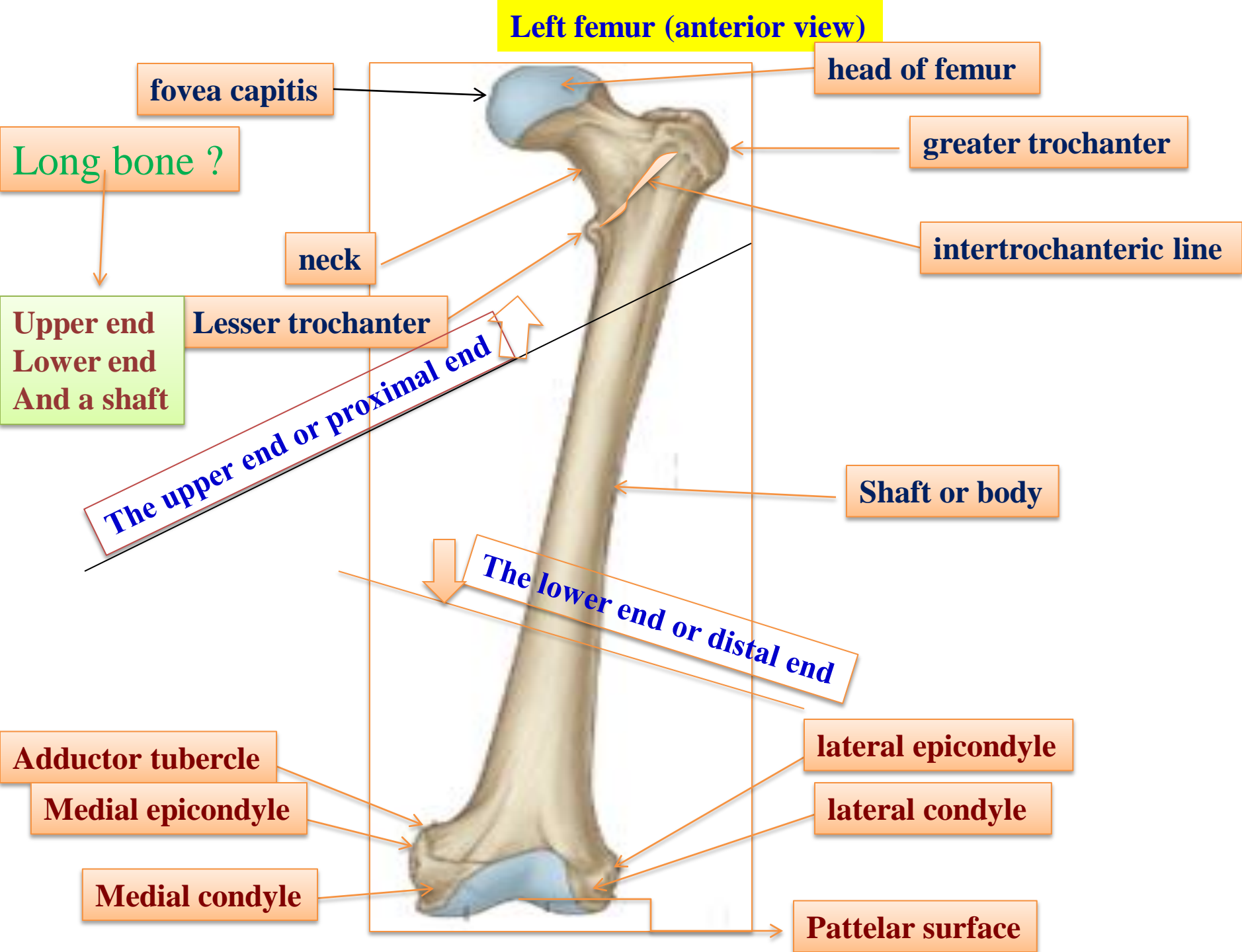




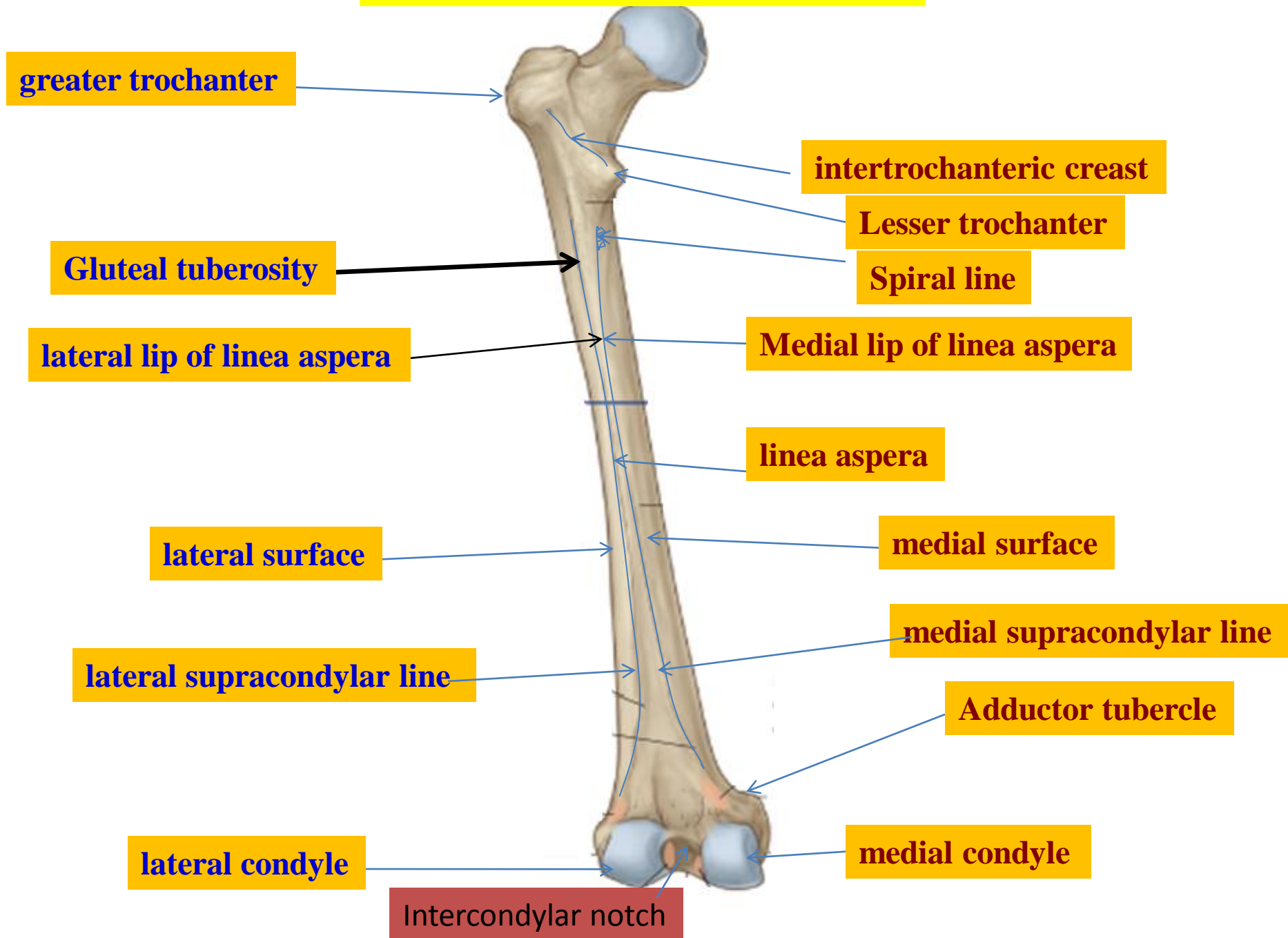


