

Anatomy 201 Skeletal System: Bones and Markings

Cranium or Skull

Frontal-front of the skull

- Supraorbital foramen

Parietal-top of the skull

- Sagittal suture
- Coronal suture

Temporal-lower side of the skull

- Squamosal suture
- External auditory (acoustic) meatus
- Mandibular fossae
- Styloid process
- Carotid canal
- Jugular foramen
- Zygomatic process
- Mastoid process

Occipital-back of the skull

- Lambdoidal suture
- Foramen magnum
- Occipital condyles

Sphenoid bone

- Sella turcica – saddle shaped
- Greater & lesser wings
- Foramen rotundum
- Foramen ovale
- Foramen spinosum
- Foramen lacerum

Ethmoid bone

- Cribriform plates
- Crista galli
- Perpendicular plate

Maxillary Bone

- Palatine process
- Medial Palatine suture
- Incisive foramen

Palatine bone

- Greater palatine foramen

Zygomatic Bones

- Temporal process
- Zygomatic arch

Lacrimal bones

Nasal bones

Orbit

- Optic canal
- Superior & inferior orbital fissures

Vomer Bone

Inferior nasal conchae

Mandible

- Ramus
- Mandibular condyle
- Coronoid process
- Mandibular foramen
- Mental foramen

Hyoid bone

Vertebral Column – Backbones

7 Cervical vertebrae – neck

- *Atlas* - first vertebra (holds the head up)
- Facets that articulates with occipital condyle
- 2 Transverse processes
- Transverse foramen
- *Axis*– 2nd cervical vertebra (rotation of the head from side to side)
- Dens (odontoid process) –tooth-like structure that points upward & lies in the ring of the atlas.
- Bifid spinous process (C2 – C6)

12 Thoracic vertebrae

- Spinous process (long pointed projection)
- 2 Transverse processes
- Body
- Vertebral foramen
- Articulating facet for the ribs
- Superior articulating process
- Inferior articulating process

5 Lumbar vertebrae (lower back)

Sacrum (5 fused vertebrae) – a triangular shaped structure at the base of the vertebral column.

- Superior articular process
- Sacral canal
- Tubercle of median sacral crest
- Sacral hiatus

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Sacrum continued:

- Sacral foramen
- Sacral promontory

Coccyx (4 fused vertebrae) – tail bone

Ribs -12 pairs

- True or vertebrosteral –the superior 7 pairs
- False or the inferior 5 pairs
- 8th, 9th, 10th ribs are called verterbochondral
- 11th, 12th ribs are called floating or vertebral

Sternum or Breast bone (long flat bone located in the middle of the thoracic cage).

- Manubrium
- Body of the sternum
- Xiphoid process –tip of the sternum

Clavicle or collar bone- (rod like bone with elongated S shape)

- Sternal end
- Acromial end

Scapula or shoulder blade

- Spine
- Acromion process
- Coracoid process
- Glenoid cavity
- Superior border
- Infraspinous fossa
- Supraspinous fossa
- Lateral (axillary) border
- Medial (vertebral) border

Humerus or upper arm bone

- Head
- Anatomical neck
- Surgical neck
- Greater tubercle
- Lesser tubercle
- Intertubercular groove
- Deltoid tuberosity (rough V shaped area on the lateral side of the bony shaft)
- Olecranon fossa
- Coronoid fossa
- Lateral & medial epicondyles
- Capitulum
- Trochlea

Radius (located on the thumb side of the forearm)

- Head of the radius
- Radial tuberosity
- Ulnar notch of the radius
- Styloid process

Ulna (located on the little finger side)

- Olecranon process
- Trochlear notch
- Radial notch of the ulna
- Coronoid process
- Styloid process

Carpal Bones or wrist (8 bones)

Proximal row:

Scaphoid
Lunate
Triquetrum
Pisiform

Distal row:

Hamate
Capitate
Trapezoid
Trapezium

Metacarpals (5) - The thumb is #1

Phalanges - finger bones (14 bones)

- Proximal, Middle, Distal phalanx
- Thumb – proximal & distal phalanx

Bones of Pelvic Girdle (hip)

Coxal Bone

- Ilium
- Iliac crest
- Posterior superior iliac spine
- Anterior superior iliac spine
- Iliac fossa
- Acetabulum
- Ischium
- Ischial spine
- Ischial tuberosity
- Obturator foramen
- Pubis

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Femur

- Head
- Neck
- Greater trochanter
- Lesser trochanter
- Linea aspera
- Lateral epicondyle
- Medial epicondyle
- Intercondylar fossa
- Patellar surface
- Lateral and medial condyle

Patella (knee cap)

Tibia (shinbone)

- Medial condyle
- Lateral condyle
- Tibial Tuberosity
- Anterior Crest
- Medial Malleolus

Fibula

- Head of the fibula
- Lateral malleolus

Foot

7 tarsal (ankle) bones

- Talus
- Calcaneus (heel bone)
- Navicular
- Cuboid
- Medial cuneiform
- Intermediate cuneiform
- Lateral cuneiform

5 Metatarsal bones (instep)

- Numbered 1 – 5
- Great toe is metatarsal #1

Phalanges (toes)

- Proximal, middle, and distal phalanx
- Great toe – proximal and distal phalanx

Will discuss with chapter 15:

Middle ear bones

- Malleus
- Incus
- Stapes