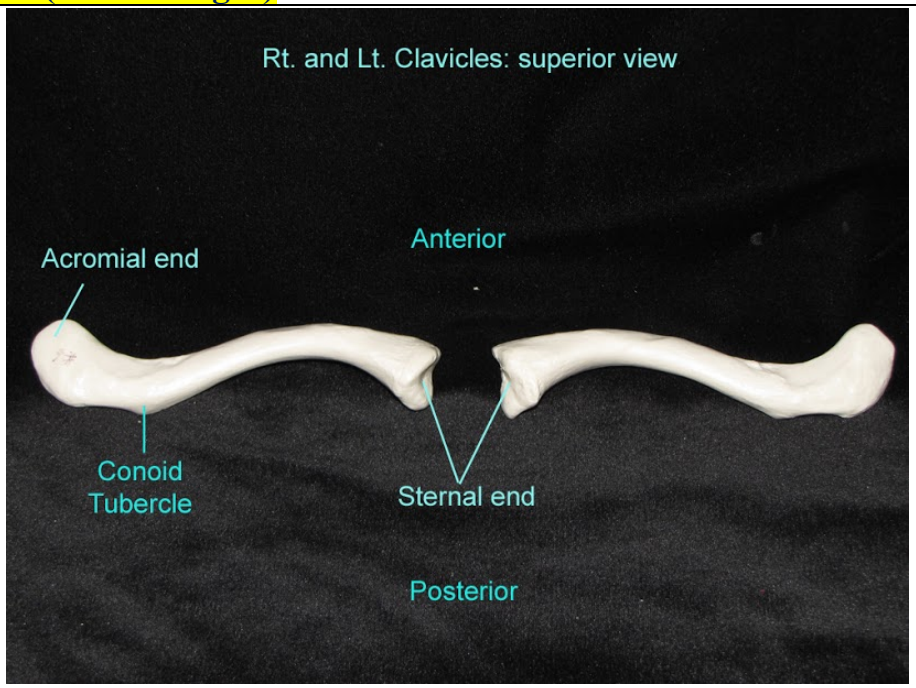
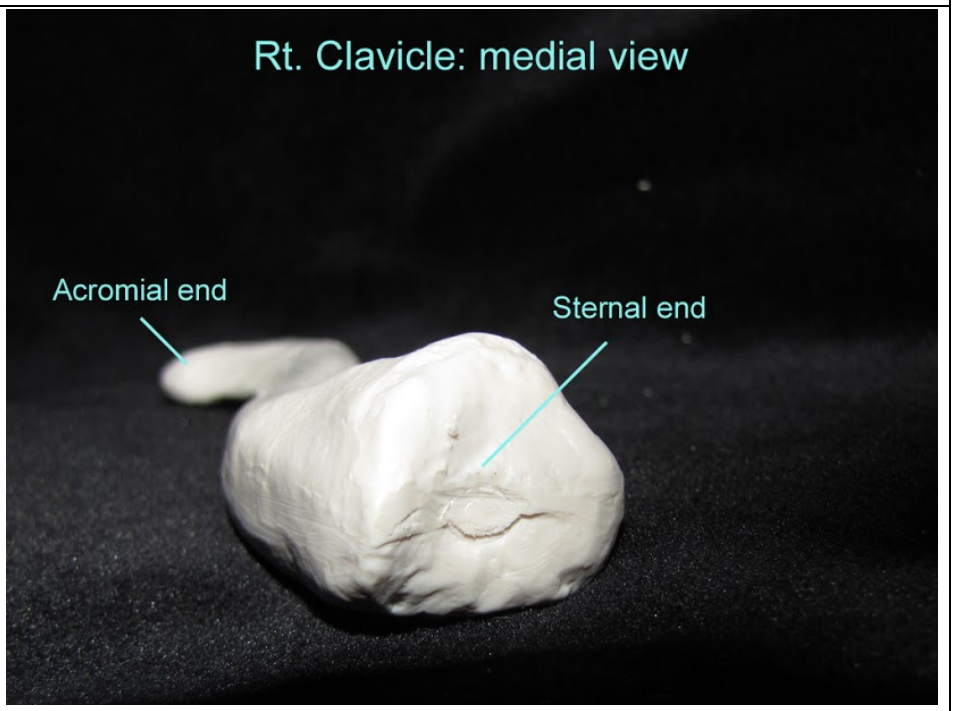
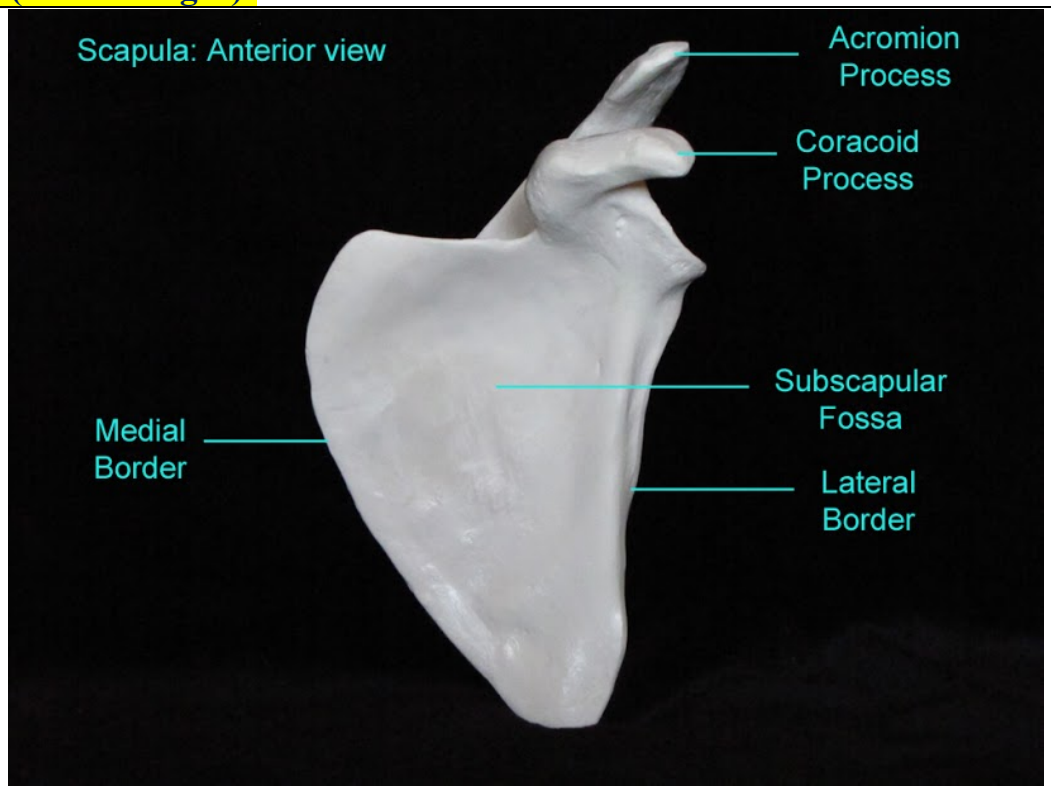
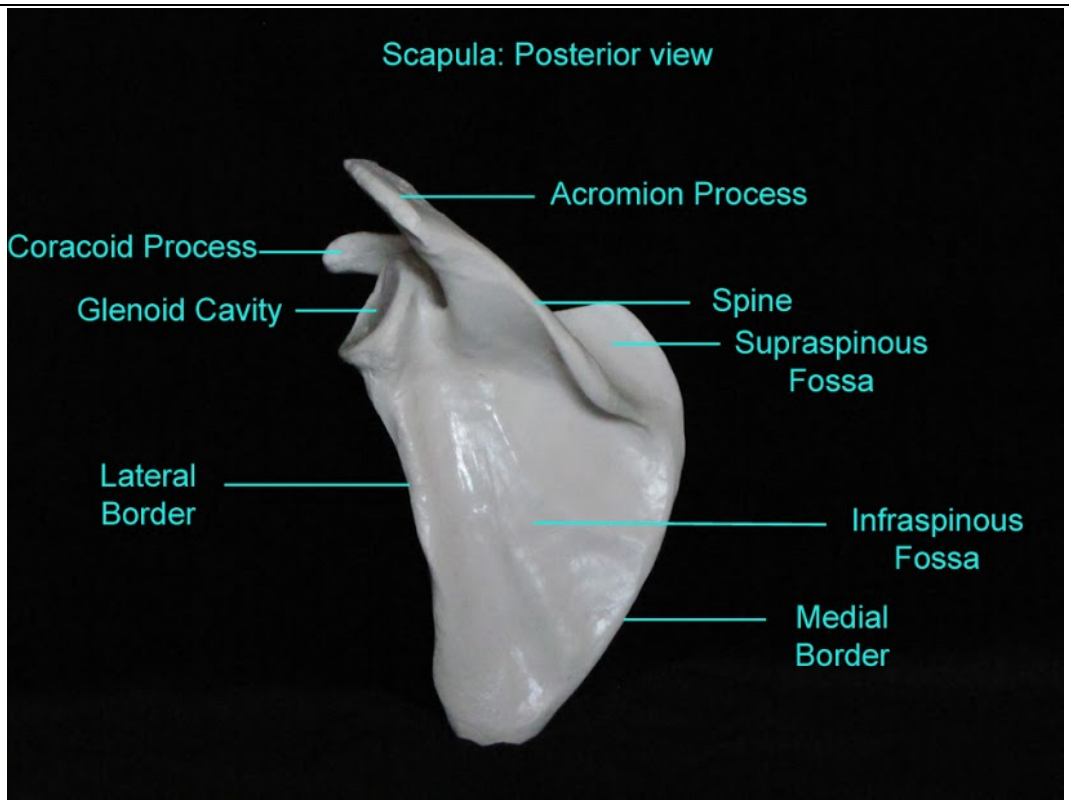
BIO 201 – Skeletal System Anatomy Lab
Appendicular Skeleton

