



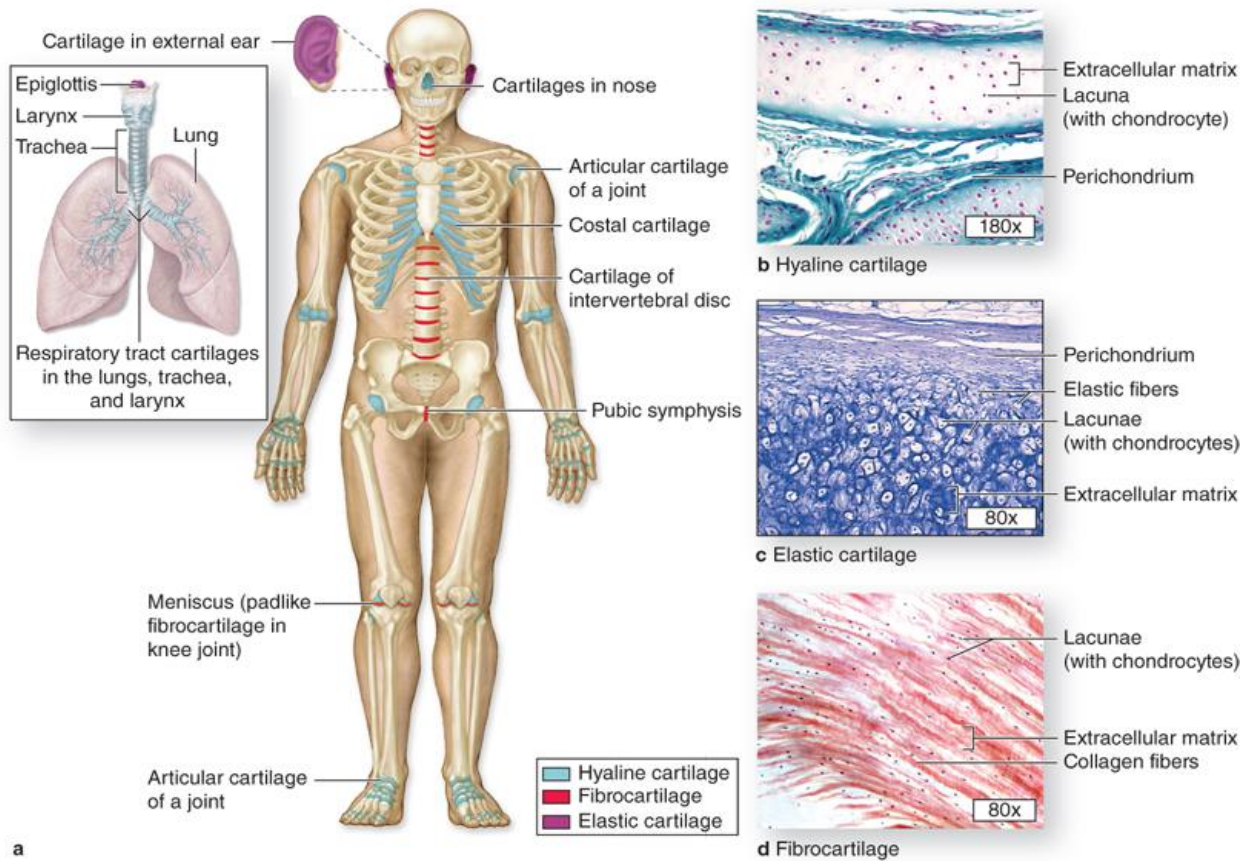
## Cartilage

Cartilage : is a special form of connective tissue, consist of mainly cells called chondrocytes (cartilage cell) and chondroblasts that synthesized connective tissue fibers and ground substance.

Chondrocyte: - spherical in shape which is located in the small vacuole called lacunae in the matrix, with centrally nucleus, some lacunae may contain more than one chondrocyte, these groups of chondrocytes called cell nests.

The surface of most of the cartilage in the body is surrounded by a membrane of dense irregular connective tissue called perichondrium, which provides nutrients to the cartilage since the cartilage tissue has no blood vessels of its own.

Perichondrium: - Irregular dense connective tissue, rich in blood and lymph vessels and nerve, surrounded the almost hyaline and elastic cartilage.

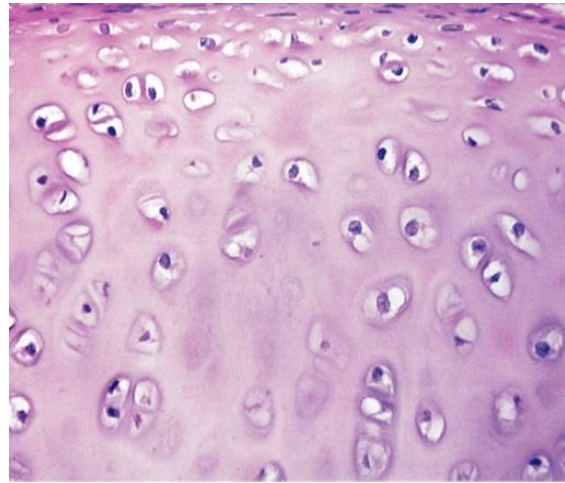
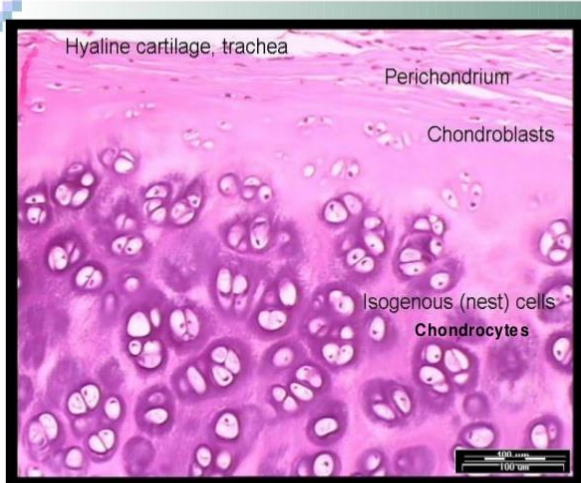


Source: Anthony L. Mescher: Junqueira's Basic Histology, 14th Edition. www.accessmedicine.com Copyright © McGraw-Hill Education. All rights reserved.

