GENERAL ANATOMY

DPT

1st semester

DR DANISH

THE SKELETAL SYSTEM I
BONES & CARTILAGES

- **General Overview:**
- The skeletal system consists of bones and cartilages connected to each other by joints.
- Bones are hard, rigid, and nonflexible.
- Cartilages are semirigid but flexible.
- Together, bones and cartilages constitute a supportive framework called the skeleton of the body.

Continued

- **- The skeleton:**
- gives the body its shape
- facilitates movement
- provides protection to the vital organs
- stores calcium and produces blood cells

BONES

- Bones are made of osseous tissue.
- Osseous tissue has strength like cast iron and lightness like pinewood.
- Bone tissue consists of bone cells and bone matrix with mineral salts (calcium phosphate).
- Study of bones is called osteology.

Functions of Bones

1. Mechanical functions.
2. Physiological functions.

Mechanical Functions

- The bones make up the skeleton and provide the rigid framework that supports the body.
- They protect certain vital organs like the brain, spinal cord, heart, lungs, and organs of the pelvis by forming sturdy walls of the body cavity.
- The bones also make body movements possible by providing attachment sites for muscles and by acting as levers for joints.

Physiological functions

- Bone is the main storage and supplier of calcium, phosphate, and magnesium salts.
- **Breakdown of percentages in the body:**
- 97% of the body's calcium is found in the bones.
- 86% of the body's phosphate is found in the bones.
- 54% of the magnesium is found in the bones.

Continued

- Contain bone marrow
- Site of blood cells formation


Thank
You