# BONES THE THIGH

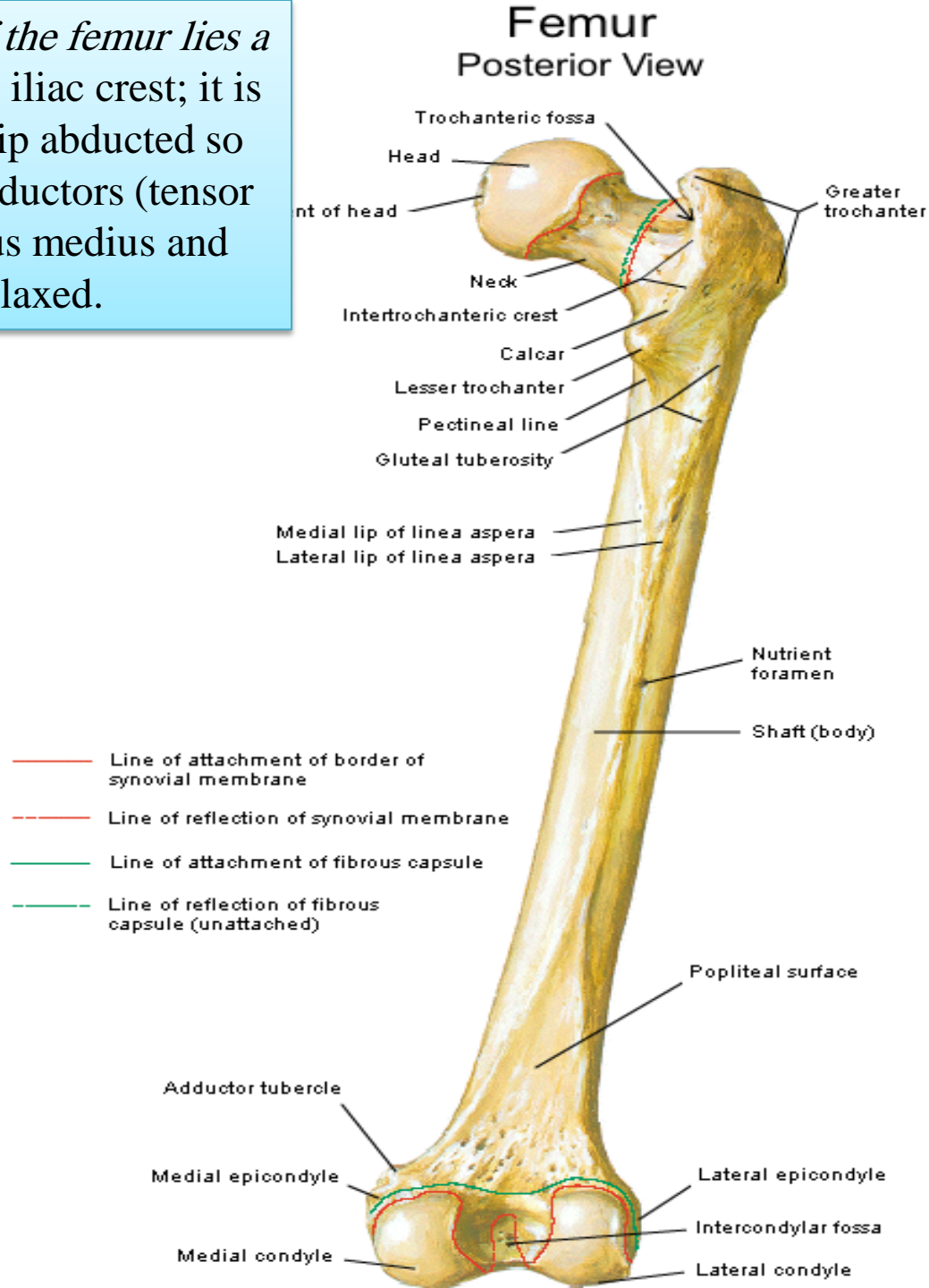
## Left femur (anterior view)