There are three types of cartilage:

## 1- Hyaline Cartilage

Hyaline cartilage is the most abundant of the three types of cartilage. Composed of cartilage cells, white fibers and ground substance with perichondrium. It is found in many locations in the body, including: Bronchi, larynx (voice-box), nose, trachea, Embryonic skeleton (i.e. in the fetus).

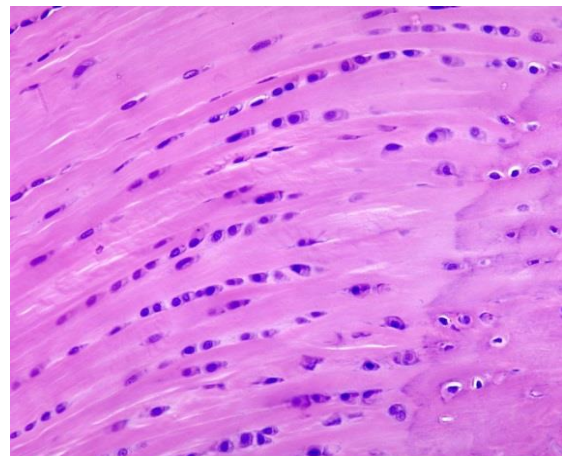
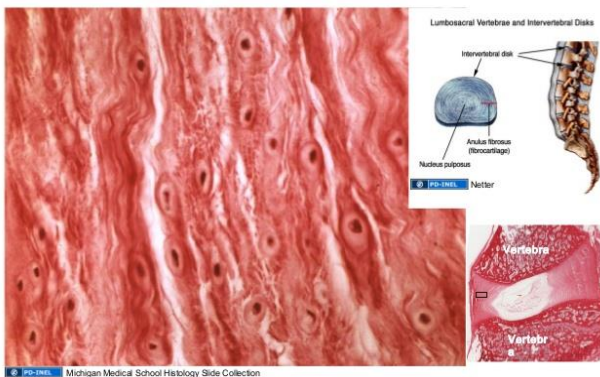


## 2- Fibrocartilage

Fibrocartilage is a tough form of cartilage that consists of chondrocytes scattered among clearly visible dense bundles of collagen fibers within the matrix. Fibrocartilage lacks a perichondrium. It is found in: **Intervertebral discs** (i.e. the discs between the vertebrae of the spine). **Pubic symphysis**.

### Fibrocartilage

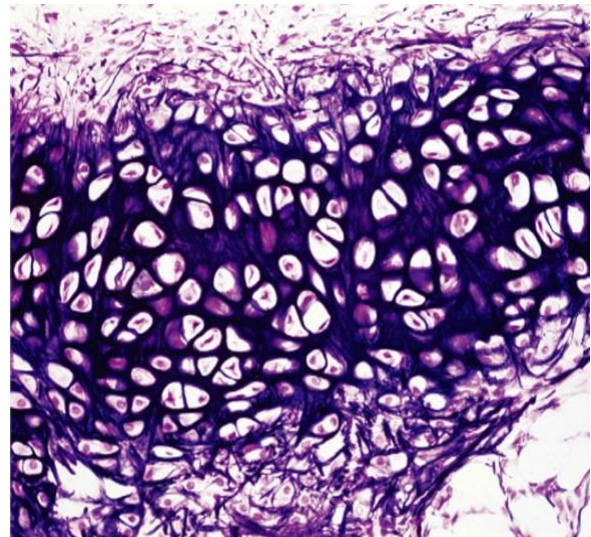
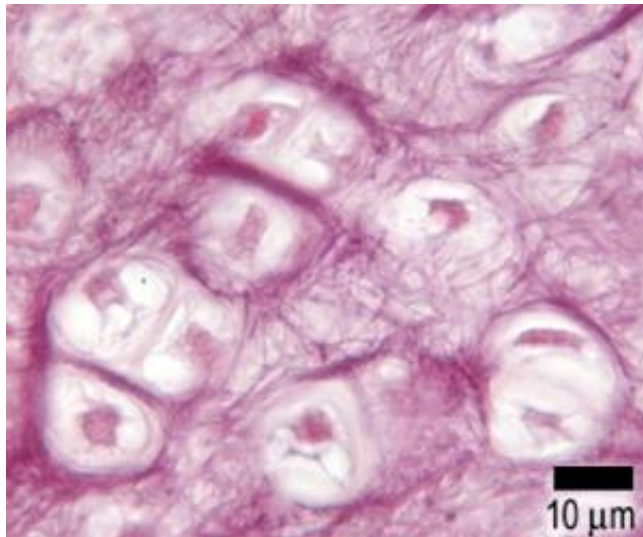
Type I and II collagen. No identifiable perichondrium





### 3- Elastic Cartilage

Elastic cartilage which is yellowish in color, the cartilage cells (chondrocytes) are located in a threadlike network of elastic fibers within the matrix of the cartilage. A perichondrium is present. It is found in: **Auditory Tubes, External Ear, Epiglottis .**



Elastic Cartilage