

Immune System: attacks/destroys disease-causing invaders or "germs" called pathogens
 cause infectious diseases

1st Line of Defense:

Our skin

- acts as a physical barrier

Sweat and Oil on your skin

- provides a slightly acidic environment
- prevents some pathogens from growing on our bodies

Other defenses

- gastric juice in our stomach
- mucus in our nose and respiratory system.

2nd Line of Defense

Immune system recognizes unknown cells, antigens, and mounts an immune response to destroy them.

2 types:

• Innate Immune Response

- quick and non-specific
- inflammation, which is swelling, fever, redness in the area.
- increase in White blood cells (WBC's) called phagocytes ⇒ roam the body searching for foreign invaders and swallows them

• Acquired Immune Response

- highly specific attack on a particular antigen
- this response can take up to a week to develop.
- gives active immunity ⇒ body remembers which antibodies should be used

B-cells

- recognize antigens, produce antibodies ⇒ attach onto antigen and signal WBC's to attack them
- antibodies remain on memory B-cells to protect the body from future attacks

T-cells

- Helper T-cells ⇒ recognize antigen and activate B-cells
- killer T-cell ⇒ recognize and destroy antigen without B-cells

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