



Parts of Human Skeleton





Joints



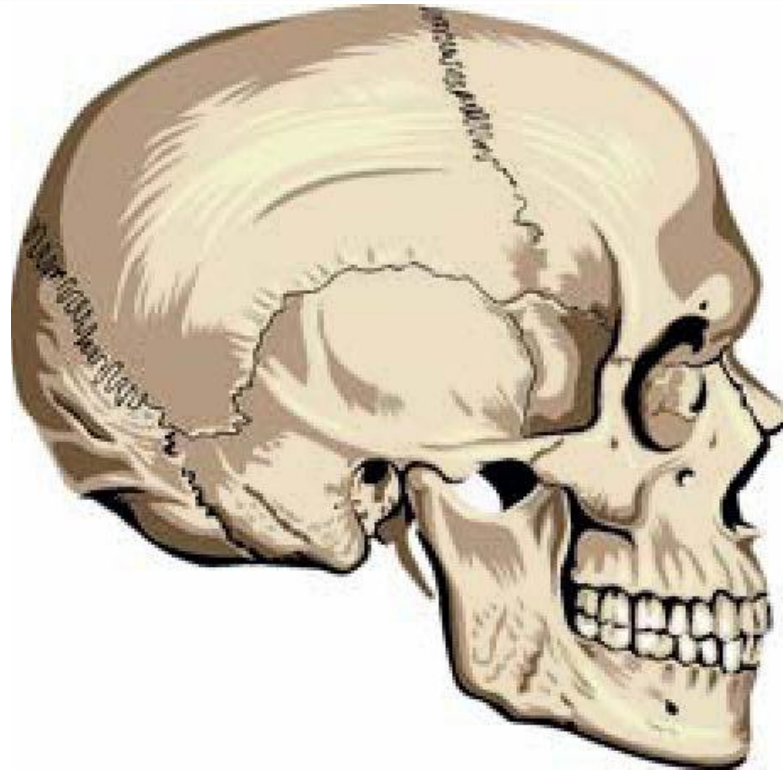
- Joint forms the junction of two or more bones
- There are three types of joints;
 - *Immovable (fixed) joints*
 - *Slightly movable joints*
 - *Movable joints*



Immovable Joints



- It can not move
- All cranial and facial bones (skull) are immovable
- Lower part of vertebral column

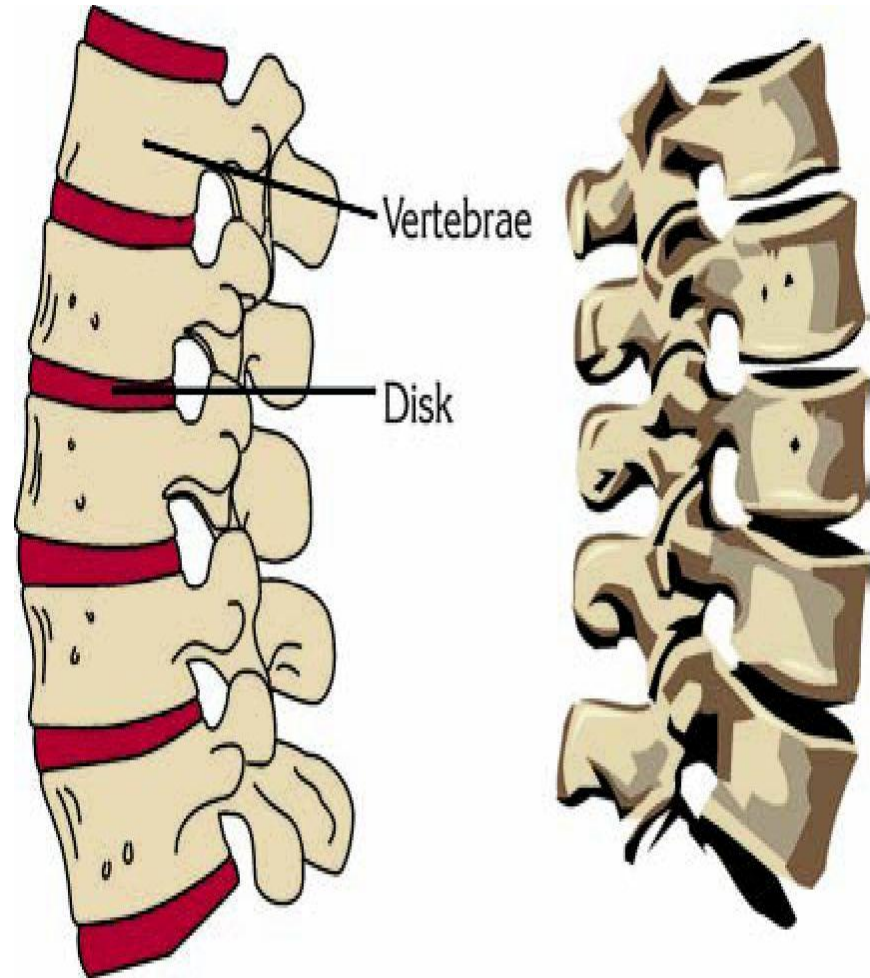




Slightly Movable Joints



- They can move slightly
- Vertebrae and thoracic joints are slightly movable
- Separated by cartilage

