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TABLE 6.1 Bone Markings

Name of Bone Marking	Description	Illustration
PROJECTIONS THAT ARE SITES OF MUSCLE AND LIGAMENT ATTACHMENT		
Tuberosity (too'be-ros'i-te)	Large rounded projection; may be roughened	
Crest	Narrow ridge of bone; usually prominent	
Trochanter (tro-kan'ter)	Very large, blunt, irregularly shaped process (the only examples are on the femur)	
Line	Narrow ridge of bone; less prominent than a crest	
Tubercle (too'ber-kl)	Small rounded projection or process	
Epicondyle (ep'i-kon'dil)	Raised area on or above a condyle	
Spine	Sharp, slender, often pointed projection	
Process	Any bony prominence	

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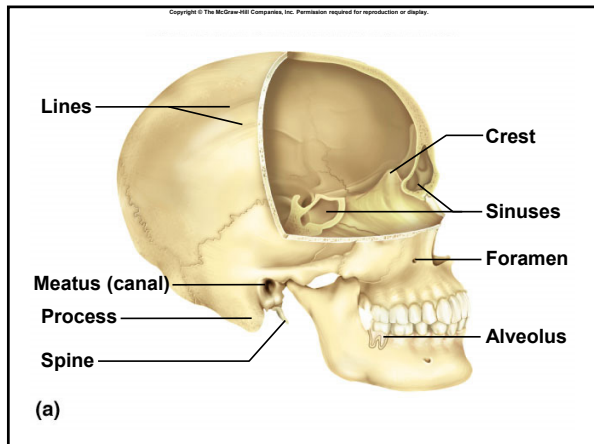
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TABLE 6.1 Bone Markings (continued)

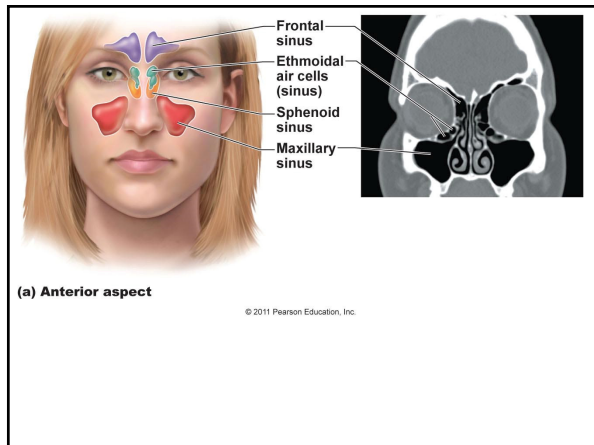
Name of Bone Marking	Description	Illustration
SURFACES THAT FORM JOINTS		
Head	Bony expansion carried on a narrow neck	
Facet	Smooth, nearly flat articular surface	
Condyle (kon'dil)	Rounded articular projection, often articulates with a corresponding fossa	
DEPRESSIONS AND OPENINGS		
For passage of vessels and nerves:		
Foramen (fo-a'men)	Round or oval opening through a bone	
Groove	Furrow	
Fissure	Narrow, slitlike opening	
Notch	Indentation at the edge of a structure	
Others:		
Fossa (fos'ah)	Shallow basinlike depression in a bone, often serving as an articular surface	
Meatus (me-a'tus)	Canal-like passageway	
Sinus	Cavity within a bone, filled with air and lined with mucous membrane	

