CEC Questions for:
“Wheat, Microbiome and Health: The Science Behind Gut Health and Food Intolerances”

1. Which of the following most accurately defines the gut microbiome?
   a. a community of bacterial living in the intestine
   b. a diverse community of bacteria, archaea, viruses and fungi that can be commensal, symbiotic and pathogenic and live inside the intestines
   c. an ecological community of microorganisms on the human body
   d. beneficial bacteria living on the intestinal wall that share food with humans

2. Which of the following are ways that gut microbes contribute to human health?
   a. generate vitamins
   b. enhance immune function
   c. provide fuel to intestinal cells to maintain a protective barrier
   d. all of the above

3. Which of the following statements is NOT true?
   a. nutrient-poor diets can result in decreased gut microbiome diversity
   b. short-chain fatty acids are formed as a result of fiber fermentation
   c. polyphenols increase pathogenic bacteria in the gut
   d. high-protein diets reduce beneficial gut bacteria and increase inflammation

4. Which of the following behaviors have been linked to the human microbiome?
   a. diet
   b. physical activity
   c. stress
   d. all of the above

5. Which of the following is a function of the gut microbiome?
   a. protection against infection
   b. digesting dietary fiber
c. providing nutrients and energy to the human body
d. all of the above

6. Which of the following foods provides the largest amount of the prebiotic fibers, inulin and oligofructose, in an American diet?
   a. wheat
   b. onion
   c. bananas
   d. garlic

7. Which of the following bacteria is NOT considered a pathogen?
   a. Escherichia (E. coli)
   b. Lactobacillus
   c. Salmonella
   d. Shigella

8. Which of the following are characteristics of the gut microbiome in someone with inflammatory bowel conditions or Celiac disease?
   a. decreased microbial diversity
   b. more pathogenic bacteria
   c. greater risk of opportunistic infections
   d. all of the above

9. Which of the following foods would be the best choice to promote a healthier gut microbiome?
   a. bacon
   b. yogurt
   c. coconut oil
   d. rice cakes

10. Cruciferous vegetables contain both fiber and polyphenols for gut microbes. Which of the following vegetables is NOT cruciferous?
   a. cauliflower
   b. broccoli
   c. carrots
   d. asparagus

11. Which of the following lunch menus would be most rich in polyphenols?
a. chicken spinach salad with raspberries, strawberries and vanilla yogurt  
b. chicken noodle soup with garlic bread  
c. ranch barbeque chicken wrap with spinach and potato chips  
d. garlic pesto pasta, chicken, broccoli and milk

12. Which of the following is the polyphenol in cruciferous vegetables associated with positive health outcomes, including reduced cancer risk?
   a. amino acids  
   b. lignans  
   c. glucosinolates  
   d. butyrate  

13. Which of the following parts of a grain would be richest in dietary prebiotics and polyphenols?
   a. bran  
   b. germ  
   c. endosperm  
   d. a and b  

14. Of the following, which is NOT one of the “P”s known promote a healthy gut microbiome?
   a. probiotics  
   b. phosphorus  
   c. prebiotics  
   d. polyphenols  

15. High protein, low carbohydrate diets have been associated with which of the following?
   a. increased production of cancer-causing compounds  
   b. decreased production of the short-chain fatty acid butyrate  
   c. both of the above  
   d. none of the above