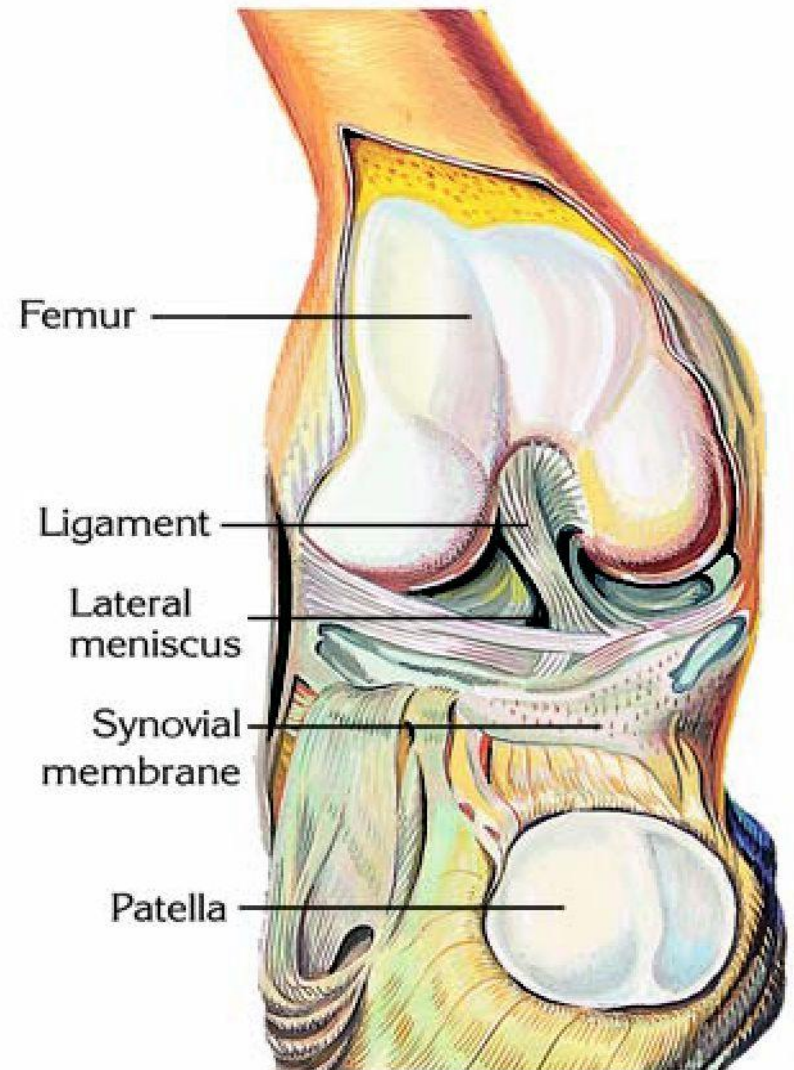




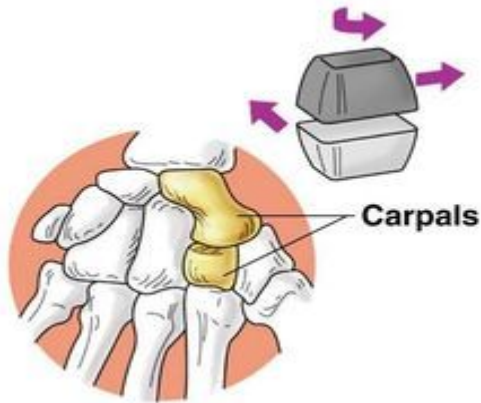
Movable Joints



- The bones in movable joints are connected to each other by **ligaments** (very strong connective tissue fibers)
- There is a synovial fluid and cartilage in movable joints which reduces friction



