

Module 4 LO1

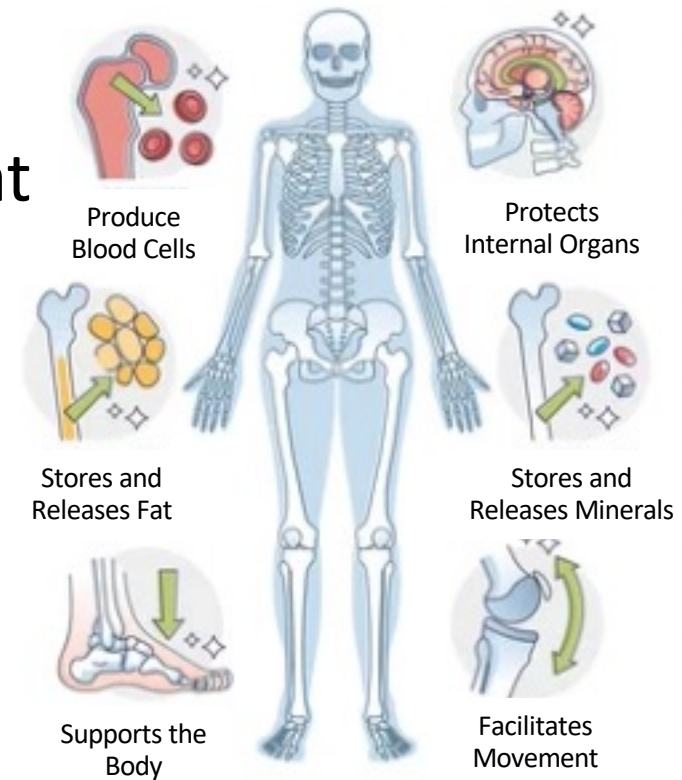
Skeletal System Function

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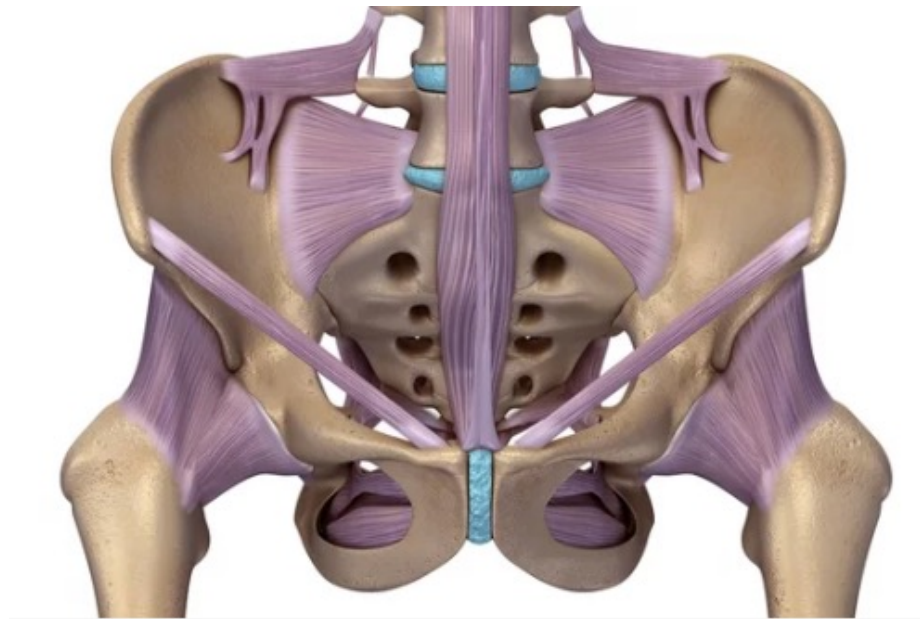
1. Functions of Bone and the Skeletal System

- A. Body support
- B. Protection of internal organs
- C. Facilitates movement
- D. Stores and releases minerals and fat
- E. Blood cell production



