



PRACTICAL HISTOLOGY 1 - FIRST COURSE

LAB -7- connective tissue

Sawa University

جامعة ساوة الاهلية

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كلية التقنيات الصحية والطبية

Department of Medical Laboratories

قسم تقنيات المختبرات الطبية

First stage

المرحلة الاولى

محاضرة رقم 7

الجانب العملي

Lecture No. 1

Practical

تدريسي المادة : م.م هبة صاحب صادق

Aims of lecture :-

- THE AIMS OF A LECTURE ON CONNECTIVE TISSUE TYPICALLY INCLUDE IDENTIFYING AND CLASSIFYING ITS DIFFERENT TYPES.
- DESCRIBING ITS COMMON STRUCTURAL COMPONENTS, AND EXPLAINING HOW ITS STRUCTURE RELATES TO ITS DIVERSE FUNCTIONS, SUCH AS SUPPORT, PROTECTION.
- TRANSPORT, AND STORAGE. LECTURES OFTEN AIM TO CONNECT THE MICROSCOPIC STRUCTURE OF THE TISSUE TO ITS MACROSCOPIC FUNCTION IN THE BODY

What is connective tissue?

Connective Tissues

The tissues that connect the different parts of the body together are called connective tissues, because their main function is to link and support all other tissues in the body.

General characteristic

- The intercellular material is maximum where as the cellular component is minimum
- Unlike the other tissues,(e g epithelium, muscle and nerve) which are formed mainly by cells,

the major constituent of connective tissue is ECM (Extra cellular matrix)

- Possess cells, fibers and ground substances

Basic Functions

- It binds various tissue together like skin with the muscles and muscles with bones
- It form inter cellular substance between cells of different types of tissue, so that help in friction less movement of the body organ
- It forms sheaths around the body organs and make a kind of packaging tissue
- The areolar tissue protects the body against wound and infection

- The adipose tissue stores fats and insulates the body against

- heat loss

- The supportive tissue forms shape and the frame work of the body

- The haemopoitic tissue produce blood

- The lymphatic tissue helps in body immunity

Proper connective tissue

1. Loose (connective tissue

□ Matrix contain various types of cells (macrophages, mast cells, lymphocytes, fat cells, plasma

cells) and fibres (white collagen fibres, yellow elastic fibres)

□ Found in continuous layers under skin surrounding blood vessels, and organs

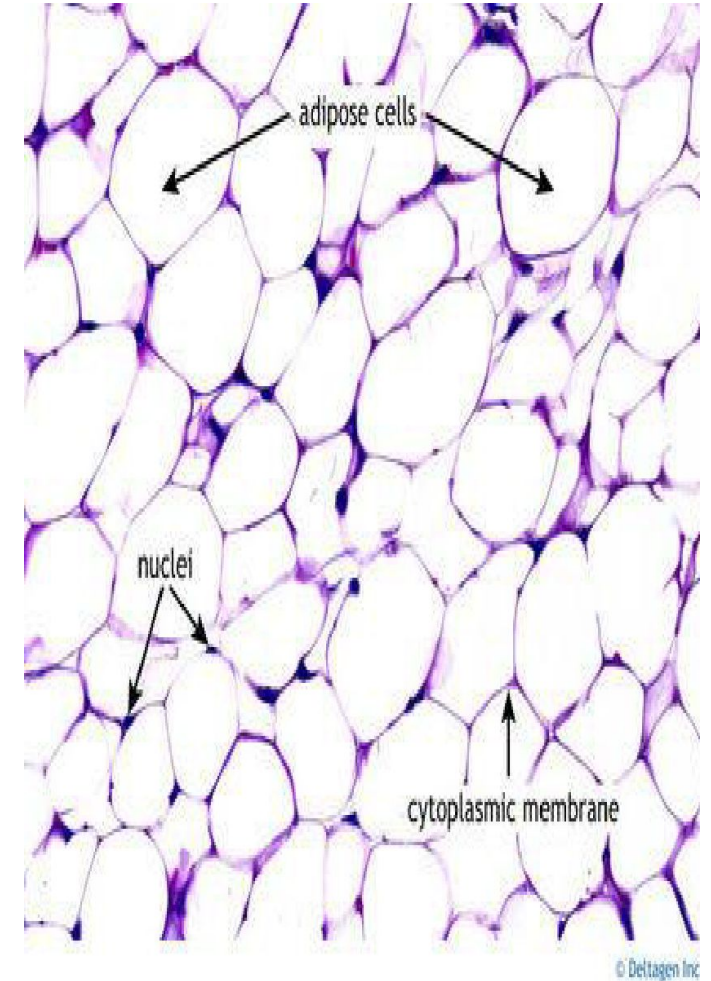


2-Adipose connective tissue

- It is contain large number of fat cells

(Adipocytes cells)

