Continuing Education Credit (CECs) Questions for "Carbohydrates, Performance & Weight Loss: Is low the way to go, or the way to bonk?"

1. According to 2014 meta-analysis comparing different types of diets published in JAMA, which type of diet was most effective for weight loss after 12 months?
   a) Low carbohydrate
   b) Low fat
   c) Both low carbohydrate and low fat diets were equally effective
   d) Neither diet was effective

2. When participating at race pace in an endurance event, most people have about ____ hours of stored glycogen available.
   a. 1 hour
   b. 2 hours
   c. 3 hours
   d. 4 hours

3. In a fit man on a diet that is not carbohydrate restricted, the maximum rate of energy production when burning carbohydrate is:
   a. About the same as that of fat
   b. About 50% higher than that of fat
   c. About 3-5 times higher than that of fat
   d. About 10 times higher than that of fat

4. Which of the following statements is true about carbohydrates?
   a. They can be burned faster than fat
   b. They are the preferred fuel for high-intensity exercise
   c. They replace muscle glycogen faster than other fuel sources after exercise
   d. All of the above are true
   e. None of the above is true

5. Which of the following best describes the relationship between carbohydrates and performance at race levels of intensity (>65% VO2 max)?
   a. Low carbohydrate diets will improve performance
   b. Low carbohydrate diets will impair performance
   c. High carbohydrate diets will improve performance
   d. High carbohydrate diets will impair performance
   e. Both A & D are correct
   f. Both B & C are correct
6. Which of the following statements is/are true for athletes using the train “low,” race “high” principle?
   a. Training occurs under “low” muscle glycogen conditions
   b. Racing occurs under “high” muscle glycogen conditions
   c. Both a and b are true
   d. Neither a nor b are true

7. Training on a low-carbohydrate diet has been associated with which of the following?
   a. Better performance measures when racing
   b. Increased feelings of well-being and lower fatigue
   c. Increased susceptibility to illness and infection
   d. None of the above
   e. All of the above

8. The vast majority of competitive endurance races:
   a. Are performed within the “fat-burning” zone
   b. Result in fat being burned at a faster rate than carbohydrates
   c. Rely heavily on muscle glycogen as a fuel source
   d. None of the above

9. High protein diets (>2g/kg BW/day) have been shown to
   a. Increase the acid content of the blood
   b. Decrease the time to exhaustion for high-intensity exercise conditions
   c. Neither a or b is true
   d. Both a and b are true

10. For an athlete competing in an event lasting longer than 2.5 to 3 hours, the recommended rate of carbohydrate intake during the event is
    a. 30-60 g/kg per hour
    b. 60 g/kg per hour
    c. up to 90 g per hour
    d. None of the above

11. Among the world’s best marathoners, what percentage of the calories in their diets come from carbohydrate?
    a. Less than 25%
    b. 30-40%
    c. 50-60%
    d. Greater than 60%

12. Where does the “fat-burning” zone occur as a percentage of VO\textsubscript{2max}?
    a. 35-50%
    b. 45-60%
c. 55-70%
d. 65-80%

13. In most cohort studies, the relationship between body mass index (relative body weight) and carbohydrate intake can be described as
   a. Negative
   b. Positive
   c. Neutral
   d. Can’t be described because the relationship is exercise dependent.

14. Which of the following is considered a pitfall (downside) of training under conditions of low carbohydrate availability?
   a. Inability to maintain desired training intensity
   b. Possible impairment of capacity to utilize carbohydrate consumed during competition
   c. Possible increase in muscle protein breakdown
   d. All of the above

15. The daily target for carbohydrate intake for athletes who train at moderate-to-vigorous intensities for 1-3 hours per day is:
   a. 1-2 grams/kg body weight
   b. 2-3 grams/kg body weight
   c. 6-10 grams/kg body weight
   d. There is no carbohydrate recommendation because moderate-to-vigorous exercise lasting 1-3 hours uses mostly fat as a fuel

Answers: 1c, 2b, 3c, 4d, 5f, 6c, 7d, 8c, 9d, 10c, 11d, 12c, 13a, 14d, 15c