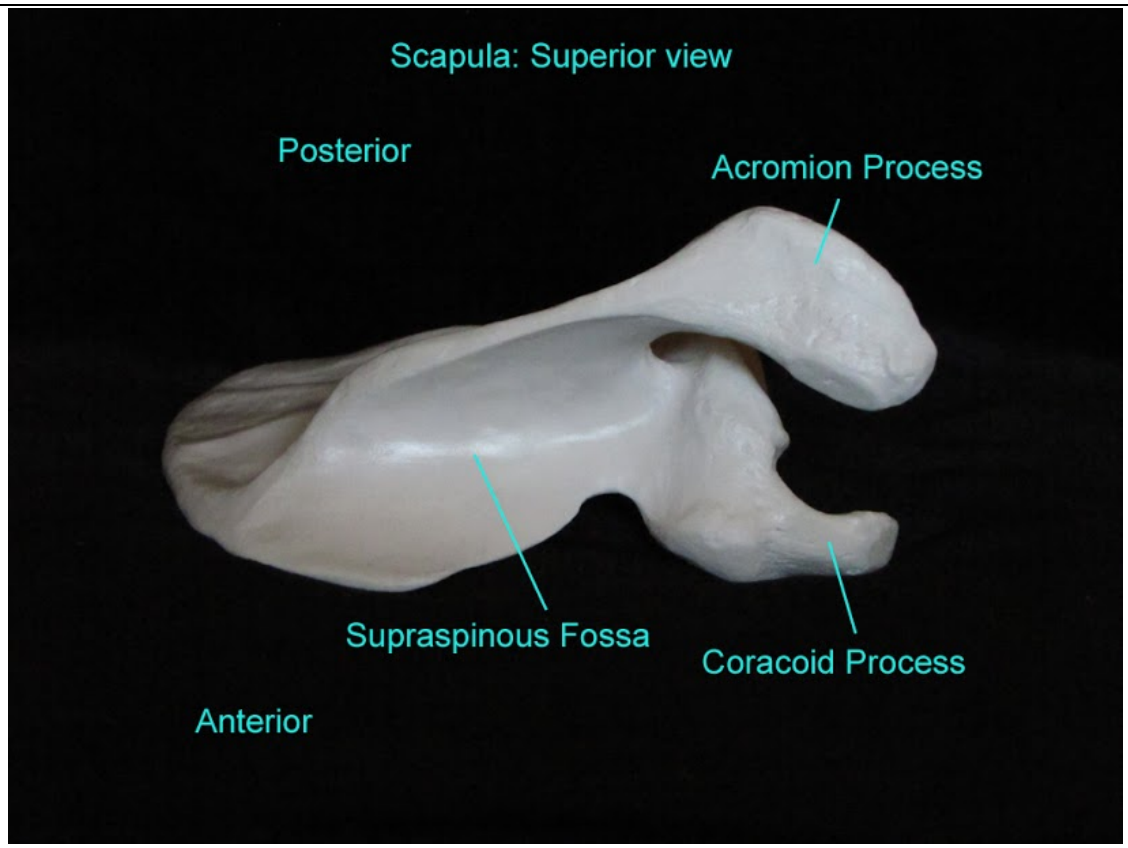
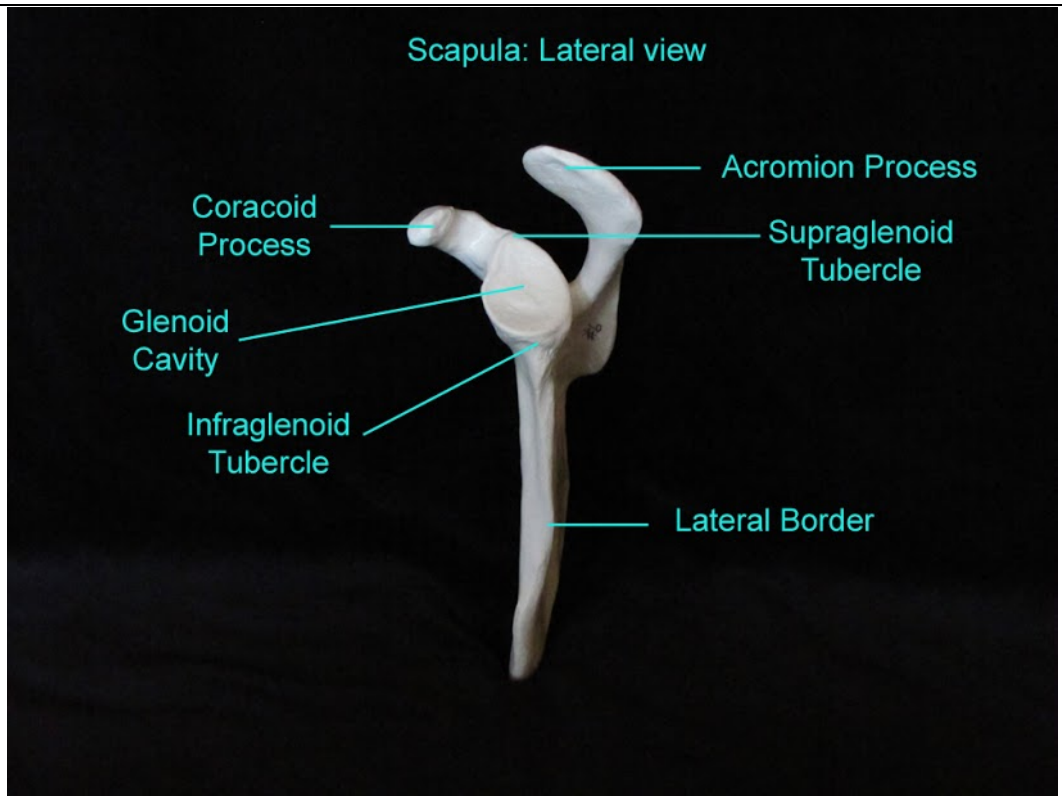
A. PECTORAL GIRDLE: CLAVICLE & SCAPULA

1. CLAVICLE (left and right)

1. Sternal end – articulates with manubrium **2. Acromial end – articulates with the acromion process of scapula** **3. Conoid tubercle – landmark on posterior, inferior surface**	
	

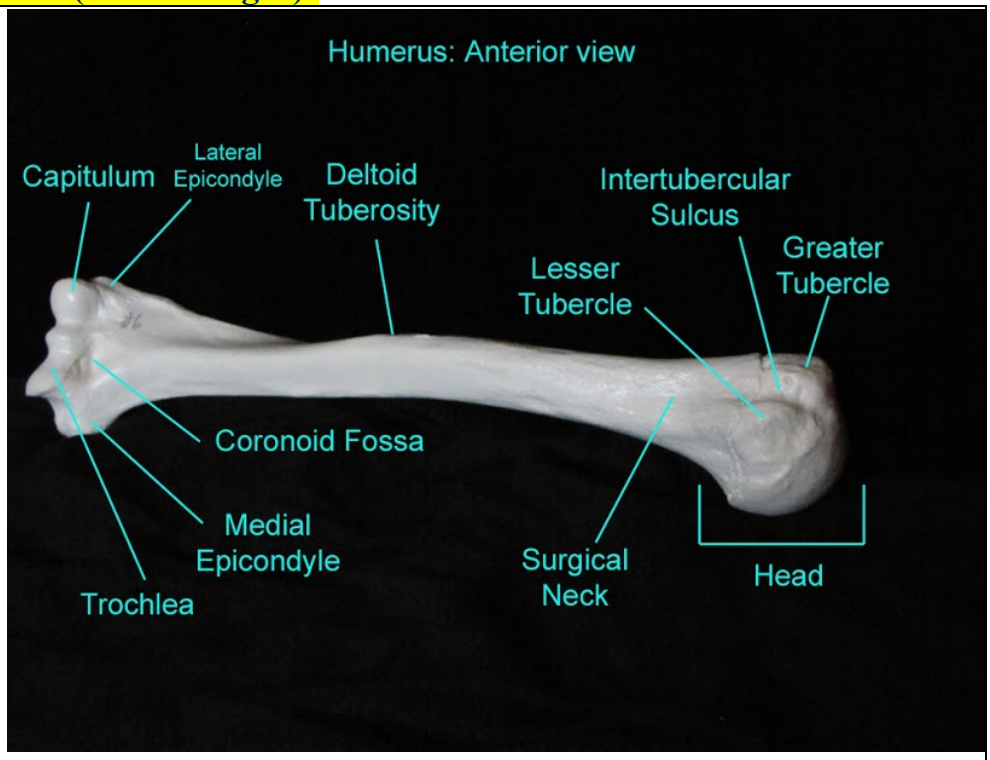
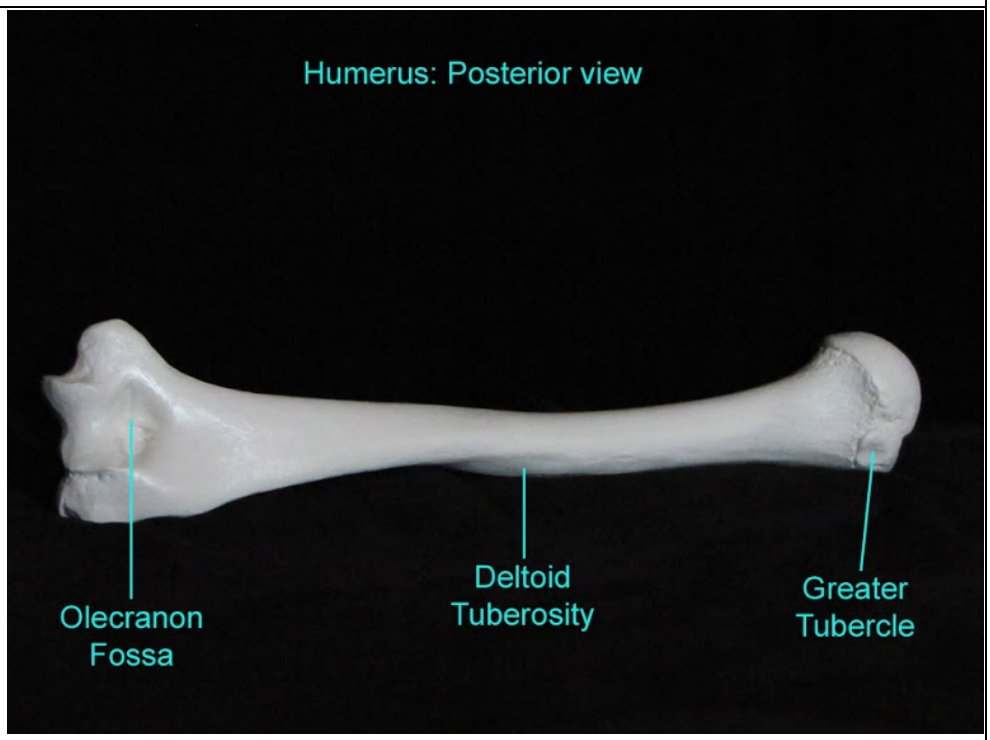
2. SCAPULA (left and right):

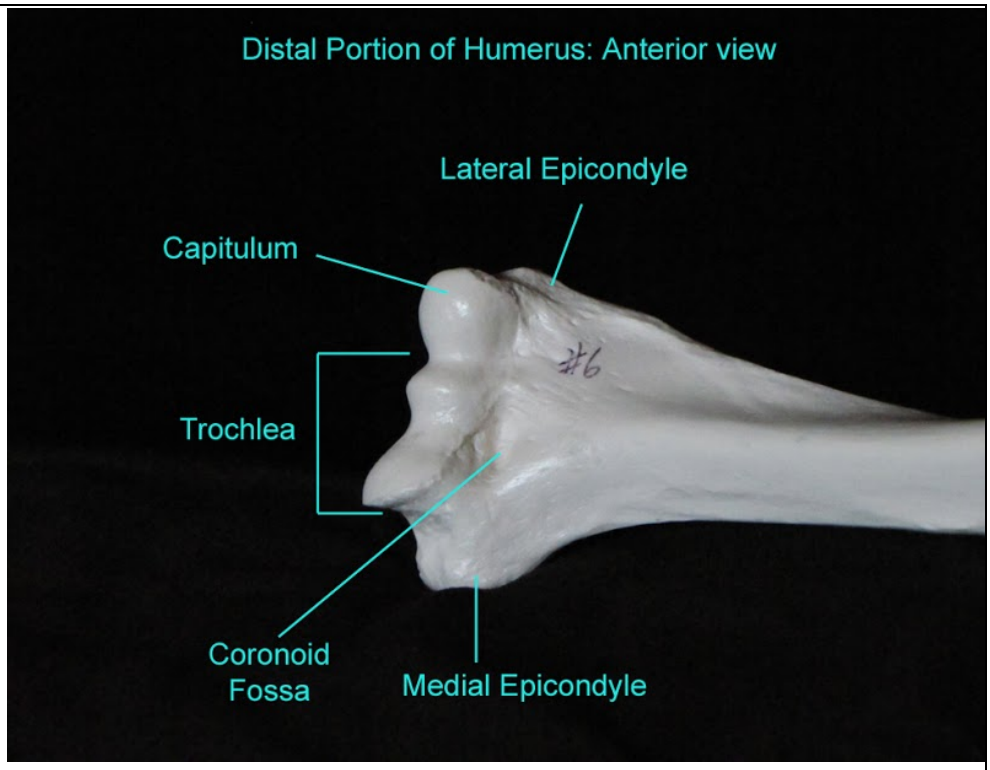
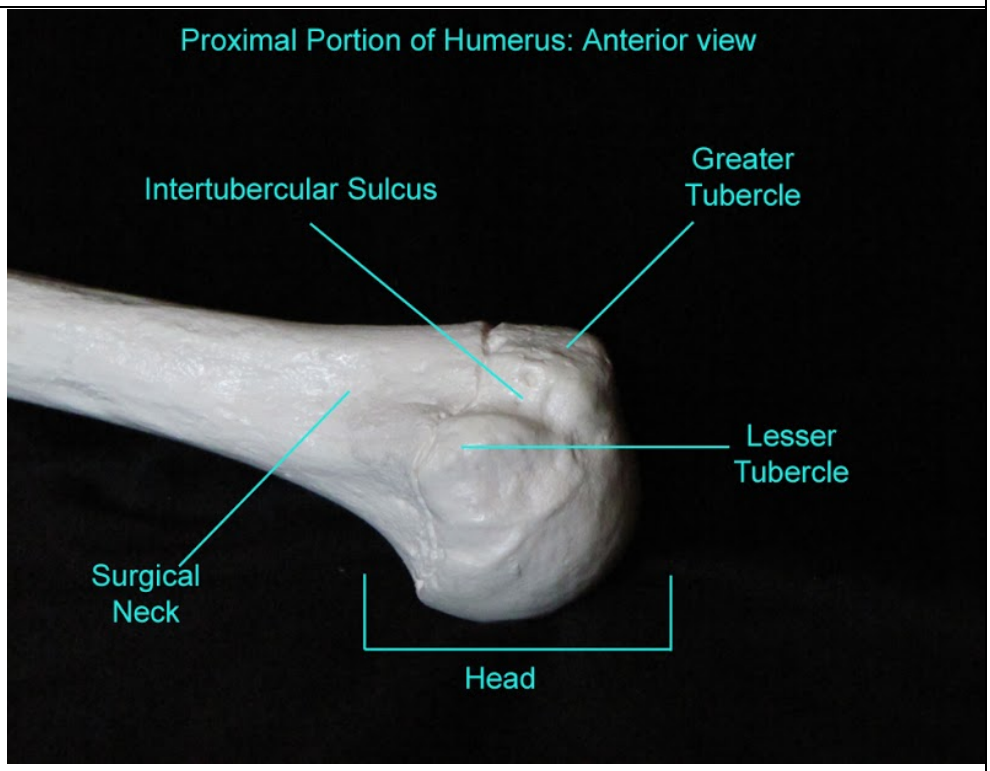
1. Acromion process (*acro* = topmost) **2. Coracoid process (coracoid = beak)** **3. Subscapular fossa** **4. Medial (vertebral) border** **5. Lateral (axillary) border** ***left scapula**	
6. Spine **7. Supraspinous fossa** **8. Infraspinous fossa** **9. Glenoid cavity (*glen-* pit, socket)** ***left scapula** **** Acromion process, coracoid process, medial and lateral border may also be seen here.**	

***Top down (Superior) view – showing left scapula **Acromion process, supraspinous fossa, and coracoid process are labeled here.**	
10. Supraglenoid tubercle 11. Infraglenoid tubercle *lateral view of left scapula **Acromion process, coracoid process, glenoid cavity and the lateral border are all seen here.	

