Unit 3 Study Guide: Tissues (Chapter 5)

* Define tissue
* What are the 4 major groups of tissues?
* **Epithelial tissue**
	+ Distinct surfaces: lateral, basal, apical
		- Always has a free surface
		- Basal surface connected to basement membrane
			* What does basement membrane consist of?
	+ Characteristics of epithelial tissue (see notes)
		- Ex. Avascularity- why would this be important?
		- Ex. Regeneration- why would this be important?
	+ Epithelial functions
	+ Structures
		- Basement membrane
		- Intercellular junctions
			* Tight, adhering, desmosomes, and gap junctions
				+ What is a function of each one?
	+ Classification of epithelial tissue
		- Two-part name:
			* First part is based on number of layers
				+ Simple
				+ Stratified
				+ Pseudostratified
			* Second part is based on shape
				+ Squamous
				+ Cuboidal
				+ Columnar
				+ Transitional
		- Simple squamous
			* Where found
			* Function?
			* Identify via illustration or real image
		- Simple cuboidal
			* Where found
			* Function?
			* Identify via illustration or real image
		- Simple columnar
			* Where found
			* Function?
			* Identify via illustration or real image
			* Ciliated vs. nonciliated (be able to identify)
			* Goblet cells (identify and explain function)
		- Pseudostratified columnar
			* Where found
			* Function?
			* Identify via illustration or real image
			* Ciliated vs. nonciliated (be able to identify)
		- Stratified squamous
			* Where found
			* Function?
			* Identify via illustration or real image
		- Stratified cuboidal
			* Where found
			* Function?
			* Identify via illustration or real image
		- Stratified columnar
			* Where found
			* Function?
			* Identify via illustration or real image
		- Transitional epithelium
			* Where found
			* Function?
			* Identify via illustration or real image
	+ Glandular epithelium
		- Function
		- Exocrine vs. endocrine
		- Simple vs. compound (identify and describe)
			* Tubular vs. alveolar (identify)
		- Merocrine, holocrine, apocrine
* **Connective Tissue**
	+ Functions
	+ Matrix
	+ Major cell types
		- Fixed cells
			* Ex. Fibroblast, mast cell
		- Wandering cells
			* Ex. Macrophage
	+ Connective tissue fibers
		- Collagenous fibers
			* Dense vs. loose in terms of amount of collagen
		- Elastic fibers
		- Reticular
	+ Categories of connective tissue
		- Connective tissue proper
			* Loose connective tissue, adipose, reticular, dense, and elastic
		- Specialized connective tissue
			* Blood, bone, and cartilage
	+ Loose connective tissue/areolar
		- Function
		- Identification
	+ Adipose
		- Function
	+ Identification
		- Adipocyte
	+ Dense connective tissue
		- Irregular vs. regular
			* Identification and function
	+ Elastic connective tissue
	+ Cartilage
		- Chondrocyte
		- Function
		- Identification
		- Hyaline, elastic, fibrocartilage
			* Identify
	+ Bone
		- Most rigid connective tissue
		- Functions
		- Osteocyte
		- Lamellae
		- Haversian canals
		- Osteon/Haversian system
		- Label and identify all structures
	+ Blood
		- Fluid matrix called plasma
		- White blood cells, red blood cells, platelets
* **Muscle Tissue**
	+ Muscle cells=muscle fibers
	+ Three types: cardiac, skeletal, smooth
	+ Skeletal muscle
		- Function
		- Identification
		- Striations
		- Voluntary or involuntary?
		- Multinucleated
	+ Smooth muscle
		- Lack striations
		- Function
		- Identification
		- Involuntary
		- Spindle-shaped
		- Centrally located nucleus
	+ Cardiac muscle
		- Striations
		- Only the heart
		- Cells joined end-to-end
		- Junction between cells= intercalated disc
		- Involuntary
		- Function
		- Identification
* **Nervous Tissue**
	+ Brain, spinal cord, peripheral nerves
	+ Function
	+ Neurons- what do these do?
	+ Neuroglial cells- what do these do?
* **Membranes**
	+ Definition of an organ
	+ Epithelial membranes
		- Serous
		- Mucus
		- Cutaneous