**المحاضرة العاشرة / التشريح والفسلجه/ قسم هندسة الأجهزة الطبية / المرحلة الثانية / الاستاذ الدكتور خيري عبدالله**

**Lec. 10 Human Skeleton**

* **The human skeleton is the internal framework of the human body . It is composed of 270 bones at birth and decreased to 206 bones by adulthood ( some bones are fused ) .**
* **The bones mass in the skeleton about 14 % of the total body weight .**

**Human skeleton is divided to :**

**1 - Axial skeleton : include , skull , vertebral column and ribs .**

**2 – Appendicular skeleton , which attached to the axial skeleton , it is formed by : shoulders , pelvis and bones of upper and lower limbs .**

**Functions of human skeleton :**

**1 – Support 2 – Movement 3 – Protection**

**4 – Production of blood cells .**

**5 – Storage of minerals .**

**6 – Endocrine regulation .**

**Bones of Upper limb :**

**1 – Humerus 2 – Radius 3 – Ulna 4 – Carpus bones (8)Wrist**

**5 - Metacarpus( 5 hand palm) 6 – Phalanx bones ( 14)**

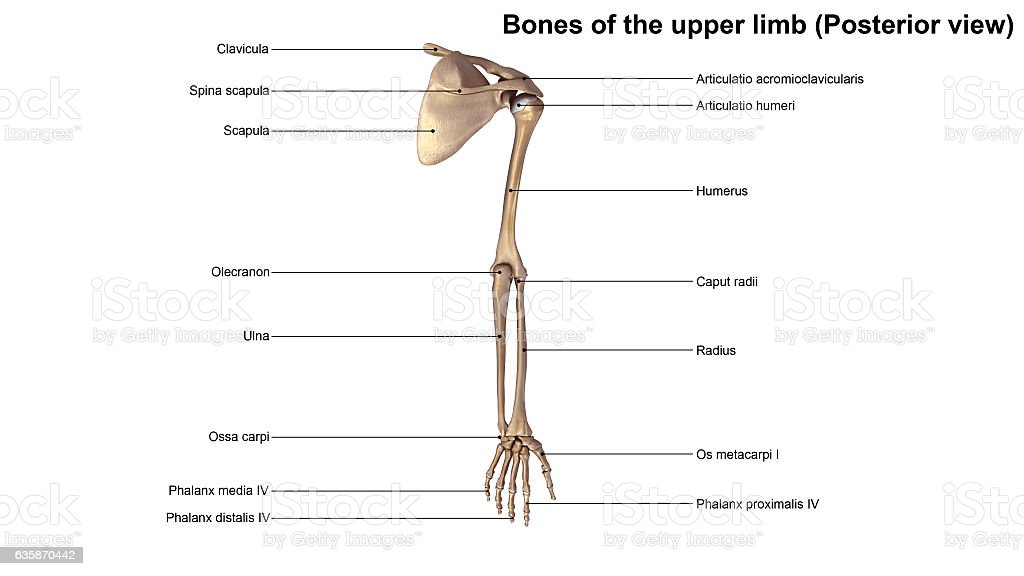
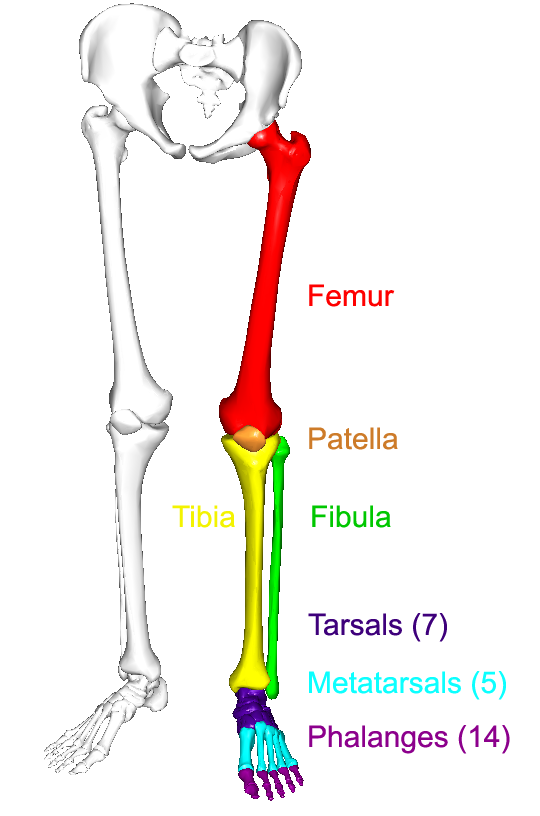
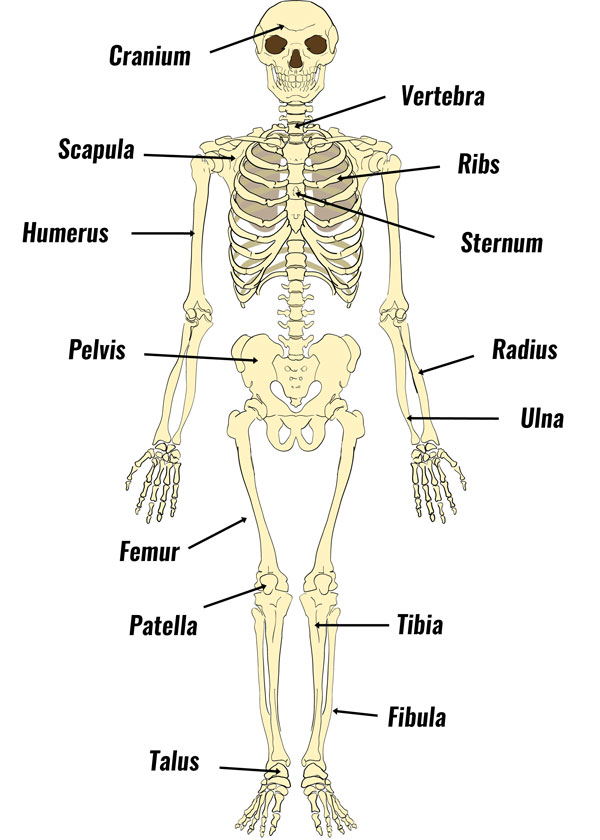
**Bones of Lower limb :**

