**CONCEPT:** FEVER

●**Fever:** an abnormally _____ body temperature (above 37.8°C) part of the 2nd line of defense in innate immunity.

□ Hypothalamus is known as the body's temperature-regulating center (normal body temperature = 37°C).

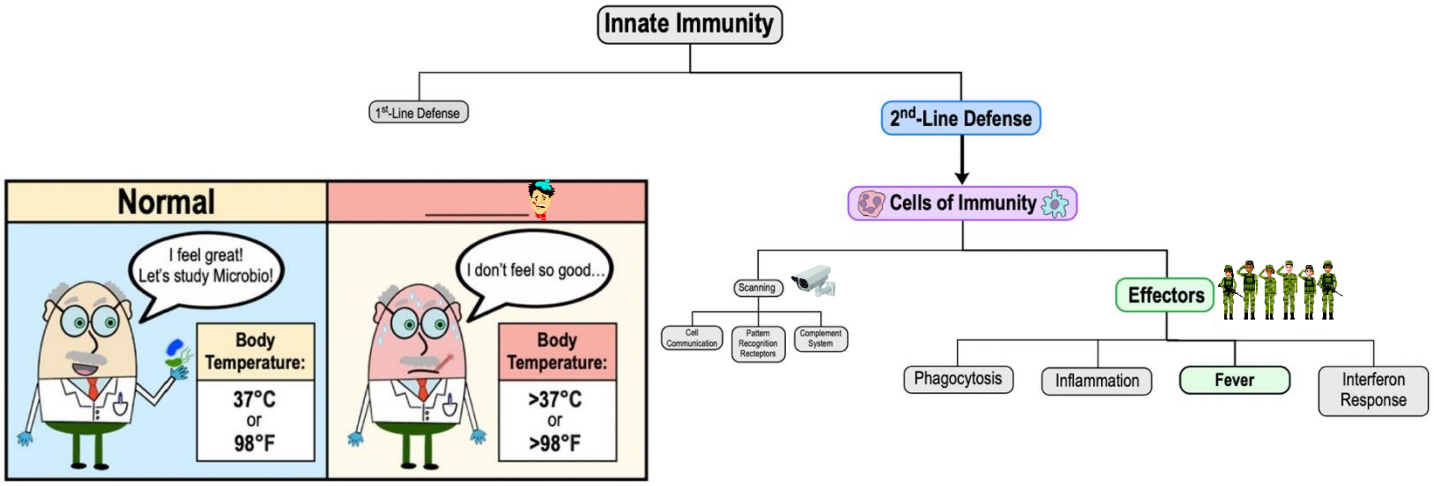
□ High body temperatures (above 37.8°C) _____ most bacteria from growing.

□ *Enhances* protective functions of the body (Ex. inflammatory response & release of inflammatory cytokines).

□ Due to _____ rates of enzymatic reactions in the body at higher temperatures.

□ _____**:** fever-inducing cytokines.

□ *Endogenous* pyrogens are made _____ the body & *exogenous* pyrogens are made *externally*.




**PRACTICE:** Lipopolysaccharide (LPS) is an endotoxin created by some gram-negative (-) bacteria that commonly causes fever in humans. Lipopolysaccharide is what type of molecule?

a) Endogenous pyrogen.
b) Exogenous pyrogen.
c) Pathogenic pyrogen.
d) External pyrogen.

**PRACTICE:** Fever can have positive effects on the process of fighting an infection. Which of these answers is not a positive effect fever can have during an infection?

a) High body temperatures inhibiting the growth of many pathogenic bacteria.
b) High body temperatures increase the enzymatic reactions associated with the immune system
c) High body temperatures enhance the inflammatory response and release of inflammatory signals.
d) High body temperatures constrict the blood vessels ensuring the infection does not spread throughout the body.