

Connective Tissues

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Monday, October 18, 2010

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Introduction

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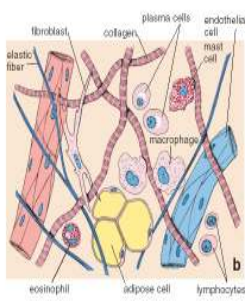
- Connecting tissues are the supporting and uniting tissues of the body.
- They are characterized by the paucity of cells and the dominance of variable amounts and numerous types of substances, such as fluid, mucus, and fibers.
- Most originate from the same type of mesodermal tissue, and mesenchyme. But a special condition is found both in the Nervous System, where the supporting tissue, the neuroglia, is in part derived from the ectoderm, and in the thymus, where the reticulum is derived from the **endoderm**.
- Classified according to specialization in structure and Function.

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Composition of Connective Tissue

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- It is composed of
 - Cells &
 - Extracellular matrix
- Extracellular matrix is composed of
 - Protein fibers
 - Ground substance &
 - Tissue fluid

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Functions of Connective Tissue

- Structural support
- Metabolic Functions
- Blood components and blood vessels
- Defensive function

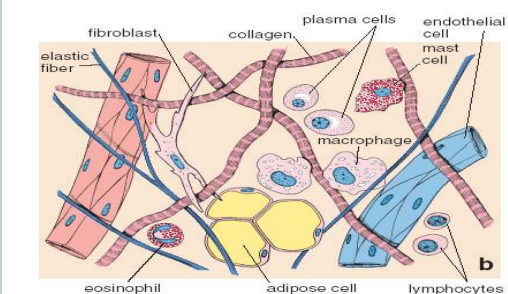
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Connective tissue fibers and cells

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Classification of Connective Tissues

Embryonic Connective Tissue

- Mesenchyma
- Mucous Connective Tissue

Connective Tissue Proper

- Loose Connective Tissue
- Dense Connective Tissue (tendons & ligaments).

Specialized Connective Tissue

- Adipose Tissue
- Blood
- Cartilage and Bone
- Hemopoietic and Lymphatic Tissue

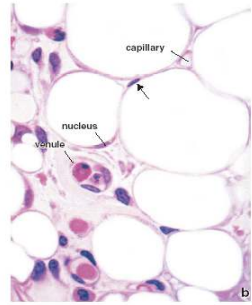
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Adipose Tissue

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- Examples: outer part of the capsule of kidney and in the adult mesentery.
- Its bulk consists of cells instead of intercellular substance.
- Signet-ring cells may be present, that is, cells with the nucleus pushed to one side of the cell membrane.
- Cells appear vacuolated because the intracellular fat substance is removed in preparation.
- Nuclei not observed in every cell, because fat cells are so large and histologic sections so thin that fat-cell nuclei may not be included in a section.
- Groups of cells separated by loose connective tissue.



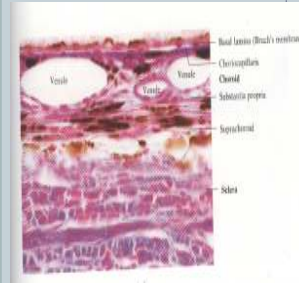
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Pigmented Tissue

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- Examples: choroid of the eye and lamina fusca of the sclera of the eye.
- Majority of the cells in the loose connective tissue are pigmented cells (melanophores); therefore it has been called pigmented tissue



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