**1 – Femur 2 – Patella 3 – Tibia 4 – Fibula 5– Seven tarsal bones**

**6 – Five Metatarsal bones 7 - (14) Phalanges**

**Bones of Skull :**

**1 – Frontal bone 2 – Occipital bone 3 – Two Parietal bones 4 – Cranial base 6 bones**



**Bones of Skull :**

**1 – Frontal bone 2 – Occiptal bone 3 – Two Parietal bones**

**4 – Two Temporal bone 5– Cranial base bones . 6 – Two Sphenoid . 7– Two Ethmoid**

**Bones of vertebral column :**

**There are 33 vertebrates separated by intervertebral disc**

**1 – Cervical vertebrates ( 7, C1 – C7 ) 2 – Thoracic vertebrates ( 12 , T1 – T12 )**

**3 – Lumbar vertebrates ( 5 , L1 – L5 )**

**4 – Sacrum 5 fused ( S1 – S5 )**

**5 – Coccyx 4 vertebrates fused (tail bones ) .**

**Ribs and sternum :**

**Ribs (Thoracic cage ) , 12 pairs of ribs :**

**1 – True ribs 1- 7 connect to the vertebrates and to the sternum by their costal cartilage .**

**2 – False ribs 8 , 9 , 10 these ribs connect to the sternum by the costal cartilage of the above rib (rib 7 ) .**

**3 – The last two ribs called floating ribs ( do not have costal cartilage ) .**

* **Sternum have three parts :**

**1 – Manubrium 2 – body 3 – Xiphoid cartilage or process**