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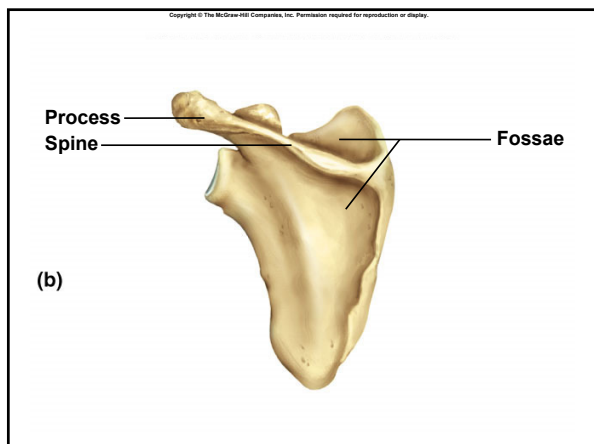
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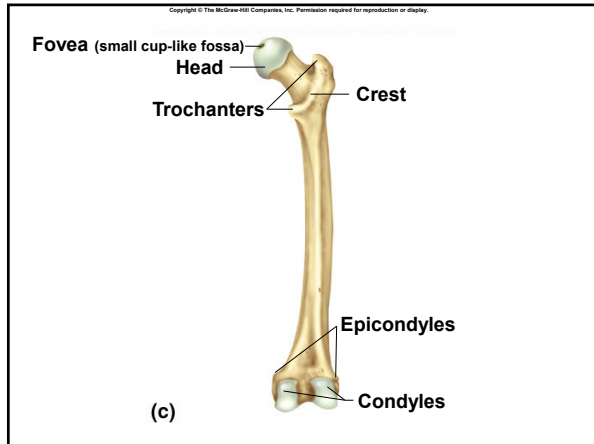
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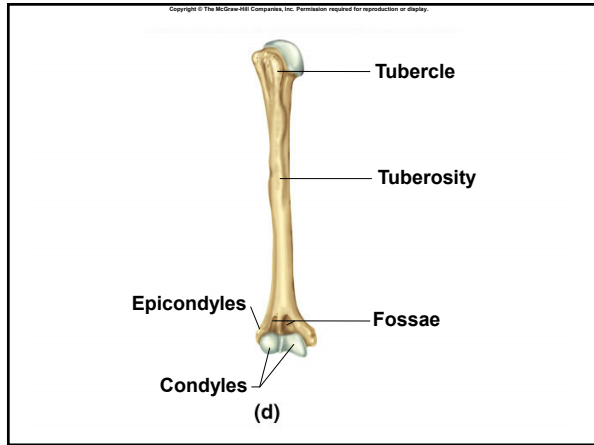
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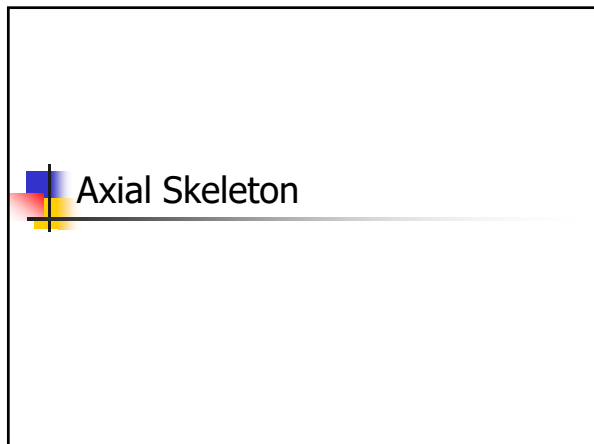
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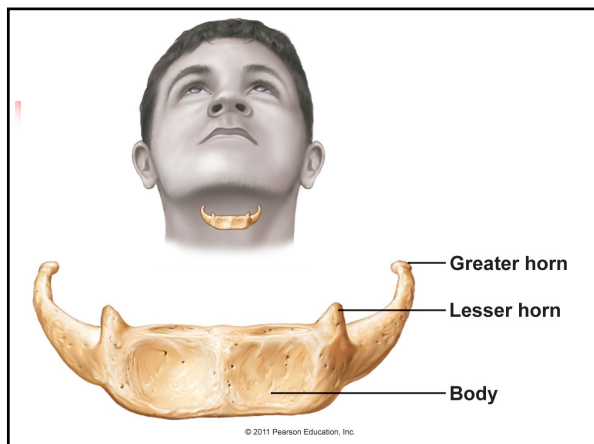
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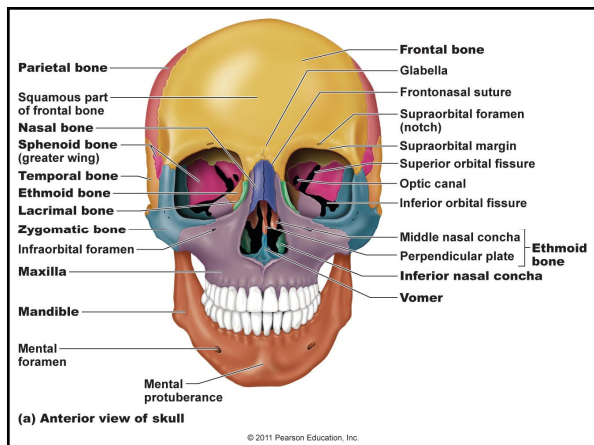
