**Immunity**
The Immune System is a defense system to help an organism survive against invaders.
Organisms with a developed immune system are considered well adapted and more likely to survive (remember adaptation and evolution????)

Antibodies vs Antigens

Foreign molecules are antigens.

Brought in by pathogens (invaders such as bacteria or viruses)

OR

Brought in by harmless things such as dust, pollen or peanut butter!

Our natural defense molecules are ­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Immunity Cells**

Non-specific Response: Immune system reacts to a general invader: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Macrophages (announce)- Engulf invaders and present antigens

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Helper Killer

Specific Response: Immune system reacts to a specific invader.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (chemical warfare)- produce antibodies

Memory Cells( \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_)-allow the immune system to fight subsequent infections faster.

Antibiotics are medications that help the immune system. They can ONLY be used on living invaders such as bacteria. Viruses are NOT alive so antibiotics will not treat them!

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- strengthen your immune system by making is work earlier.

**Ways to build immunity…**

Active Immunity-\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to build an immunity. YOU build antibodies

Examples Natural: Illness or exposure to a pathogen

Artificial: Vaccinations

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- your body does not work to build an immunity, the antibodies are given to you.

Examples Natural: From your Mother’s immune system via placenta or milk.
In autoimmune diseases, white blood cells attack the body’s healthy cells.

Allergies are due to an overactive immune system.

HIV destroys the T cells so the immune system cannot function.