

Infectious Diseases Unit Notes

Name: _____

DO NOT LOSE!

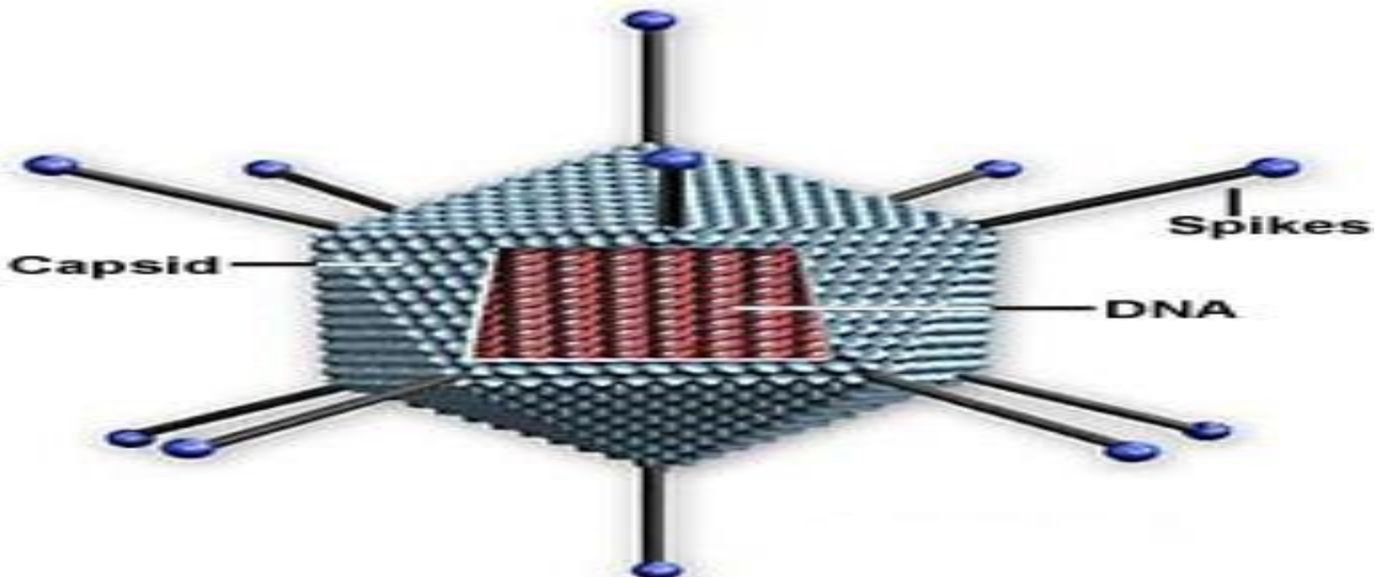
- Infectious Diseases will include

- V _____
- Bact _____
- Para _____

- A virus a nucleic acid (_____ or RNA) enclosed in a _____ shell or coat (Capsid)



Animal Virus Structure



Viruses are extremely _____, approximately 15 - 25 nanometers in diameter



- They can _____ only by invading and taking over other cells as they lack the cellular machinery for self _____.

Why Viruses are not living?


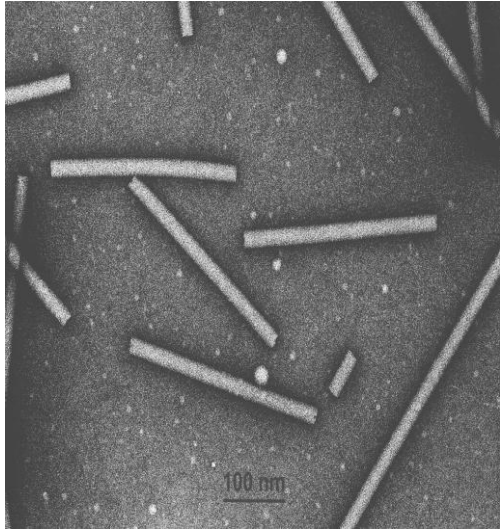
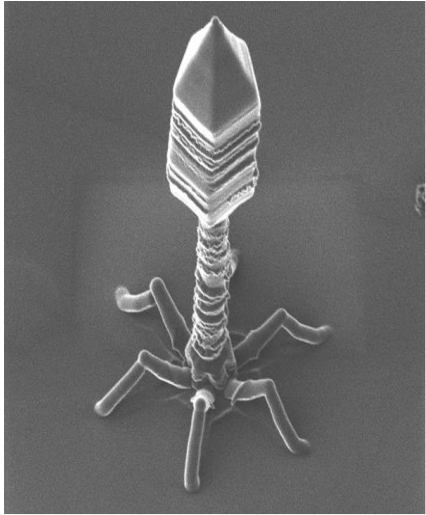
- Viruses are not made of _____.
- They have no cell parts.
- They do not _____ and develop
- They do not _____ to environment

Why Viruses are kind of living but not really.