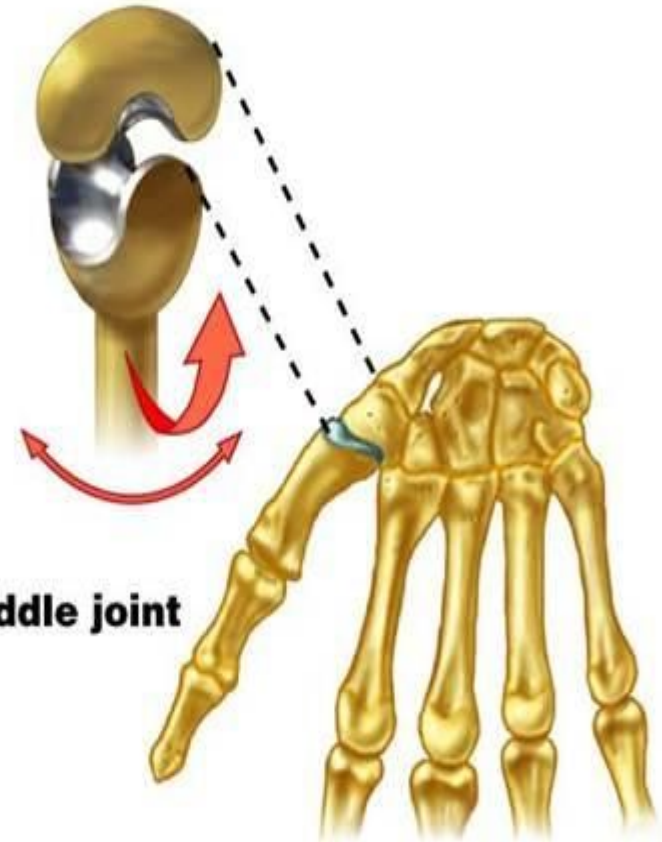
- Intervertebral joint



Plane Joint



- Between carpal bones



e Saddle joint

- Humerus, ulna, and radius



Hinge Joint



- Radius and ulna



Pivot Joint

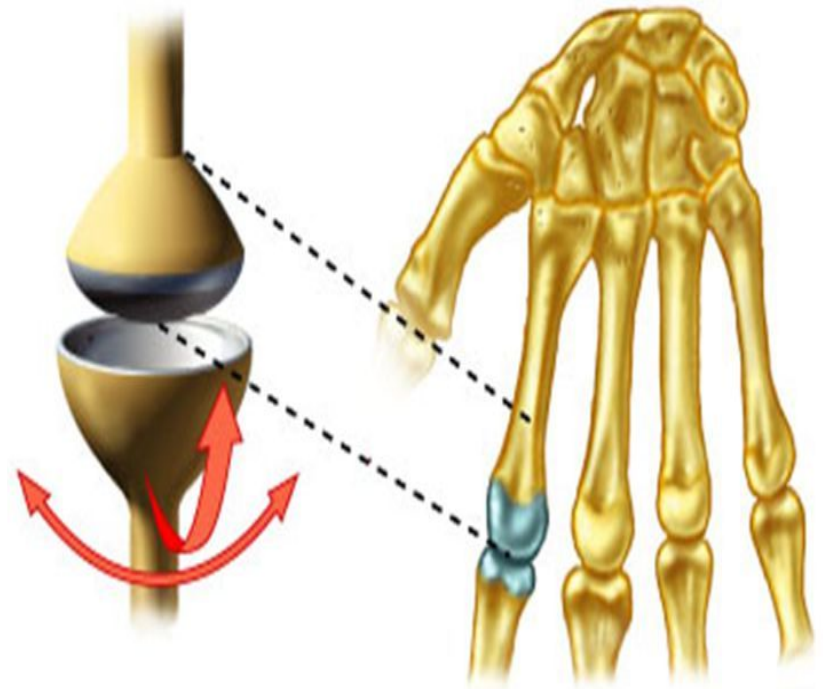


- **Scapula and humerus**



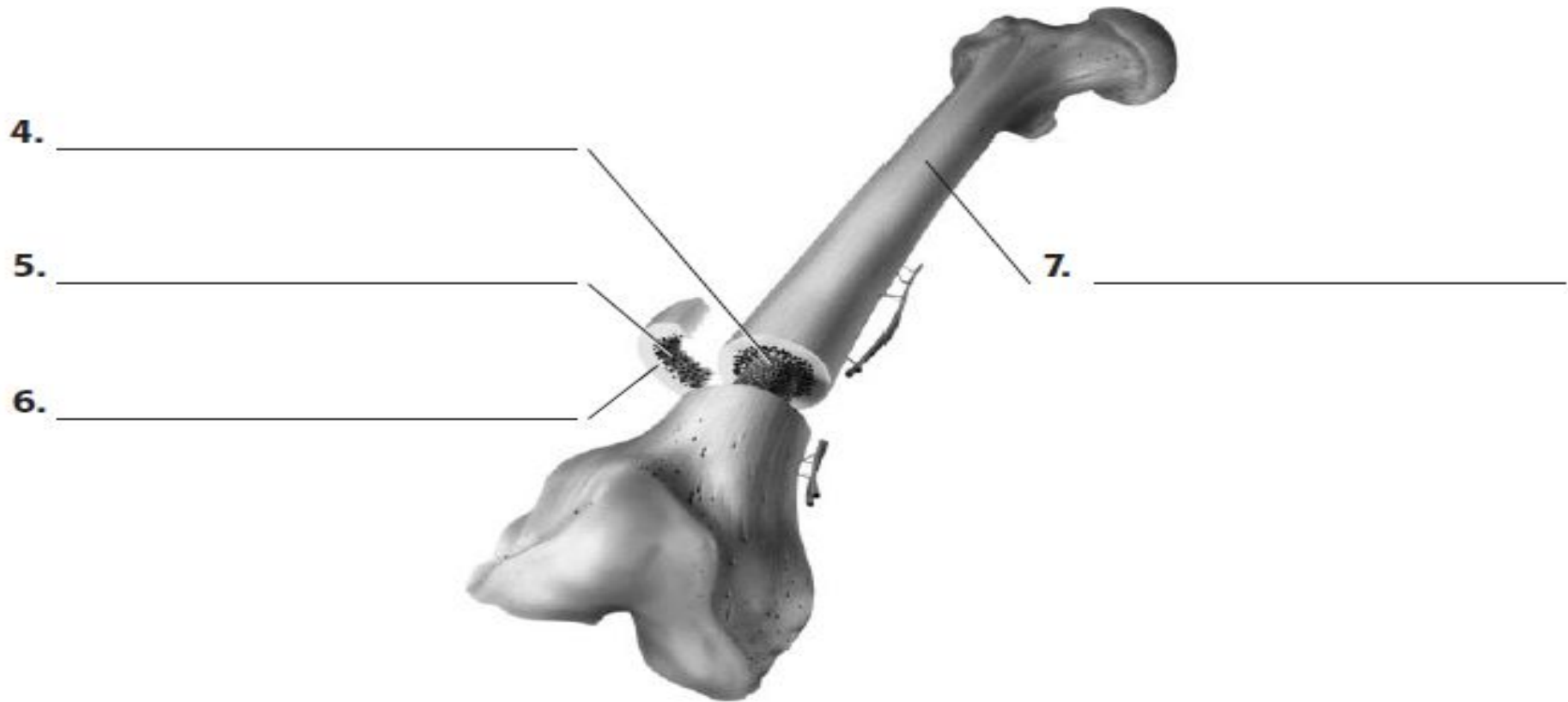
Ball-and-Socket Joint

- **Ellipsoid joint**
- **Between metacarpals and phalanges**



SKILL: INTERPRETING GRAPHICS

Label the following parts of the diagram: *bone marrow*, *compact bone*, *periosteum*, and *spongy bone*.



In the spaces provided, describe the differences between compact bone and spongy bone.

