

Skeletal Histology

EQ: Compare and contrast the different type of connective tissue found in the skeletal system.

Connective Tissue

- Found everywhere in the body
- Functions
 - Binds body tissues together
 - Supports the body
 - Provides protection

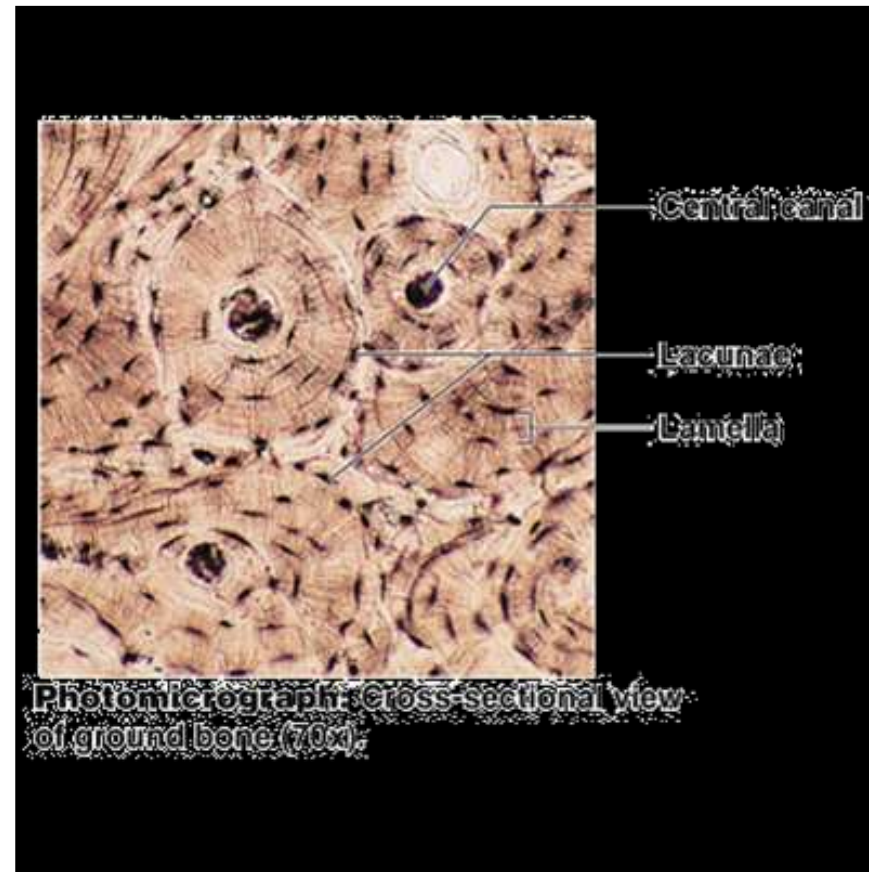
Connective Tissue Types

○ Bone (osseous tissue)

○ Composed of:

- Osteocytes in lacunae (cavities)
- Hard matrix of calcium salts
- Large numbers of collagen fibers

○ Used to protect and support the body



Connective Tissue Types

○ Hyaline cartilage

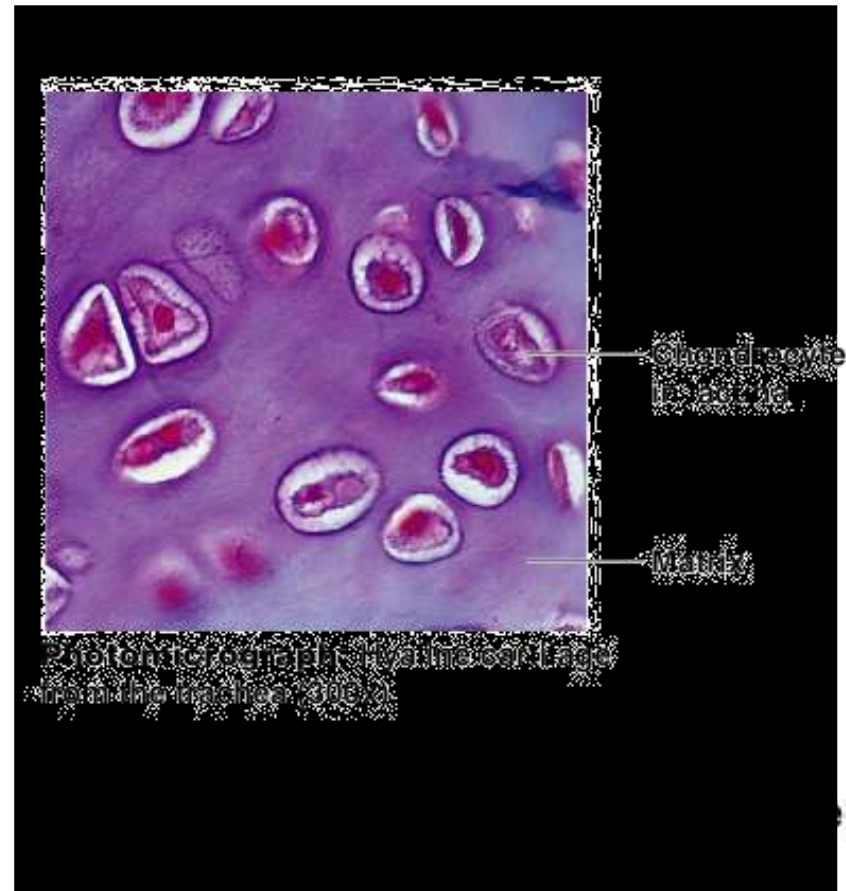
- Most common cartilage

- Composed of:

