

# The Skeletal System: Anatomy

The Skeletal System- Adult skeleton= 206 bones

- A. Axial Skeleton
  - 1. 74 bones; 6 middle ear bones
- B. Appendicular Skeleton
  - 1. 126 bones

## **I. Bones Markings (Practical 1)**

- A. Angle
- B. Body
- C. Condyle
- D. Crest
- E. Epicondyle
- F. Facet
- G. Fissure
- H. Foramen
- I. Fossa
- J. Groove
- K. Head
- L. Line
- M. Margin
- N. Meatus
- O. Neck
- P. Notch
- Q. Process
- R. Ramus
- S. Sinus
- T. Spine
- U. Trochanter
- V. Tuberosity
- W. Tubercle

## **II. Full Skeleton (Practical 2)**

- A. Temporal Bone
- B. Frontal Bone
- C. Parietal Bone
- D. Occipital Bone
- E. Mandible
- F. Hyoid Bone
- G. Sternum
- H. Ribs
- I. Cervical Vertebrae
- J. Thoracic Vertebrae

Cooperate: Unite in power, thought, and goal.

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- K. Lumbar Vertebrae
- L. Sacrum
- M. Coccyx
- N. Clavicle
- O. Scapula
- P. Humerus
- Q. Ulna
- R. Radius
- S. Carpals
- T. Metacarpals
- U. Phalanges
- V. Coxal
- W. Femur
- X. Patella
- Y. Tibia
- Z. Fibula
- AA. Tarsals
- BB. Metatarsals
- CC. Phalanges

## **III. Skull (Practical 3)- 28 bones: cranium-8 bones: face-14 bones: ear-6 bones**

1. Frontal Bone
  - a. frontal sinuses
  - b. supraorbital margin
  - c. supraorbital foramen
2. Parietal Bone
3. Sphenoid
  - a. body
  - b. greater wings
  - c. lesser wings
4. Temporal Bone
  - a. mastoid process
  - b. external acoustic meatus
  - c. zygomatic process
  - d. mandibular fossa
  - e. styloid process
5. Occipital Bone
  - a. foramen magnum
  - b. occipital condyles
  - c. external occipital protuberance
6. Ethmoid

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## FACIAL

7. Palatine
8. Mandible
  - a. body of mandible
  - b. ramus
  - c. mandibular condyle
  - d. mental foramen
  - e. coronoid process of mandible
  - f. angle of mandible
9. Maxilla
10. Nasal
11. Zygomatic Bone
12. Lacrimal
13. Inferior Nasal Conchae
14. Vomer

## SUTURES

1. Squamous
2. Coronal
3. Lambdoid
4. Sagittal

## FONTANEL

1. Frontal (anterior)
2. Occipital (posterior)
3. Sphenoid (anterolateral)
4. Mastoid (posterolateral)

## OTHER

1. Hyoid

## Middle Ear- 2 of each

1. malleus (hammer)
2. incus (anvil)
3. stapes (stirrup)

## IV. Vertebral Column (Practical 4)

1. Cervical Vertebrae (7)
  - a. atlas (1)
    1. superior articular facet
    2. transverse process
    3. transverse foramen
    4. vertebral foramen

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5. inferior articulating processes
- b. axis (2)
  1. superior articular facet
  2. body
  3. transverse process
  4. transverse foramen
  5. inferior articulating processes
  6. vertebral foramen
  7. dens
- c. cervical vertebrae (3-7)
  1. spinous process
  2. superior articular facet
  3. transverse process
  4. transverse foramen
  5. vertebral foramen
  6. inferior articulation processes
- d. thoracic vertebrae (1-12)
  1. spinous process
  2. superior articular facet
  3. transverse process
  4. articular facet for tubercle of rib
  5. vertebral foramen
- e. lumbar vertebrae (1-5)
  1. spinous process
  2. transverse process
  3. body
  4. superior articular facet
- f. sacrum
  1. superior articular facet
  2. median sacral crest
  3. sacral foramina
- g. coccyx
- h. curves
  1. primary
  2. secondary

## V. Thorax (Practical 5)

### A. Sternum

1. body
2. manubrium
3. xiphoid process

### B. Ribs

1. true ribs (upper 7)
2. false ribs (5 pairs)

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3. floating ribs
  - a. head
  - b. neck
  - c. tubercle
  - d. body or shaft
  - e. costal cartilage

## C. Clavicle

1. sternal end
2. acromial end

## D. Scapula

1. superior angle
2. acromion process
3. coracoid process
4. medial border
5. superior border
6. costal surface
7. inferior angle
8. lateral border
9. spine
10. glenoid cavity

## E. Coxal

1. ilium
2. ischium
3. pubic bone (pubis)
4. acetabulum
5. iliac crests
6. anterior superior spine
7. anterior inferior spine
8. posterior superior spine
9. posterior inferior spine
10. greater sciatic notch
11. ischial spine
12. obturator foramen
13. ischial tuberosity
14. pubic symphysis

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## VI. Upper Extremity (Practical 6)

### A. Humerus

1. head
2. anatomical neck
3. greater tubercle
4. lesser tubercle
5. intertubercular sulcus
6. deltoid tuberosity
7. medial epicondyle
8. coronoid fossa
9. lateral epicondyle
10. olecranon fossa
11. capitulum
12. trochlea

### B. Radius

1. head
2. neck
3. styloid process
4. radial tuberosity

### C. Ulna

1. olecranon process
2. coronoid process
3. styloid process
4. head
5. trochlear notch

### D. Carpals

1. pisiform
2. triquetrum
3. lunate
4. scaphoid
5. hamate
6. capitate
7. trapezoid
8. trapezium

### E. Metacarpals ( 1 - 5)

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## F. Phalanges

1. proximal phalanx
2. middle phalanx
3. distal phalanx

## VII. Lower Extremity (Practical 7)

### A. Femur

1. head
2. neck
3. lesser trochanter
4. greater trochanter
5. intertrochanteric line
6. lateral epicondyle
7. lateral condyle
8. medial epicondyle
9. medial condyle

### B. Patella (sesmoid bone)

### C. Tibia

1. intercondylar eminence
2. lateral condyle
3. medial condyle
4. tibial tuberosity
5. anterior crest
6. medial malleolus

### D. Fibula

1. head
2. lateral malleolus

### E. Tarsals

1. cuneiforms (1 - 3)
2. navicular
3. talus
4. calcaneus
5. cuboid

### F. Metatarsals (1 - 5)

### G. Phalanges

1. distal
2. middle
3. proximal