8. Compact bone: _____

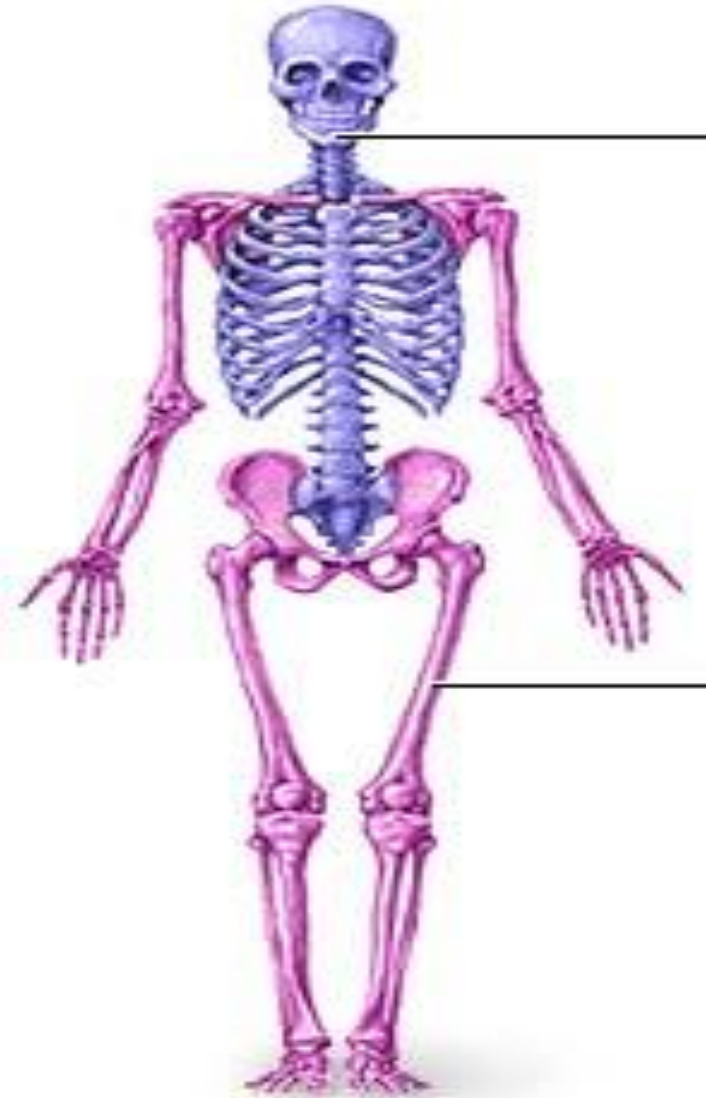
9. Spongy bone: _____



Parts

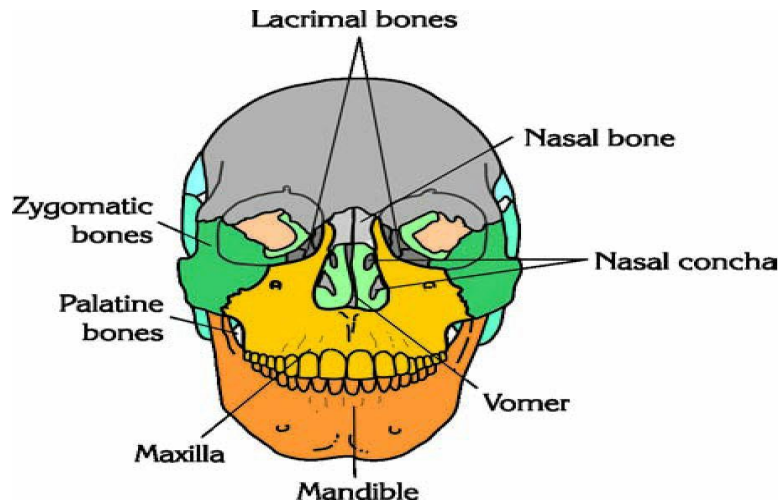
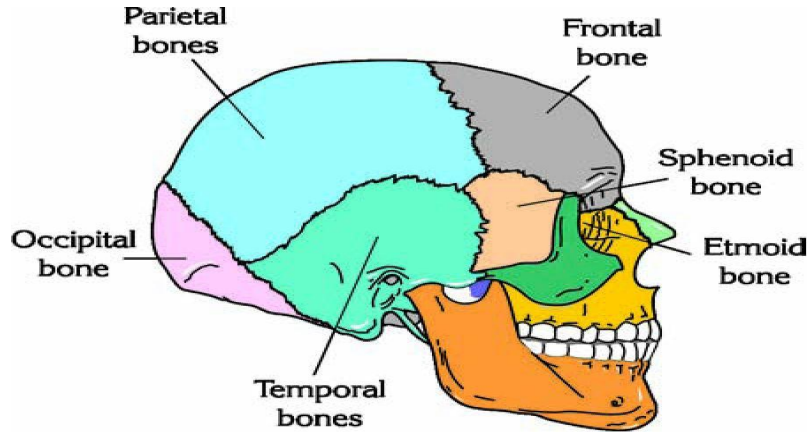


- Skeleton is divided into:
- 1. Skull
- 2. Thorax (Trunk)
- 3. Extremities





Skull (22)



- It has 22 bones
 - Cranial bones (8)
 - Facial bones (14)
- Cranial bones are fused to each other by immovable joints and enclose important nerve centers



THORAX



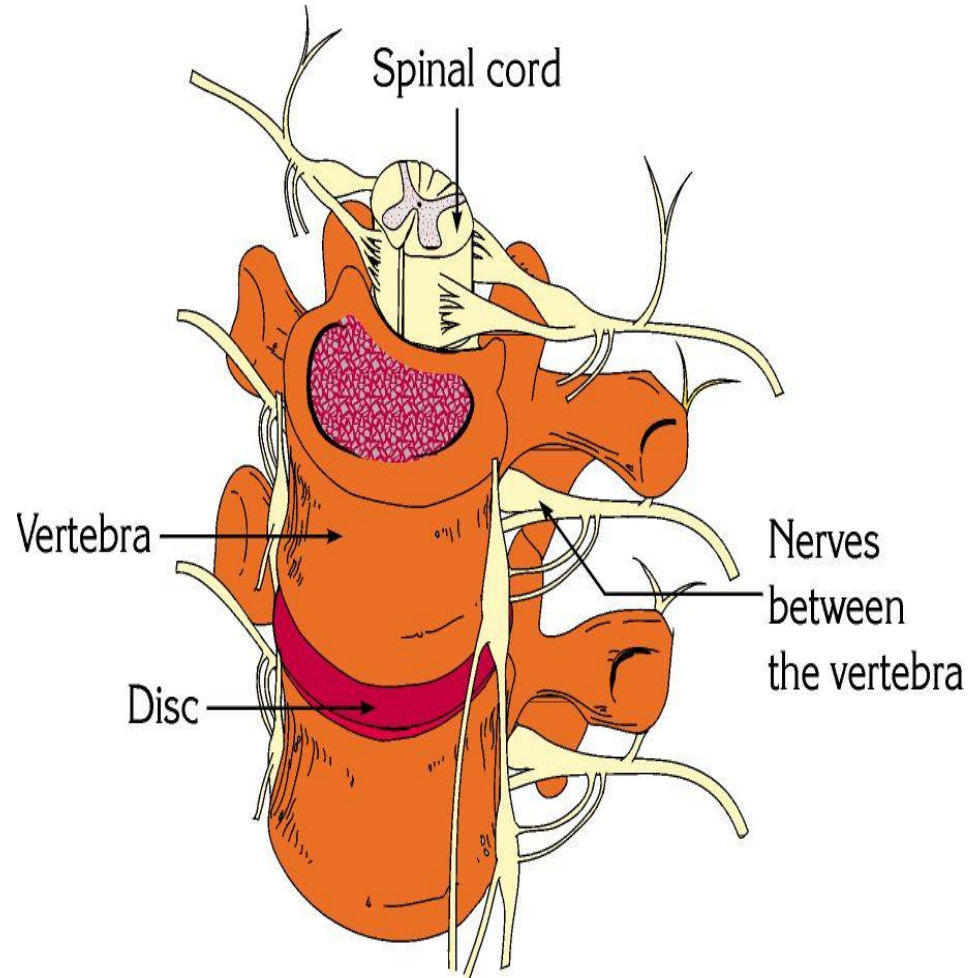
- The bones of thorax are composed of the vertebral column, sternum, ribs, pelvic girdle and pectoral girdle