- Viruses replicate, but only by _____ living cells, not by themselves
- They _____ / Mutate
- Limited _____

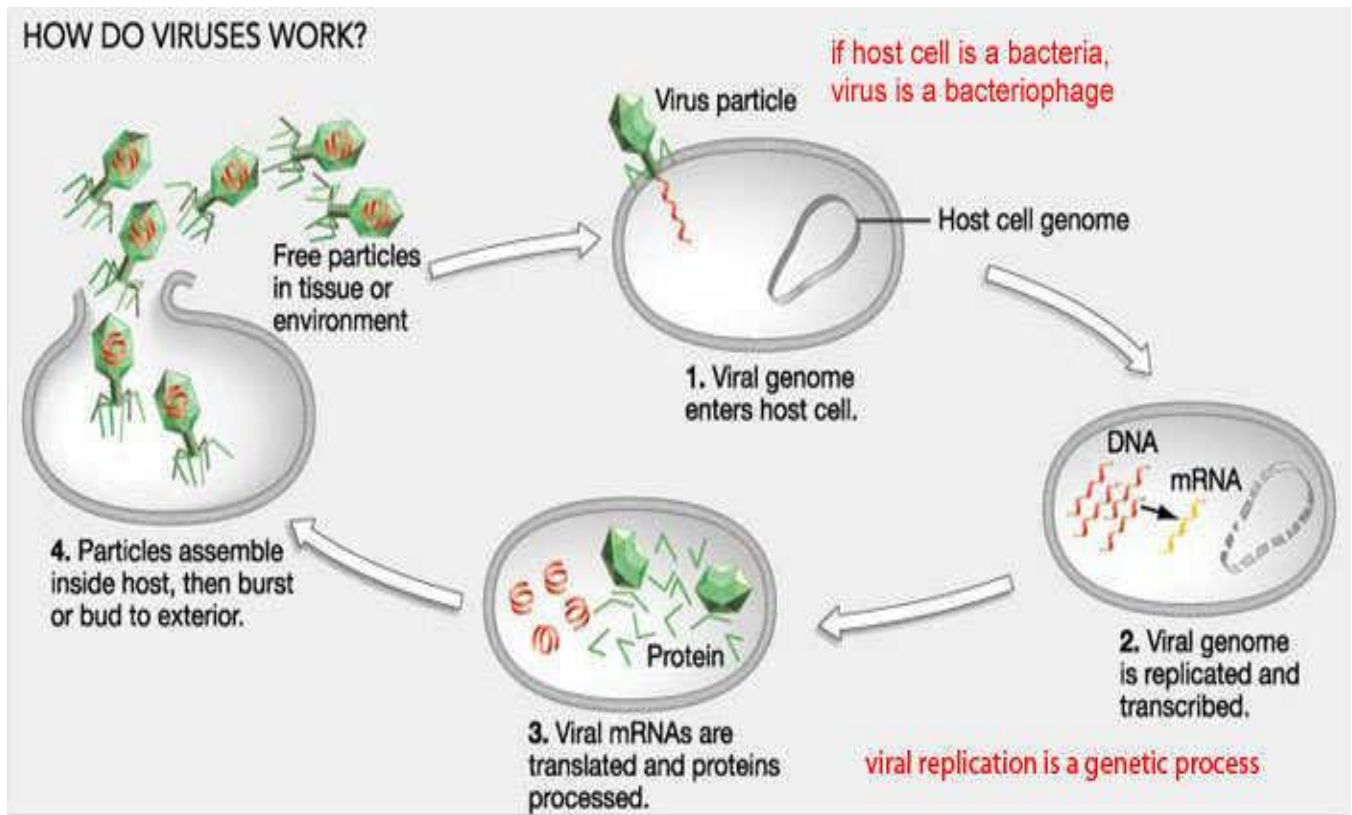
● Viruses are not considered _____ by most scientists.

