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?
  - Rheumatic Fever
  - Systemic Lupus Erythematosus
  - Rheumatoid Arthritis

Allergies
- Allergic response

Objectives:
1. What chemical and physical surface barriers are part of the first line of defense against invading pathogens?
2. Describe the cell types and defensive proteins that are utilized during a non-specific immune response.
3. What is the purpose of inflammation? What are the hallmark features of inflammation?
4. What causes a fever? How is a mild/moderate fever beneficial?
5. Describe antibody- and cell-mediated immunity.
6. What cell types are involved in antibody- and cell-mediated immunity?
7. What is an antibody? What does it do?
8. What is an autoimmune disease?
9. What is an antigen?
10. What are MHC markers? How do they allow us to distinguish “self” from “non self?”
11. Why is the immune response faster following the second exposure to an antigen?
12. What is the difference between active and passive immunity? Give examples of each.
13. What is an allergy? Describe the allergic response.
14. What is a pathogen?