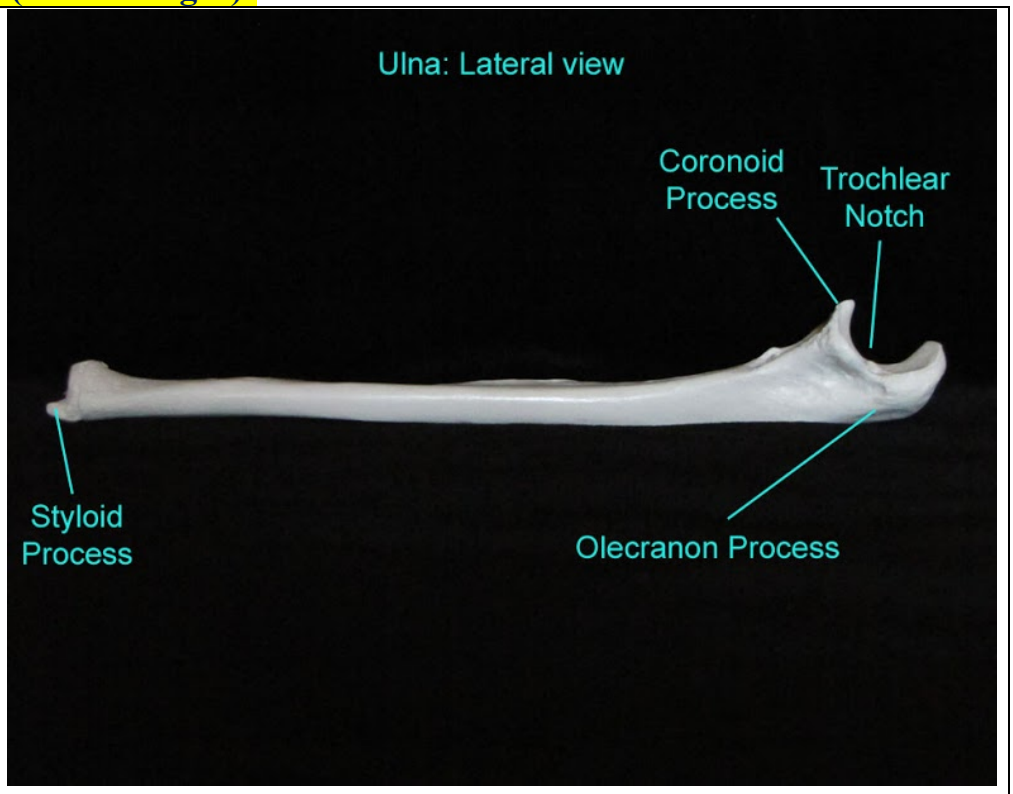
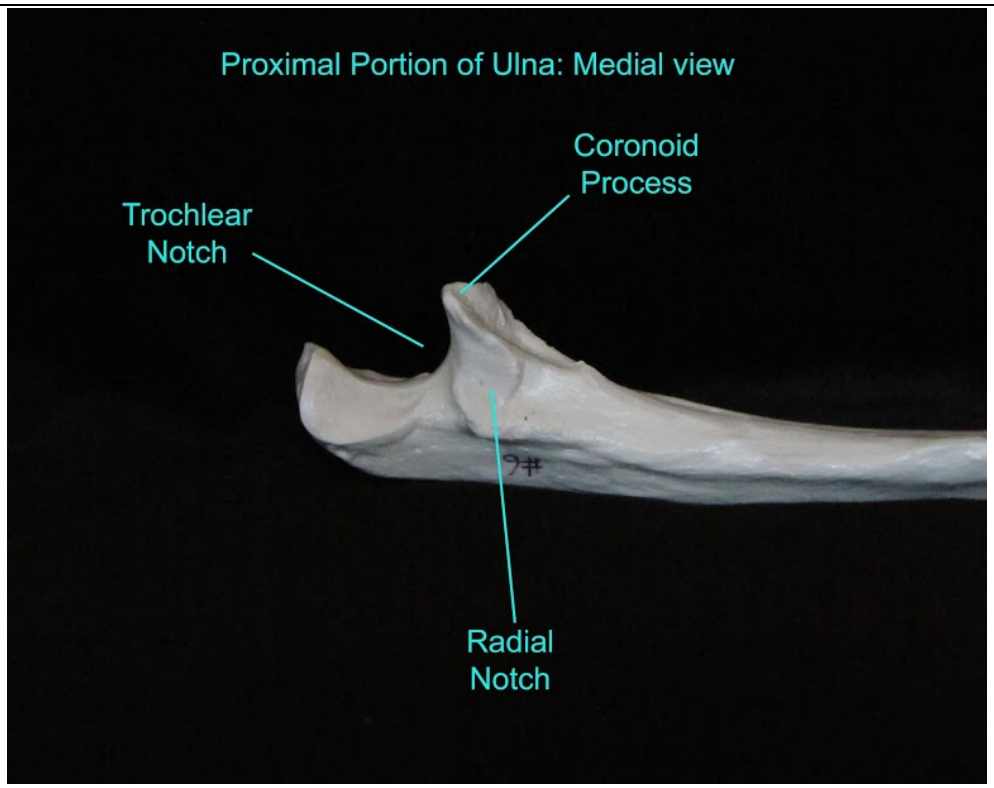
B. UPPER EXTREMITY - HUMERUS, RADIUS, ULNA, CARPALS, METACARPALS, PHALANGES

1. HUMERUS (left and right):

1. Head – articulates with glenoid cavity **2. Greater tubercle** **3. Lesser tubercle** **4. Intertubercular sulcus (or groove)** **5. Surgical neck** **6. Deltoid tuberosity** **7. Coronoid fossa** ***Right humerus**	
8. Olecranon fossa ***Deltoid tuberosity and the Greater tubercle may be seen here.** ****Right humerus**	

9. Trochlea – articulates with the trochlear notch of the ulna (*troch* – wheel) **10. Capitulum – articulates with the head of the radius** **11. Medial epicondyle** **12. Lateral epicondyle** ***Coronoid fossa can be seen** ***Right humerus**	
Anterior view of proximal portion of the right humerus: Nice view of the Greater tubercle, Lesser tubercle, Intertubercular Sulcus, head and surgical neck of the humerus.	

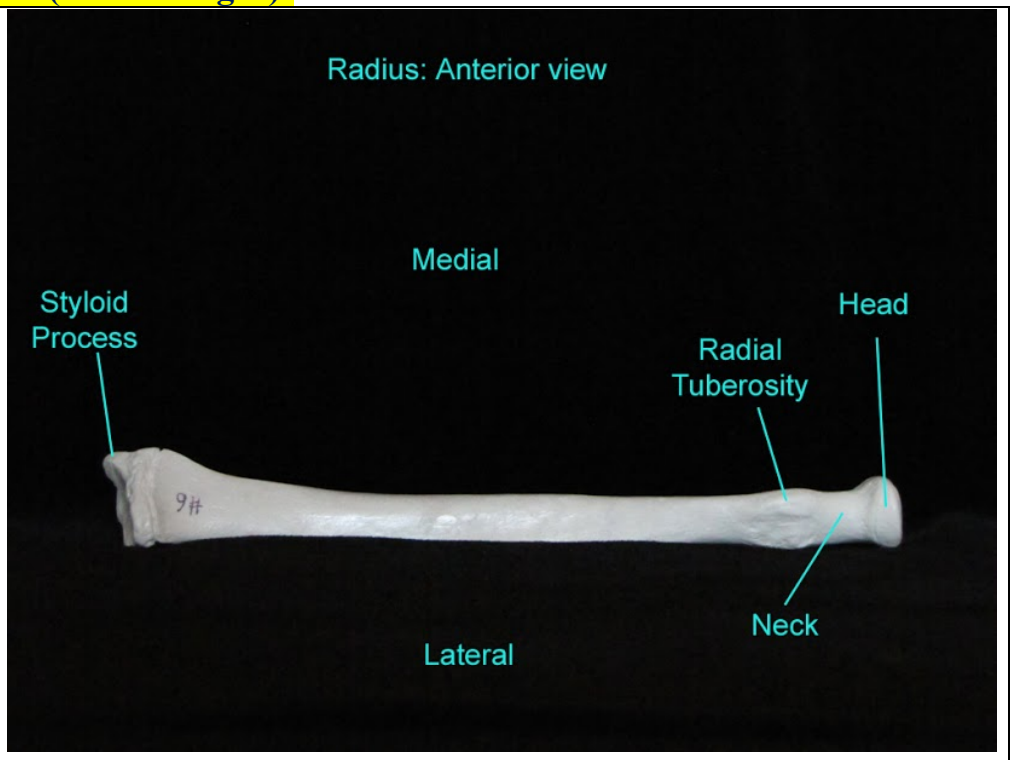
2. ULNA (left and right):

1. Trochlear (or semilunar) notch **2. Olecranon process (*olecran* – the elbow)** **3. Coronoid process** **4. Styloid process** ***Right ulna**	
5. Radial notch ***Right ulna** ****Trochlear notch and coronoid process**	

3. RADIUS (left and right):

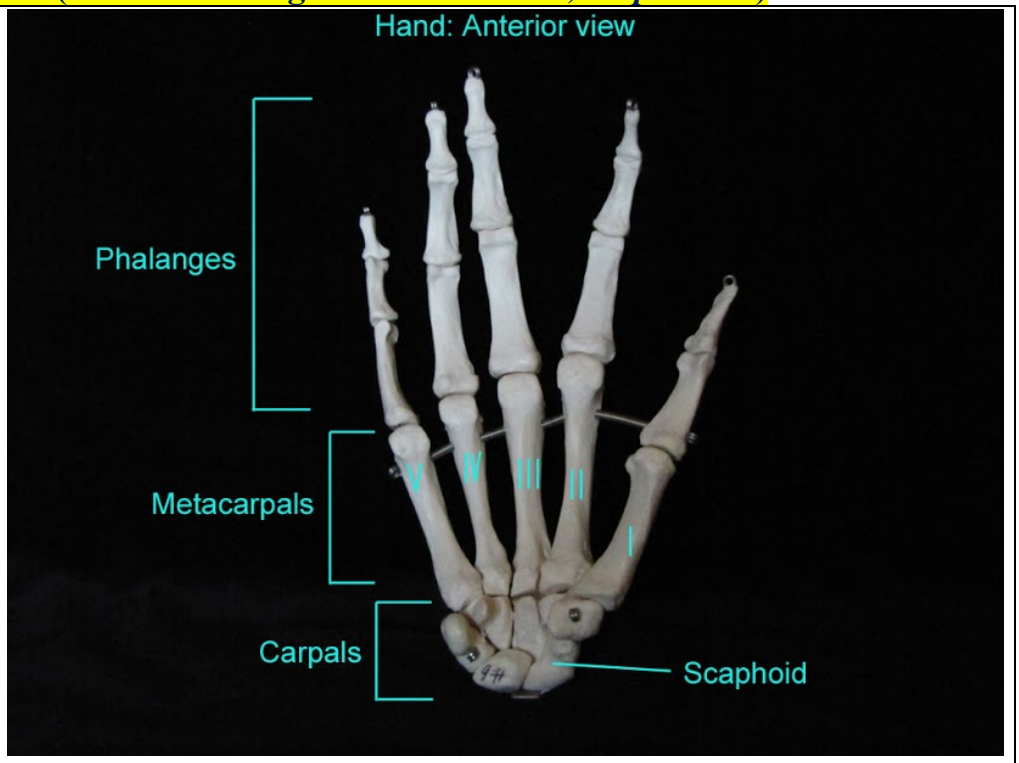
1. Head – articulates with capitulum and radial notch
2. Neck
3. Radial tuberosity
4. Styloid process

