Chapter 13 – Immune System

What is a pathogen?
How does the body deal with intruders?
3 lines of defense
   1. Chemical and physical surface barriers
   2. What happens if the chemical and physical barriers are penetrated?
      Defensive cells
         Phagocytes, Eosinophils, Natural Killer cells
      Defensive proteins
         Complement, interferon
      Inflammation
         Fever
   3. Adaptive or acquired immunity
      MHC markers and antigens
      B and T lymphocytes
      Antibody-mediated (humoral) immune response
      Cell-mediated immune response

Autoimmune Disorders
   What is an autoimmune disorder?
   Examples

Allergies
   Allergic response

Objectives:
1. What chemical and physical surface barriers are part of the first line of defense against invading pathogens?
2. Identify and describe the function of the various cell types and defensive proteins that are utilized during a non-specific immune response. (Second line of defense)
3. What is the purpose of inflammation? What are the hallmark features of inflammation? What causes each of these signs of inflammation?
4. What causes a fever? How is a mild/moderate fever beneficial?
5. Describe antibody- and cell-mediated immunity. Be sure to include the various cell types involved.
6. What is the difference between effector and memory cells?
7. What is an antibody? How do antibodies defend against pathogens?
8. What is an autoimmune disease? What are some examples?
9. What is an antigen?
10. What are MHC markers? Are these “self” or “not self” antigens?
11. Why is the immune response faster following the second exposure to an antigen?
12. What is the difference between active and passive immunity? Natural and artificial immunity? Give examples of each.
13. What is an allergy? Describe the allergic response. What is anaphylactic shock?
14. What is a pathogen?
15. What are the three lines of defense against invading microorganisms? Which of these lines of defense is/are part of innate immunity? Which is/are part of adaptive immunity?
16. What is the function of suppressor T cells?