Types of Virus

<ul style="list-style-type: none">● R_____ 	<ul style="list-style-type: none">● R_____ 	<ul style="list-style-type: none">● Multi-sided 
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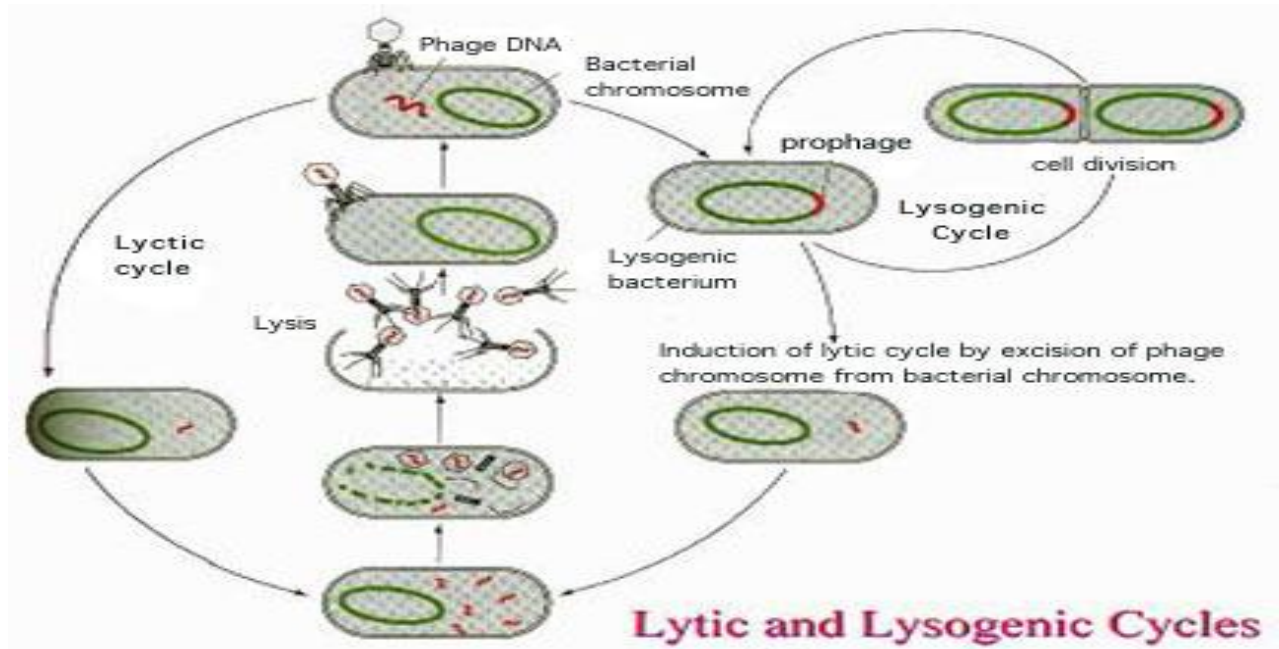
Lytic viruses – Causes _____ cell to _____ / die as virus replicates