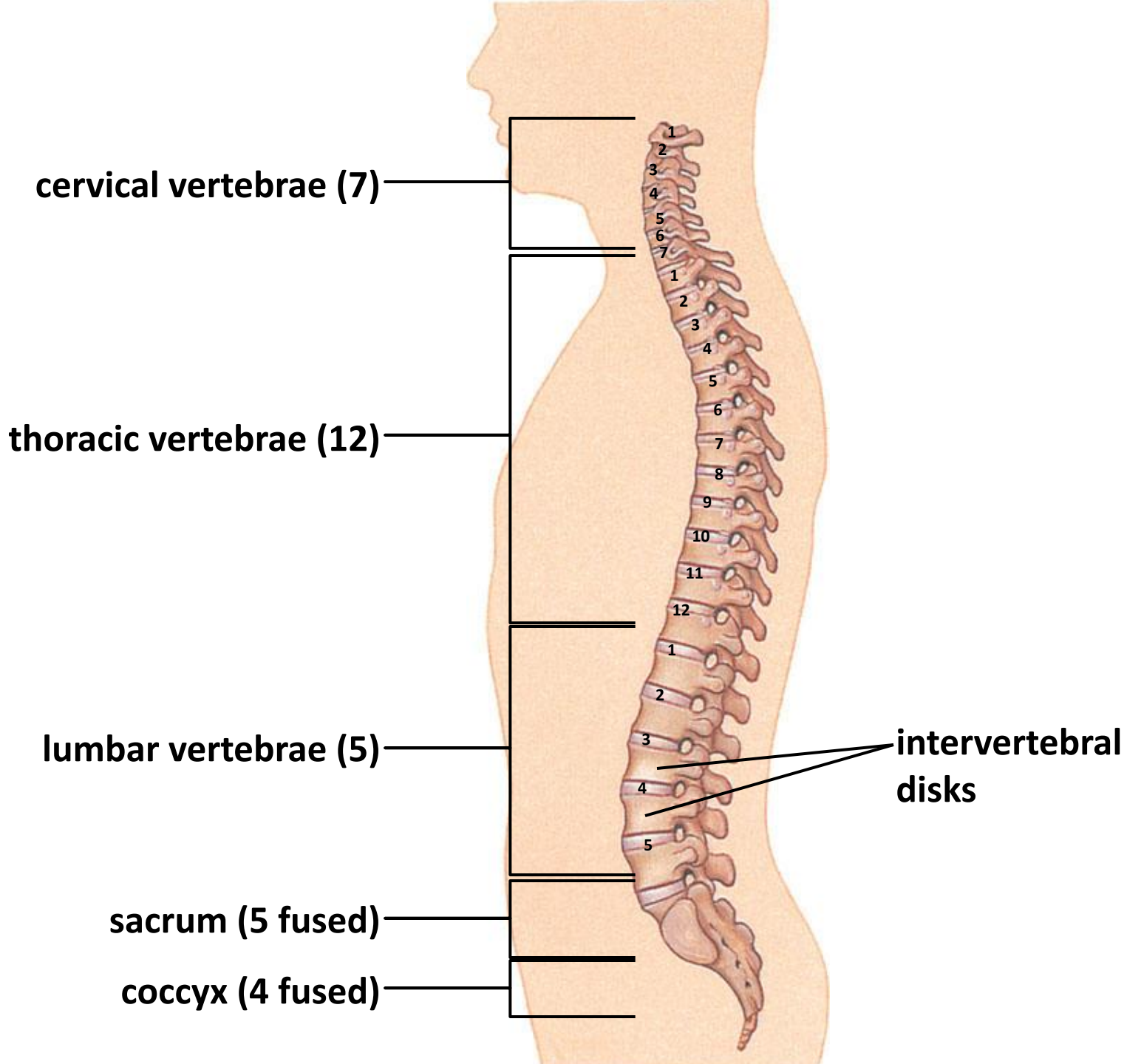


Vertebral column



- Protects spinal cord
- All vertebrae are involved in the movement of backbone
- Atlas and axis (first two) are involved in head movement



