



Department of Anesthesia Techniques {Biology}

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Specialized Connective Tissue

divided into:

- * Structural connective tissue, including (cartilage and bone).
- * Connective and vascular tissue, including (blood and lymph).

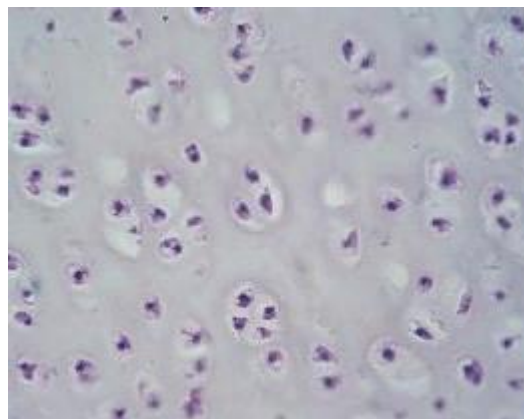
Structural connective tissue:-

1-Cartilage

The cartilage is the entire body structure during the embryonic stages, but it gradually recedes until it remains confined to certain places, for example, it covers the articulating surfaces between the bones. It consists of cells and fibers that differ in terms of quantity and quality.

1- Hyaline cartilage

It is the most common type of cartilage in the body, as it is found in the trachea, the ends of the ribs, and the cartilage of the nose. It appears in a transparent bluish-white color.





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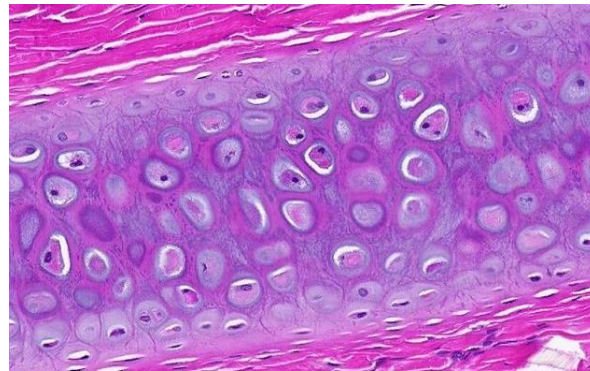
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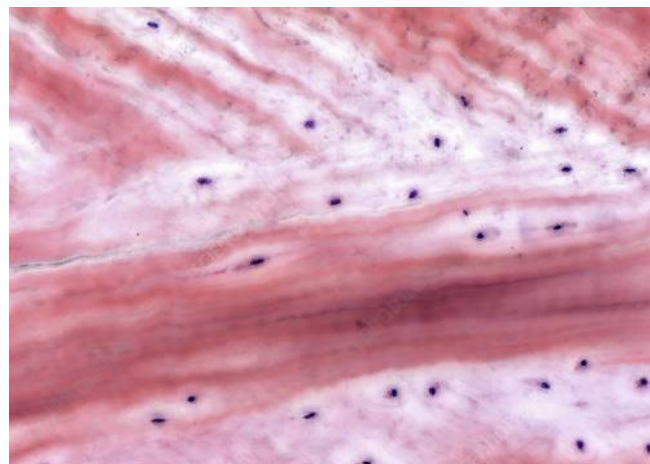
2-Elastic cartilage

It is found in the outer auricle and epiglottis, which is similar to the hyaline cartilage, but is more flexible and susceptible to torsion due to the presence of zero fibers in the interstitial material, and it contains perichondrium.



3-White fibro cartilage

In the discs between the vertebrae there is an intervertebral material that is characterized by containing bundles of white fibers parallel to each other and contains cartilaginous cells and does not contain periosteum.





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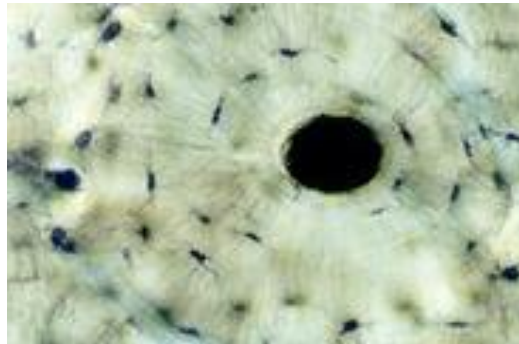


2-Bone

Specialized connective tissue consisting of osteocytes within small chambers (vacuoles) and an interstitial substance consisting of organic materials (egg fibres) and inorganic materials (minerals, carbonates, calcium phosphate, magnesium chloride and calcium chloride) which give rigidity to the bone and the bones are of two types:

Compact bone

Osteocytes here have long appendages that connect to neighboring cells (to transport food).



spongy bone

The bone tissue contains wide voids interrupted by interlocking bony septa of different sizes and shapes that branch off to form sacs that meet with each other to confine between them spaces filled with bone