Viral Replication

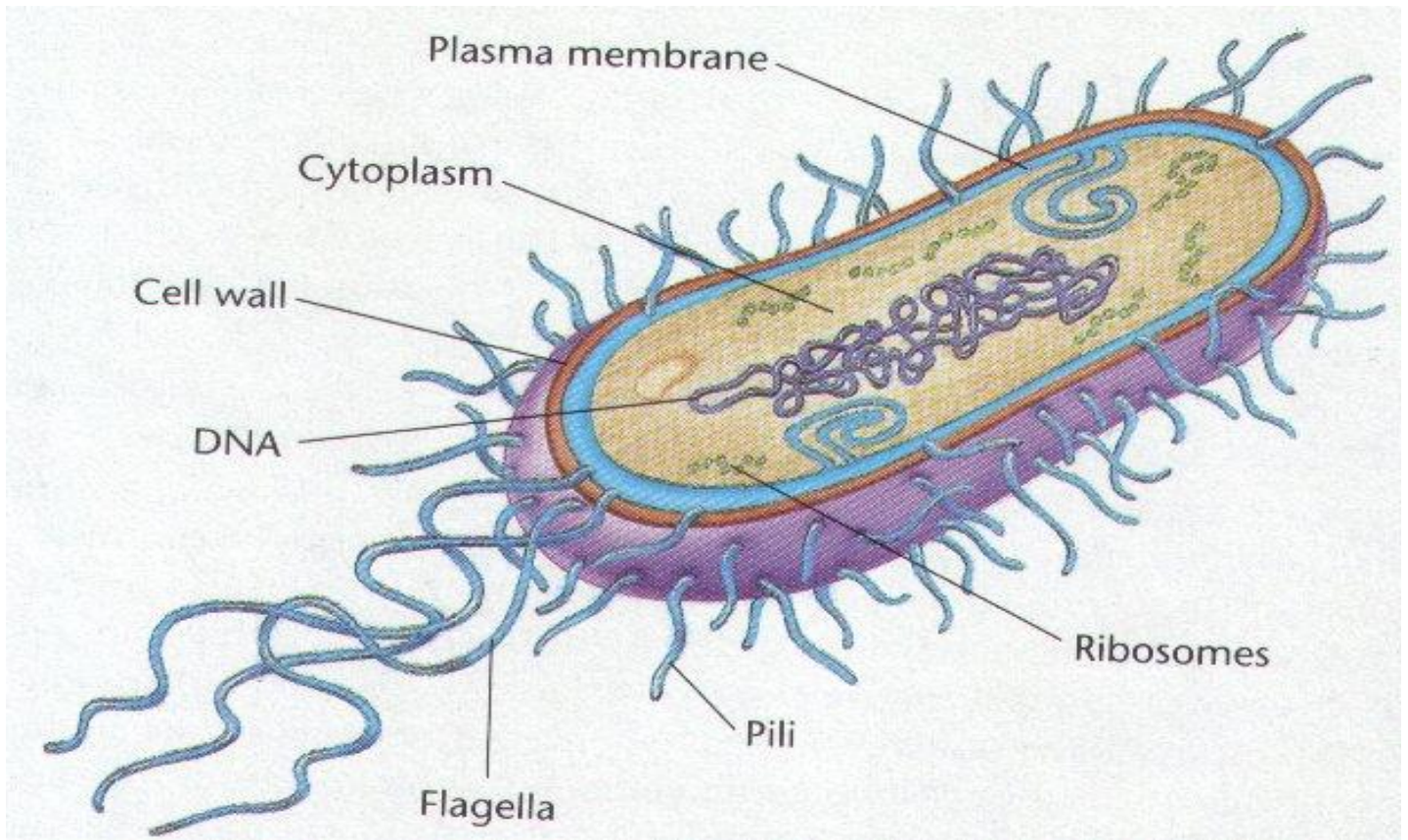


- Viral _____/RNA infected into cell
- DNA/RNA _____.
- New Virus are constructed.
- Viruses _____.
- Viruses break free to find new _____ .

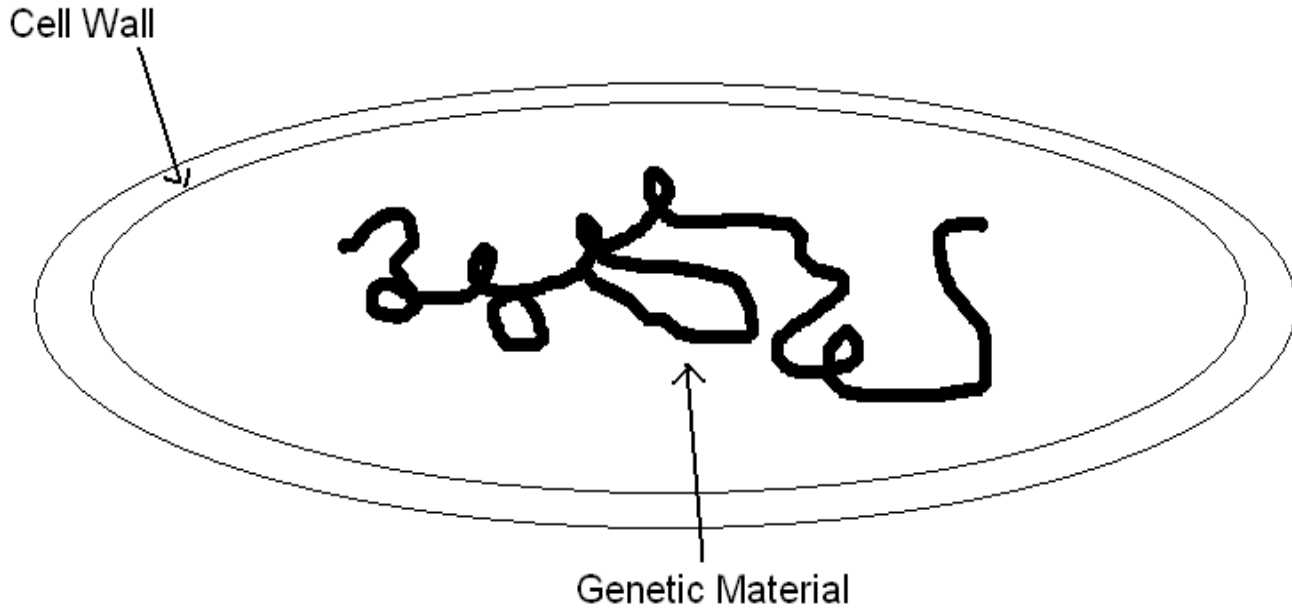
Lysogenic Virus – A virus that can _____ inside your cells _____ until it breaks out and then hides again. With you _____.



