

Assessments

Science and Our Food Supply: Investigating Food Safety From Farm to Table

Name/Code Number: _____

You may use a code instead of your name – please be sure to use the same code on your post-assessment.

Please select the **BEST** answer to each of the questions below.

1. _____ How do bacteria reproduce?
 - a. Through spore formation
 - b. Through binary fission
 - c. Through transduction and meiosis
 - d. Through meiosis, genetic exchange, and mitosis

2. _____ What do bacteria require to grow?
 - a. Time to grow and optimum temperature
 - b. Nutrients such as glucose and optimum pH
 - c. Time, temperature, nutrients, optimum pH and moisture
 - d. Time to grow and nutrients such as glucose

3. _____ What are the “4 Cs of Food Safety” that are used to control bacteria?
 - a. Cook, Cut, Clean, Combat cross-contamination
 - b. Cook, Chill, Clean, Combat cross-contamination
 - c. Cook, Chill, Combat BAC, Combat cross-contamination
 - d. Cover food, Chill, Clean, Combat BAC

4. _____ What effect does **chilling** food have on bacteria?
 - a. It kills the bacteria by breaking down their cells.
 - b. It slows the growth of the bacteria by slowing their metabolism.
 - c. It removes bacteria from hands and surfaces.
 - d. It prevents the spread of bacteria from one surface to another.

5. _____ Are all bacteria harmful?
 - a. Yes, bacteria are pathogens and they can cause serious illnesses.
 - b. Yes, given the proper environment, all bacteria can cause damage.
 - c. No, while some bacteria are pathogenic, others are necessary for our health.
 - d. No, bacteria that have been treated with disinfectants are no longer harmful.

6. _____ What path does food generally take along the Farm-To-Table Continuum?
 - a. Farm-Processing-Transportation-Table-Retail
 - b. Farm-Transportation-Processing-Retail-Table
 - c. Farm-Processing-Transportation-Retail-Table
 - d. Farm-Transportation-Retail-Table-Processing

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7. _____ Which of these is an example of **competitive exclusion**?
 - a. Over time, bacteria are evolving to become more antibiotic resistant due to overuse of the medications.
 - b. Pathogenic bacteria, such as *Salmonella*, are being killed with strong disinfectants that are being used on the farms.
 - c. Beneficial bacteria are able to colonize on young chicks, preventing pathogenic bacteria, such as *Salmonella*, from infecting the chickens.
 - d. Livestock that are able to survive infections of pathogenic bacteria are allowed to breed and reproduce.

8. _____ Compost may contain animal feces (manure). Which treatment used in composting makes it safe to use animal manure that may contain *E.coli* O157.H7 and other harmful bacteria to fertilize croplands to produce lettuce, radishes, strawberries, watermelons, etc.?
 - a. Drying the compost to dust-like particles to kill the bacteria
 - b. Treating the compost to generate heat to kill the bacteria.
 - c. Using sterilization chemicals to kill the bacteria.
 - d. Using sunlight to kill the bacteria.

9. _____ Which of these statements is **true** about *milk*?
 - a. All milk must be refrigerated at temperatures below 40 degrees.
 - b. Ultra-High-Temperature Pasteurized (UHT) milk can be stored at room temperature for up to 90 days.
 - c. Pasteurized milk does not contain any microorganisms.
 - d. Pasteurizing milk is unhealthy, as it destroys essential amino acids.

10. _____ Which of these statements about *pasteurized and unpasteurized juices* is **true**?
 - a. Freezing unpasteurized juices destroys bacteria.
 - b. It is possible to tell the difference between pasteurized juice and unpasteurized juice just by looking at it.
 - c. Pasteurizing juices helps to keep us safe from foodborne pathogens.
 - d. Unpasteurized juice is perfectly safe as long as it is used within 2-3 weeks after juicing.

11. _____ A foodborne pathogen is
 - a. Any microorganism found in food for human consumption
 - b. Any microorganism that can cause illness in humans
 - c. Any microorganism found in food that can cause illness or harm to humans
 - d. Probiotics that are found naturally in raw foods that keep us healthy

12. _____ What is the "Danger Zone"?
 - a. The temperature at which foods can safely be held.
 - b. The temperature range in which bacteria can grow.
 - c. A downloadable app about food safety.
 - d. The area of the grocery store that contains high calorie foods.

