

THE 206 BONES OF THE HUMAN BODY

I. Bones of the Axial Skeleton – 80 bones

- A. Skull – 28 bones – all these are separate when born
 - 1. Cranium – encloses and protects the brain – 8 bones – large and flat
 - a. Frontal bone – forehead – superciliary arch – where eyebrows are
 - b. Parietal bones – paired; sides and top of head
 - Connects frontal and occipital bone
 - c. Occipital bone – posterior wall and floor; contains the foramen magnum
 - d. Temporal bones – paired; contains external auditory meatus – hole for the ear
 - Styloid process – attaches to tongue & neck muscles
 - Zygomatic process – attaches cheek bone
 - Mastoid process
 - e. Sphenoid bone – butterfly shaped bone; sella turcica – houses the pituitary gland
 - Right behind eye
 - f. Ethmoid bone – a small bone anterior to the sphenoid bone
 - Forms most of the nasal septum
 - 2. Facial Bones – 14 bones – 12 are paired and 2 are single
 - a. Maxillary bones – upper jaw
 - b. Palatine bones – posterior to the maxillary bones; roof of your mouth
 - c. Zygomatic bones – cheekbones
 - d. Nasal bones – bridge of the nose
 - e. Lacrimal bones – inside of eyesocket; smallest; lacrimal duct – tears
 - f. Vomer – helps form nasal septum; thin and flat
 - g. Inferior nasal conchae – two thin scroll-like bones attached to the lateral walls of the nasal cavity
 - h. Mandible – single lower jaw; only one that moves: longest and strongest on face
 - Ramus
 - mental foramen
 - alveolar margin – teeth
 - 3. Ear Ossicles – 6 bones

B. Hyoid Bone – neck region – supports the tongue – 1 bone
 - Horseshoe shape
 - Does not articulate w/any other bone

C. Vertebral Column – 26 bones – each sep. by a spinal disc
 - 1. Cervical Vertebrae – neck – 7 bones
 - a. Atlas – 1st vertebra
 - b. Axis – 2nd vertebra – odontoid process

Quiz I
Anatomical
Bones

2. Thoracic Vertebrae – thorax – articulate with the ribs – 12 bones
 3. Lumbar vertebrae – small of the back – 5 bones
 4. Sacrum – 3 to 5 fused bones – hip – 1 bone
 - Articulate w/the pelvic bone
 5. Coccyx – 3 to 5 fused bones – tail – 1 bone
 - Moveable at birth
- D. Thoracic Cage
1. Sternum – breastbone (manubrium (triangular) , body (longest, broader above), xyphoid process (sword shaped))
 2. Ribs – 12 pair
 - a. True – 7 pair – connect to sternum directly by costal cartilage
 - b. False – 5 pair – indirect or no connections to sternum
 1. Floating – last 2 pair – no connection

II. Bones of the Appendicular Skeleton

- A. Pectoral Girdle – shoulder girdle – 4 bones – provides a connection between the axial skeleton and the upper limbs
 - More free and mobile than pelvic girdle
1. Clavicles – collarbone – 2 bones
 2. Scapulae – shoulder blades – 2 bones; 2nd to 7th rib
- B. Upper Limbs – 60 bones (30 bones/arm)
1. Humerus – upper arm
 2. Radius – lateral bone of forearm – always in line with thumb
 3. Ulna – medial bone of forearm; little finger side
 4. Carpals - 8 bones – wrist
 - a. Trapezium
 - b. Trapezoid
 - c. Capitates
 - d. Hamate
 - e. Scaphoid
 - f. Lunate
 - g. Triangular
 - h. Pisiform

Distal Row

Proximal Row
 5. Metacarpals – 5 bones – hand numbered 1 to 5
 6. Phalanges – 14 bones – digits, 2 in thumb(proximal and distal), 3 in each of the other digits (proximal, middle, and distal)
- C. Pelvic Girdle – 2 bones – supports the lower limbs
1. Coxal bones – 2 bones

- a. formed from the fusion of 3 bones: pubis, ischium, and ileum (largest of the three)
- D. Lower Limbs – 60 bones (30 bones/leg)
 - 1. Femur – thigh – longest and heaviest bone in the body
 - 2. Patella – knee – located within a large tendon that wraps over the anterior side of the knee
 - 3. Tibia – larger leg bone – medial side
 - 4. Fibula – thin leg bone lateral to the tibia
 - 5. Tarsals – 7 bones – ankles
 - a. Talus – articulates with leg; front of ankle
 - b. Calcaneous – heel; largest
 - c. Medial Cuneiform
 - d. Intermediate cuneiform
 - e. Lateral Cuneiform
 - f. Cuboid
 - g. Navicular – arch
 - 6. Metatarsals – 5 bones – foot or instep numbered 1-5 starting on medial side
 - 7. Phalanges – 14 bones – arranged same as in fingers