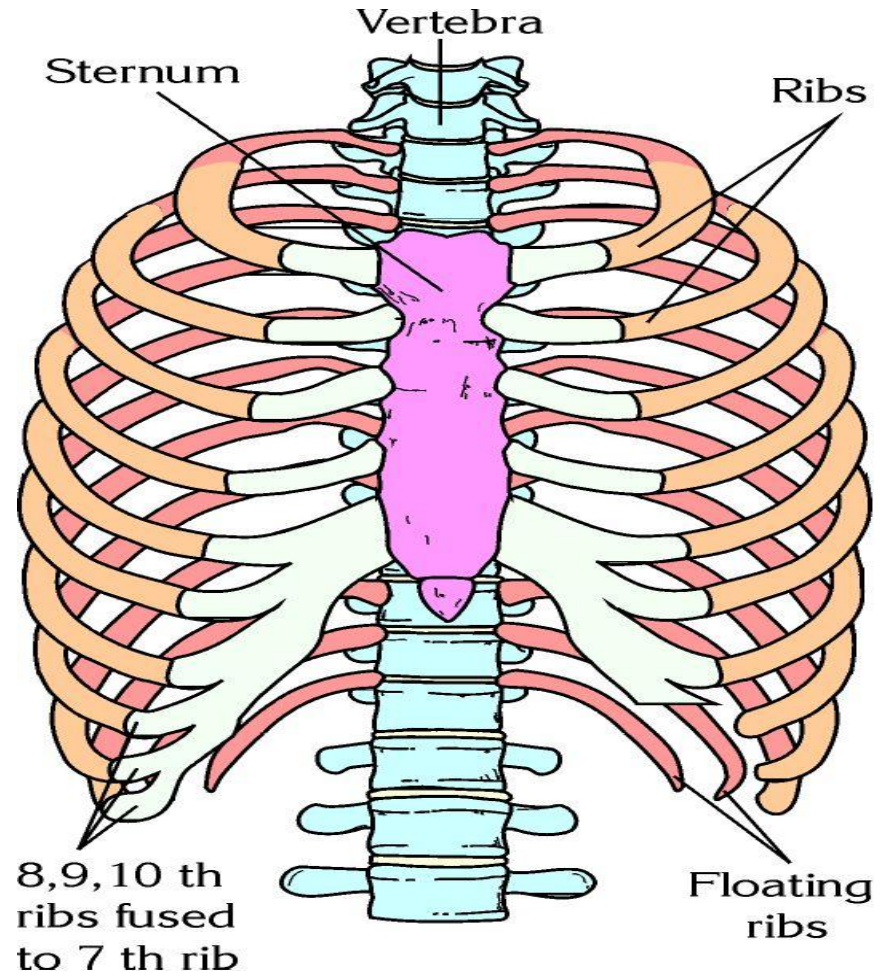




Thorax



- Also named as chest
- Protects heart, lungs and other abdominal organs
- Consists of ribs(12 pairs) and sternum

