

- I. Definitions
 - A. Innate (Natural) Immunity
 - B. Adaptive Immunity
- II. Non-Specific Host Defenses
 - A. First line defenses
 1. Physical barriers
 - a. skin
 - b. mucous membranes
 - c. saliva
 2. Chemical Factors
 - a. sebum
 - b. salt
 - c. lysozyme
 - B. Normal Flora
- III. Formed Elements
 - A. Hematopoietic stem cell
 - B. Erythrocyte
 - C. Megakaryocyte
 1. Platelets
 - D. White Blood Cells = Leukocytes
 1. Granulocytes
 - a. Eosinophils
 - b. Basophils
 - c. Neutrophils
 2. Agranulocytes
 - a. Monocytes
 - 1) macrophages
 - 2) Dendritic cells
 - b. Lymphocytes
 - c. Natural killer (NK) cells
- IV. Cell Communication
 - A. Cytokines
 1. receptors
 - B. Examples
 1. Chemokines
 2. Colony-stimulating factors
 3. Interferons
 4. Interleukins
 5. Tumor necrosis factors
 - C. Adhesion molecules
- V. Phagocytosis
 - A. Phagocytes
 - B. Process
 1. adherence
 2. ingestion
 - a. pseudopods
 - b. phagosome
 3. phagolysosome

VI. Inflammation

A. Signs

B. Purpose

C. Process

1. Dilation

2. Leukocyte migration

a. Tumbling

b. diapedesis

3. pus

D. Hallmarks

1. acute inflammation

2. chronic inflammation

E. Outcomes

a. sepsis

VII. Fever

VIII. Sensor Systems

A. Toll-Like Receptors

B. Complement System

1. Classical pathway

2. Alternative pathway

a. C3b

b. membrane attack complex (MAC)