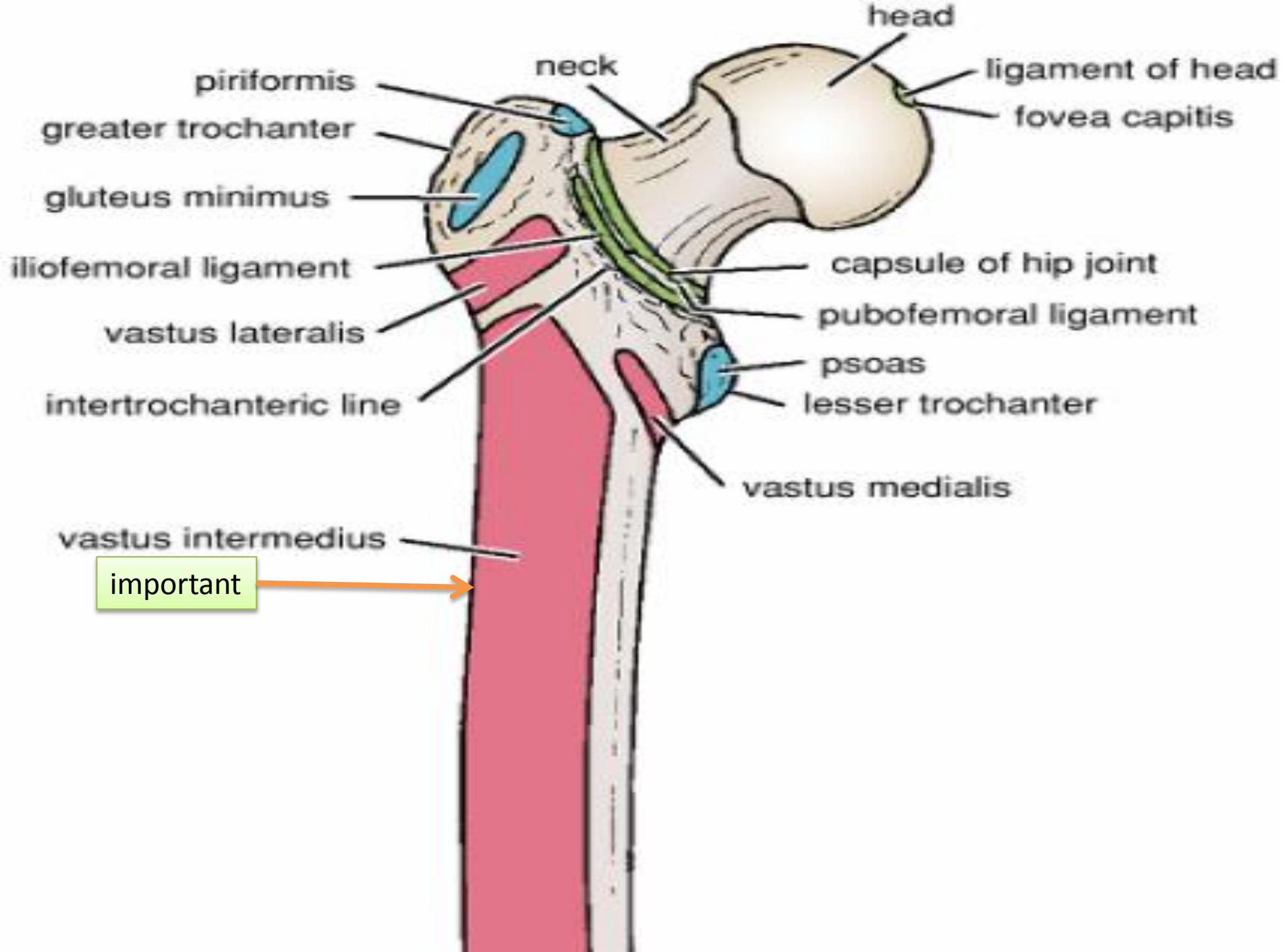
# Left femur (posterior view)

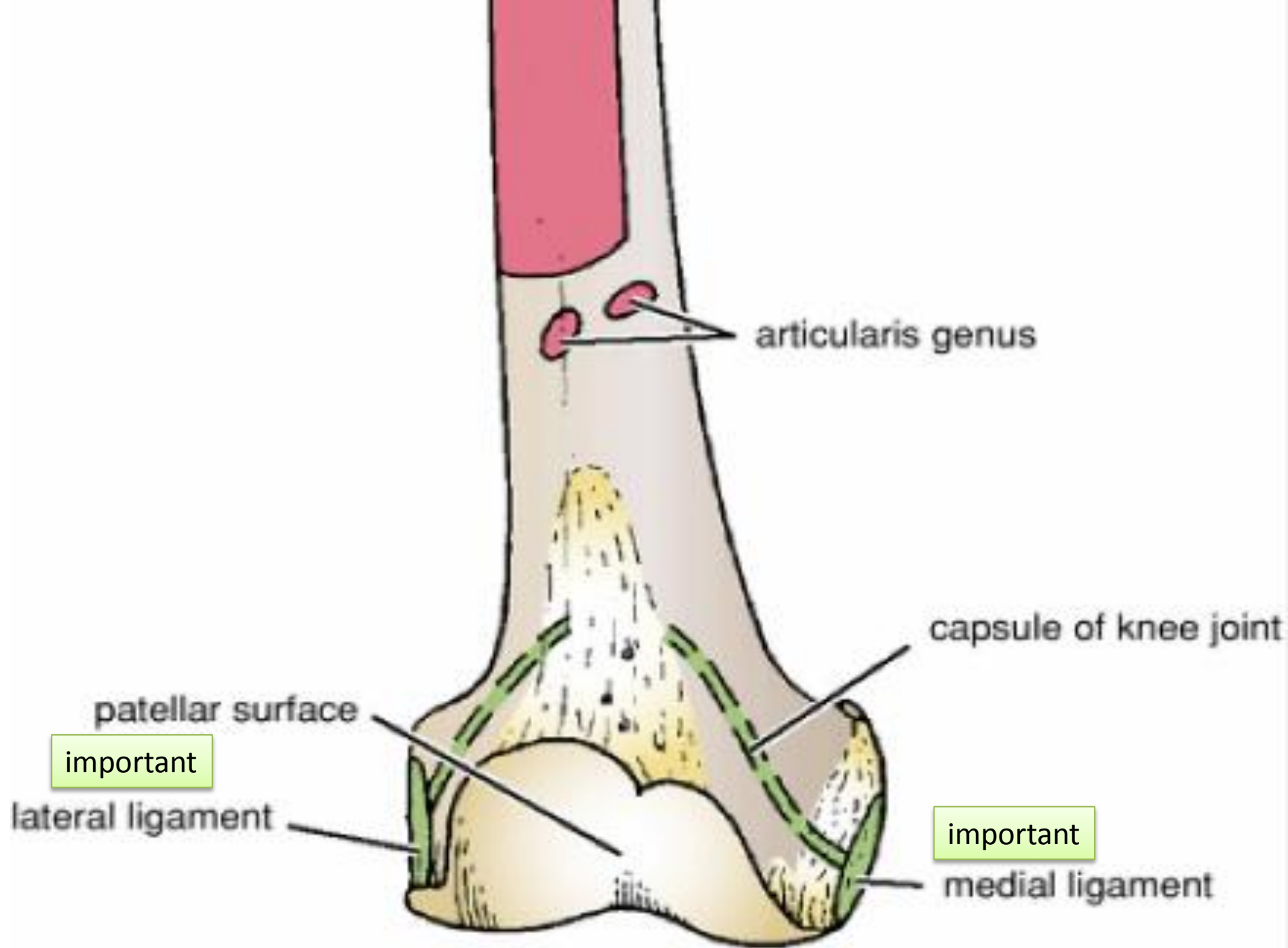