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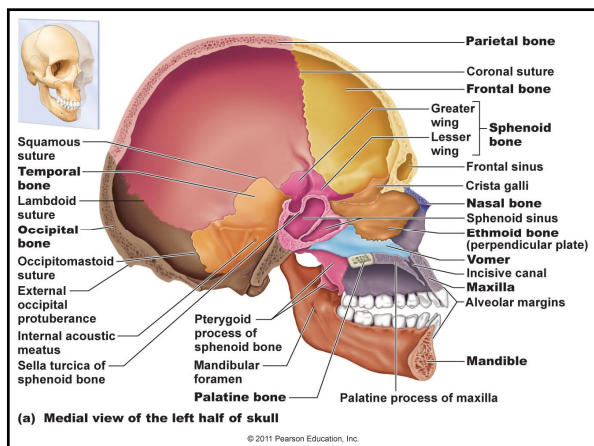
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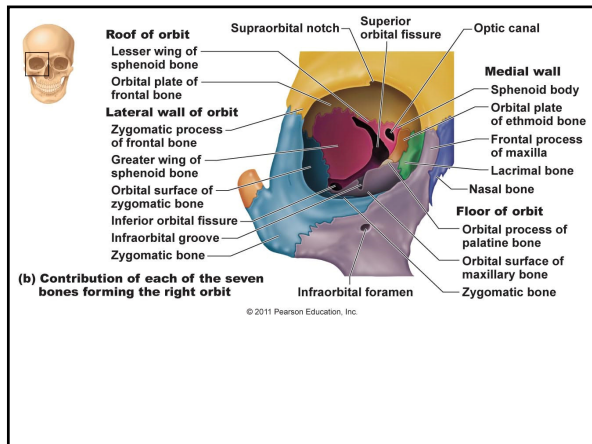
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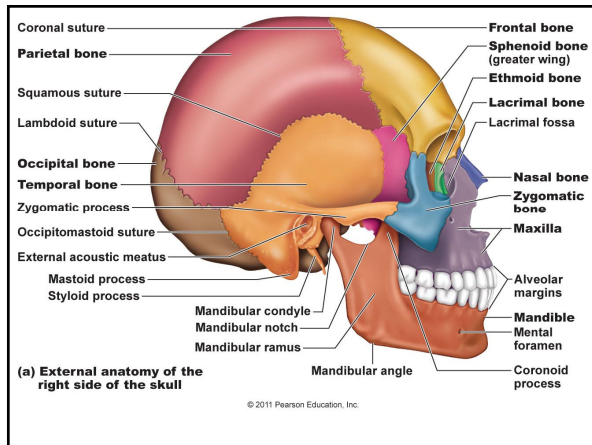
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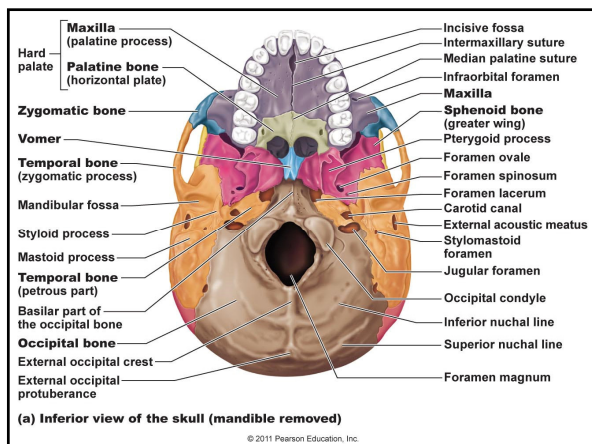
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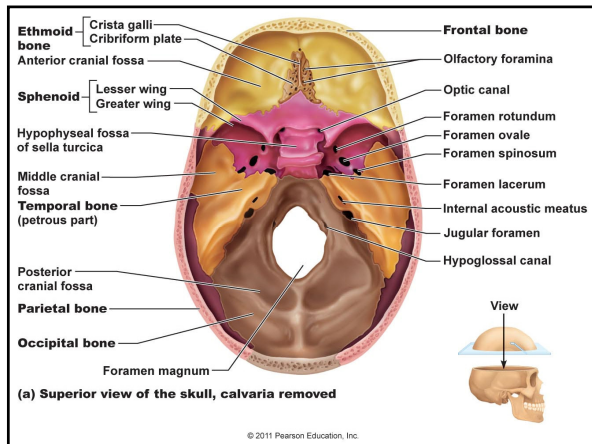
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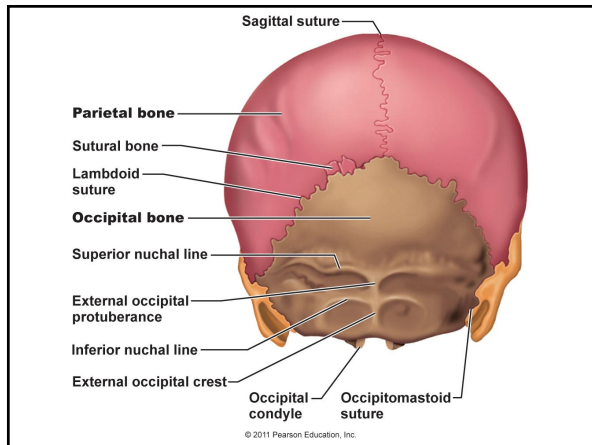
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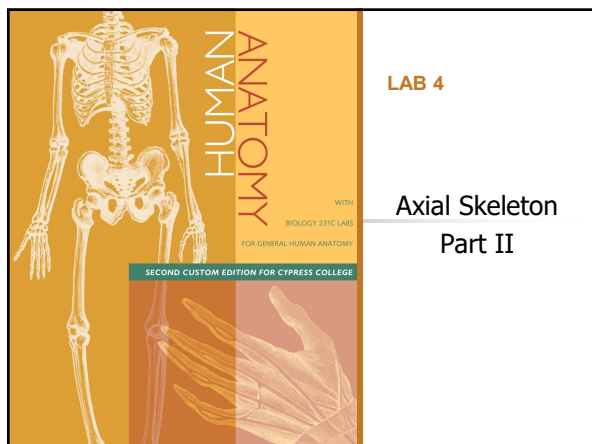