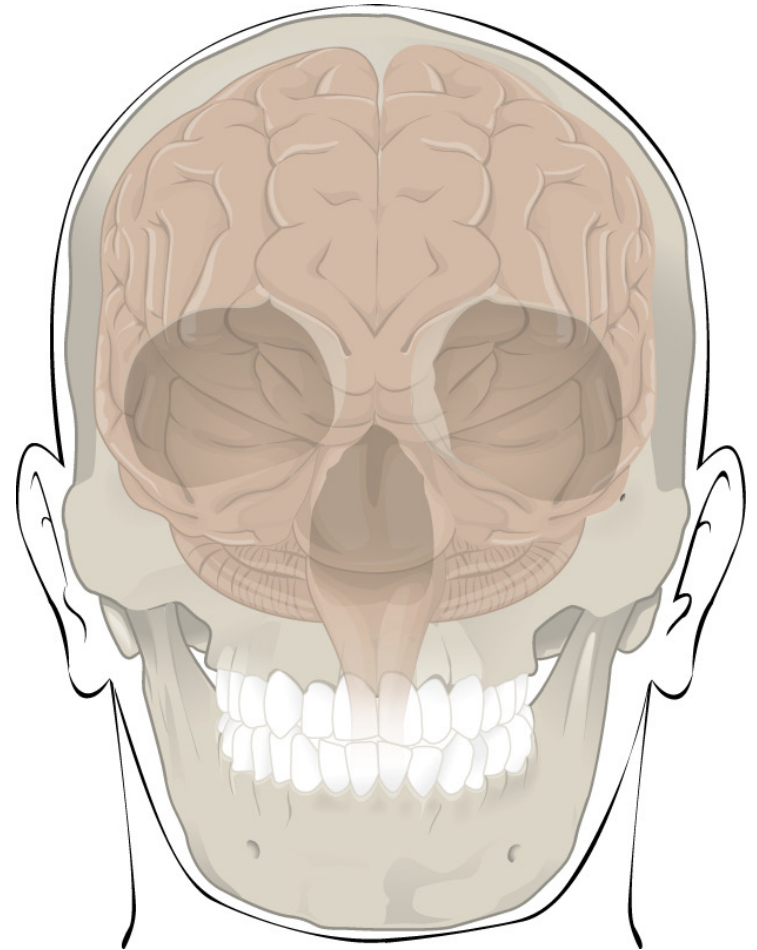
A. Body Support

- Serves as structural framework
 - Supporting soft tissues
 - Providing attachment points for muscle tendons



B. Protection of Internal Organs

- Protects internal organs
 - Cranial bones – brain
 - Vertebrae – spinal cord
 - Rib cage – heart and lungs



