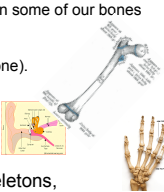


Interesting Facts about the Skeletal System

- Do we have more bones when we are a baby or when we are all grown up
 - Baby has 305 bones
 - Adult has 206 bones. This is because as we grown some of our bones join together to form one bone.
- The longest bone in our bodies is the **femur** (thigh bone).
- The smallest bone is the **stirrup** bone inside the ear.

Differences between males and females:


- Males and females have slightly different skeletons,
 - Males have slightly thicker and longer legs and arms;
 - Females have a **wider pelvis** and a larger space within the pelvis, Why? **Babies must fit!**



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5 Functions of the Skeletal System


- 1. Support**- framework that supports body and cradles its soft organs
- 2. Protection**- for delicate organs, heart, lungs, brain
- 3. Movement**- bones act as levers for muscles
- 4. Mineral storage**- calcium & phosphate
- 5. Make Red Blood** - cell formation-RBC




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Types of Skeletons

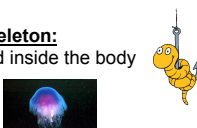
Exo-skeleton: animals that have shells




Endo-skeleton: hard structure inside the animal.



Hydrostatic skeleton: Fluid held inside the body



No skeleton



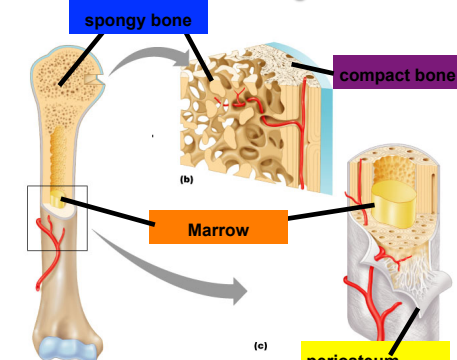
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The Skeletal System

- Parts of the skeletal system
 - Bones (skeleton)
 - Joints
 - Cartilages
 - Ligaments (bone to bone)(tendon=bone to muscle)

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Anatomy of a Long Bone

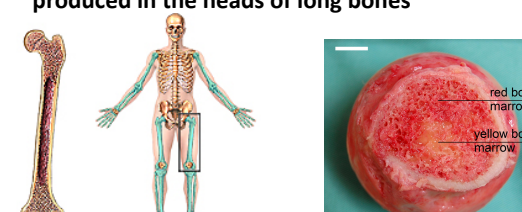


Labels: spongy bone, compact bone, Marrow, periosteum

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Bone Marrow

- Bone marrow is the flexible tissue found in the interior of bones.
- **Makes RBC:** In humans, red blood cells are produced in the heads of long bones

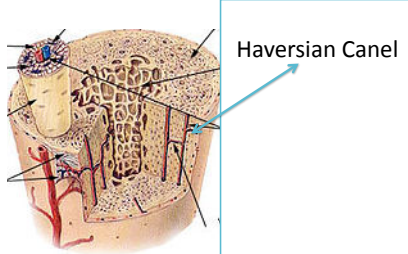


Labels: red bone marrow, yellow bone marrow

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Haversian Canal

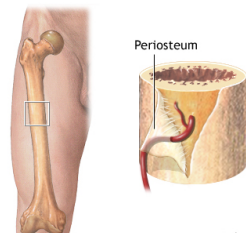
- Tunnels in bones for blood vessels, nerve fibers.



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Periosteum

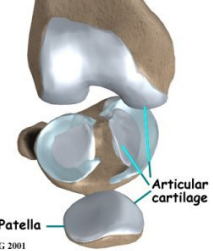
- **Periosteum is a membrane that lines the outside of all bones**
 - attachment for muscles and tendons.



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Cartilage

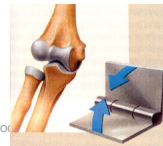
- Is a flexible connective tissue that:
 - **Connects bones** and stops them from grinding together (joints).
 - Where:
 - Ears, nose
 - Bronchial tubes




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Types of Joints – Places that bend/move

Hinge-
A hinge joint allows extension and retraction of an appendage. (Elbow, Knee)



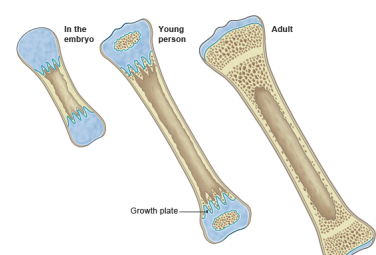
Ball and Socket-
A ball and socket joint allows for radial movement in almost any direction. They are found in the hips and shoulders. (Hip, Shoulder)



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Ossification

- **Making bone**
- The process of laying down new bone material by cells called osteoblasts.



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Diseases of the Skeletal System:

- Rickets**- vitamin D deficiency
- Osteomalacia**- soft bones, inadequate mineralization in bones, lack of vitamin D
- Pagets Disease**- spotty weakening in the bones, excessive and abnormal bone remodeling
- Rheumatoid arthritis**- autoimmune reaction

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