Ch 4 Connective Tissue Notes

Connective tissue is the most \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and widely \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ type of tissue. General characteristics of connective tissue:

* Found \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in body
* Made of living \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ surrounded by a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Connective tissue types differ in types of \_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, & \_\_\_\_\_\_\_\_\_\_\_\_ of matrix
* Basic functions are: \_\_\_\_\_\_\_\_\_\_\_\_\_ parts together, \_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_ organs, insulation, storing fuel, & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ substances.

There are 4 classes of connective tissue:

1.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ 4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Common properties of all types of connective tissues-

* Common origin, all originate from the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Wide variety of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Large amounts of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_matrix
* Have 3 main elements:
1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ substance- transparent, like a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. 3 types of fibers for support:

|  |  |  |
| --- | --- | --- |
| Type of fiber | Color of fiber | Appearance |
| Collagen |  |  |
| Elastic |  |  |
| Reticular |  |  |

\*\*The ground substance and fibers make up the extracellular matrix of connective tissues

1. Contain \_\_\_\_\_\_\_\_\_\_\_ within the extracellular matrix.

 Named according to **function (their suffix)**

|  |  |
| --- | --- |
| Suffix | Function |
|  | Build |
|  | Maintain (mature cell) |
|  | Break |

 Also named according to classification type/location (their prefix)

|  |  |
| --- | --- |
| Prefix | Classification Type/Location |
|  | Connective |
|  | Cartilage |
|  | Bone |
|  | Blood |

Special cells that can also be found in connective tissue: fat cells (adipocytes), white blood cells (lymphocyte, neutrophil, eosinophil), mast cells (secrete histamine), macrophage (“eaters”), plasma cells (produce antibodies)

**Types of Connective Tissues** (Connective Tissue Proper, Cartilage, Bone, & Blood)

1. ***Connective Tissue Proper*-** All connective tissues except \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_, & \_\_\_\_\_\_\_

|  |
| --- |
| Loose Connective Tissue Proper |
| Name | Description/ Type of Fibers in Matrix | Location | Sketch |
| Loose Connective (Areolar) |  |  |  |
| Adipose (Fat) |  |  |  |
| Reticular Connective |  |  |  |
| Dense Connective Tissue Proper |
| Name | Description/ Type of Fibers in Matrix | Location | Sketch |
| Dense Regular (White Fibrous) |  |  |  |
| Dense Irregular |  |  |  |
| Elastic Connective |  |  |  |

\*\*Edema is also called “swelling”. It occurs with loose connective tissues soak up fluid from surrounding tissues.

1. ***Cartilage***-
* stands up to both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(pull) and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(push)
* is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ so nourished by diffusion
* no\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ fibers
* cells are found in groups of 2, 4, or 6 in spaces called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* distinguishable by type of \_\_\_\_\_\_\_\_\_\_\_ they contain.

|  |
| --- |
| Types of Cartilage |
| Type | Description/Type of fibers in matrix | Location | Sketch |
| Hyaline Cartilage |  |  |  |
| Elastic Cartilage |  |  |  |
| Fibrocartilage |  |  |  |

1. ***Bone (Osseous)-***
2. 2 types-
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- shaft of bone; Haversian systems parallel
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- ends of bone; No Haversian systems

\*Haversian system= \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ around a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 B. Bone cells-

|  |  |  |
| --- | --- | --- |
| Cell | Job | Sketch of A Bone Cell  |
| Osteon |  |  |
| Osteocyte |  |
| Osteoblast |  |
| Osteocyte |  |

Sketch of blood:

1. ***Blood (Vascular)***
* Has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ matrix contained within vessels
* Most common cell type is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ but also contains \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* The fibers found in blood are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Job of blood is to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_