



Faculty of Applied Science
Medical Technical Radiology
Radiographic and Medical
Terminology I
(MTR109)

Lecture 5

SKELETAL SYSTEM TERMINOLOGY

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Outline



- What is Skeletal System?
- Main functions of the skeletal system
- Basic Terms
- Divisions of the Skeleton
- Types of Bones
- Bone Structure Terms
- Joint Terminology
- Common Skeletal Conditions (Intro Level)

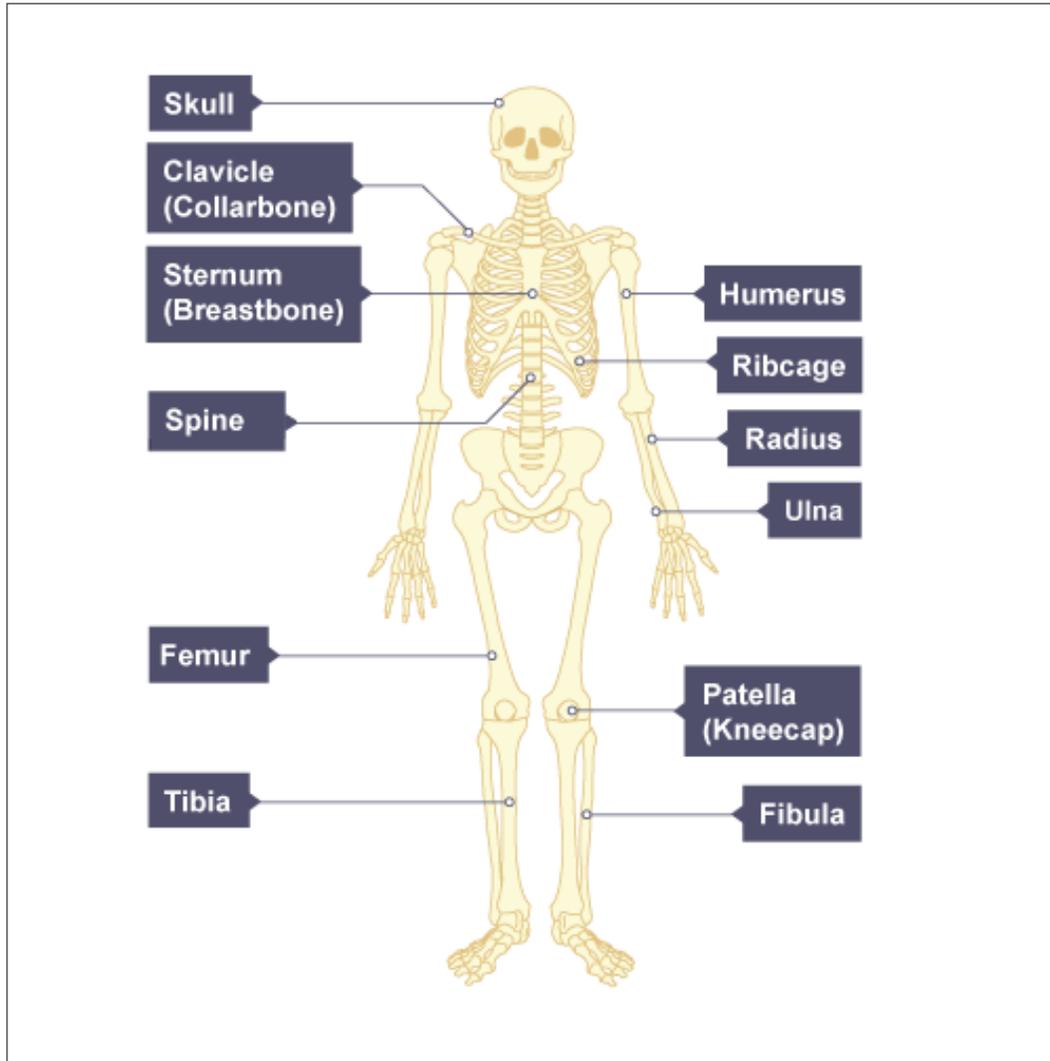
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Learning outcomes

- By the end of this lesson, students will be able to:
 - Define** basic terms related to the skeletal system.
 - Identify** the main parts and divisions of the skeleton.
 - Name** the different types of bones.
 - Describe** the basic structure of a long bone.
 - Use** correct skeletal terminology when labeling diagrams or answering questions.

What is Skeletal System?