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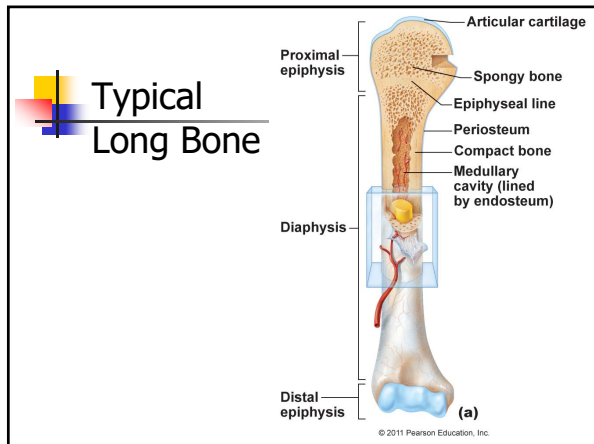
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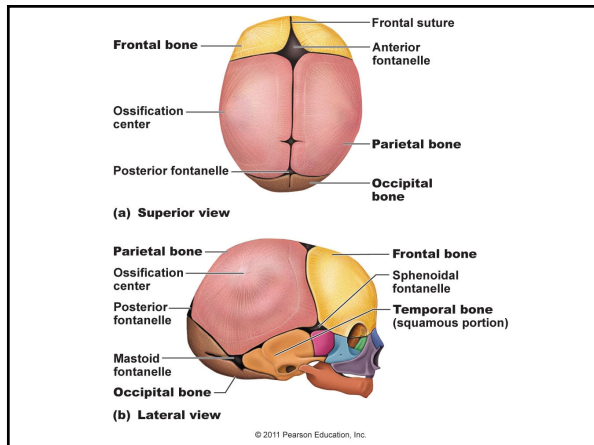
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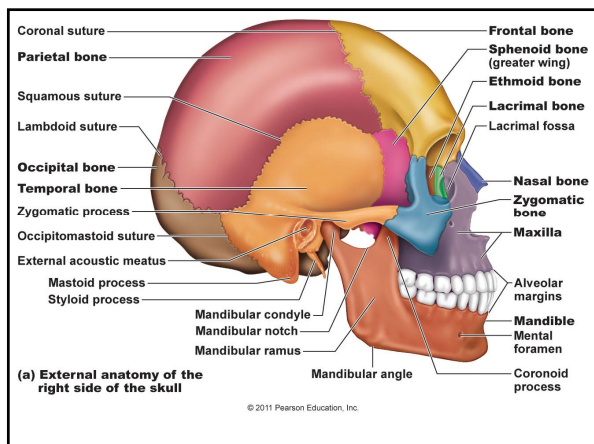
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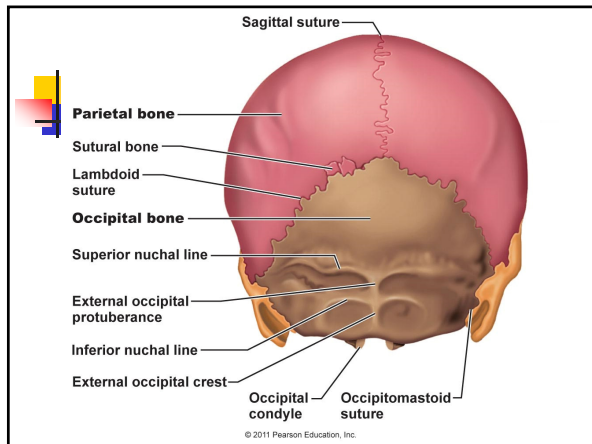
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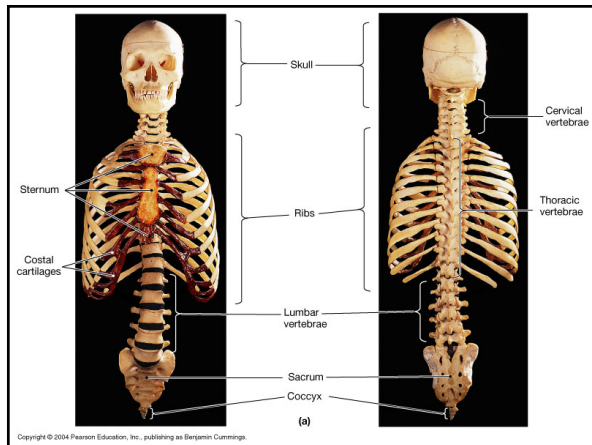
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Vertebral Column

