

U5:L1 THE IMMUNE SYSTEM

PROTECTION

What is “protection” in terms of human biology?

CONTROL

What is “control” in terms of human biology?

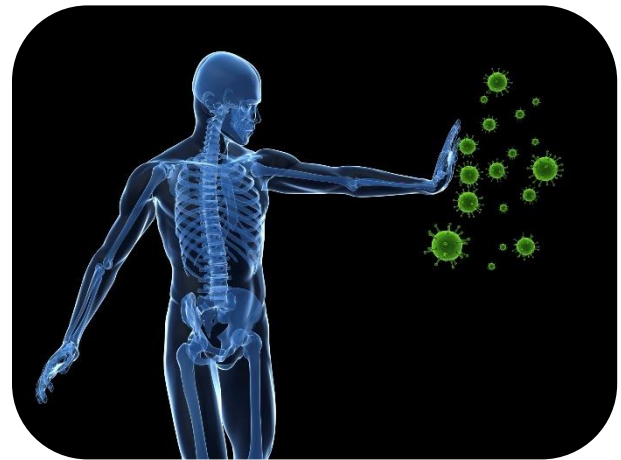
Our body’s **immune system** works to _____

_____.

_____ is the body’s capability to

_____.

What are some of the **BAD GUYS** that our immune system fights against?



CARCINOGENS	
PARASITES	
FUNGUS	
TOXINS	

GERMS SPREADING

- Viruses can be transferred from dry smooth surfaces up to _____ after being contaminated.
- Some viruses can travel on _____
- Bacteria doubles every _____
- 5 bacteria at 12 noon = 10 million bacteria by 7pm
- 3 days with no bacteria dying = enough to cover the Earth!

Human skin is a virtual zoo, according to U.S. researchers, who found _____ of bacteria on the forearms of test subjects

3 LINES OF DEFENCE – THE 1ST LINE

This line of defense is referred to as _____.

This means that it _____

_____.

The first line of defense includes:

- skin - _____
_____.
- _____ – line the respiratory, urinary, reproductive and gastrointestinal tracts. Trap invaders in sticky mucous and expel it from the body by the wave-like motion of the cilia as well as coughing and sneezing.
- _____.

INNATE/NATURAL IMMUNITY



CHEMICAL EXAMPLES:

- _____

• Skin has an acid pH (_____) to kill bacteria

• Stomach acid AND Body temperature

PHYSICAL EXAMPLES:

• Skin and mucous membranes act as mechanical barriers

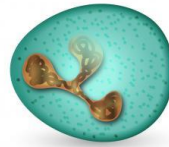
• _____ sweep mucous and trapped particles to the throat to be expelled

PHAGOCYTES

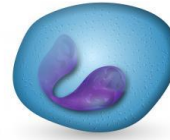
Phagocytes are cells that _____

_____ (phagocytosing) harmful foreign particles, bacteria, and dead or dying cells.

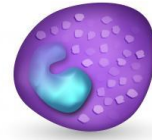
Their name comes from the Greek phagein, "_____" and "-cyte", the suffix in biology denoting "_____".



Neutrophil



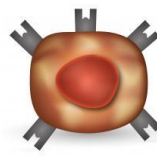
Eosinophil



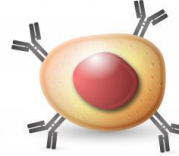
Basophil



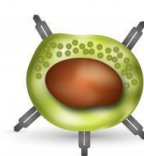
Monocyte



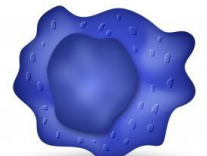
T Cell



B Cell



Natural killer



Macrophage

WISGLEEK

INFLAMMATION

Occurs when tissue is damaged by _____

- Causes _____
- Goal is to _____

EXAMPLES...

- 1.
- 2.
- 3.
- 4.