- The **skeletal system** is the **framework of bones and cartilage** in the human body that **supports the body, protects internal organs, and helps movement.**



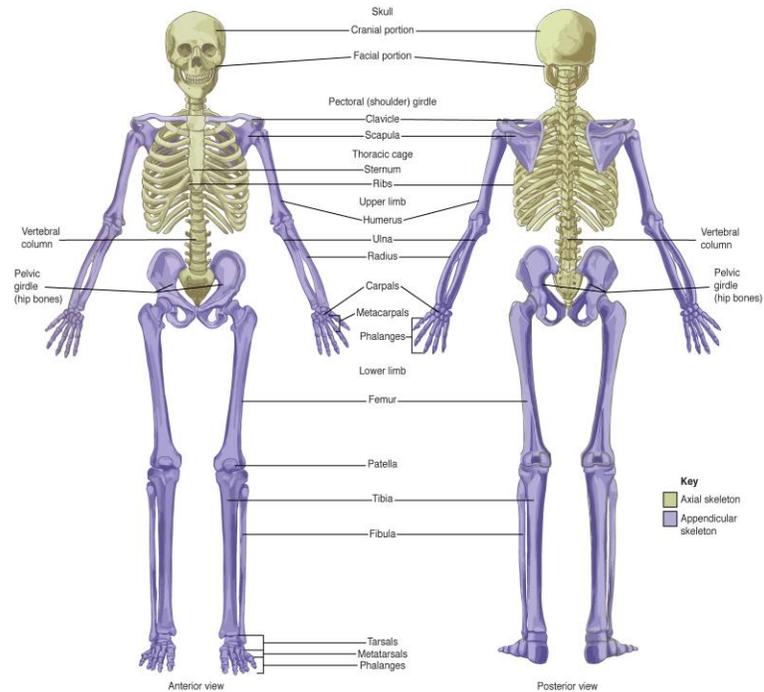
Main functions of the skeletal system

- **Support:** Gives the body shape and keeps us upright
- **Protection:** Protects vital organs
 - Skull → brain
 - Rib cage → heart and lungs
- **Movement:** Works with muscles to allow movement
- **Blood cell production:** Makes red and white blood cells in bone marrow
- **Mineral storage:** Stores calcium and phosphorus

Basic Terms

- **Skeleton:** The internal framework of bones that supports the body
- **Bone (Os):** A hard, living connective tissue
- **Cartilage:** Flexible connective tissue that cushions joints
- **Ligament:** Connects bone to bone
- **Tendon:** Connects muscle to bone
- **Joint (Articulation):** Place where two or more bones meet

Divisions of the Skeleton



- **Axial Skeleton:** Skull, vertebral column, ribs, sternum and Appendicular
- **Skeleton:** Upper and lower limbs, shoulder and pelvic girdles