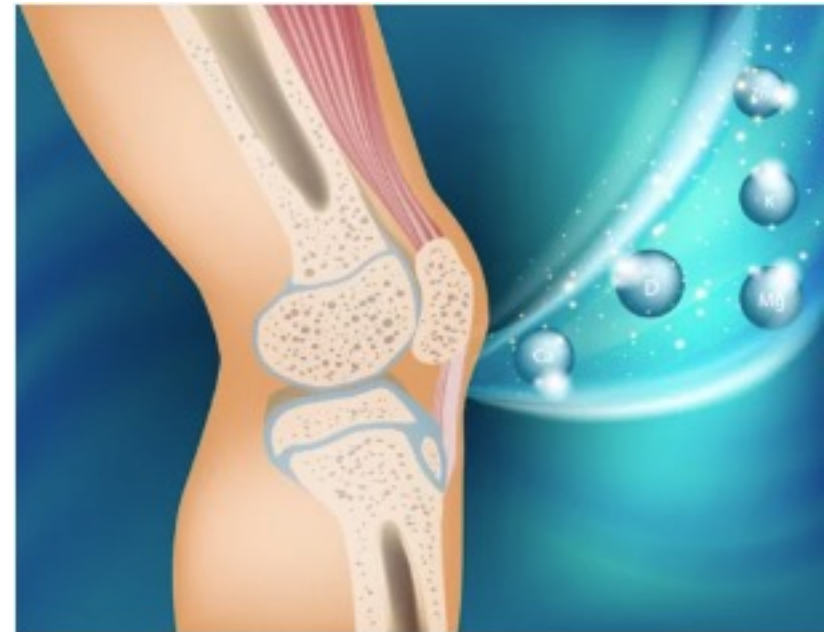
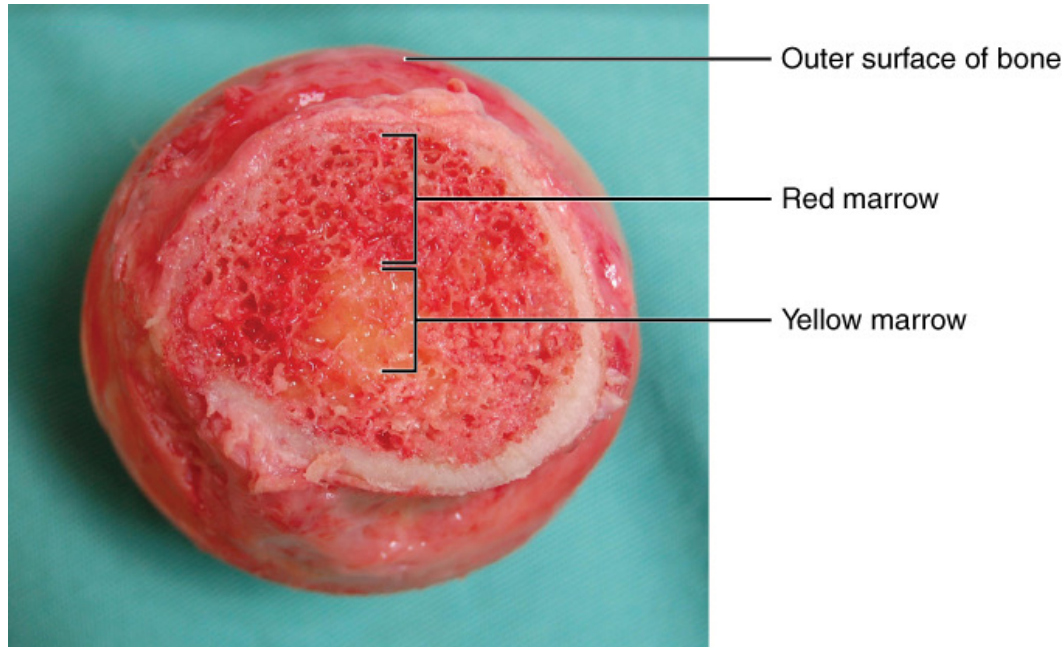
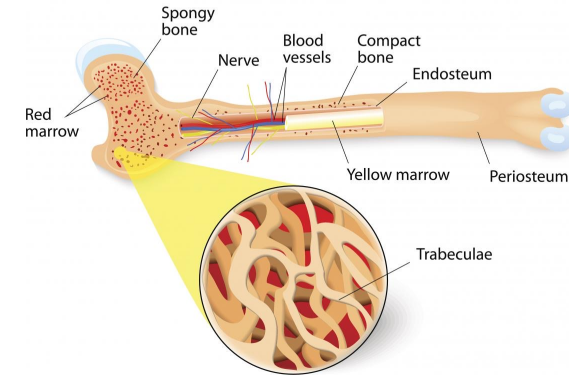
C. Facilitates Movement

- Muscles contract
 - Pull of bone to produce movement



D. Stores and Releases Minerals and Fat

- Minerals – contribute to bone strength
 - Calcium (99% of storage in bone)
 - Phosphorus
- Fat



E. Blood Cell Production

- Connective tissue termed red bone marrow
 - Hemopoiesis or hematopoiesis
 - Production of red blood cells, white blood cells, platelets
- Red bone marrow
 - Consists of:
 - Blood cells, adipocytes, fibroblasts, macrophages
 - Reticular fibers
- Location
 - Fetus – developing bones
 - Adults – hip bones, ribs, sternum, vertebrae, skull, epiphysis of long bones
- Newborn
 - All bone marrow is red and involved in hemopoiesis
- With development
 - Red bone marrow becomes yellow