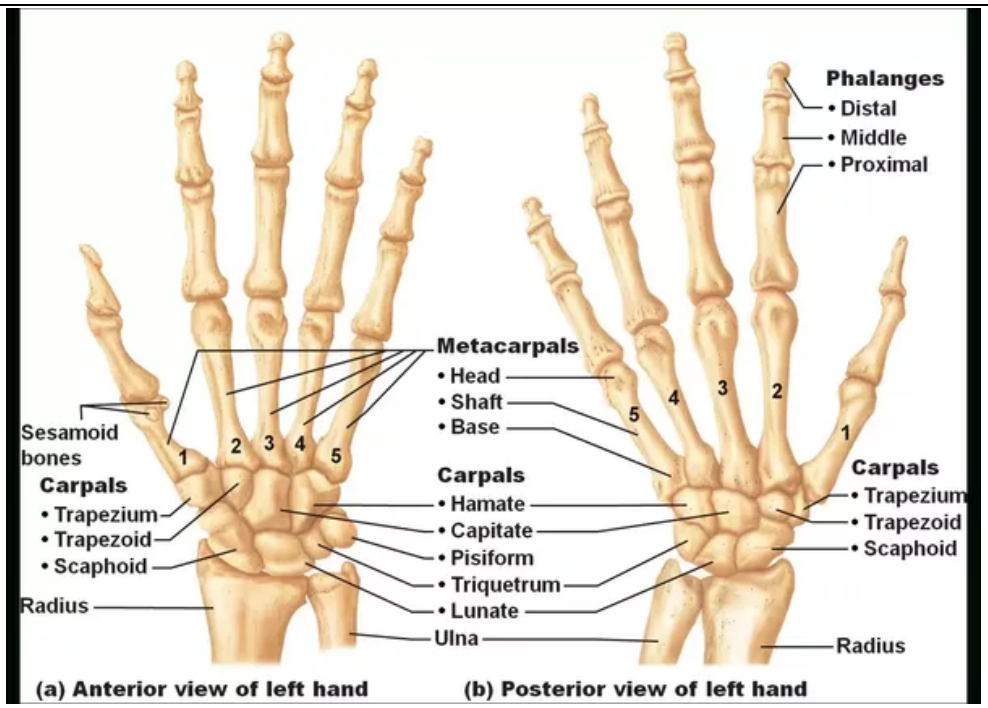
***Right radius bone**



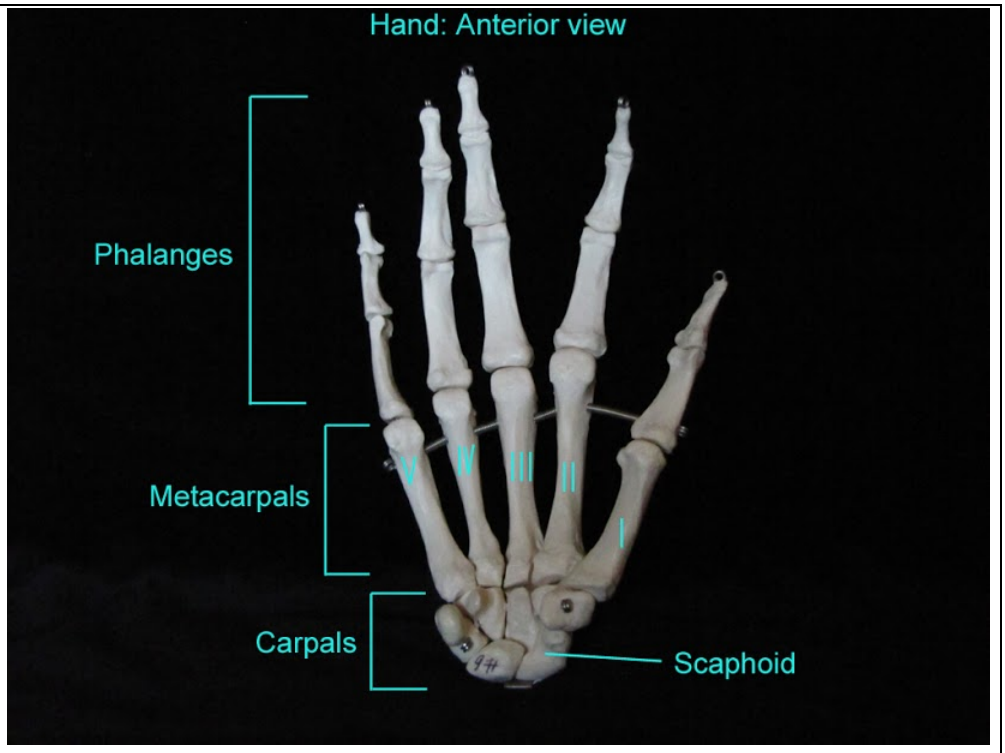
4. CARPALS (8 bones arranged in 2 rows of 4, *carp*=wrist)

***Carpals of the right hand.**

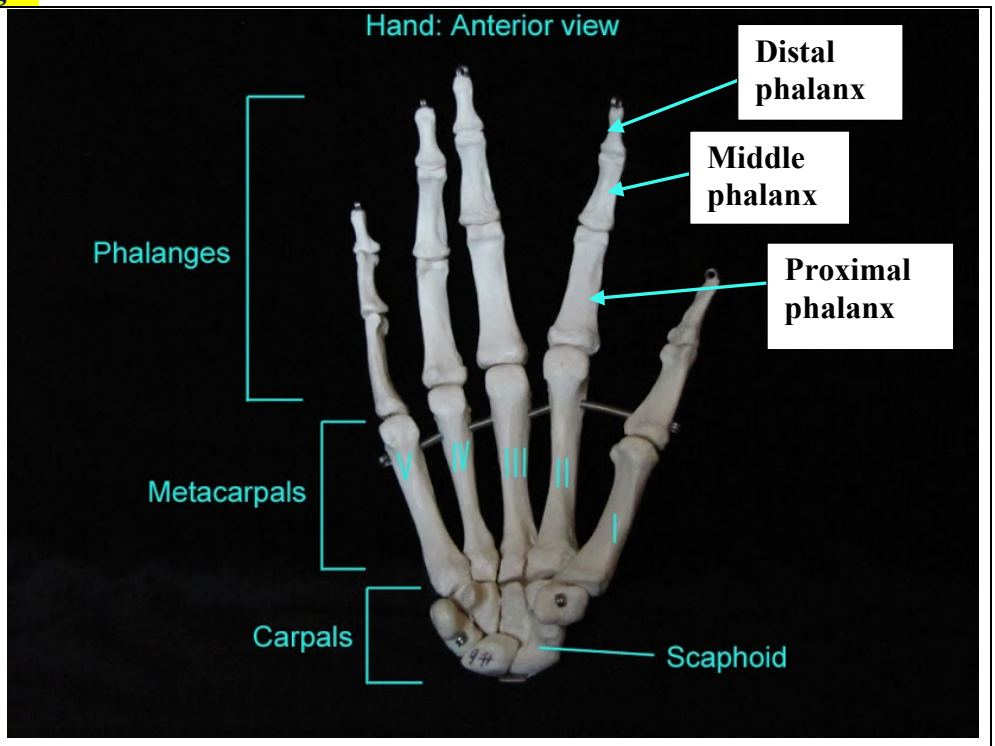


1. Scaphoid **2. Lunate** **3. Triquetrum** **4. Pisiform** **5. Trapezium** **6. Trapezoid** **7. Capitate** **8. Hamate**	

5. METACARPALS (5 bones of the hand – known as I-V beginning on the lateral side)

***Metacarpals of the right hand.** ***Numbering starts with the thumb as I**	

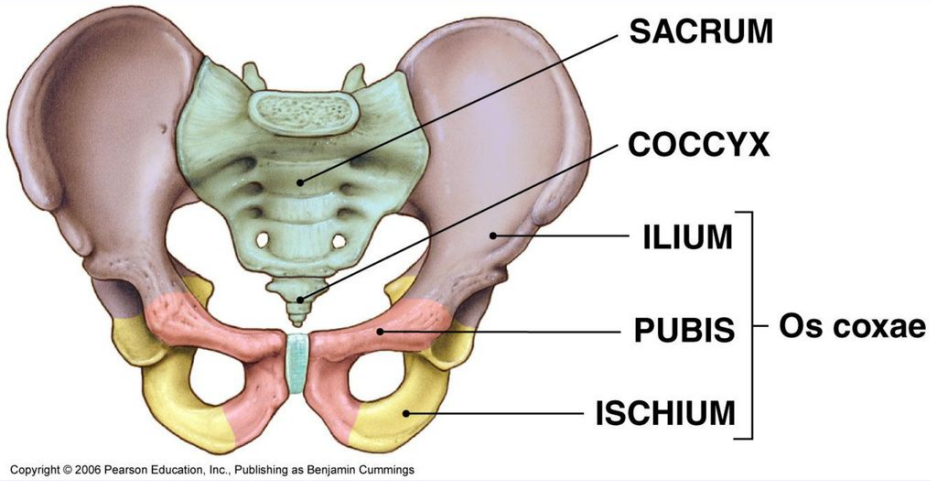
6. Phalanges

1. Proximal phalanges (I-V) **2. Middle phalanges (II-V, not in thumb)** **3. Distal phalanges (I-V)** ***phalanx = singular** ****phalanges = plural** *****All phalanges have a proximal, middle and distal phalanx, with the exception of the thumb.**	

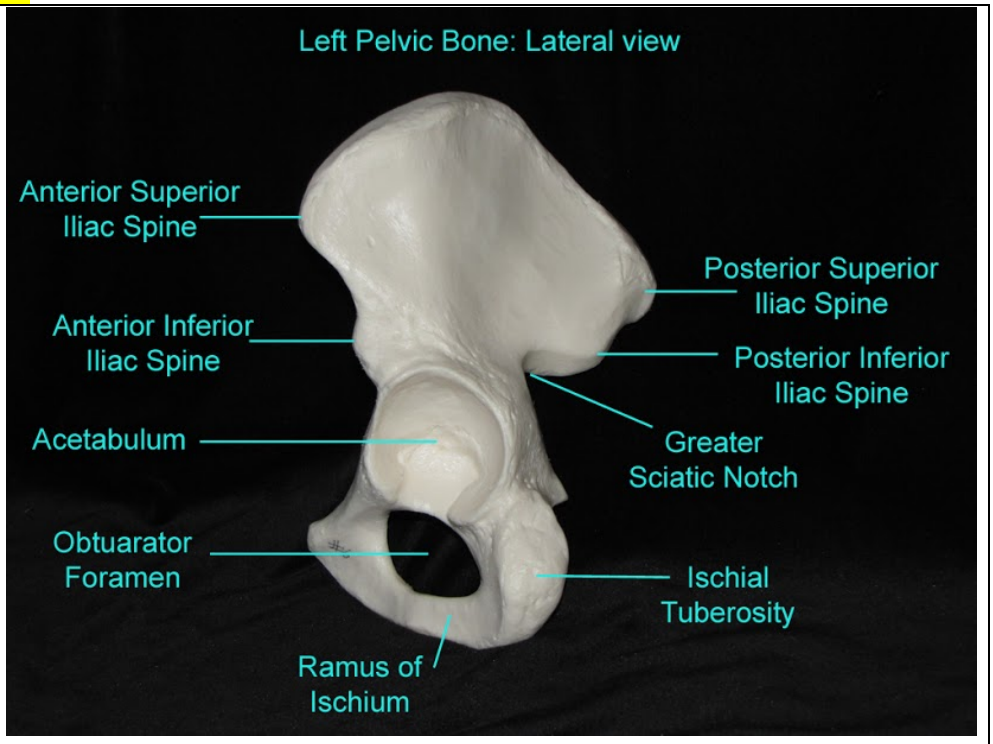
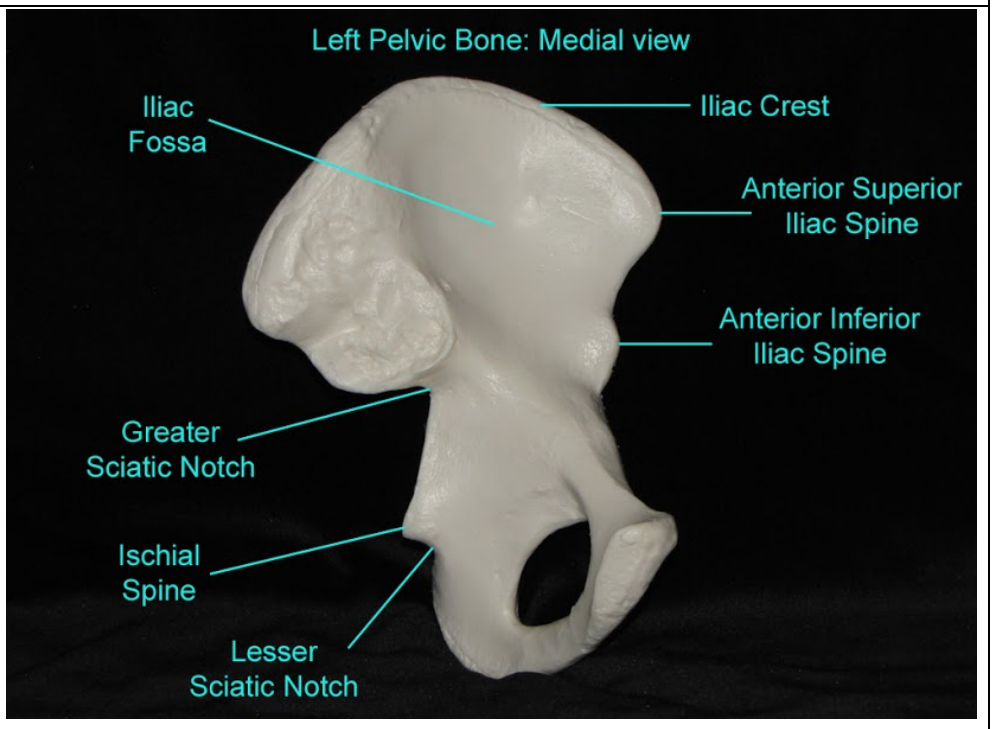
The thumb only has a proximal phalanx and a distal phalanx (no middle phalanx).

