

Immune System

Nonspecific Immunity

Specific Immunity

1st Line of Defense

2nd Line of Defense

External Defense

Internal Defense

Passive (short-term; temporary)

Active (longterm)

- 1.) Physical Barriers
 - skin, cilia, nose hairs, mucus
- 2.) Chemical Barrier
 - lysozyme - tears + saliva
 - HCl
 - oil + sweat
 - ear wax
 - pH of vagina

- 1.) Phagocytic:
 - Macrophages + WBC's
 - neutrophils
 - monocytes
- 2.) Inflammatory Response
- 3.) Interferon
- 4.) Fever
- 5.) Complement System (complement proteins)
- 6.) Natural Killer Cells

- temporary protection
- * you do NOT come in contact with the bacteria/virus
- protection is immediate
- you are given someone else's antibodies
- * does NOT produce memory cells
- breast milk
- via placenta
- Immunoglobulins (IgG) Travel Vaccines, Hep B, cholera,

- exposed to the pathogen ^{for}
- * memory cells produced
- Cells Involved -
- T-Cells, Helper T-Cells
- Cytotoxic T-Cells
- B-cells, Memory Cells
- MMR, Varicella (chicken pox) Polio, Hep. A, DPT - DtaP -