● Area of focus: Bacteria



- Prokaryotic (No _____) and no internal organelles.



- Has a cell _____.

- DNA floats in cell

- Two types:

1.) Archaea – _____

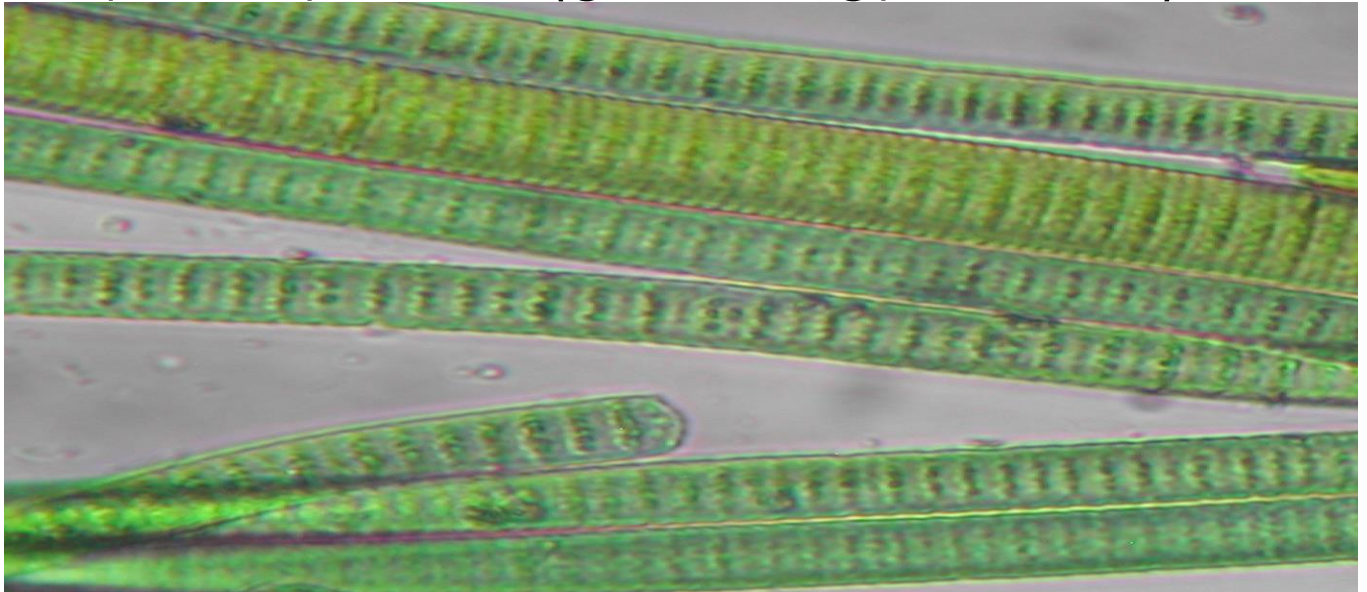
2.) Eubacteria – _____

- Eubacteria – True bacteria, gets _____ from food or sun.

- Sphere (_____) Shaped – Cocci .

- Rod shaped – Bacilli -

- Spiral shaped – Spirilla ~
- Mycoplasma bacteria – _____ known life form (jagged and random).
- Vibrio - Coma shaped ,
 - Diplo = Pair ..
 - Tetrad = Groups of four ::
 - Sarcinae = Groups of Eight. ::::
 - Staphylo = Cluster
 - Strepto = Chain -----
- Blue-Green Algae: Also called Cyanobacteria. It is photosynthetic (gets energy from sun).