C. PELVIC GIRDLE: consists of 2 pelvic bones, also called the os coxae. Each os coxa consists of 3 bones - Ilium, Ischium, Pubis.

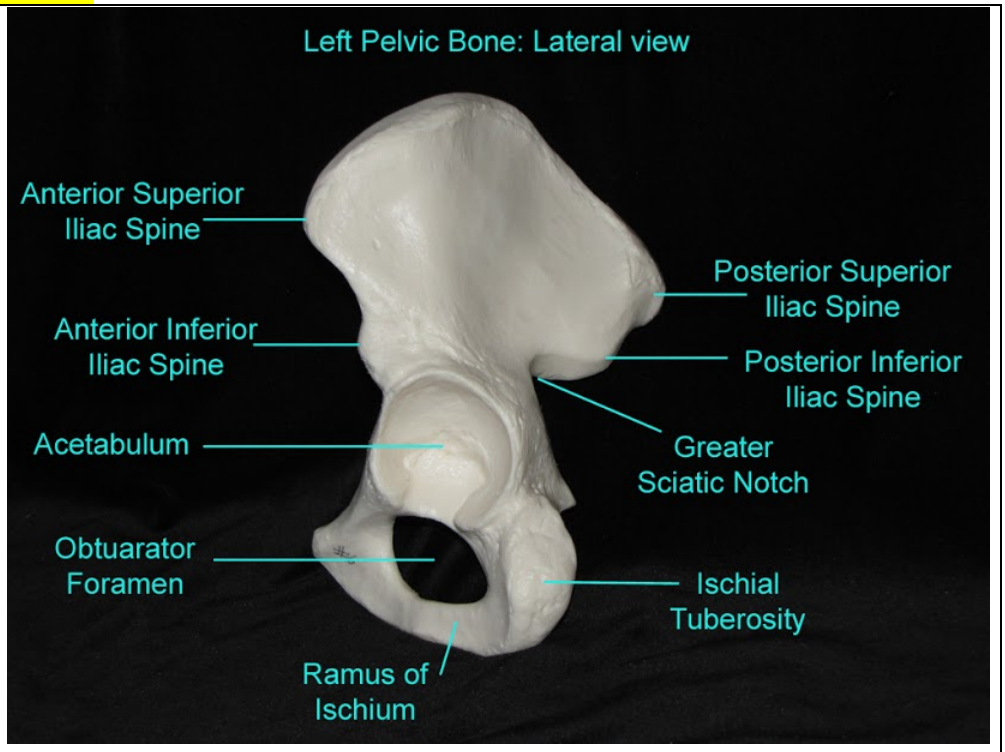
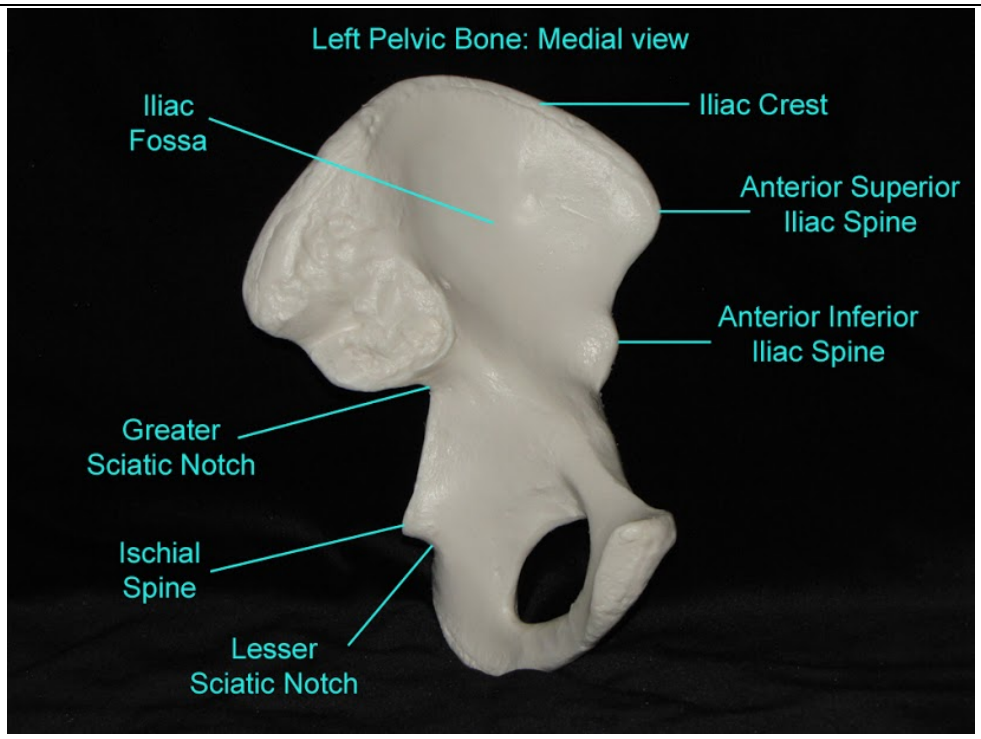
Pelvis (pelvic girdle):



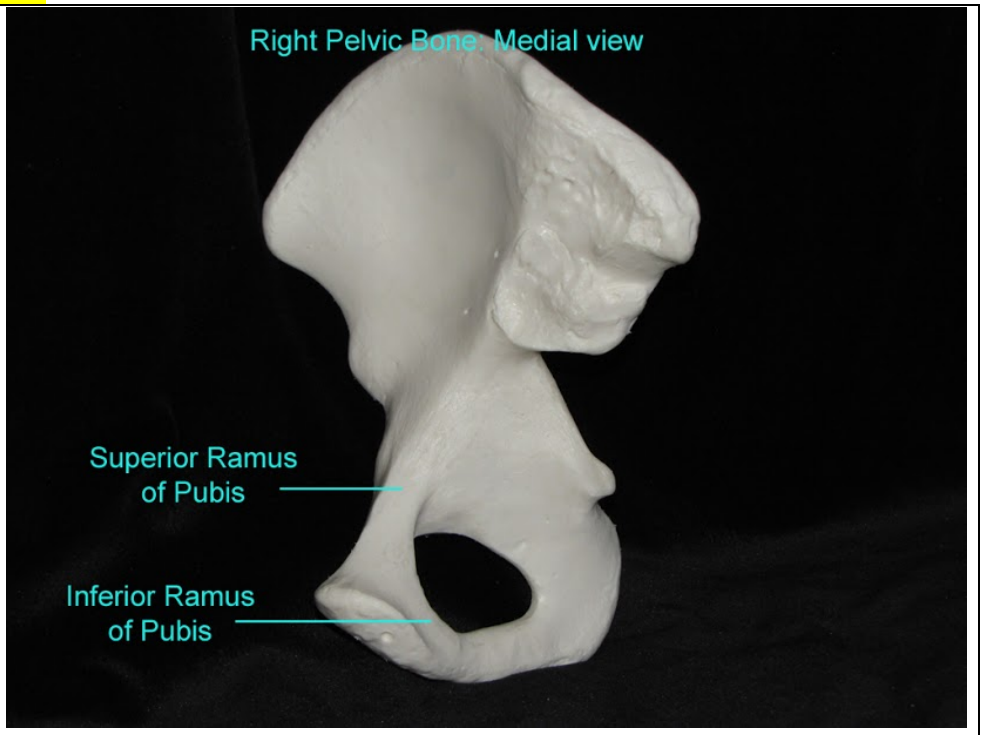
1. ILIUM

1. Anterior superior iliac spine **2. Anterior inferior iliac spine** **3. Posterior superior iliac spine** **4. Greater sciatic notch (route of major nerves to lower limb**	
5. Iliac crest **6. Iliac fossa**	

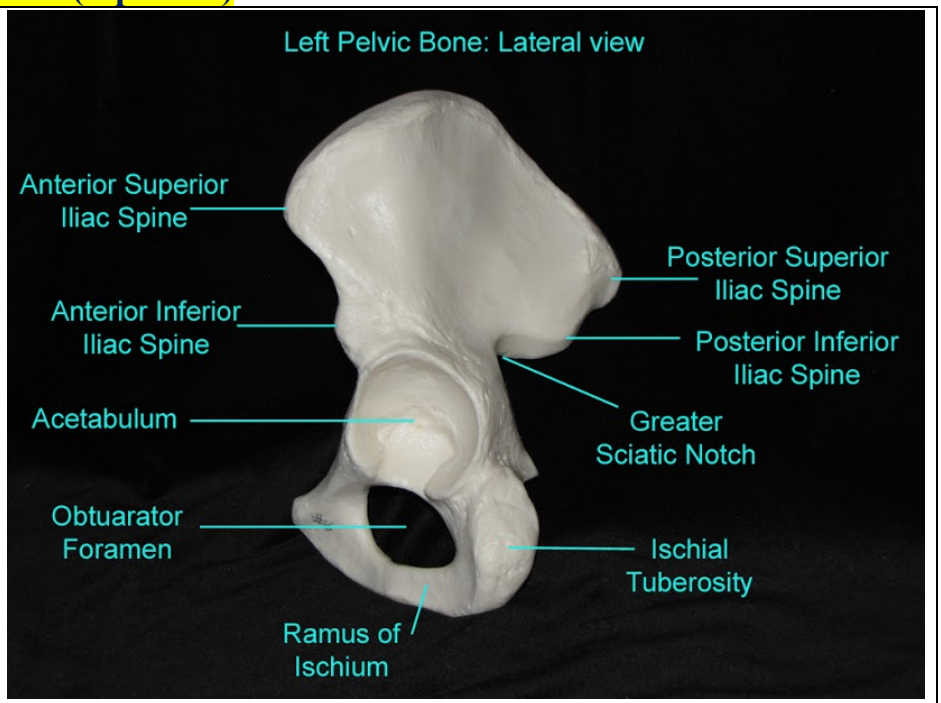
2. ISCHIUM

1. Ischial tuberosity ("sit" bones) **2. Ramus of ischium (*ramus*- a branch)**	
3. Ischial spine **4. Lesser sciatic notch (route of pudendal nerve to genitals)**	