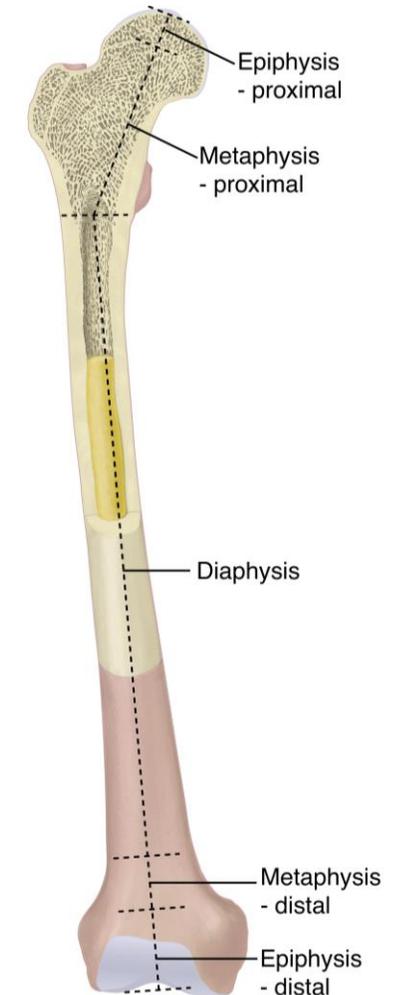
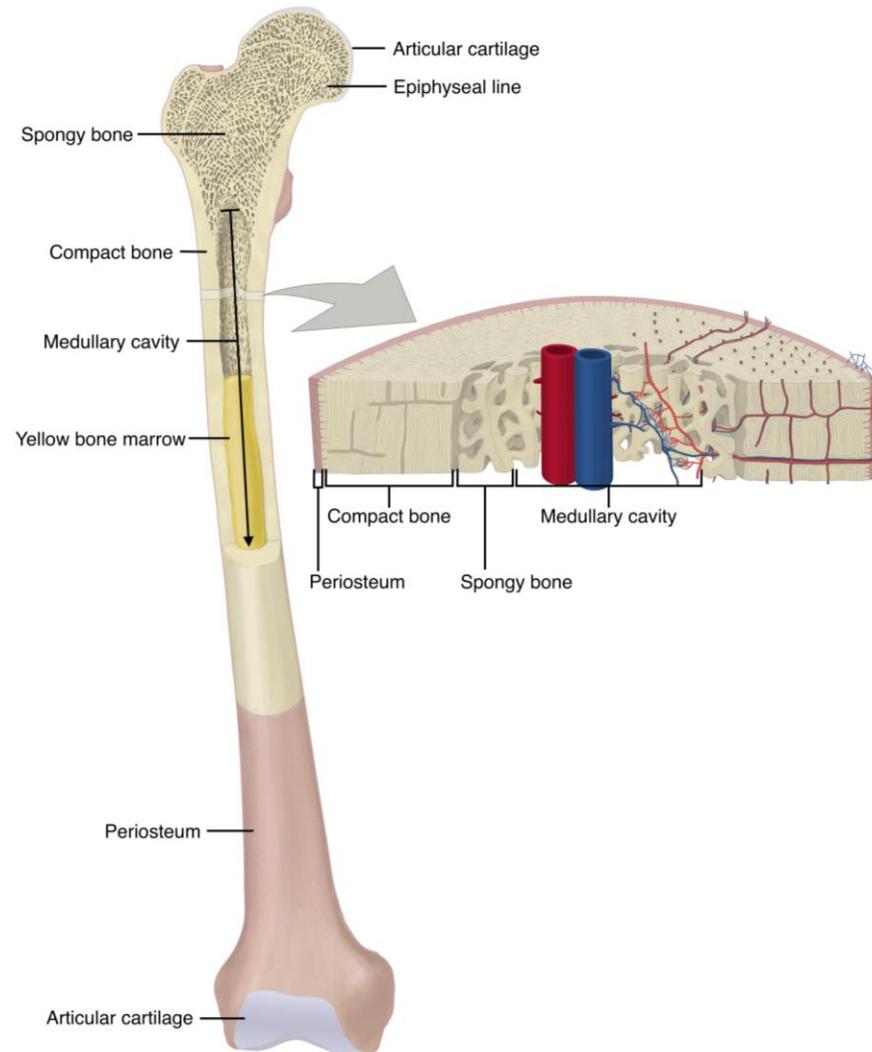
Types of Bones



- **Long bones:** Femur, humerus
- **Short bones:** Carpals, tarsals
- **Flat bones:** Skull bones, sternum, scapula
- **Irregular bones:** Vertebrae, facial bones
- **Sesamoid bones:** Patella

Bone Structure Terms

- **Diaphysis:** Shaft of a long bone
- **Epiphysis:** Ends of a long bone
- **Metaphysis:** Region between diaphysis and epiphysis
- **Periosteum:** Outer covering of bone
- **Compact bone:** Dense, strong outer layer
- **Spongy (cancellous) bone:** Porous inner bone
- **Medullary cavity:** Space containing bone marrow



Joint Terminology

- **Synovial joint:** Freely movable joint
- **Fibrous joint:** Immovable (e.g., skull sutures)
- **Cartilaginous joint:** Slightly movable (e.g., intervertebral discs)
- **Articular cartilage:** Covers bone ends in joints
- **Synovial fluid:** Lubricates joints

Common Skeletal Conditions

Fracture: Broken bone

Osteoporosis: Decreased bone density

Arthritis: Inflammation of joints

Scoliosis: Abnormal lateral curvature of spine



Directional and Positional Terms (Used with Bones)

- **Proximal / Distal:** Nearer to / farther from trunk
- **Medial / Lateral:** Toward / away from midline
- **Anterior / Posterior:** Front / back



Next lecture

- **Muscular System Terminology**



References

- **Tortora, G. J., & Derrickson, B. H. (2021).** *Principles of anatomy and physiology* (16th ed.). Wiley.
- **Marieb, E. N., & Hoehn, K. (2019).** *Human anatomy & physiology* (11th ed.). Pearson Education.