**Chapter 12: Lymphatic System**

Function

Lymph

Lymph Vessels

Know Figures 12.11 in e-text (page 413)

* Lymph Capillaries and Collecting Vessels
* Afferent and Efferent Vessels

Lymph Nodes

* Cortex and Medulla

Lymph Organs (Function and Location)

* Spleen
* Tonsils
* Peyer’s Patch
* Thymus

Immune System Defense

* Innate (Non-Specific)
	+ Function
	+ 1st Line of Defense

Be able to describe the difference between innate and adaptive immune response AND how they respond to foreign substances.

* + - Skin and Mucus Membranes
		- Stomach Mucosa
		- Saliva and Lacrimal Fluid
		- Mucus
	+ 2nd Line of Defense
		- Natural Killer Cells
			* Perforin
		- Inflammatory Response
			* 4 Common Indicators
			* Neutrophils
			* Diapedesis and chemotaxis
		- Phagocytes
			* Monocytes and Macrophages
		- Antimicrobial Proteins
			* Complement and Interferon
			* MAC – Complement Fixation
			* Opsonization
		- Fever
			* Pyrogens
* Adaptive (Specific)
	+ Third Line of Defense
		- Antigen Specific
		- Systemic
		- Memory
	+ Cells of Adaptive Defense
		- Immunocompetent
		- B Lymphocytes
		- T Lymphocyte
		- Macrophages
	+ Humoral (Antibody Mediated)
		- Antibodies (Immunoglobulins)
		- Plasma Cells and Memory B Cells
		- Active vs. Passive Immunity
			* Naturally vs. Artificially Acquired
		- Antibody Functions and Classes
	+ Cellular (Cell Mediated)
		- T Cell Clones
			* Cytotoxic T Cells
			* Helper T Cells
			* Regulatory T Cells
			* Memory T Cells

Types of Grafts

* Auto, Iso, Allo, Xeno

Disorders of Immune System

* Allergies
	+ Histamine and Allergens
	+ Anaphylactic Shock
* Immunodeficiencies
	+ HIV/AIDS
	+ Multiple Sclerosis
	+ Myasthenia Gravis
	+ Type I Diabetes Mellitus
	+ Systemic Lupus Erythematosus
* Self Tolerance Breakdown
	+ Rheumatic Fever