Chemistry: Article – Don’t Sweat the Small Stuff

1. How much money do we spend each year on sports drinks?

2. Where does your body store carbohydrates? …in what form?

3. What is glycogen converted into so that the body can use it?

4. For moderate-to high-intensity exercise, how long does it take for your glycogen reserves to be used up?

5. What two things happen as the glycogen reserves are used up?

6. What does lactic acid do?

7. What substance is used to take heat away from working muscles?

8. What three things could happen if you sweat off more than 2% of your body weight?

9. What two types of ions can be lost through excessive sweating?

10. What are positively-charged ions called? …negatively-charged ions?

11. For what three main functions are potassium (K\(^{+}\)) ions responsible?

12. What role do sodium (Na\(^{+}\)) ions play?

13. What could happen if the Na\(^{+}\) and/or K\(^{+}\) ion concentration is lower than normal?

14. What three main ingredients are in sports drinks?

15. What is the number one consideration for an athlete in maximizing performance?
16. Besides consuming sports drinks, how else could lost carbohydrates and electrolytes be replaced?

17. What advantage (for some people) do sports drinks have over water?

18. Per 240 mL of drink, a good sports drink should provide what quantity of carbohydrates?
   ...what quantity of sodium?

19. Drinking salt solutions greater than 3% salt tends to what?

20. The small amounts of sodium added to sports drinks encourage drinking without causing what?

21. What is a poor indicator that your body needs more fluids?

22. Why should you avoid juices and carbonated beverages while you are exercising?

23. If you are going to consume a sports drink, what is the most important factor in choosing a drink?

24. What causes muscle fatigue?

25. Write the chemical equation for aerobic respiration.

26. What is the Krebs cycle?

27. How are the waste products (CO₂ and H₂O) removed from the body?

28. What is the energy “backup plan” known as?

29. Which system, aerobic or anaerobic, provides more energy?

30. What may happen when muscles start to feel heavy and worn out?