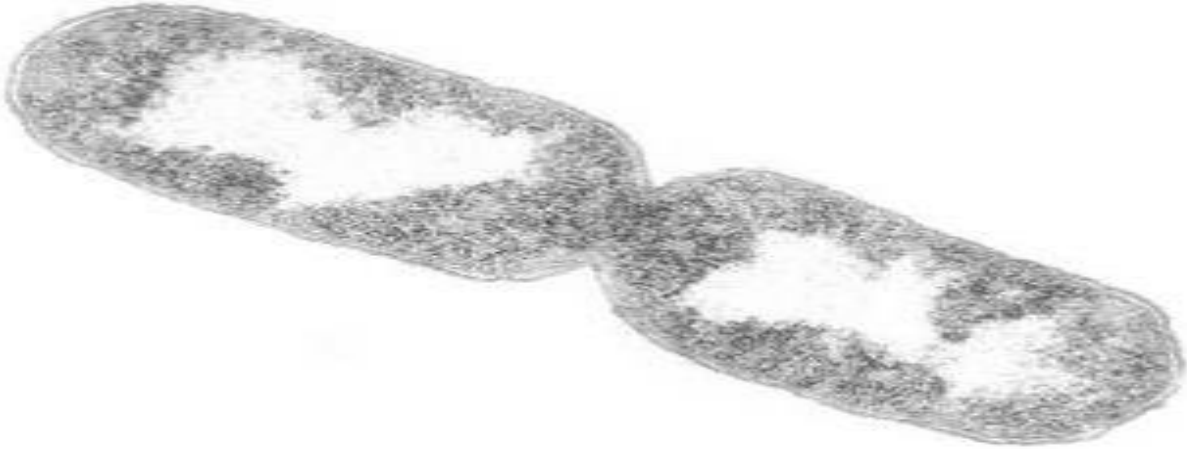
- Gram staining: Technique used to _____ bacteria.
 - Pink and Red: Gram _____ -
 - Dark Purple: Gram _____ +

- Bacterial food borne illness can be prevented by....
 - - _____ the initial number of bacteria present.
 - - _____ – Prevents the small number of bacteria from growing rapidly.
 - - Destroying the bacteria by proper _____.
 - - Avoiding _____.
Clean cutting board immediately after use.

- Penicillin: Antibiotic that _____ bacteria derived from penicillin mold (fungi).
- *Antiseptic* - agent that kills or inhibits the _____ of microorganisms on the external surfaces of the body.

- Plaque is the accumulation of _____ and micro-organisms on a tooth.
- Tartar is dental plaque that has _____. Tartar can form when plaque is not removed from the tooth surfaces.

- Binary Fission: The process by which a bacterium _____ by splitting in two.



- In asexual reproduction, one individual produces offspring that are genetically _____ to it.
- Sexual Reproduction: Genetic material from two different individuals combines into a genetically _____ offspring.

