Chapter 5 Tissues

Tissues: Cells are arranged in tissues that provide specific functions for the body.

Types: there are four main types of tissues. List them.

Epithelial tissue:

Where found?

Epithelial tissue is widespread throughout the body, covers organs, and lines body surfaces.

Characteristics: are made up of tightly packed cells containing little intercellular material, generally lack blood vessels, and are replaced frequently. They tend to have prominent nuclei when viewed under the microscope.

Simple: how many layers?

Stratified: how many layers?

Functions: They function in protection, secretion, absorption, and excretion.

Types of Epithelium (epithelial tissues)

Squamous: What shape are the top cells generally?

Simple: What is this best suited for? List several places you are likely to find it.

Stratified: What is this best suited for?

What does keratinized mean? Where are you likely to find it?

Cuboidal: What shape is this cell?

Simple: This type functions in _____ and _____ in the kidneys and _____ in the glands.

Stratified: What is the advantage of several layers? Where is this type found?

Columnar: What shape is this cell?

What specialized cell is often found with it? What is the function of this cell?

Simple: Where is it found?

In intestinal cells, the surface area is increased with _____. What is the purpose of these?

Stratified: Where is this type found?

Pseudostratified ciliated columnar: These cells appear layered but really are not. Why do they look layered?

What does "ciliated" mean?

Where are these cells found?

Transitional epithelium: Why can't we classify this type as to shape?

Where is it found and why?

Glandular epithelium: This tissue is made up of cells designed to produce and secrete substances into ducts or into body fluids.

Glands that secrete products into ducts are called _____ glands; those that secrete into body fluids and blood are called _____.

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Glands are classified by the ways the glands secrete their products.

a. _____ glands release fluid products by exocytosis (pancreas) and are grouped as serous which produce a watery fluid or mucus, which produce a thicker, protective substance.

b. _____ glands lose portions of their cell bodies during secretion (mammary glands).

c. _____ glands release entire cells (oil glands in the skin).

Connective Tissue: bind, support, protect, serve as frameworks, fill spaces, store fat, produce blood cells, protect against infection, and repair tissue damage.

. Unlike epithelial tissues, connective tissues have abundant matrix, or intercellular material, throughout, and have good blood supplies (except cartilage).

Composition: Collagenous, reticular and elastic fibers. How do they differ?

Cell types: What are the four cell types and their functions?

Types of connective tissues: There are many diverse types of connective tissues.

Loose fibrous connective (areolar): What are the main functions of this type?

The arrangement of the fibers gives its name, how are they arranged?

What is the main cell type found in this tissue?

Adipose: is a specialized loose connective tissue designed to store _____.

Where is it located? (Don't say everywhere!)

Dense fibrous connective: is very strong because of the arrangement of the collagenous fibers. How are they arranged to make this a tough tissue?

This tissue is found all over the body. List two common places we can look for it.

Cartilage: Cartilage is a rigid connective tissue that provides a supportive framework for various structures. It lacks a vascular system, therefore the healing process is slower.

Cartilage cells are called _____.

Cartilaginous structures are enclosed within a connective tissue called _____.

Which is the most common type of cartilage?

Hyaline: Where is this found?

Elastic: is so named because it is _____. Where is it found?

Fibrocartilage: is the toughest of the three. Where is it found?

Bone: What is its matrix composed of?

What are bone cells called?

This is a "pretty tissue" because of the arrangement of the cells. How are they arranged?

Blood: is composed of _____ and a liquid _____.

What is its function?

Muscle tissue: What is the general function of all muscle tissue?

What are three different types of muscle tissue?

Skeletal muscle: Where is it found?

Its cells are long and so are called muscle _____. They may have several _____.
The cells appear striped and are said to be _____.
Is it usually voluntary or involuntary?

Smooth muscle: Where is it found?

What is the shape of its cells?

How many nuclei does it have?

Is it voluntary or involuntary?

Cardiac muscle: It is only found in the _____. Like skeletal muscle it is striped and so is said to be _____.

The cardiac cells are connected to each other by _____ _____.

Is it voluntary or involuntary?

Nervous Tissue: There are two types of nervous tissue. Where are they found?

Neuron: What is its function?

Neuroglia cells: what are their functions?

Epithelial Membranes:

These membranes are considered to organs because they are composed of more than one type of tissue.

They are composed of a layer of _____ tissue and a layer of _____ tissue.

List the four main types of epithelial membranes.