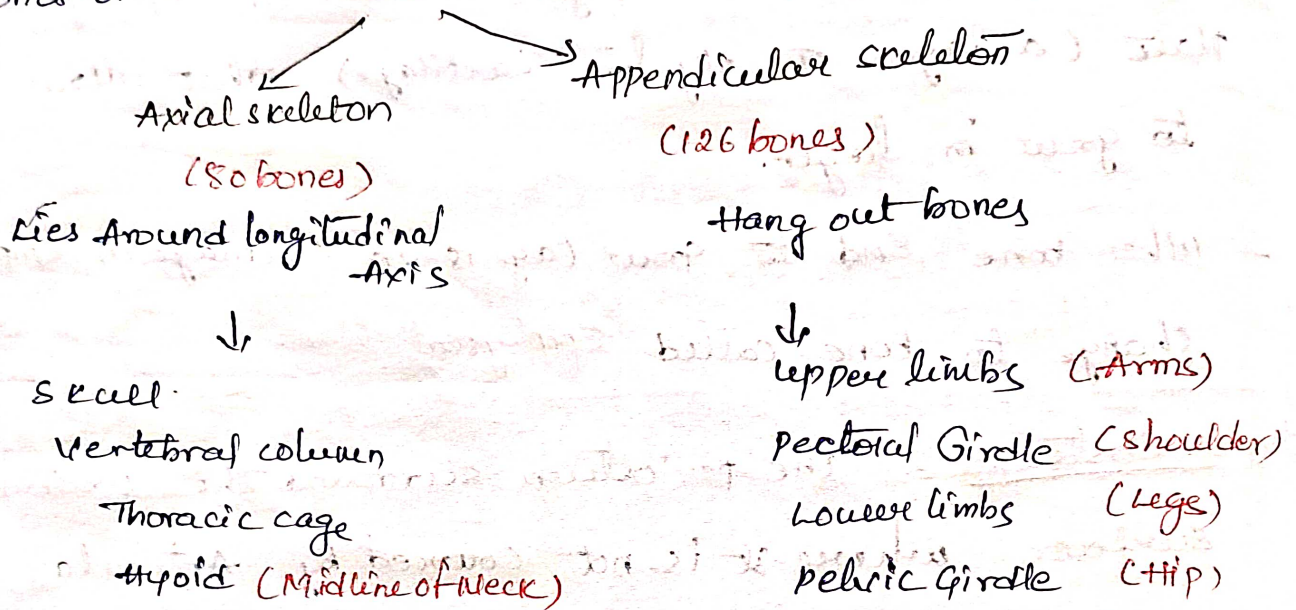


Divisions of the Skeletal system

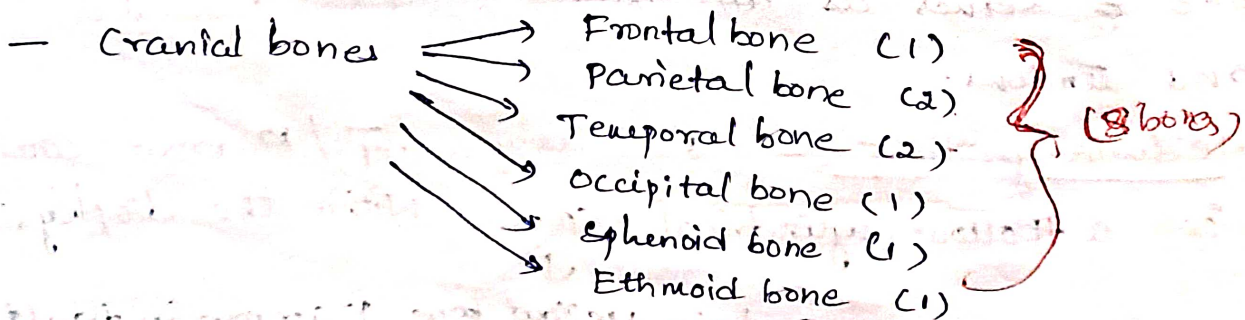
- The adult human skeleton consists of 206 bones.
- most of which are paired right & left side of the body.
- Bones of Adult skeleton are grouped into 2 principal divisions.



(1) Axial skeleton:-

(A) Skull:- Bony structure of head is called skull
(Highly organized & complex structure)

- It is made up of 22 bones
- Cranial bones (8)
 - Facial bones (14)



- Facial bones → Nasal bones (2) Inferior nasal conchae (2)
 Maxillae (2) Vomer (1)
 Zygomatic bones (2)
 Mandible (1)
 Lacrimal (2)
 Palatine (2)

14 bones

Functions of skull:-

(1) Skull protect & support sensitive organs of the body like brain, eyes & ears.

(2) Movements in the head is due to cranial bones provides large surface for attachment of muscles.

(3) Cranial bones accommodate & stabilize the position of brain, cranial nerves & vessels.

(4) Facial bones form the framework of the face.

(5) Skull has various cavities which play an important role in communication of organs & environment.

(6) The Mandible & Maxillae contain alveolar ridge in which teeth are present.

(7) These serve as support system for entry into digestive & respiratory system.

(B) Vertebral (spinal) column:-

= It is composed of bones & CT.

- It is a flexible curved structure that provides axial support to the body.

- In this, bones are called vertebrae

- Vertebrae column is formed by 26 irregular bones

which are connected and supported by ligaments

Vertebral column is divided into 5 portions :-

- (i) Cervical vertebrae (Movable) :- 4 vertebrae in Neck region
(C1-C7) are known as cervical vertebrae.
- (ii) Thoracic vertebrae (Movable) :- 12 vertebrae present in posterior
(T1-T12) region of thoracic cavity, axes
- (iii) Lumbar vertebrae (Movable) :- 5 vertebrae which support the
(L1-L5) lower back.
- (iv) Sacrum (Immovable) :- 5 sacral vertebrae fuse with one
another to form a single region.
known as Sacrum.
- (v) Coccyx (Immovable) :- 4 coccygeal vertebrae joint & form
a single structure.

Functions of vertebral column :-

(i) supports the head.

(ii) Help maintain balance in upright position

(iii) Enclose & protect spinal cord.

(iv) Permit Movement.

(v) Absorbs shocks during walking.

(vi) Serves as a point of Attachment for the ribs, pelvic girdle
and muscles of back & upper limbs.

(c) Thorax / Rib cage / Thoracic cage :-

- Sternum, ribs, costal cartilages of ribs & bodies of
thoracic vertebrae makes a cone shaped cage like
structure known as thoracic cage.

sternum — Manubrium, Body, xiphoid process

Ribs — 7 True ribs (1-7)
5 False ribs (8-12)

clavicle & scapula } Pectoral Girdle

12 Thoracic vertebrae (T₁-T₁₂)

- It serves as a protective cover for organs like Heart & lungs.

- It also support bones of shoulder girdle & upper extremities

(D) Hyoid bone:- It is a horse-shoe shaped / U-shaped bone b/w larynx & mandible.

- It is a unique component of Axial skeleton that do not join with any other bone.

- Through Temporal bone → Hyoid bone is suspended by means of ligament.

- Hyoid bone serves as point of attachment for tongue, neck and pharynx muscles.

- It also assists in keeping larynx open.