- Adipocyte is a large, spherical or oval shaped cell, nucleus to periphery of the cell
- Found beneath skin in dermis around kidney heart and eye balls



3-Reticular tissue

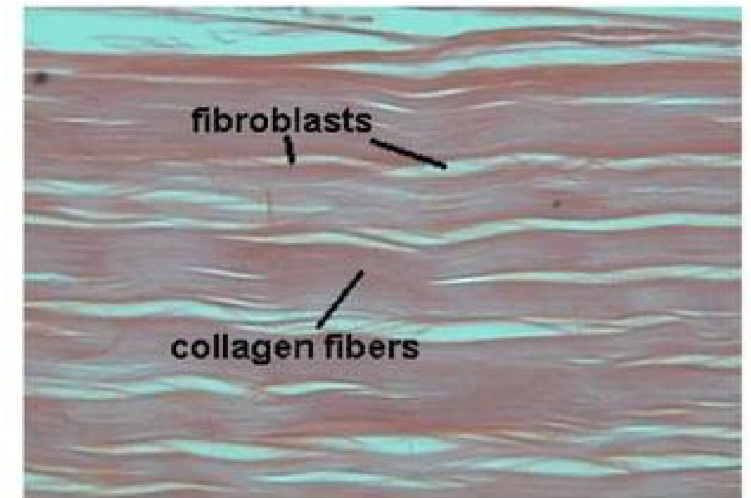
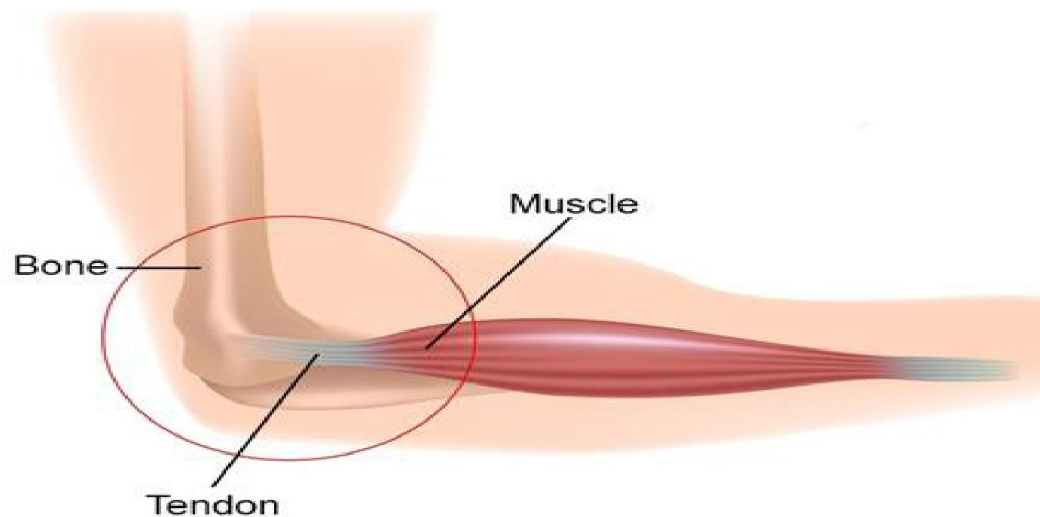
- Reticular cells has number of cytoplasmic processes which are interconnected to form reticular network
- Reticular cells secretes reticular fibres
- Found lymph glands spleen liver bone marrow thymus and tonsils