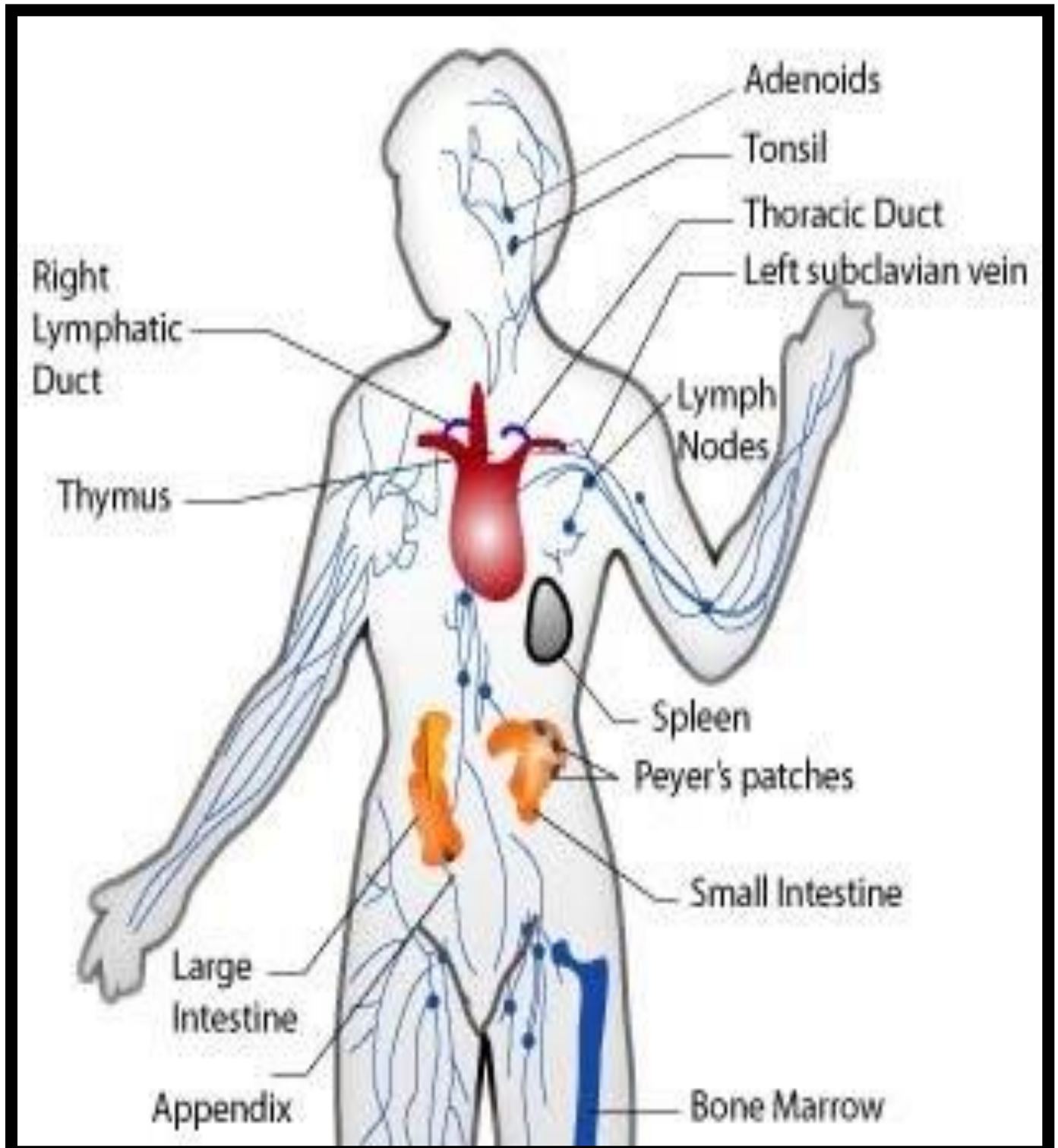
Positives (+)