- Abundant collagen fibers
 - Rubbery matrix

- Entire fetal skeleton is hyaline cartilage

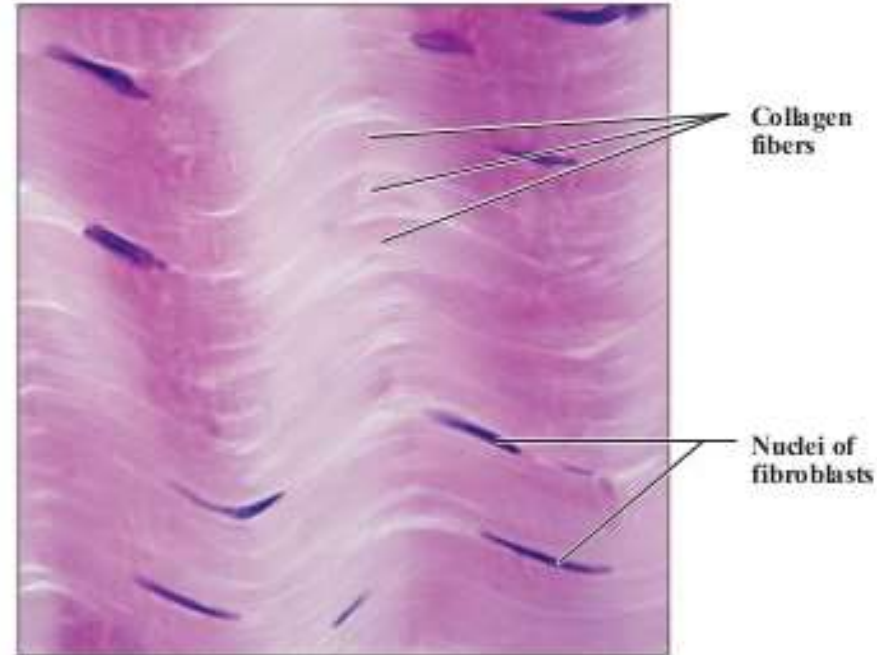
- Covers bones at the joints



Connective Tissue Types

○ Dense Regular Connective Tissue

- Mostly collagen fibers with some elastic fibers
 - Able to withstand intense tensile stress when pulled in one direction
- Tendons – Attach muscles to bones or to other muscles
- Ligaments – attach bones to other bones

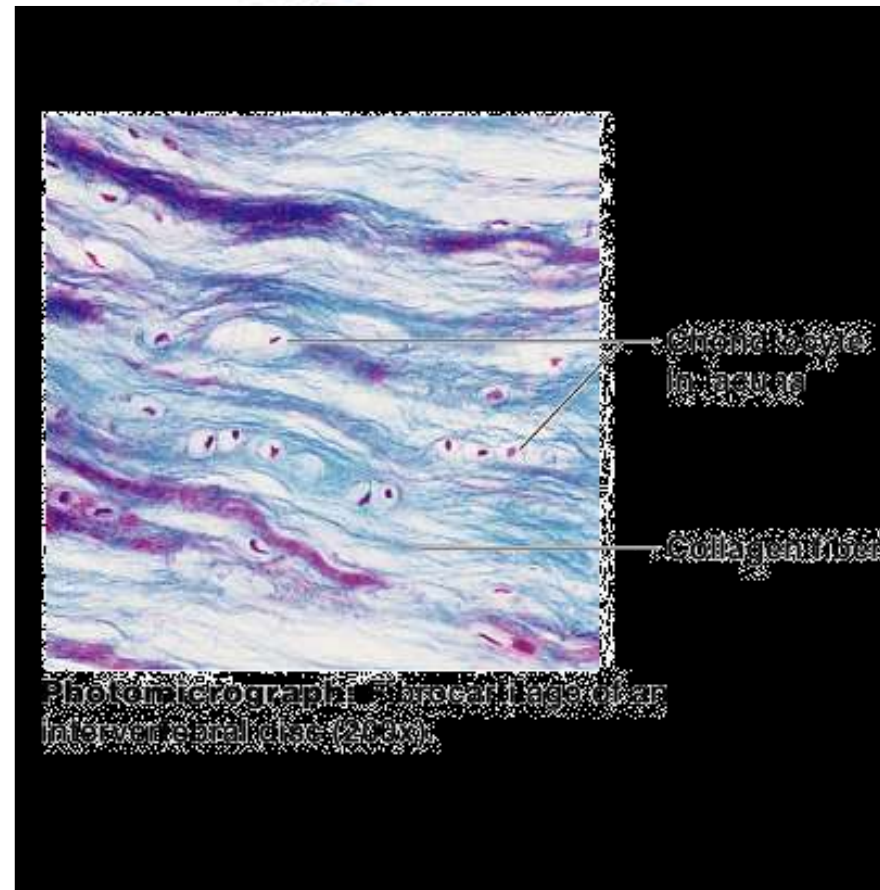


Photomicrograph: Dense regular connective tissue from a tendon (500x).

Connective Tissue Types

○ Fibrocartilage

- Highly compressible
- Example: forms cushion-like discs between vertebrae



Regeneration of Tissues

- Tissues that regenerate easily
 - Epithelial tissue
 - Fibrous connective tissue and bone
- Tissues that regenerate poorly
 - Skeletal muscle
- Tissues that are replaced largely with scar tissue
 - Cardiac muscle
 - Nervous tissue within the brain and spinal cord