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13. _____ What is pasteurization?
 - a. A process that filters harmful bacteria from foods
 - b. The process of super-freezing to destroy bacteria
 - c. The process of creating probiotics in dairy products
 - d. A heating/cooling process to destroy pathogenic microorganisms

14. _____ Which of the statements below is an important technique to avoid cross contamination?
 - a. Always keep raw meats on a top shelf in the refrigerator.
 - b. Use a clean cutting board at the beginning of preparing a meal and wipe it off with a paper towel before using it for new or cooked items.
 - c. At the market, ensure that raw meats are bagged separately from other items, such as fresh produce or precooked meats.
 - d. Keep a sponge by the kitchen sink, and use to frequently wipe all surfaces.

15. _____ How long can leftover foods safely be left out at room temperature?
 - a. 2 hours
 - b. 20 minutes
 - c. 4 hours
 - d. 6 hours

16. _____ Which of these is the most common source of food contamination in restaurants?
 - a. Improper hand washing practices
 - b. Dirty silverware or dishes
 - c. Food cooked to the wrong temperature
 - d. Hair not tied back properly

17. _____ What is the best way to ensure that hamburger patties are free of harmful bacteria?
 - a. Purchase ground beef from a high end market and look for the USDA symbol.
 - b. Cook the ground beef until there is no pink visible.
 - c. Use a meat thermometer to ensure internal temperatures are at least 160°F.
 - d. Use a meat thermometer to ensure internal temperatures are at least 140°F.

18. _____ For how long should a person wash his/her hands with soap and hot water?
 - a. At least 20 seconds
 - b. It depends on how dirty his/her hands look
 - c. It depends on how busy the person is and how long it has been since the last hand washing
 - d. At least 10 seconds

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19. _____ Which of the following does not hinder an outbreak investigation?
- People's memory of what they ate a few days ago
 - Disposal of perishable foods
 - Multi-state food distribution
 - DNA profile of foodborne pathogens
20. _____ Which of these "12 Most Unwanted Bacteria" is properly paired with a food with which it is most commonly associated?
- Salmonella* – bread past its 'Use by' date
 - Vibrio-cholera* – soft cheeses
 - Campylobacter jejuni* – undercooked shellfish
 - E-coli* O157-H7 – Undercooked ground beef
21. _____ Which of these items are required on the Nutrition Foods label?
- Serving Size, Saturated Fat, Unsaturated Fat, and Calcium
 - Serving Size, Calories per serving, Dietary Fiber, and Calcium
 - Serving Size, Calories per serving, Saturated Fat, and Unsaturated Fat
 - Calories per serving, Saturated Fat, Monounsaturated Fat, and Polyunsaturated Fat
22. _____ Which of the following combinations are nutrients "to get more of"?
- Vitamin A, Vitamin D, Dietary Fiber, and Potassium
 - Vitamin A, Vitamin C, Vitamin D, and Saturated Fat
 - Protein, Vitamin A, Vitamin D, and Calcium
 - Protein, Vitamin A, Vitamin D, and Saturated Fat
23. _____ What is the recommended daily limit for sodium?
- 4800 mg
 - 3200 mg
 - 2300 mg
 - 1200 mg
24. _____ Essential fatty acids that the body cannot produce and must be obtained through food are a kind of
- Cholesterol
 - Saturated Fatty Acid
 - Monounsaturated Fatty Acid
 - Polyunsaturated Fatty Acid
25. _____ On a daily basis, the *Dietary Guidelines for Americans* recommends consuming less than
- 10 % of daily calories from added sugars and less than 10% of daily calories from saturated fats
 - 20 % of daily calories from added sugars and less than 10% of daily calories from saturated fats
 - 10 % of daily calories from added sugars and less than 20% of daily calories from saturated fats
 - 20 % of daily calories from added sugars and less than 20% of daily calories from saturated fats