Dense Connective Tissue

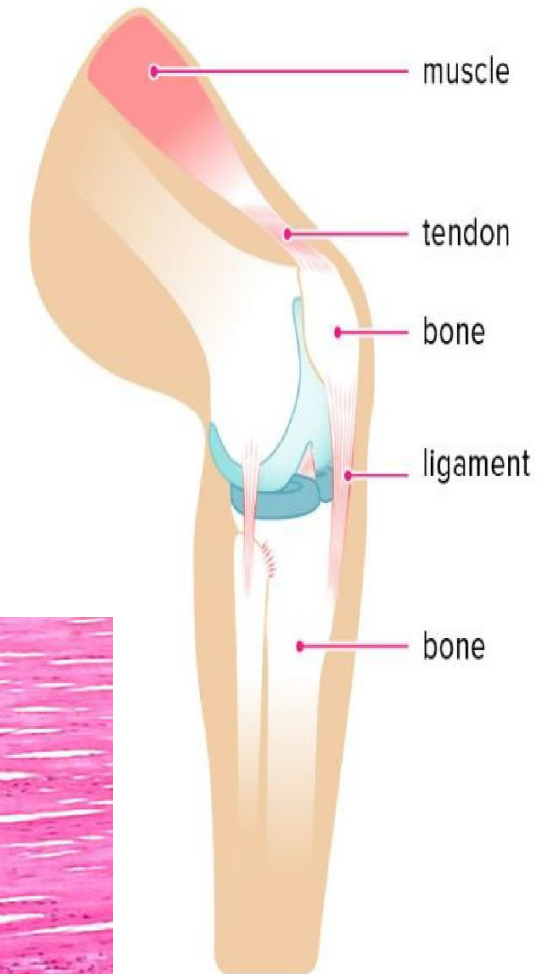
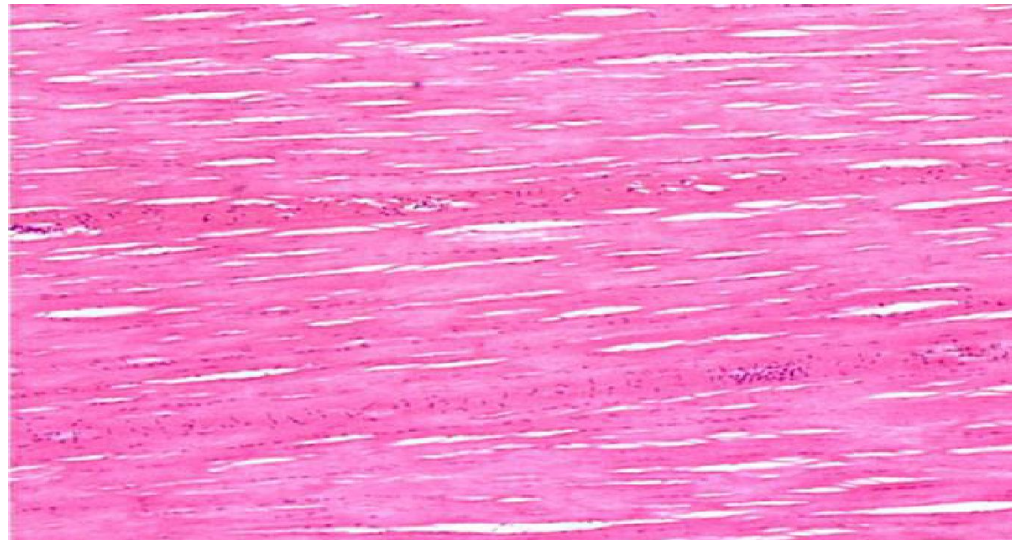
1. Dense regular Connective Tissue

- Fibers in a typical loose ground substance; reticular cells lie on the network, including white blood cells, mast cells, and macrophages.
- Location: Lymphoid organs(lymph nodes, bone marrow, and macrophages.(e.g. Tendons).



