Immune System Notes

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Name Tag “hi my name is Jen!”
* Antibody – Body Guard – these can tag pathogens for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A. Functions

1. Prevent infection
2. Recognize and destroy foreign matter.
   1. Germs
      1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
      4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

B. What can weaken the Immune System?

1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

C. 2 Types of Diseases

1. **Noninfectious Disease**

Noncommunicable

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* + Not transmitter person to person
  + Caused by genetics of lifestyle choices
    - EX:

**2. Infectious Disease**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Contagious

* Caused by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Transmitted person to person.
* EX: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

D. 2 Types of Immunity  
Immunity \_

**1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* + Does not require and immune response
    - Genetic immunity
    - breastfeeding

**2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

* + Occurs as a result of an immune system response to foreign antigens
  + Vaccines
  + Illness

E. Types of Defenses

* **1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ defense** 
  1. \_\_\_\_\_\_\_\_\_\_ (largest one)
     + Openings tears, saliva, mucus, oils. Secretions have Lysozyme the break down cell walls
* b. Inflammatory response and fever
  1. If pathogen gets past skin – they trigger \_\_\_\_\_\_\_\_\_\_\_ Cells to release \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
  2. Histamines – increase blood flow – make capillaries \_\_\_\_\_\_\_\_\_\_\_\_\_!
  3. White blood cells travel to pathogen to engulf and destroy.
  4. Temperature increase also follows
     + \_\_\_\_\_\_\_\_\_\_ fever – 101 and below – Good
       - Increases WBC and decreased pathogen
     + \_\_\_\_\_\_\_\_\_\_ fevers – 102 and above are dangerous
       - Beyond the hypothalamus

2. Specific defense systems

a. Recognizing “self” and “non-self”

b. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ – foreign tag that triggers response

c. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – B cells and T cells (Main workers in specific defense)

B cells – made in bone marrow

discover antigens in body fluids

T cell – made in marrow and mature in \_\_\_\_\_\_\_\_\_\_

have to be presented with a antigen by infected cells.

Both are always searching the body

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Response - B cells – Traveling in blood stream

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Response – T Cells – Virus attacks a cell.

Both can make \_\_\_\_\_\_\_\_\_\_\_\_\_ cells that “never forget”

F. Immune System Responses

* 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ “antigens”- allergens (pollen, dander, peanuts) trigger inflammatory response
  + Antihistamines help reduce \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – Abnormal amount of histamine released due to an antigen

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – air passages narrow due to resp. infection, exercise, stress and allergens.

3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ diseases

Type I diabetes, rheumatoid arthritis, lupus

4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ – retrovirus that weakens and destroys T cells

First suspected due to rare infections