- Vertebrae
 - Cervical Vertebrae (C1-C7)
 - Thoracic Vertebrae (T1-T12)
 - Lumbar Vertebrae (L1-L5)
- Sacrum (S1-S5)
- Coccyx (3-5, typically 4)

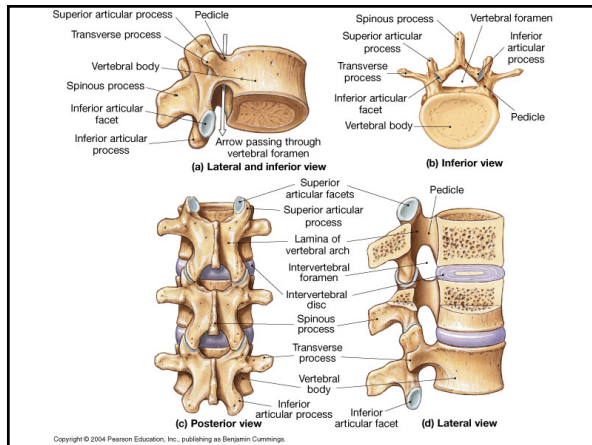
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Vertebral Anatomy

- Typically has a body and vertebral arch
- Superior and inferior articular processes
- Separated by intervertebral discs

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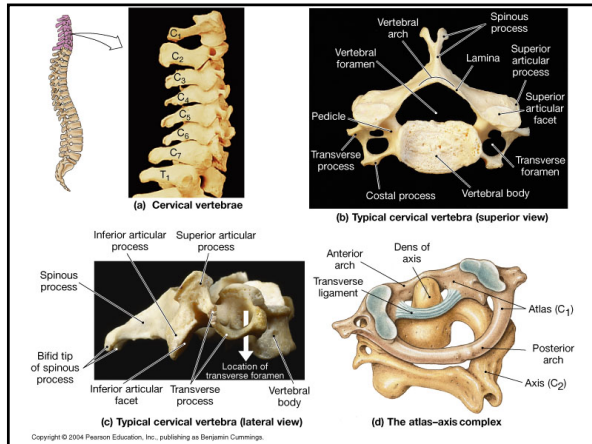
F-170 Table 7-2 – Regional Differences in Vertebral Structure and Function

TABLE 7-2 REGIONAL DIFFERENCES IN VERTEBRAL STRUCTURE AND FUNCTION

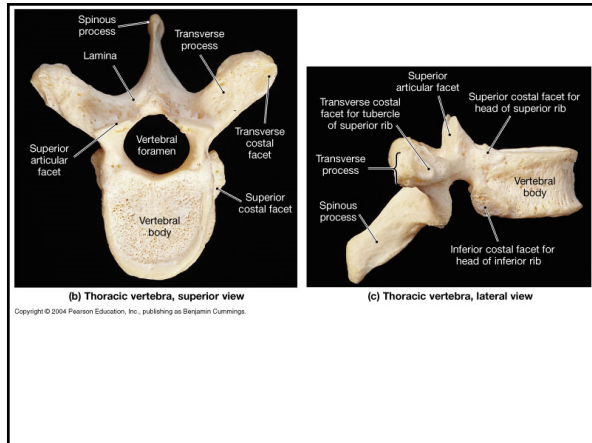
Feature	Type (Number)		
	Cervical Vertebrae (7)	Thoracic Vertebrae (12)	Lumbar Vertebrae (5)
Location	Neck	Chest	Inferior portion of back
Body	Small, oval, curved faces	Medium, heart-shaped, flat faces; facets for rib articulations	Massive, oval, flat faces
Vertebral foramen	Large	Smaller	Smallest
Spinous process	Long; split tip; points inferiorly	Long, slender; not split; points inferiorly	Blunt, broad, points posteriorly
Transverse process	Has transverse foramen	All but two (T ₁₁ , T ₁₂) have facets for rib articulations	Short; no articular facets or transverse foramina
Functions	Support skull, stabilize relative positions of brain and spinal cord, and allow controlled head movement	Support weight of head, neck, upper limbs, and chest; articulate with ribs to allow changes in volume of thoracic cage	Support weight of head, neck, upper limbs, and trunk
Typical appearance (superior view)			

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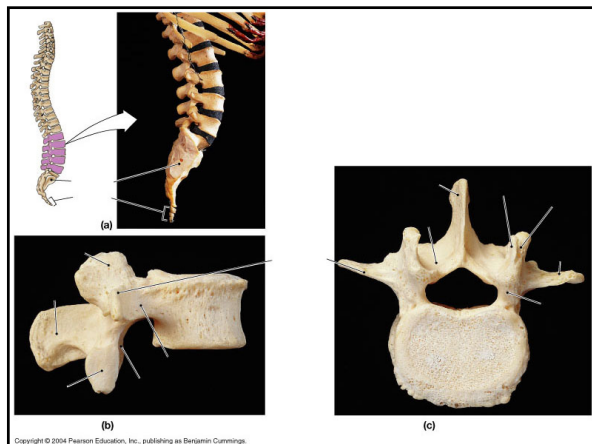
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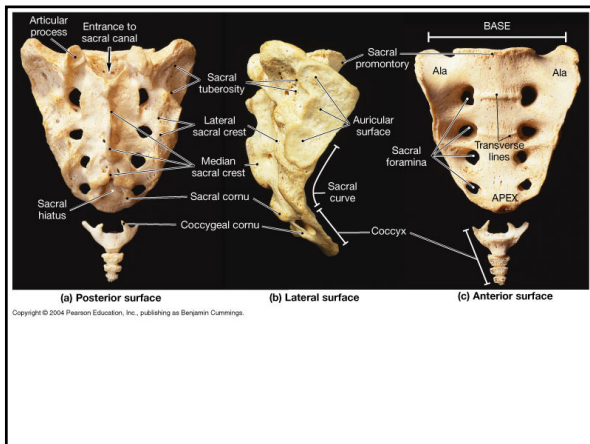
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Thoracic cage

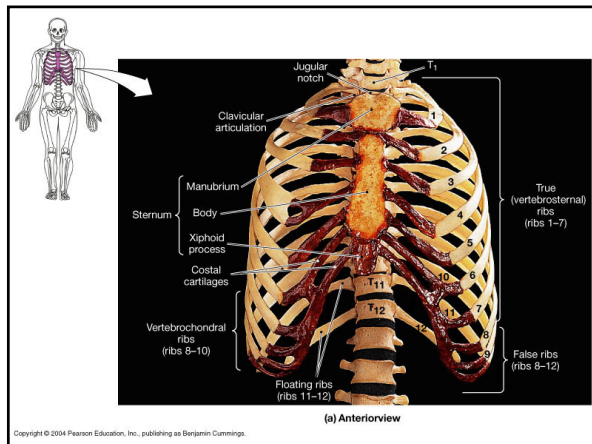
- Thoracic vertebrae
- Ribs
- Sternum
- Ribs and sternum forms the rib cage

