

# Structure and function of Connective Tissues

## Part -3



**By Dr. Shashi Prabha**  
**HOD , Zoology Dept.**  
**Karim City College**

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# Types of Connective Tissues



On the basis of nature of matrix, connective tissues are of three types

1. Connective Tissue proper
2. Skeletal connective tissue
3. Vascular connective tissue

# Types of Connective Tissues *..contd..*



## **Skeletal Tissue**

It is a highly specialized and organized compact connective tissue having abundant intercellular substances . These form endoskeleton of the vertebrates and also protect the vital organs of the body like brain, heart, lungs etc.

## **Types of Skeletal Tissues**

Skeletal tissues are of two types

- Cartilage
- Bones

# Types of Connective Tissues

( Skeletal Tissue .. Contd..)



## Bone Tissue

- Bone tissue is the structural and supportive connective tissue of the body and is the hardest of all connective tissues
- It is solid, rigid and inflexible connective tissue
- It is made up of bone cells and intra cellular ground substances. Bone is covered with periosteum .
- Matrix of the bone is formed of organic and inorganic matter
- Different type of bone cells are found in bone tissue

# Types of Connective Tissues

( Skeletal Tissue .. Contd..)



## Types of Bone Cells

- **Osteoblasts**

- These are involved in creation and mineralization of bones.
- These are bone forming cells. They produce a protein matrix called osteoid

- **Osteocytes**

- These constitute 90 -95% of total bone cells
- These cells are surrounded by calcified matrix and secrete ossein in the matrix
- The cytoplasm of osteocyte contain lipid droplets, granules and glycogen
- Osteocytes is separated by the matrix from each other and connected with each other by canaliculi

# Types of Connective Tissues

( Skeletal Tissue .. Contd..)



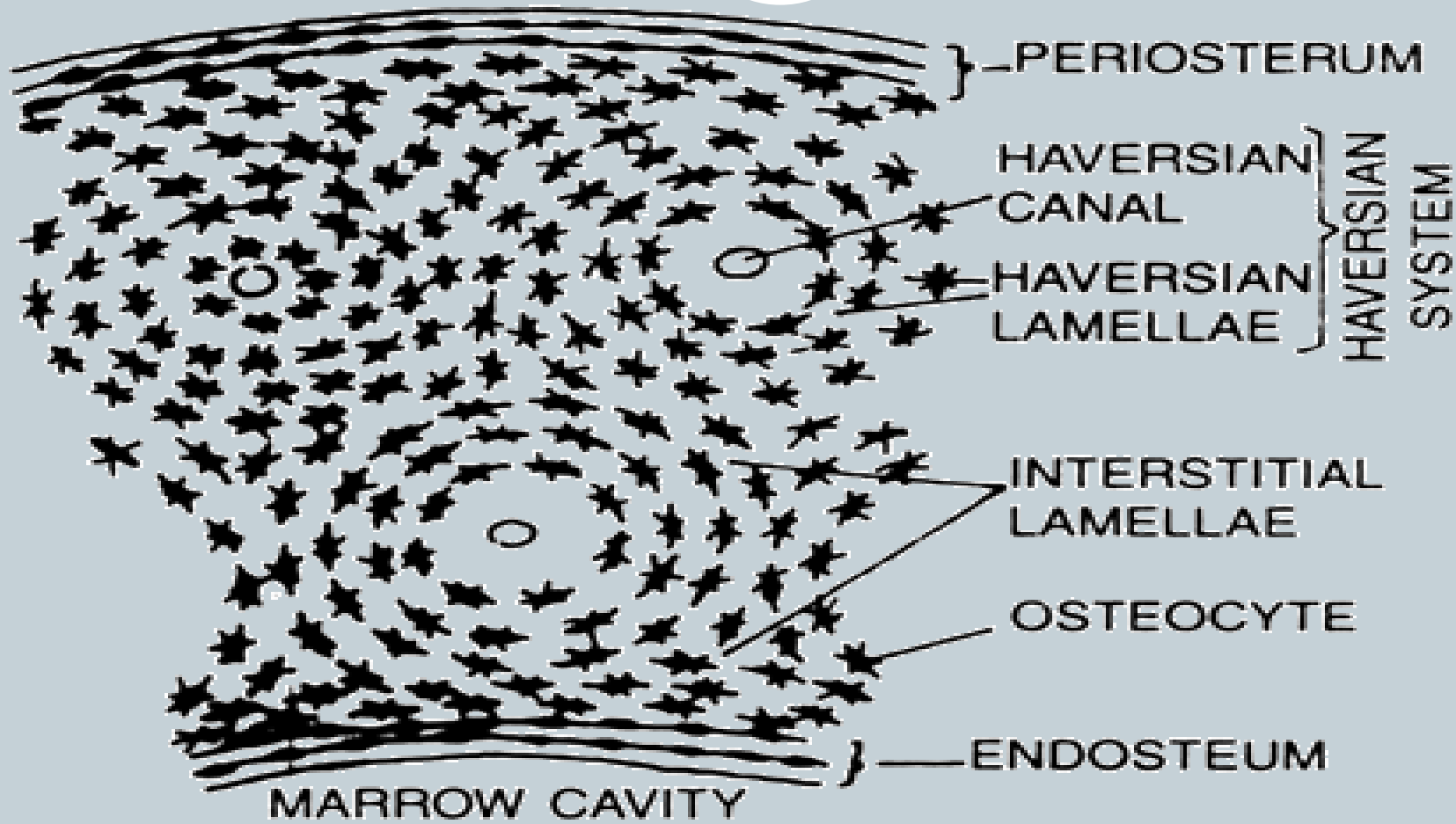
## Types of Bone Cells... contd..

- **Osteoclast**

- It is a giant bone cell multinucleated and contains lysosomes
- This cell is associated with growth and remodeling of bones

In bone matrix, these cells called osteocytes, osteoblasts and osteoclasts are present around haversian canal

# TS of Bone of mammal



*Thank You*

