

# GENERAL OSTEOLOGY

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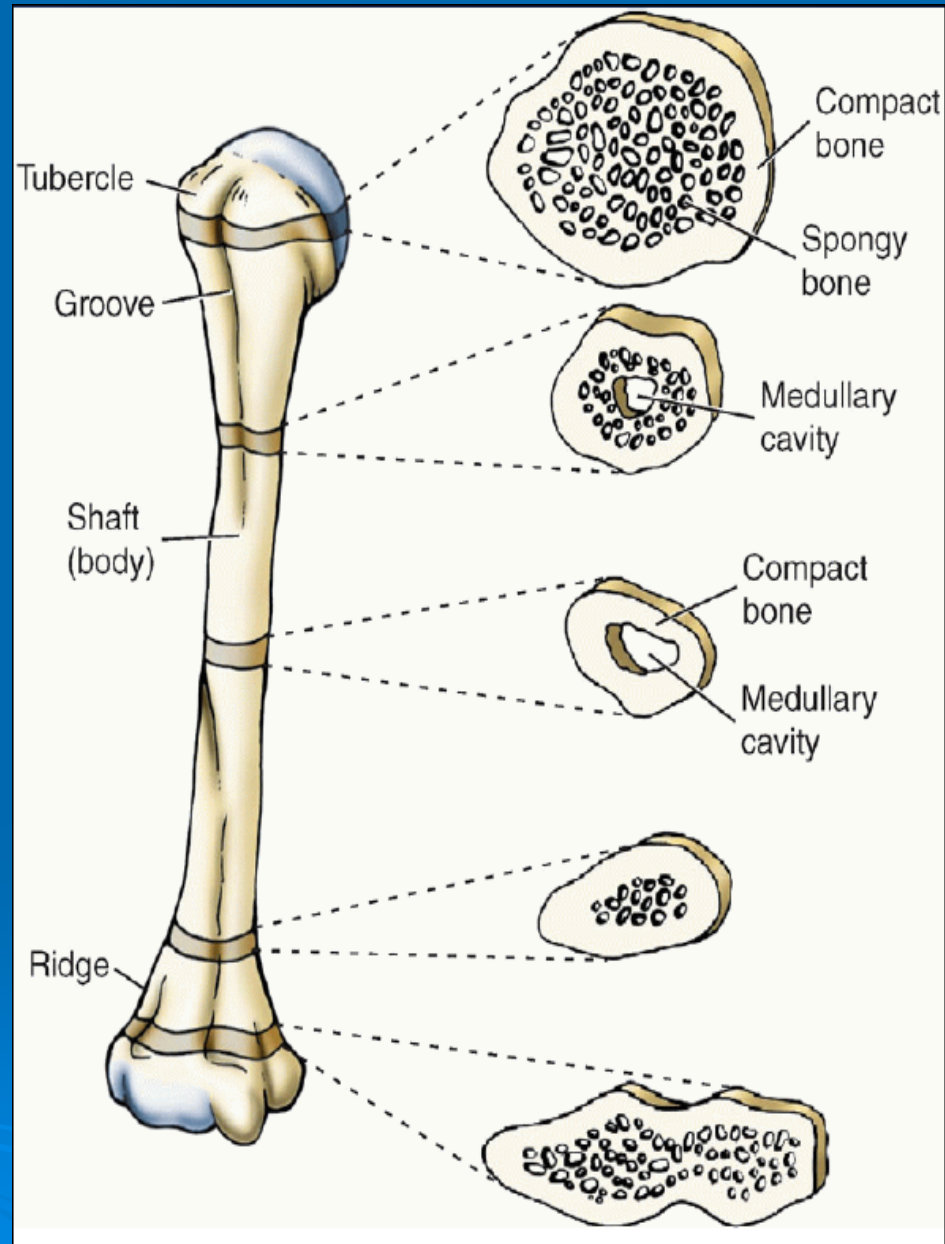