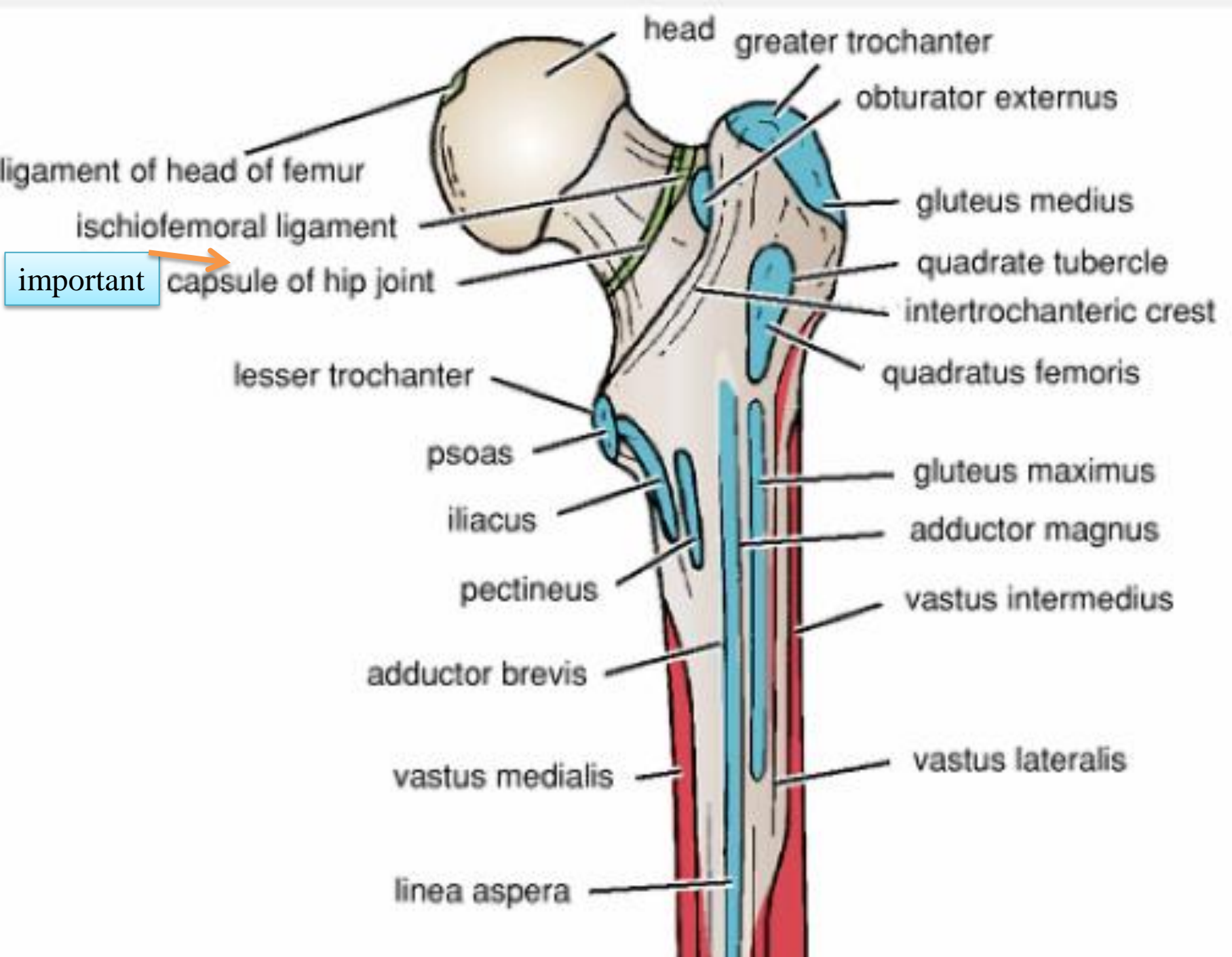
The *greater trochanter of the femur lies a hand's breadth below the iliac crest*; it is best palpated with the hip abducted so that the overlying hip abductors (tensor fasciae latae and gluteus medius and minimus) are relaxed.











important