- Food Source
- Recycling waste
- Food
- Industrial
- Decomposition

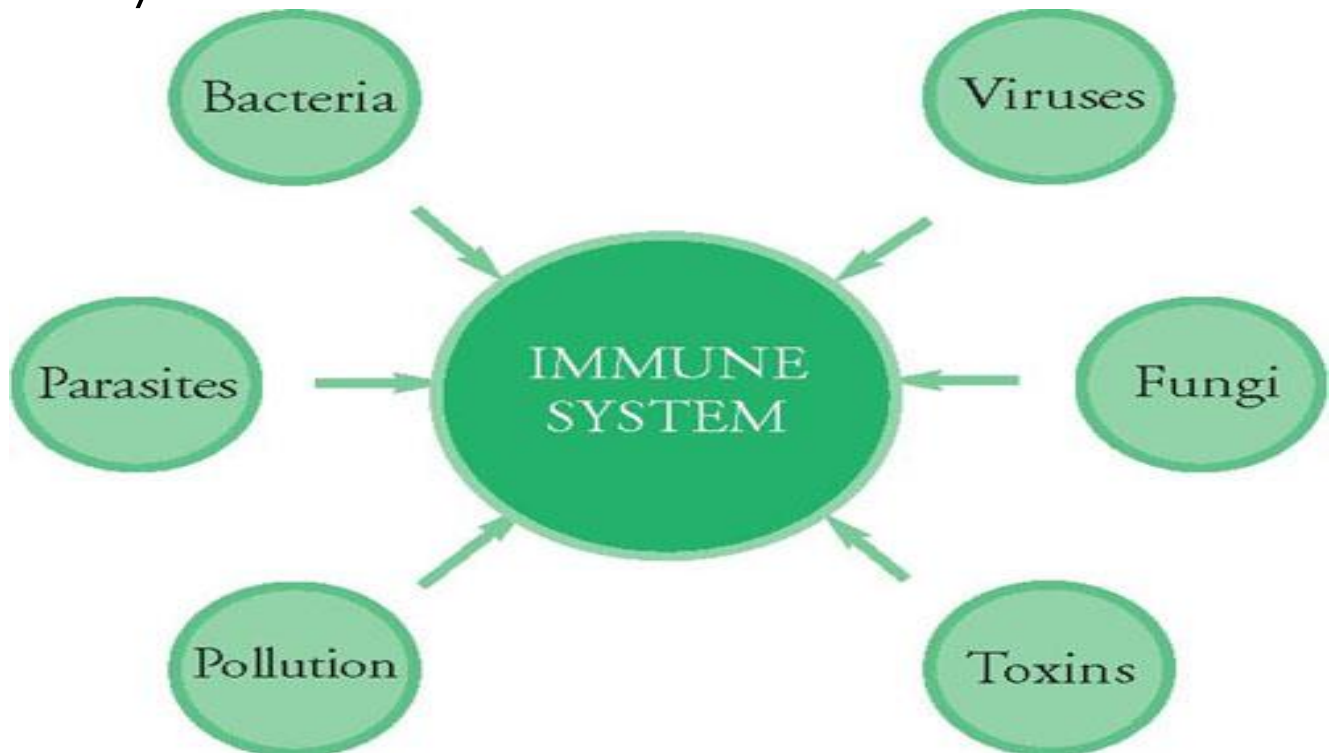
Negatives (-)

- Health Problems
- Destroys

- Immune system - A system that _____ the body from diseases.



- Skin prevents disease from _____
body



1st Line of Defense

- Skin prevents disease from entering body
- Interleukins – _____body it's under attack

2nd Line of Defense

- The inflammatory response: Damaged cells release _____.
– These chemicals cause blood vessels to leak fluid into the tissues, causing _____.

- This helps isolate the foreign substance from further contact with body tissues.

3rd Line of Defense

- Interleukins: These tell the body it's under _____.
 - These give you the aches and pains. "Time to rest!" (Warning System)
- Leukocytes: _____ blood cells (made in bone marrow)
 - - Phagocytes: Cells that _____ invaders.
 - - Lymphocytes: Cells that _____ the invaders and help the body destroy them if they come back.
 - B-Cells
 - T-Cells
- Dendritic Cells: These cells function to obtain _____ in tissues, they then migrate to lymphoid organs and activate T cells.
 - Antibodies cling to _____ making it difficult to attach to cell.
- Immunity: Your immune system is now _____ with the invaders and can summon antibodies quickly.

- Vaccine: A suspension of weakened or dead pathogenic _____ are injected in order to stimulate the production of antibodies and boost immunity.
- Virus prevention
 - Minimize _____ with reservoir animal (birds, mice, etc.)
 - Minimize person to _____ contact

Diseases can be spread by...

- _____
- Air
- Water
- _____
- Person to Person
- Animal to Person

Parasitism: One organism _____ while the other is harmed.

Endoparasite- Parasite that lives _____ of you (worms, etc)

Ectoparasite – Parasite that lives _____ of you (biting flies etc)

New Area of Focus: HIV/AIDS

- HIV=Human Immunodeficiency V_____
 - The virus attacks the _____ of our immune system.
 - This makes the _____ susceptible to disease.

Please record the ways in which you can be infected with HIV as a class.

- Unprotected _____ intercourse with an infected person.
 - That is all types of sex, where bodily fluid is released for either gender.
- - *Contact with an infected person's _____*
- - *From mother to child (_____)*
- - Use of infected blood-Most blood banks are tested but always a risk
- - Injecting _____ (needles are often shared between users)

AIDS -Acquired Immune Deficiency S_____

The disease AIDS occurs when the immune system cells left in the body _____ below a particular point.

STD's - The types of sexual activity that can _____ a disease are

- penetrative sex (vaginal, anal or oral)
- genital _____.

Some diseases are transmitted through -

- skin to skin _____
- Fluids such as) _____, blood or saliva
- some are passed from mother to _____

Review! Abstinence is best, (Means no contact!) if you can't abstain, than use a condom. Condom use doesn't prevent the skin to skin STD's, and only helps against the others.