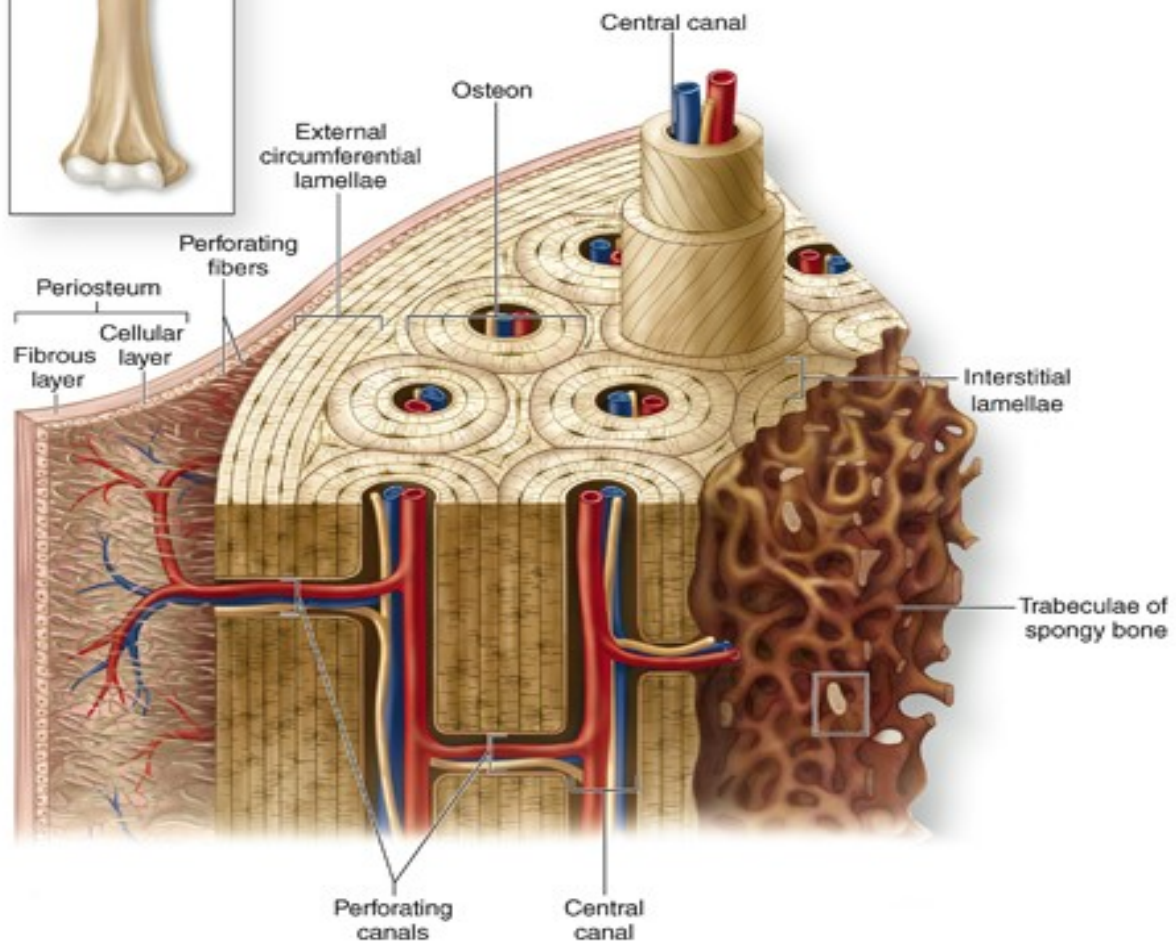
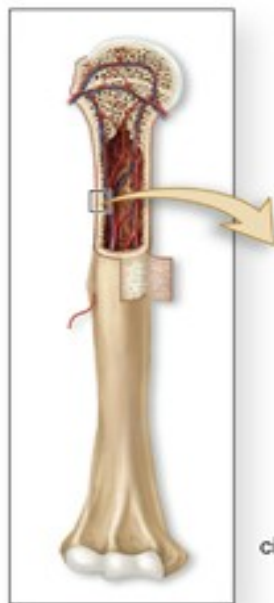
- the skeletal system (osteology) consists of bones and cartilage
- provides our basic shape and support for the body and is what the muscular system acts on to produce movement
- protects vital organs such as the heart, lungs, and pelvic organs



# Bones

- two types of bone:
  - 1) compact bone
  - 2) spongy bone
- have a superficial thin layer of compact bone around a central mass of spongy bone, except where the latter is replaced by a medullary cavity





# Classification, markings & formations of bones



- **Long bones:** diaphyses and epiphyses
- **Short bones:** cuboidal in shape; carpal and tarsal bones
- **Flat bones:** thin and flat; scapula, vault of the skull → cancellous layer = diploe with red bone marrow
- **Irregular bones:** fit none of the previous description
- **Sesamoid bones:** develop in certain tendons and are found where tendons cross the ends of long bones in the limbs; patella

- **capitulum:** small, round, articular head
- **condyle:** rounded, knuckle-like articular area, often occurring in pairs
- **crest:** ridge of bone
- **epicondyle:** eminence superior to a condyle
- **facet:** smooth flat area, usually covered with cartilage → bone articulates with another bone
- **foramen:** passage through a bone
- **fossa:** hollow or depressed area
- **groove:** elongated depression or furrow

- **head (caput):** large, round articular end
- **line:** linear elevation
- **malleolus:** rounded process
- **notch:** indentation at the edge of a bone
- **protuberance:** projection of bone
- **spine:** thorn-like process
- **spinous process:** projecting spine-like part
- **trochanter:** large blunt elevation
- **trochlea:** spool-like articular process or process that acts as a pulley
- **tubercle:** small raised eminence
- **tuberosity:** large rounded elevation



# Cartilage



- Specialized supporting connective tissue
- No neurovascular elements
- **Hyaline:** bluish-white, in fetal skeleton, in adult are remnants; articular, costal cartilages
- **Elastic:** yellowish; external ear and epiglottis
- **Fibrocartilage:** more collagen fibers; tendon insertions and intervertebral discs