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The ribs

- Ribs 1-7 are vertebrosteral ribs
- 8-12 are vertebrochondral ribs
- 11-12 are floating ribs

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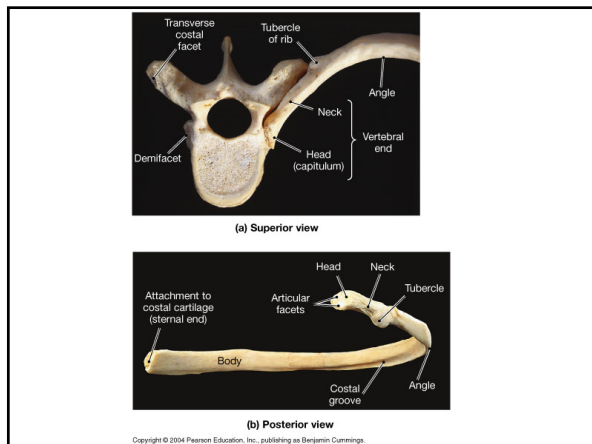


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Typical rib

- Has a head, neck, tubercle, and a body
- Costal groove marks pathway of blood returning to the heart

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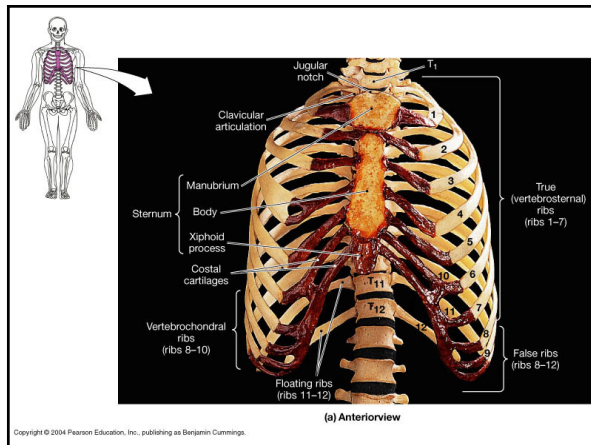


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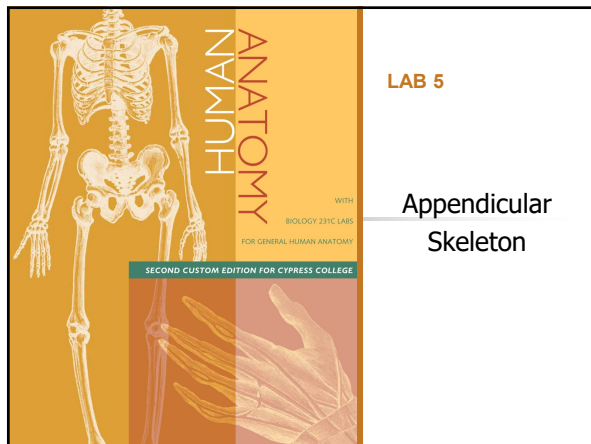
The Sternum

- Manubrium
- Body
- Xiphoid process

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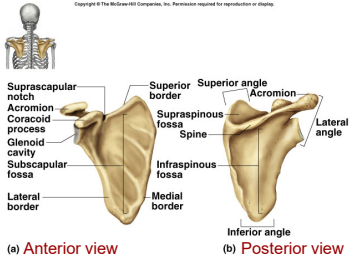


Pectoral Girdle & Upper Appendicular Skeleton

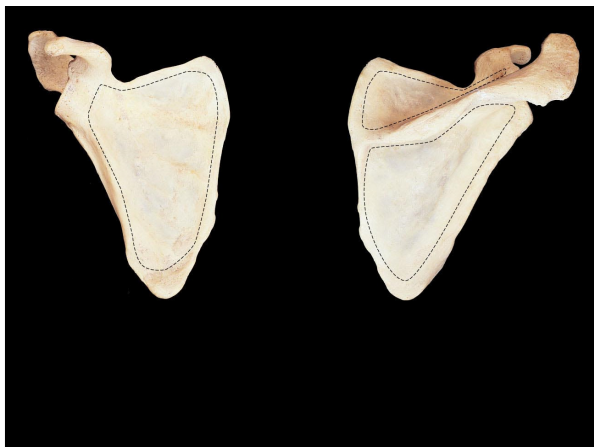
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Scapula

- Triangular → three borders (edges of triangle)
 - Superior, vertebral (medial), and axillary (lateral)
- Which is the anterior view? The posterior view?



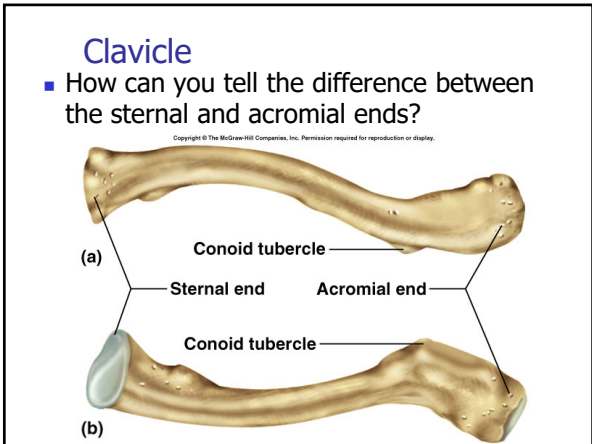
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Clavicle

- How can you tell the difference between the sternal and acromial ends?