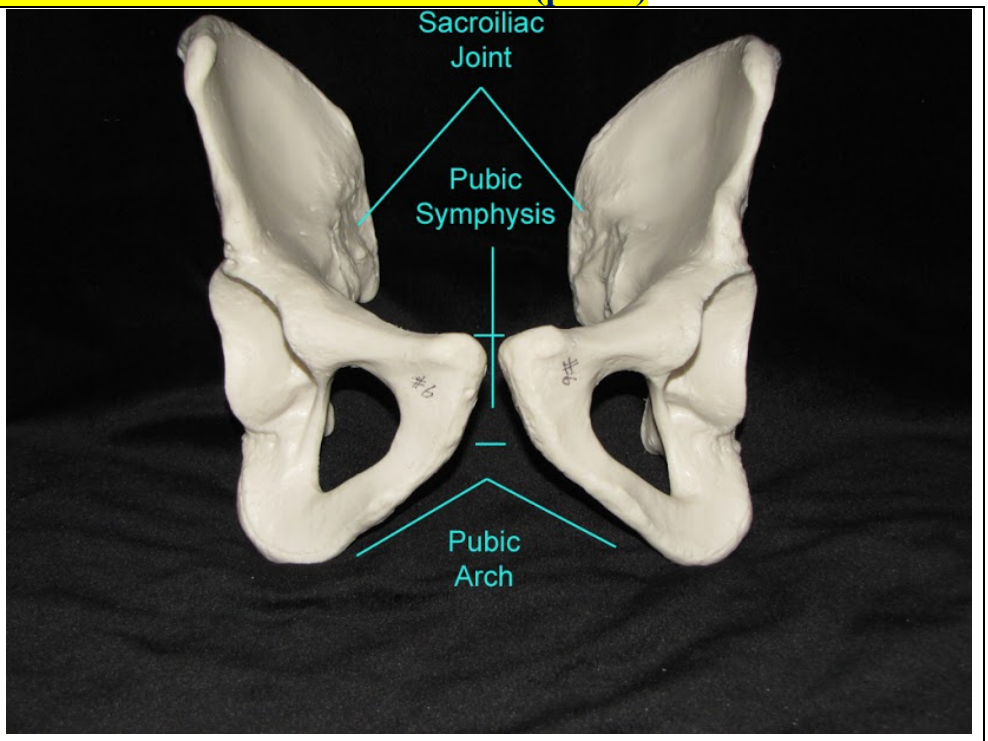
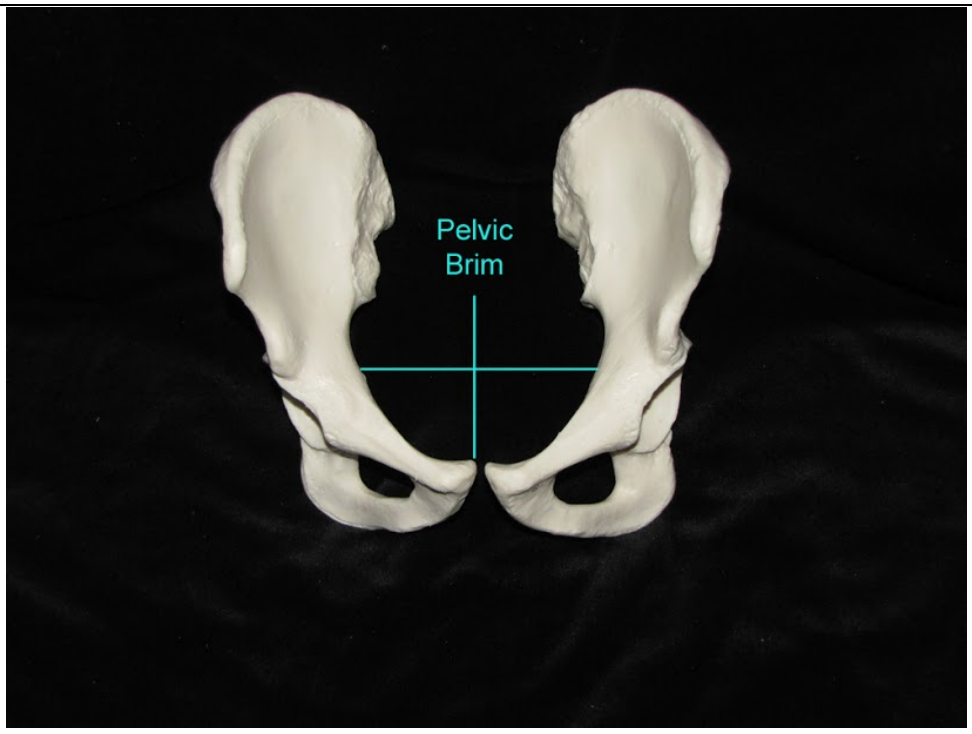
3. PUBIS

1. Superior ramus of Pubis **2. Inferior ramus of Pubis**	

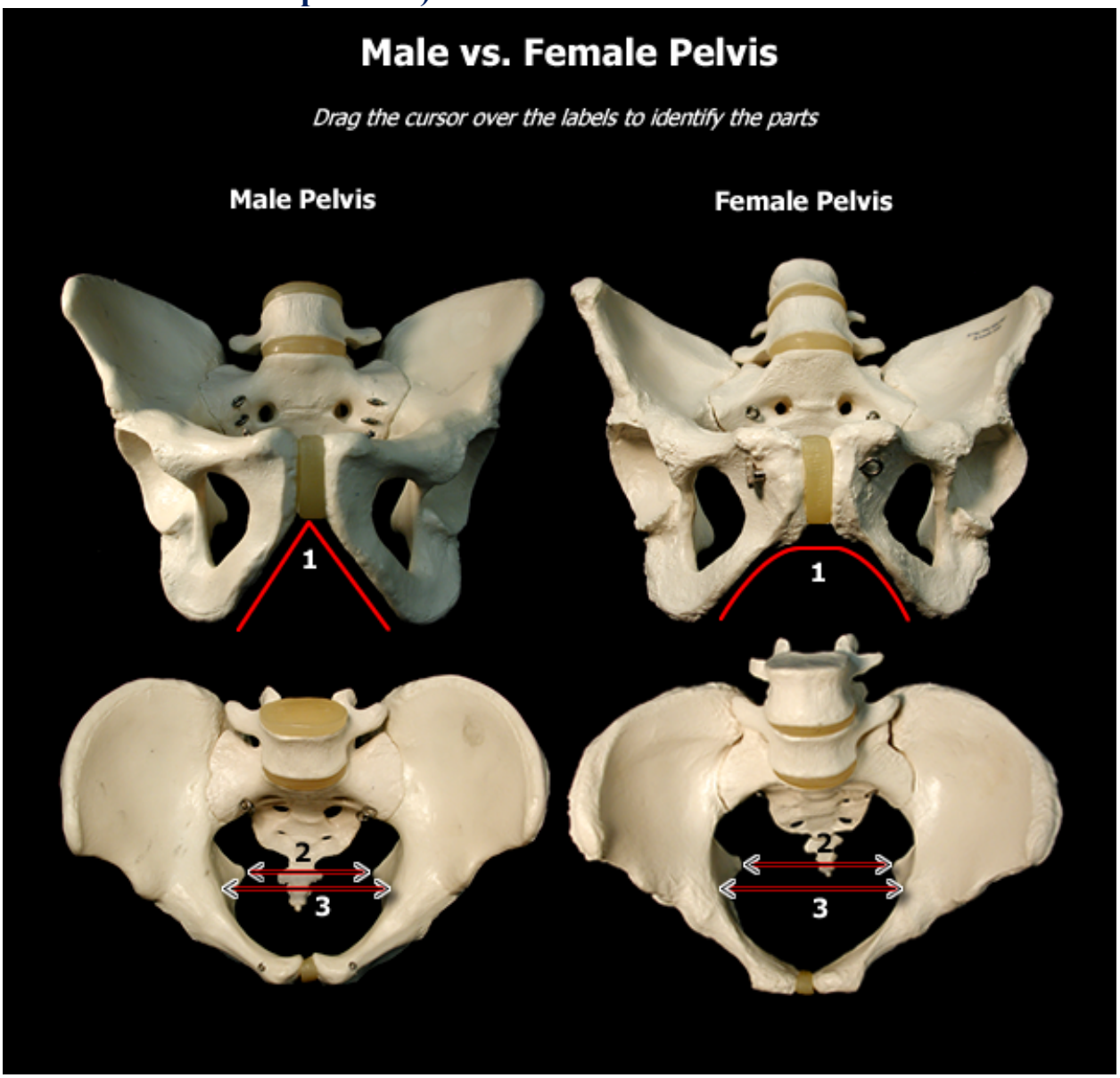
4. OS COXA (hip bone)

1. Acetabulum (articulates with head of the femur and formed by parts of the ilium, ischium, and pubis) **2. Obturator foramen (the largest foramen in the skeleton, yet nothing large passes through it)**	

5. ARTICULATED PELVIC GIRDLE (pelvis)

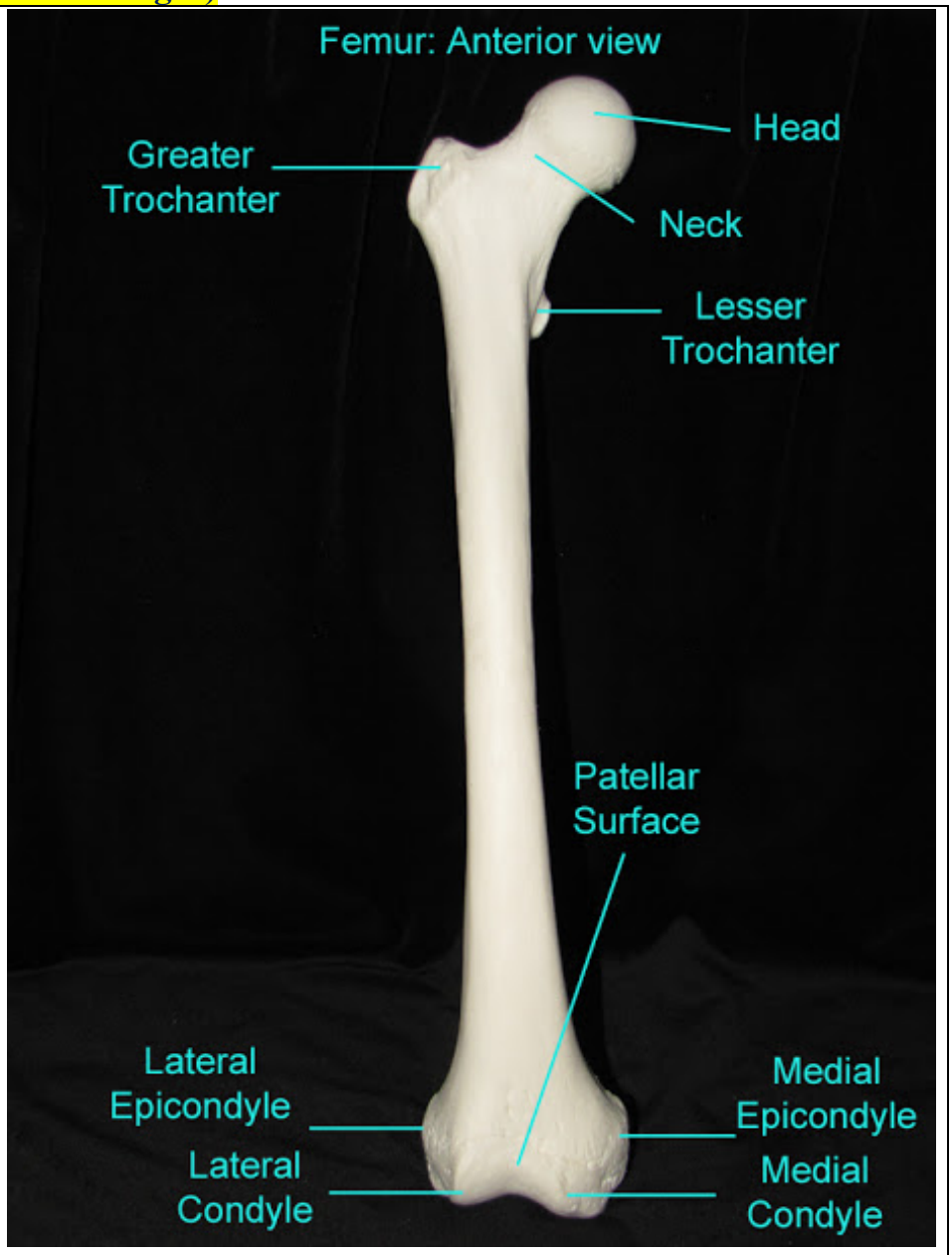
1. Pubic symphysis (symphysis pubis) **2. Pubic arch**	
3. Pelvic brim **4. When standing, the anterior superior iliac spines and the upper end of the symphysis pubis lie in the same vertical plane.**	