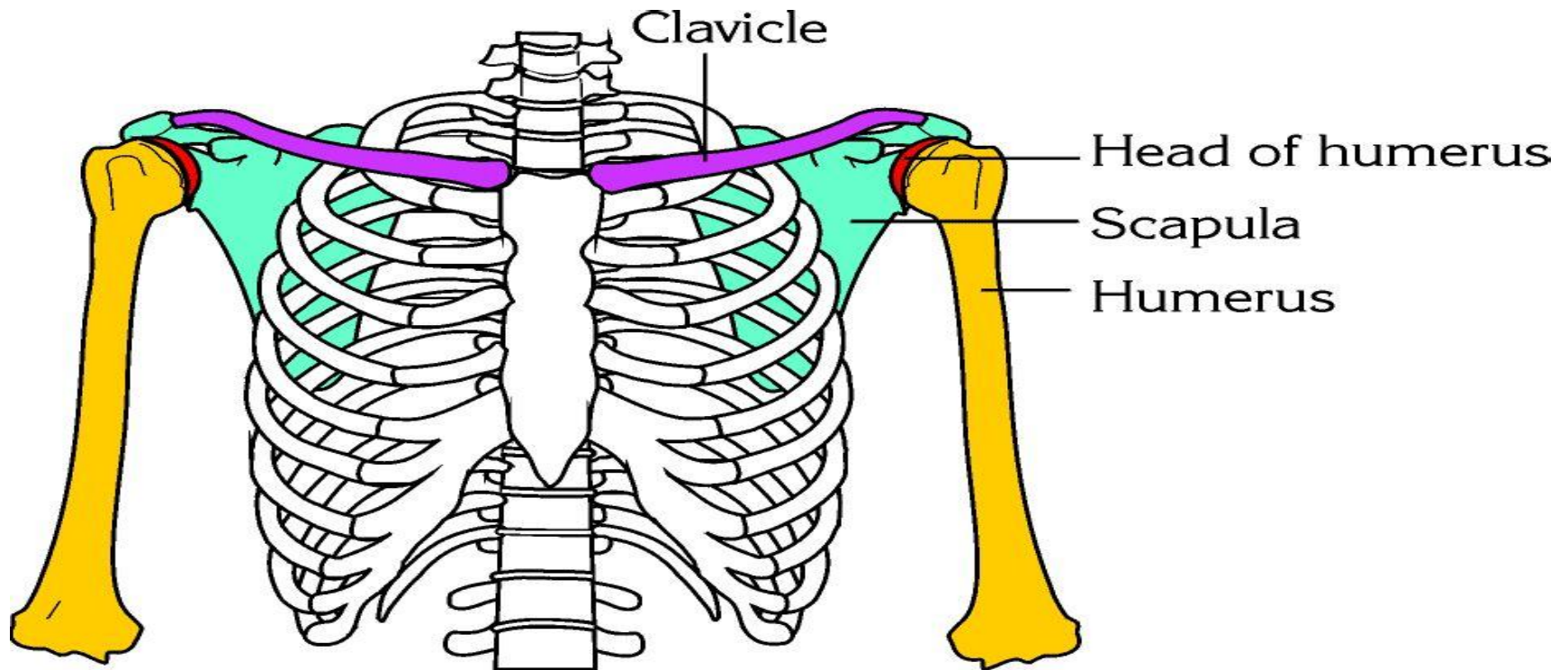




Pectoral girdle



- It consists of clavicle which is joined to the *sternum* and *scapula*

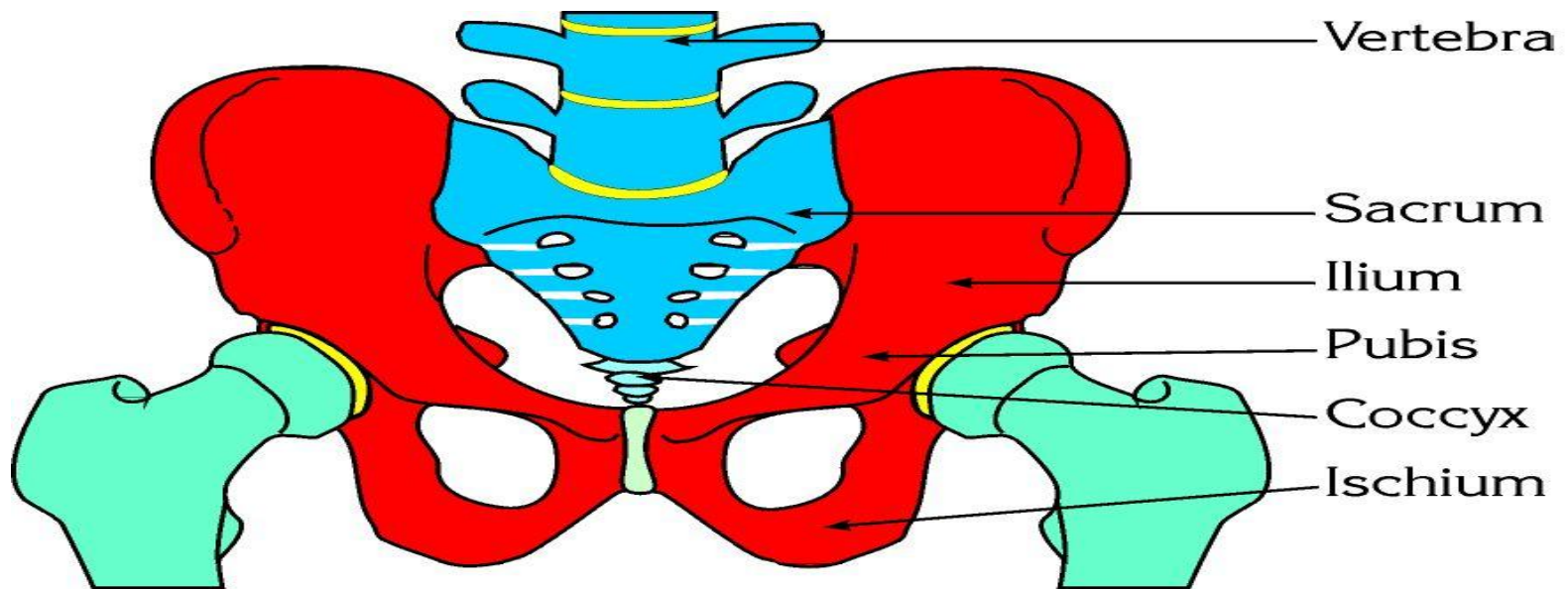




Pelvic girdle



- It consists of the ilium, ischium, pubis, sacrum and coccyx

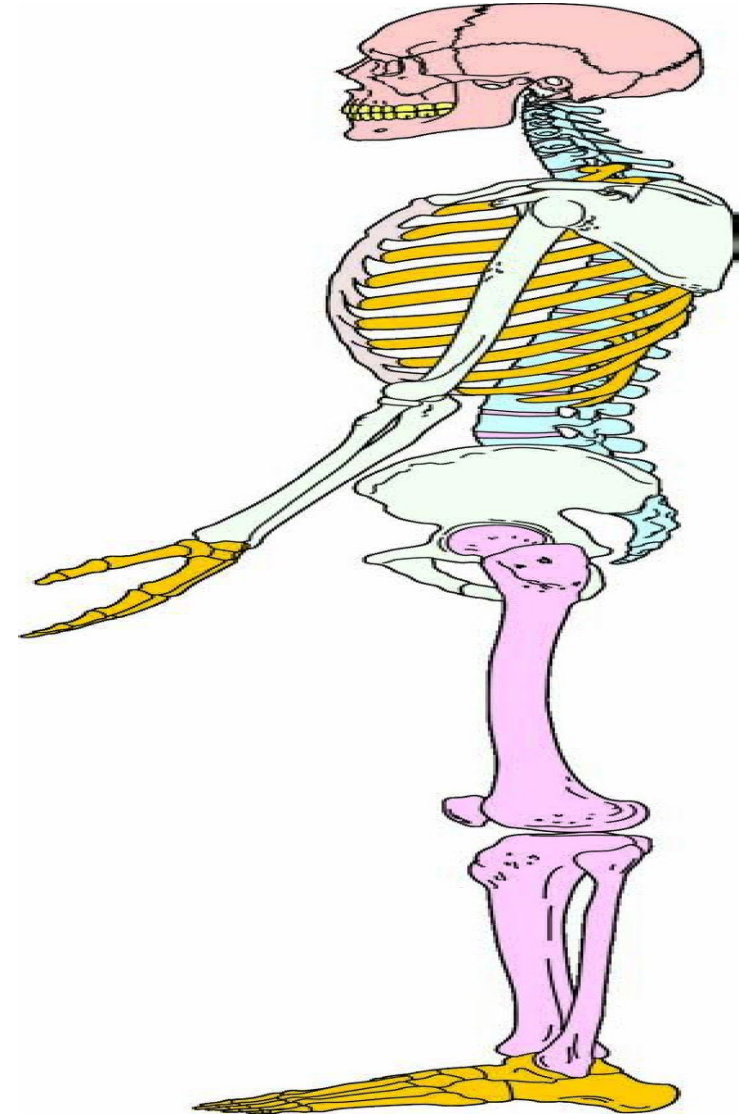




Extremities

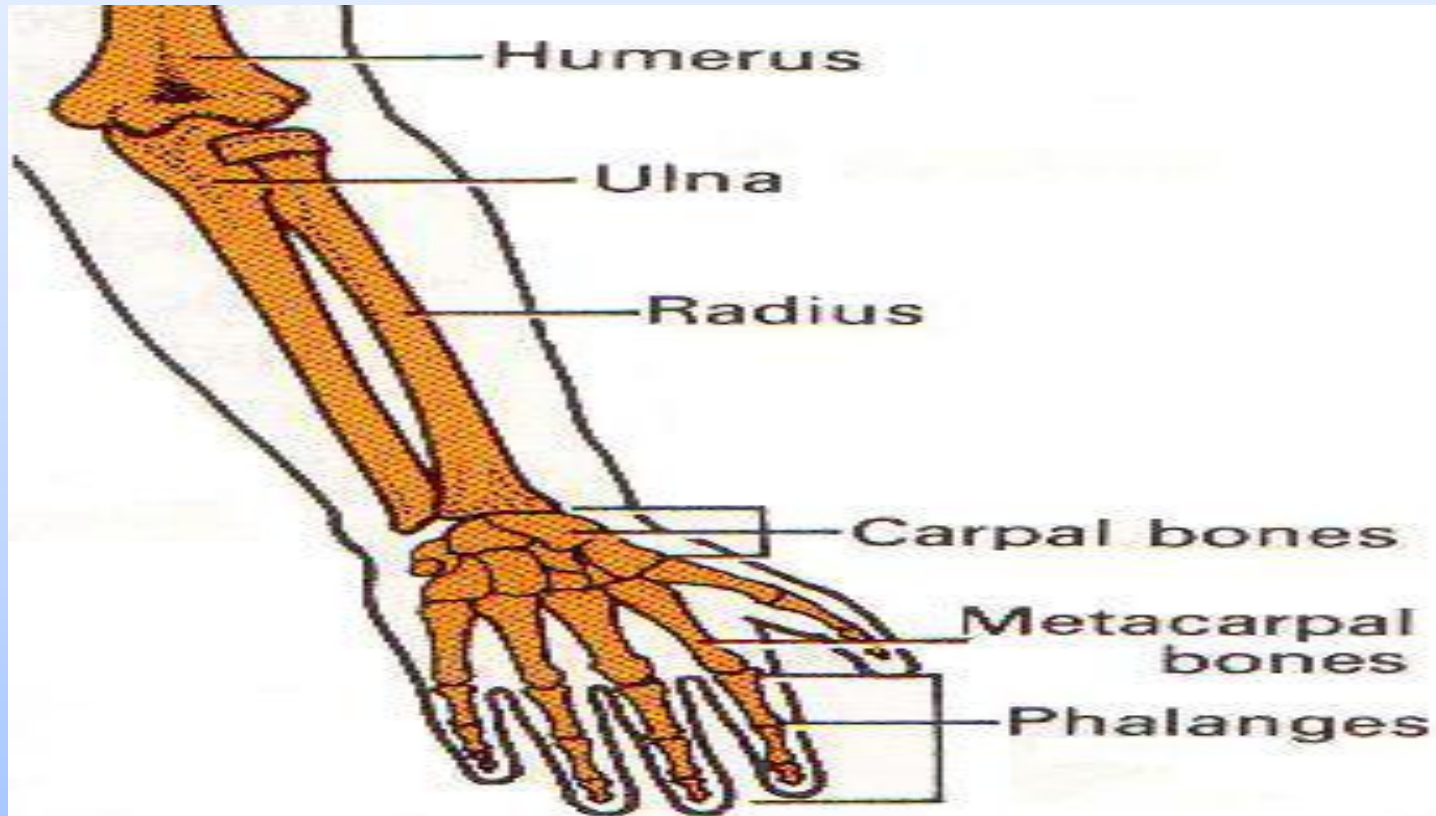