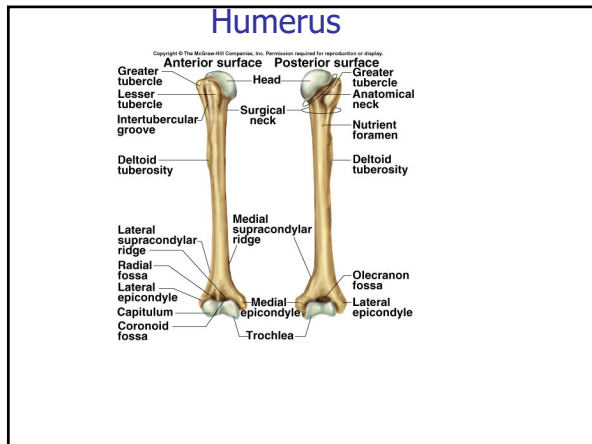
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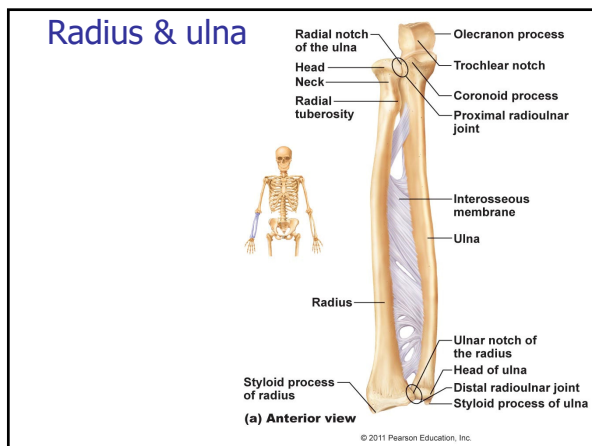
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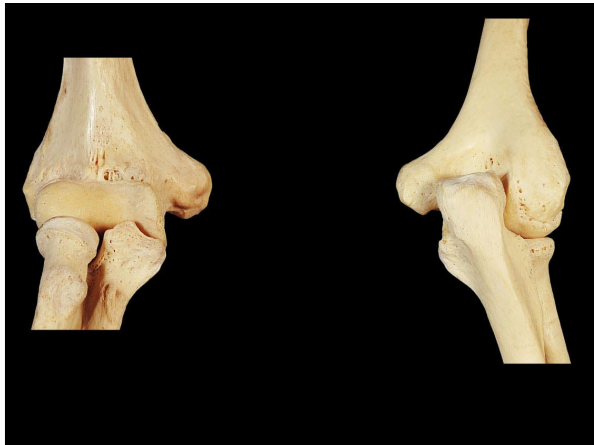
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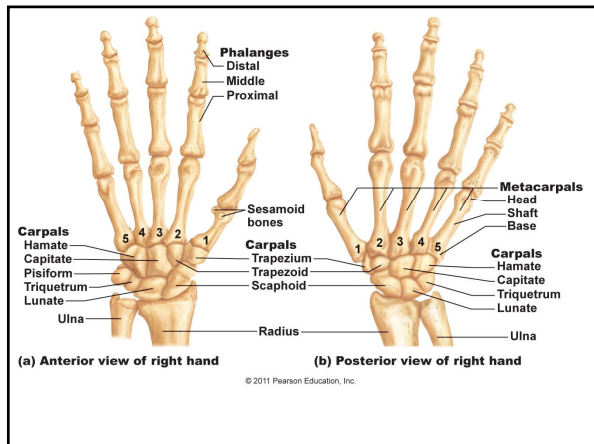


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Hand

- **Carpals** = wrist bones
- **Metacarpals** = palm bones
- **Phalanges** = digits (fingers)
 - Pollex (thumb) has 2 phalanges, other fingers have 3 phalanges
 - Labeled proximal, medial, & distal
 - Which is missing in the thumb?
- Bones are numbered from the thumb (first) towards the pinky finger (fifth)

