9.2 Biological and Social Hazards

Key Concepts

- Infectious diseases are spread by direct human contact, through contaminated food and water, and by animals.
- Since new diseases are continually emerging, it is important to know how, where, and to what extent they are spreading.
- Some social hazards result from lifestyle choices a person makes, while other social hazards cannot be controlled.

**Vocabulary Preview**

*Define the vocabulary term in your own words. Then, write yourself a quick note on how you will remember it. One term has been done for you.*

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
<th>How I Remember</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious</td>
<td>A disease that has appeared in the human population for the first time or</td>
<td>Think of an animal emerging from a jungle.</td>
</tr>
<tr>
<td>disease</td>
<td>has existed for a while but is increasing or spreading rapidly</td>
<td></td>
</tr>
<tr>
<td>Emerging</td>
<td>A disease that has appeared in the human population for the first time or</td>
<td></td>
</tr>
<tr>
<td>disease</td>
<td>has existed for a while but is increasing or spreading rapidly</td>
<td></td>
</tr>
</tbody>
</table>

**Infectious Disease**

*For Questions 1–7, complete each statement by writing in the correct word or words.*

1. Infectious diseases are caused by pathogens, which are __________ hazards.
2. Pathogens spread through the human population by humans, water or food, or by __________
3. Globally, infectious diseases cause nearly __________ deaths annually.
4. Organisms such as ticks and mosquitoes serve as __________ for infectious diseases by carrying pathogens.
5. People who are infected with tuberculosis release bacteria-laden droplets into the __________ when they cough, sneeze, speak, and spit.
6. Developed nations greatly reduce the risk of infectious diseases through the use of __________ treatment facilities that treat sewage to reduce the incidences of diseases such as cholera.
7. The bacterium that causes cholera is a __________ pathogen.
8. **Organize Information** Fill in the table with details on how each infectious disease is spread.

<table>
<thead>
<tr>
<th>Infectious Disease</th>
<th>Mode of Transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis</td>
<td></td>
</tr>
<tr>
<td>Cholera</td>
<td></td>
</tr>
<tr>
<td>Malaria</td>
<td></td>
</tr>
</tbody>
</table>

**Emerging Diseases**

*For Questions 9–14, write True if the statement is true. If the statement is false, replace the underlined word to make the statement true. Write your changes on the line.*

9. An emerging disease is a disease that appears for the first time or has existed for a while and is increasing **slowly** around the world.

10. A **pandemic** is an outbreak of a disease that becomes widespread and affects a whole region or even the entire world.

11. H1N1 is an example of an emerging disease.

12. Some diseases, such as tuberculosis, are becoming resistant to **pathogens** due to natural selection.

13. In the United States, the **WHO** is the primary national center for responding to emerging diseases.

14. If global temperatures **fall**, tropical diseases will expand into new, formerly cool areas.
15. Why are emerging diseases a cause for concern?

16. Explain how climate change may encourage an increase in the spread of disease.

17. Why is it important that international and local government agencies work together to control the spread of emerging diseases?

18. Describe ways that the CDC has helped contain the spread of the H1N1 flu virus.

Social Hazards

19. Name three examples of social hazards.

20. Explain how cigarette smoke can be a hazard to someone even if he or she does not smoke.

21. Describe how the choices you make concerning what you eat can increase or reduce the social hazards you face.
22. Fill in the concept map with terms from the word bank.

Extension Extend the concept map by adding an example to each of the boxes of the “can be spread by” and “spread quickly due to” branches.

23. What are three ways pathogens can spread?

24. How do governments and organizations respond to emerging diseases?