

Name: \_\_\_\_\_

Date: \_\_\_\_\_

## Answer Key: Pathogen Patrol: A 10th Grade Disease Prevention Quiz

Sophomores identify transmission vectors and analyze communal health strategies in this versatile formative assessment or bell-ringer activity.

### 1. Which biological mechanism describes why a 'herd immunity' threshold is necessary in a high school setting?

**Answer:** B) It limits the available hosts, breaking the chain of transmission.

Herd immunity occurs when a large portion of a community becomes immune to a disease, making the spread from person to person unlikely.

### 2. True or False: Antibiotics are an effective primary prevention method for seasonal rhinovirus infections.

**Answer:** B) False

Rhinoviruses cause the common cold and are viral; antibiotics only treat bacterial infections.

### 3. The \_\_\_\_\_ route of transmission occurs when a person touches a contaminated surface, like a gym weight, and then touches their face.

**Answer:** A) indirect contact

Indirect contact transmission involves an intermediate object (fomite) rather than person-to-person physical contact.

### 4. Which of these is a non-communicable disease often influenced by long-term lifestyle choices?

**Answer:** C) Hypertension

Hypertension (high blood pressure) is a non-communicable condition often related to diet, exercise, and stress management.

### 5. To effectively reduce the spread of norovirus in a cafeteria, surfaces should be cleaned with \_\_\_\_\_ which is more effective than standard soap.

**Answer:** B) a diluted bleach solution

Norovirus is highly resistant; a chlorine bleach solution is one of the few effective ways to disinfect surfaces contaminated by it.

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**6. True or False: Using an alcohol-based hand sanitizer is always more effective than washing hands with soap and water.**

**Answer:** B) False

Soap and water are more effective at removing certain types of germs, specifically cryptosporidium and norovirus, and also remove physical dirt.

**7. Which practice represents a form of 'respiratory etiquette' to prevent droplet transmission?**

**Answer:** B) Coughing into the crook of the elbow

Coughing into the elbow prevents hand contamination and limits the distance respiratory droplets travel.

**8. A student traveling abroad receives a prophylactic treatment to prevent Malaria; this is necessary because Malaria is a \_\_\_\_\_ disease.**

**Answer:** B) vector-borne

Vector-borne diseases are transmitted to humans by organisms like mosquitoes or ticks.

**9. True or False: Chronic sleep deprivation can lead to a suppressed immune system, making the body more susceptible to infections.**

**Answer:** A) True

During sleep, the immune system releases proteins called cytokines; lack of sleep decreases their production.

**10. In terms of food hygiene, what is the 'Danger Zone' temperature range where bacterial growth is most rapid?**

**Answer:** B) 40°F to 140°F

Bacteria multiply rapidly between 40 and 140 degrees Fahrenheit; food should not be left in this range for more than two hours.