Environmental Diseases

1. According to the **Miasma Theory of Disease**, what is the cause of illness?
2. Describe each of these common treatments from doctors following the Miasma theory.
   1. Bloodletting –
   2. Water Cure –
3. According to the **Germ Theory of Disease**, what is the cause of illness?
   1. What two important discoveries stemmed from the germ theory?
4. What is a **non-transmissible disease**?
   1. Give an example.
5. What is an **infectious disease**?
6. Define each of these types of infectious organisms and cells:
   1. **Multicellular –**
   2. **Unicellular –**
   3. **Prokaryote –**
   4. **Eukaryote –**

1. Summarize each of the different causes of infectious disease using this table:

|  |  |  |  |
| --- | --- | --- | --- |
| **Infectious Agent** | **Type of Cell** | **Single or Multicellular** | **Example Disease** |
| **Large Parasites** |  |  |  |
| **Fungi** |  |  |  |
| **Protozoa** |  |  |  |
| **Bacteria** |  |  |  |
| **Viruses** |  | N/A |  |
| **Prion** |  | N/A |  |

1. What was the cause of the 1993 intestinal outbreak in Milwaukee? How did it spread?
2. What is an **emergent disease**?
3. What is the hypothesized origin of each of these emergent diseases?
   1. HIV –
   2. SARS –
   3. H1N1 Influenza –
   4. Spanish Flu of 1918 –
4. What type of climates is the malaria protozoa most likely to be found? Why?
5. Describe the three strategies used to deal with malaria in the 1940s:



1. What is **resistance**?
2. What types of disease do **antibiotics** treat?
3. Why are bacteria able to evolve resistance more quickly than other organisms?
4. Describe the four misuses of antibiotics that encourage the development of resistance:







**Chemical Toxins**

1. What does it mean if a substance is **toxic**?
2. Describe what kind of effects each of these mutagens can have:
   1. Carcinogens –
   2. Teratogens –
3. What effect do **neurotoxins** have on the body? What are two examples of neurotoxins?
4. How does each of these types of **endocrine hormone disruptors** affect the body?
   1. **Hormone mimics –**
   2. **Hormone blockers –**
5. How is the plastic additive BPA classified?
6. What does **toxicity** measure?
7. Finish the statement, “*Any synthetic or natural chemical has the potential to cause harm \_\_\_\_\_\_*

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1. Which type of solubility is more likely to lead to the accumulation of a toxin in the body?
2. What is chemical **persistence**?
3. What level of a food chain is most likely to **bioaccumulate** a persistent toxin?
4. What does the **mortality** in a toxicity study tell you?
   1. What exactly does the LD50 level tell you about a substance?
5. Define **risk assessment** –
6. What is an example of an acceptable risk with a high probability of exposure? Why is this risk acceptable?
7. What is an example of an acceptable risk with a high severity? Why is this risk acceptable?
8. According to the graphic shown, what is the greatest cause of death in the United States?

The lowest?