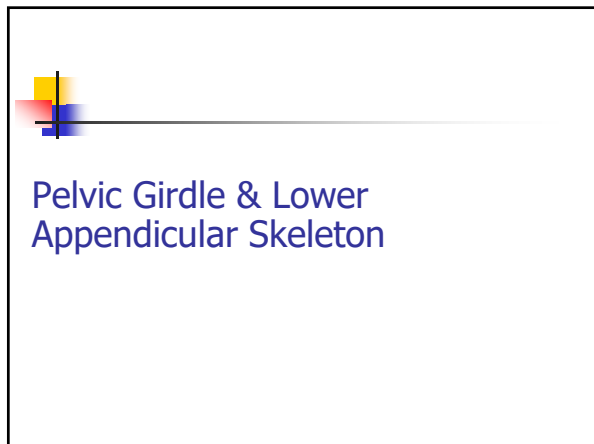
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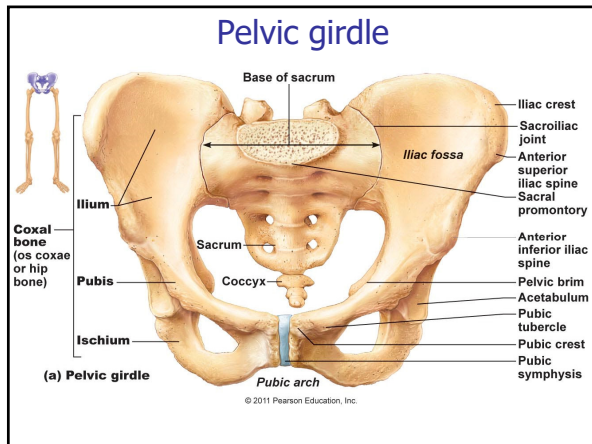
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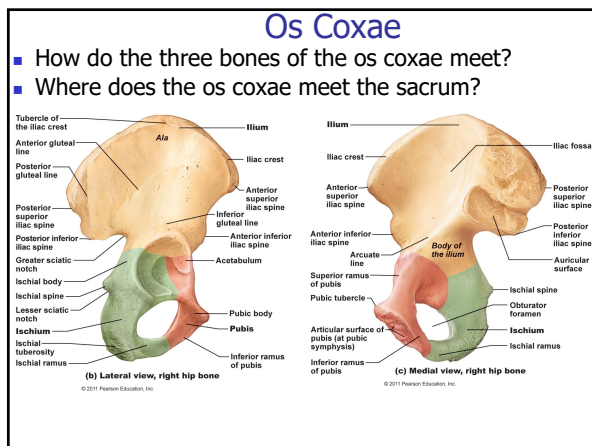
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Male vs. Female Pelvic Girdles

- Why are they different?
- Differences: refer to text page 216, Table 8.2
- Is the skeleton in your bone box is male or female?

Male

Female

Pelvic brim
Pelvic inlet
Obturator foramen
Pubic arch

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Femur & Patella

- How does the patella fit into the femur?

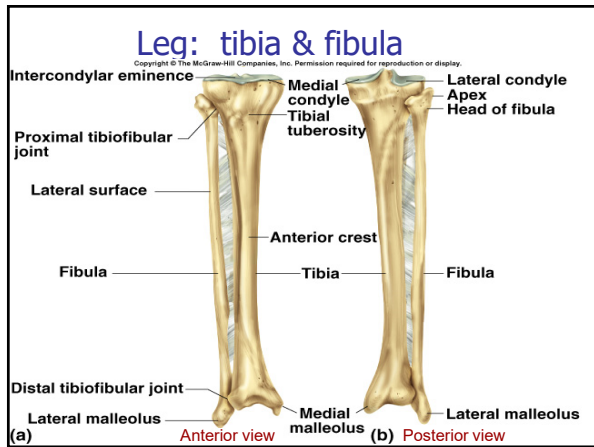
(a) Anterior view

(b) Posterior view

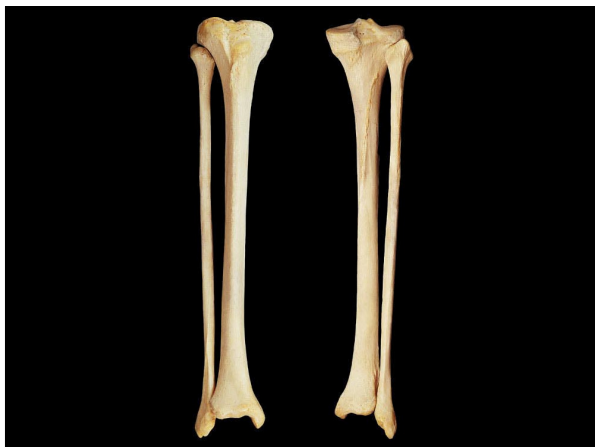
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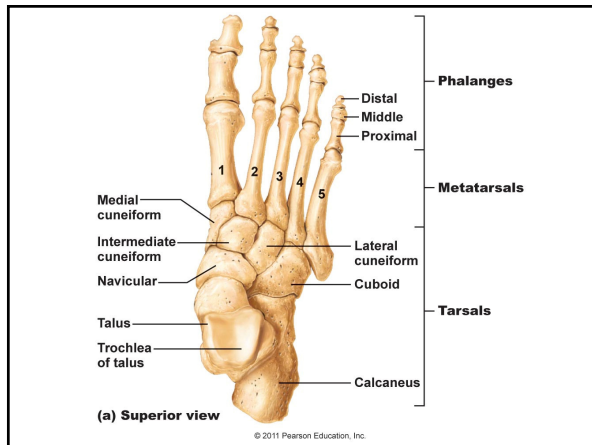


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Foot

- Tarsals = ankle bones
- Metatarsals = foot bones
- Phalanges = digits (toes)
 - Hallux (big toe) has 2 phalanges, other toes have 3 phalanges
 - Labeled proximal, medial, & distal
 - Which is missing in the hallux?
- Bones are numbered from medial to lateral: from the hallux (first) towards the pinky toe (fifth)

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