****Be able to distinguish a male pelvis from a female (see your textbook for illustrations and comparisons)****



D. LOWER EXTREMITY: FEMUR, PATELLA, TIBIA, FIBULA, TARSALS, METATARSALS, PHALANGES

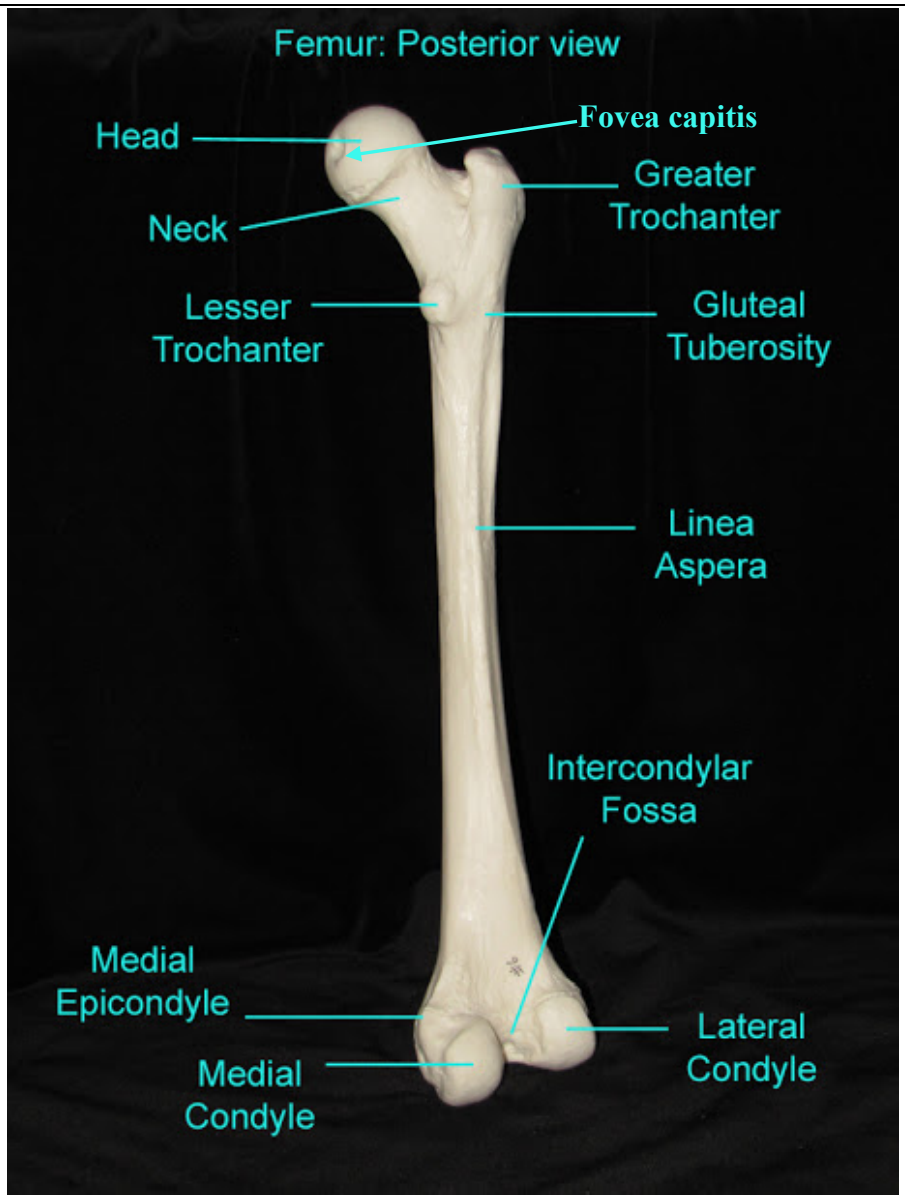
1. FEMUR (left and right)

1. Head (the depression of the fovea capitis, where the ligamentum teres attaches the femur to the acetabulum. When hip joints are replaced, the prostheses are held together by the surrounding muscles) **2. Neck** **3. Greater trochanter** **4. Lesser trochanter** **5. Medial epicondyle** **6. Lateral epicondyle** **7. Medial condyle** **8. Lateral condyle** **9. Patellar surface** ***RIGHT FEMUR**	

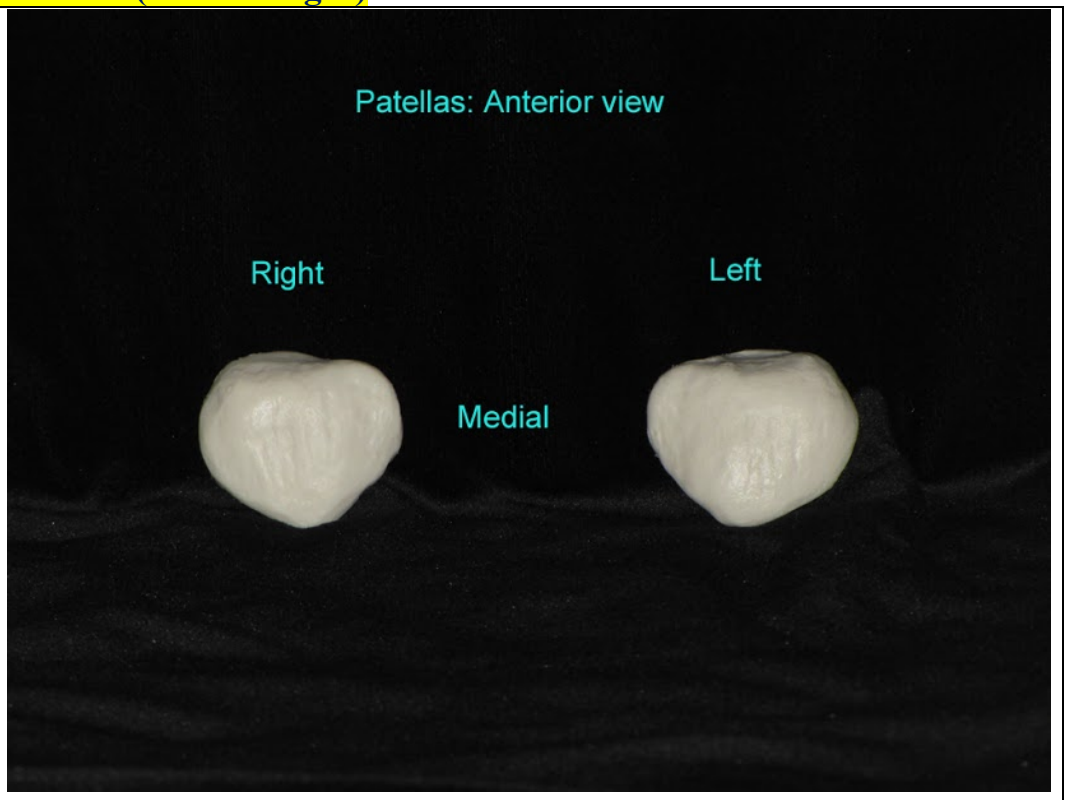
10. Gluteal tuberosity
11. Linea aspera
12. Intercondylar fossa

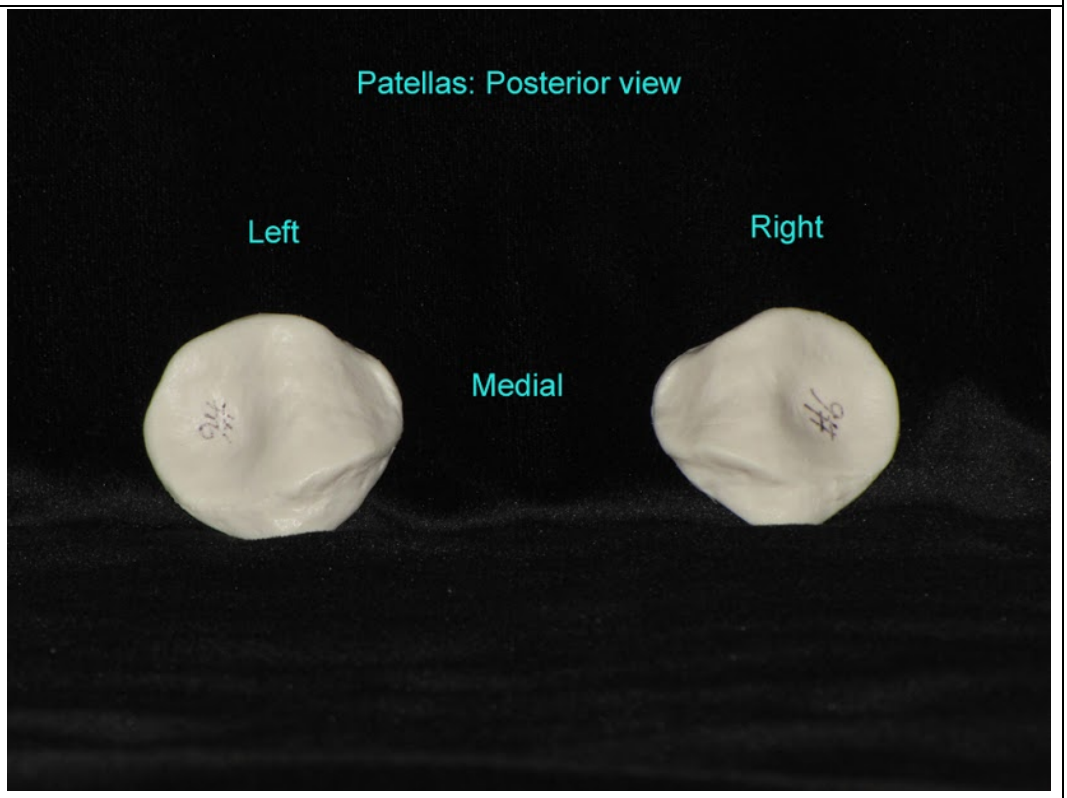
***Review other features of the femur labeled here. The fovea capitis on the head may be seen here - the depression of the fovea capitis is where the ligamentum teres attaches the femur to the acetabulum. When hip joints are replaced, the prostheses are held together by the surrounding muscles)**

***RIGHT FEMUR**



2. PATELLA (left and right)

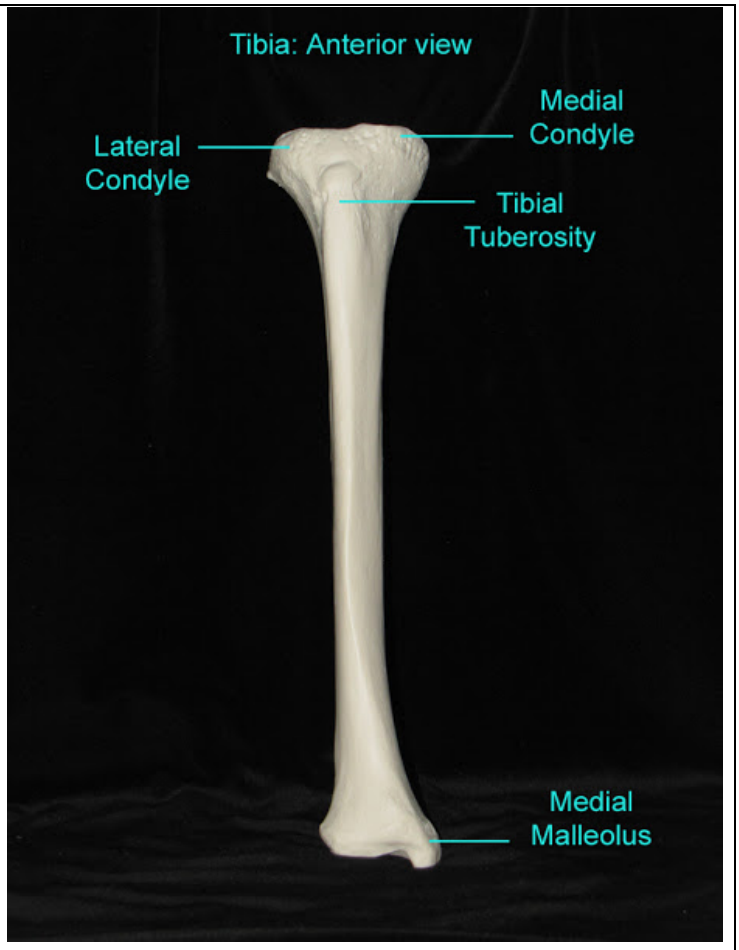




3. TIBIA (left and right)

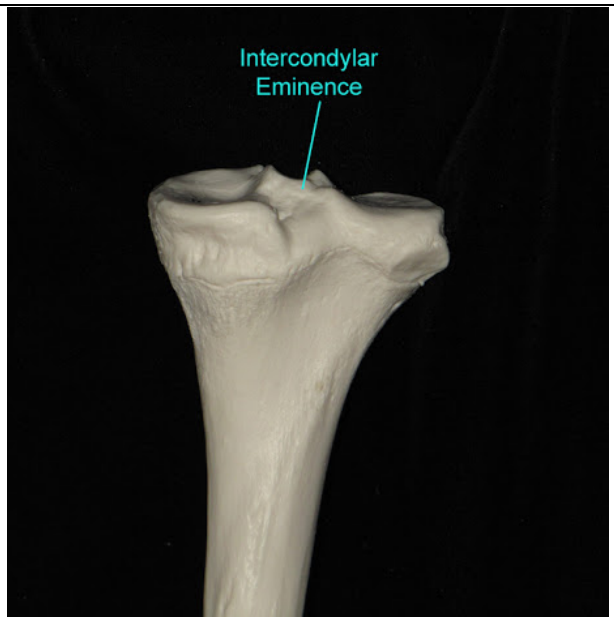
1. Lateral condyle
2. Medial condyle
3. Tibial tuberosity
4. Medial malleolus