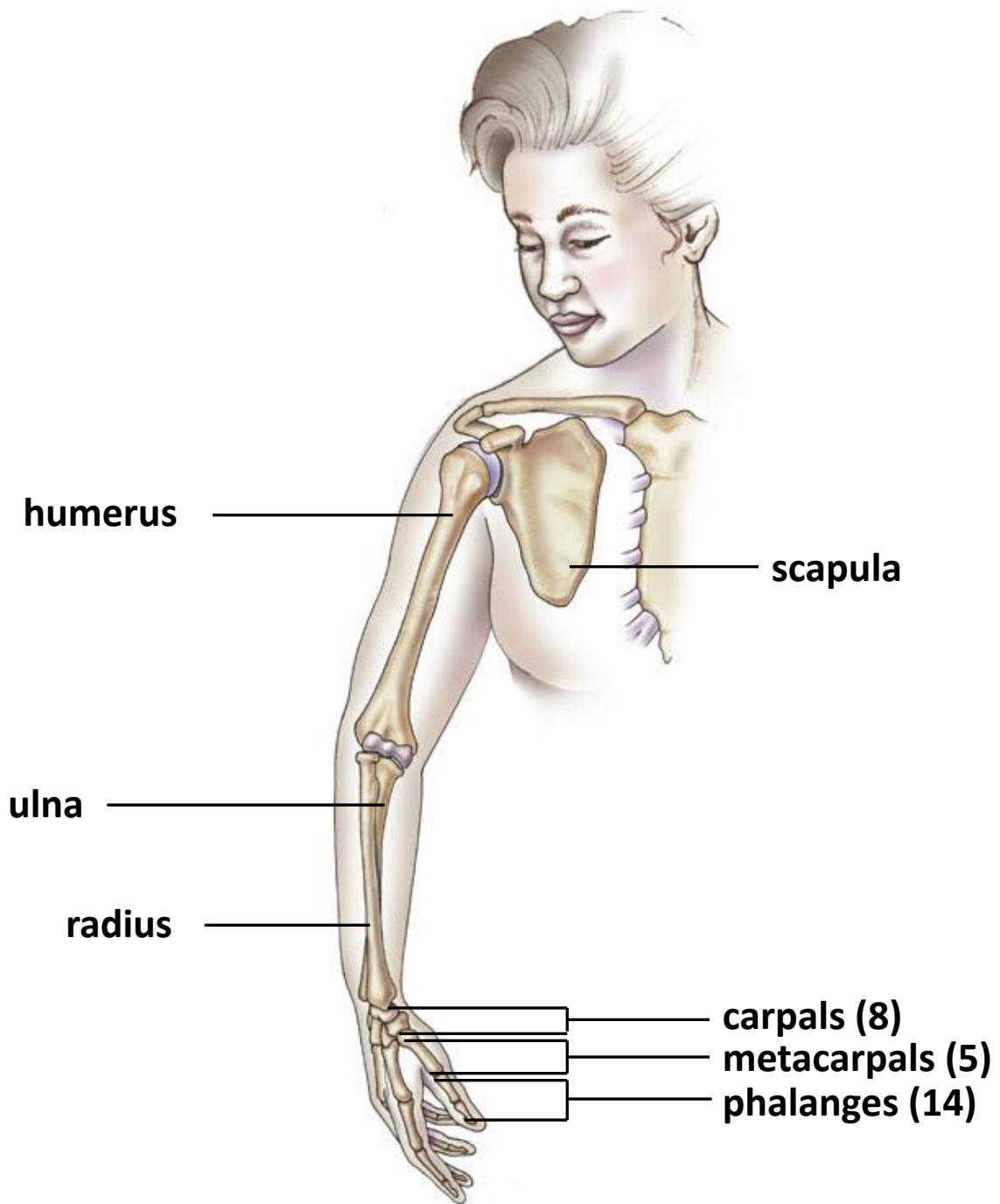
- They consist of
 - - arms + hands
 - - legs + feet
- Each arm and leg have 3 bones
- Each foot and hand have 27 bones
- Total bones in extremities is 120





Upper extremities





humerus

scapula

ulna

radius

carpals (8)

metacarpals (5)

phalanges (14)



Lower extremities



Bones of the Lower Limb

