

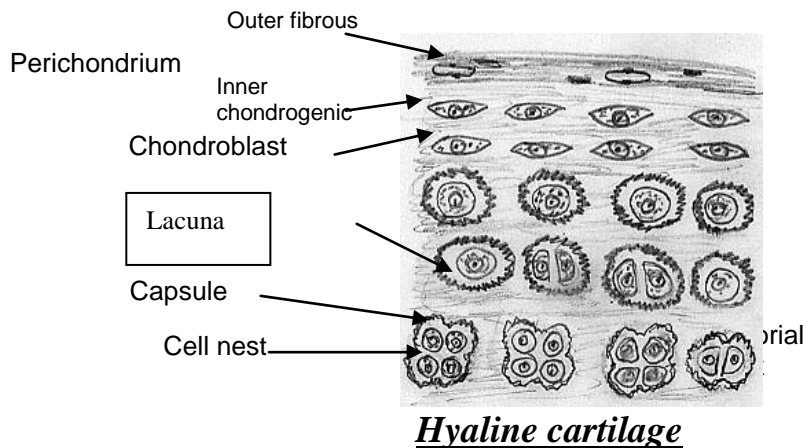
# CARTILAGE

## Definition:

Cartilage is a connective tissue in which the amorphous intercellular substance is hardened to provide rigidity, support and attachment for tissue. So it is characterized by glassy, rigid, rubbery, non vascular matrix with some degree of flexibility.

## General structure of cartilage:

- Consists of intercellular substance and cells.
- Cartilage cells are; Chondroblasts and chondrocytes.
- Chondrocytes occur with spaces called lacunae in the matrix.
- The intercellular substance is formed of: Fibers and Ground substances
- Not penetrated by blood vessels; (avascular).
- C.T. covering (Perichondrium).



## Types of cartilage:

1. Hyaline cartilage.
2. Yellow elastic cartilage.
3. White fibrocartilage.

## Hyaline cartilage

- Sites:
  - ✓ In the embryo, it forms the skeleton prior to its replacement by bone
  - ✓ In the adult, it is located in;
  - ✓ Articular surfaces of joints.
  - ✓ Walls of the large respiratory passages
  - ✓ Costal cartilage (ventral ends of ribs, site of articulation with the sternum)
  - ✓ Epiphyseal plate, it is responsible for the longitudinal growth of bone.

## 1- Cartilage cells:

Chondroblasts.

Chondrocytes.

**2-Perichondrium:**

- Dense irregularly arranged connective tissue .
- Ensheaths the cartilage
- Contains the blood vessels that nourish chondrocytes in addition to nerves and lymphatic vessels.
- Consists of 2 layers;outer fibrous and inner cellular (chondrogenic)

## **Elastic cartilage**

**Sites;** in tissues that need stiffness and elasticity such as;

1. Ear pinna
2. Epiglottis
3. External auditory meatus
4. Eustachian tube

## **White Fibrocartilage**

**Sites;**

1. Symphysis pubis
2. Intervertebral discs