2. Dense irregular Connective Tissue

- Arranged collagen fibers some elastic fibers major cell type is the fibroblast
- Location Dermis of the skin submucosa of digestive tract and joints
- (e.g. Ligaments)

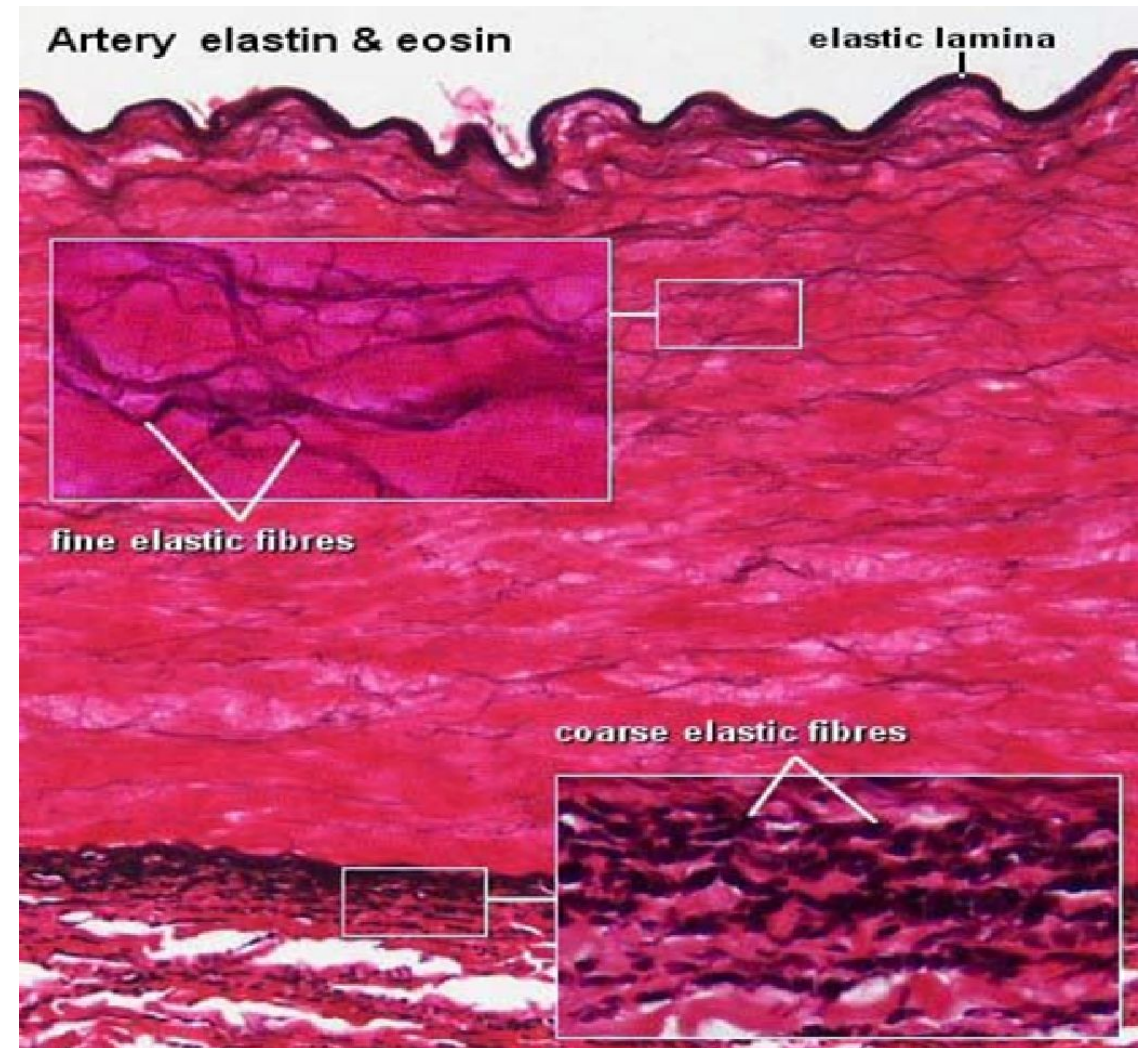


3-Elastic connective tissue :

Structure: It is predominantly elastic fibers with fibroblasts between fibers and yellowish in colour.

Location: It is found in

- Lung tissue , trachea and bronchial tubes .
- Walls of elastic arteries .



Discussion :-

- 1What are the types of connective tissue?
- 2-What are the functions of connective tissue?
- 3-What are connective tissue diseases?

References

- Pathologic basis of diseases, A57 edition, 2012.

Any questions?

*Thank
You*