**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