***RIGHT TIBIA**

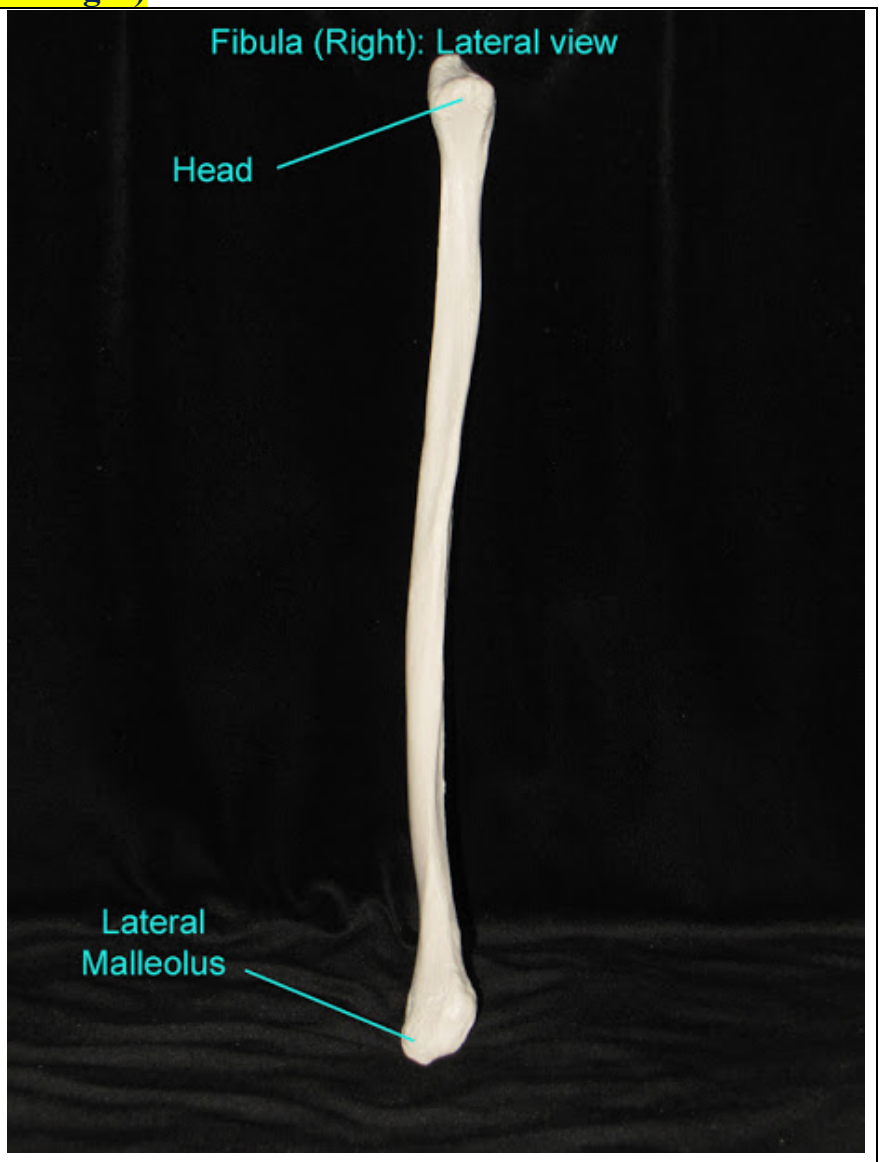


Proximal portion of the tibia, posterior view

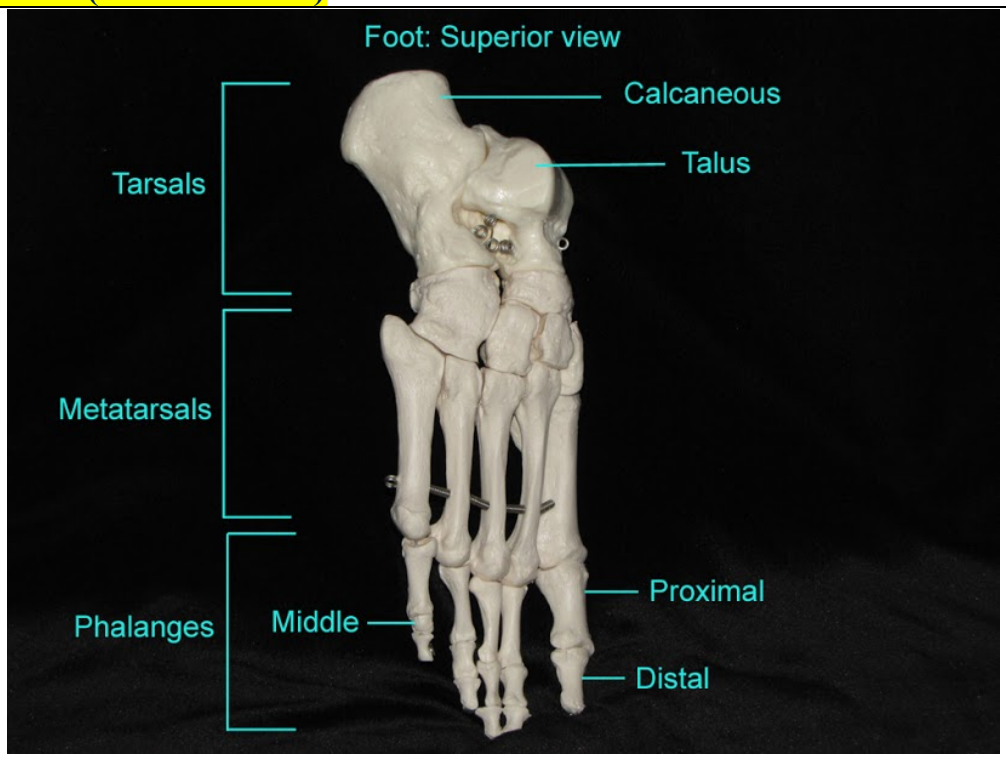
1. Intercondylar eminence



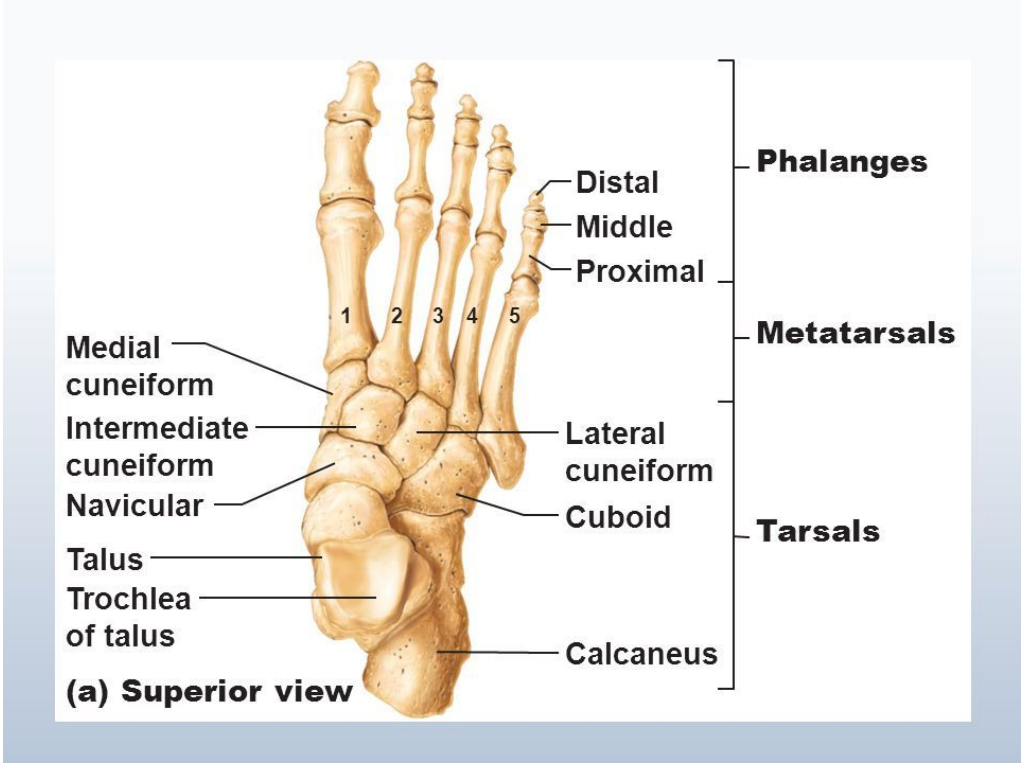
4. FIBULA (left and right)

1. Head **2. Lateral malleolus** **3. Malleolar fossa – is NOT depicted here but would be seen on the medial side of the fibula. It would be seen on the other side of the lateral malleolus** ***RIGHT FIBULA**	

5. TARSALS (7 ankle bones)

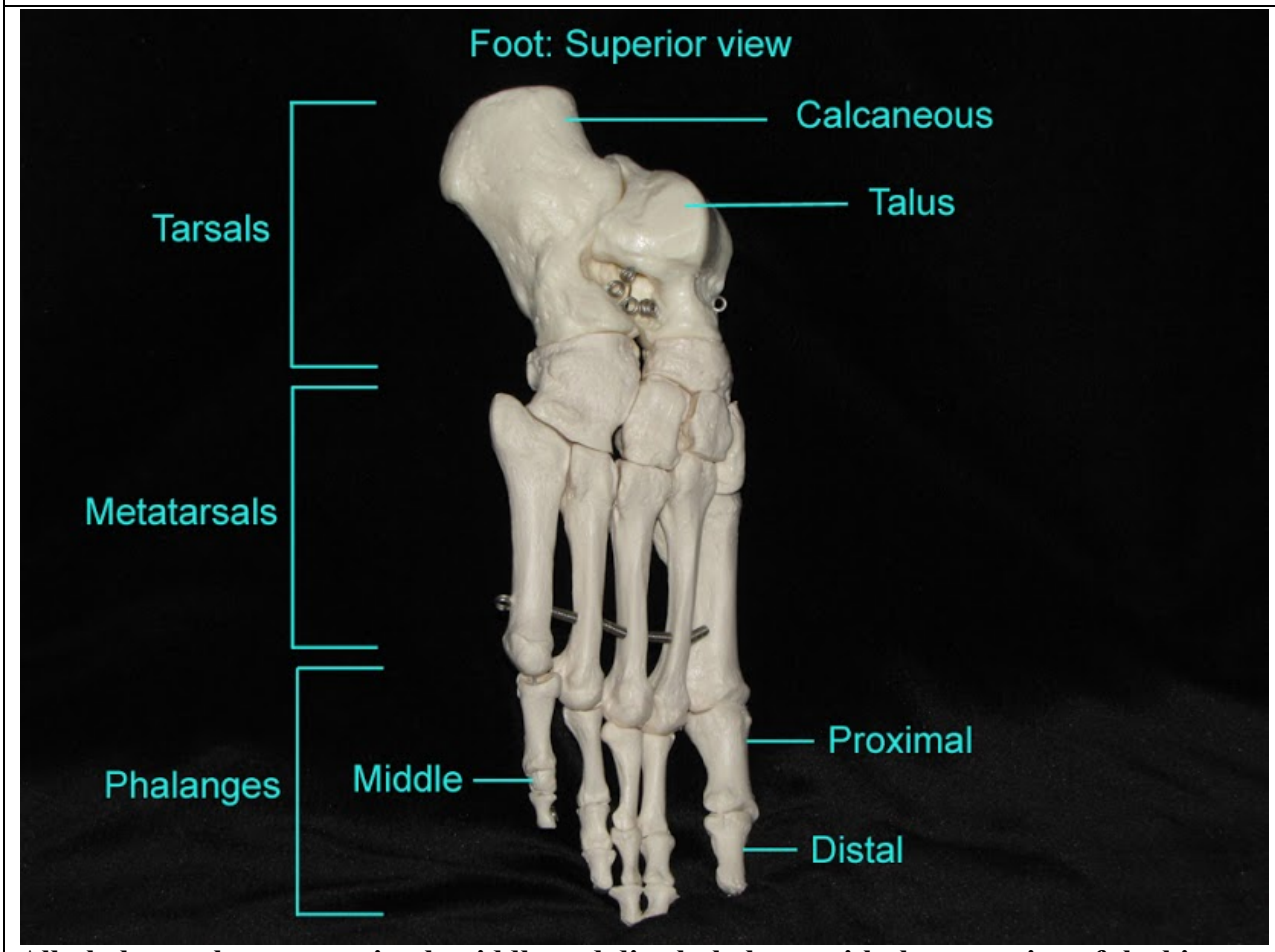


1. Talus
2. Calcaneus
3. Navicular
4. Medial cuneiform
5. Intermediate cuneiform
6. Lateral cuneiform
7. Cuboid



6. METATARSALS and PHALANGES

-Metatarsals (5 foot bones) known as 1-V, starting medially
-Phalanges – Proximal (I-V), Middle (II-V, absent in the big toe), & Distal (I-V):



All phalanges have a proximal, middle and distal phalanx, with the exception of the big toes. The "big toe" will only have a proximal and a distal phalanx.