

## Study Questions: Carbohydrates

### **STUDY QUESTIONS:** Carbohydrates

The online lectures and lecture notes will help you to answer the questions below. Remember that if more than one answer is correct, to receive full credit, you should select all that apply

1. Which of these statements is TRUE of carbohydrates?
  - a) You can find them in whole foods like fruit, veggies, and dairy.
  - b) You can find them in processed foods like chips, candy, and cake.
  - c) You can find them in all the food groups except the Protein food group.
  - d) All carbohydrates contain carbon, hydrogen, and oxygen.
2. Which of these are considered to be simple carbohydrates?
  - a) Monosaccharides
  - b) Disaccharides
  - c) Polysaccharides
3. What monosaccharide do all 3 disaccharides have in common?
4. Which sugar needs to be enzymatically digested to be absorbed?
  - a) glucose
  - b) fructose
  - c) galactose
  - d) sucrose
5. Which food(s) do you find sucrose in?
  - a) Fruits
  - b) Vegetables
  - c) Dairy
  - d) Whole seeds like rice and beans
  - e) Sprouted whole grains
  - f) Table sugar
6. Which foods do you find maltose in?
  - a) Sprouted grains
  - b) Non-sprouted grains
7. What type of carbohydrate(s) is/are absorbed into the blood stream from the small intestine?
  - a) monosaccharides
  - b) disaccharides
  - c) only glucose
8. Starch is a plant's storage form of what? \_\_\_\_\_
9. Glycogen is an animal's storage form of what? \_\_\_\_\_

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10. Which of the following is a correct statement:
  - a) Glycogen is abundant in foods like meat.
  - b) Glycogen is nearly undetectable in meats.
11. True or False. Glycogen can be stored both in the liver and muscles.
12. Which type of fiber would be most likely to help alleviate constipation?
  - a) Soluble fiber
  - b) Insoluble fiber
13. Which of the following food would be the highest in fiber?
  - a) Orange juice
  - b) Enriched white bread
  - c) Beans
  - d) Yogurt
14. Which of the following foods would have naturally occurring sugar?
  - a) Fruit
  - b) Soda
  - c) Milk
  - d) Rice
  - e) Vegetables
15. Which of the following is NOT a health problem related to eating too much sugar?
  - a) hyperactivity in children
  - b) tooth decay
  - c) diabetes
  - d) obesity
16. Which of the following foods would NOT be a source of carbohydrate?
  - a) Meat
  - b) Milk
  - c) Fruit
  - d) Grains
17. When blood glucose levels drop, which hormone brings glucose out of storage to raise blood glucose levels?
  - a) Insulin
  - b) Glucagon
  - c) Glycogen
  - d) Adrenaline

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18. Which of the following are ways glucose can be provided for the brain when dietary carbohydrate is limited?
- Stored glycogen
  - Fatty acids
  - protein
19. Which of the following are ways glucose can be used when it enters the cell?
- It can be used for energy.
  - It can be stored as glycogen.
  - It can be stored as fat.
  - It can be stored as protein.
20. Which of the following is/are TRUE of ketones?
- They are produced when dietary carbohydrate is limited
  - They can be used by the brain as an alternative fuel
  - They speed up protein break down in muscles
  - They can build up in the blood and cause a condition known as ketosis
21. Which of the following is TRUE of type 2 diabetes?
- It is an autoimmune disease in which the immune system attacks the pancreas and there is not enough insulin production
  - Begins with insulin resistance and strongly associated with obesity
  - Develops in pregnancy
22. A serving of beans has 18 grams of total carbohydrate. Six grams of that 18 grams of carbohydrate is fiber and 0 grams is sugar. What kind of carbohydrate is the remaining 12 grams? \_\_\_\_\_
23. Which of the following is the best way to determine if a bread is whole wheat?
- Look for a bread that is brown in color.
  - Look for a bread that is multigrain.
  - Look for a bread that lists whole wheat flour as the first ingredient.
  - Look for added fiber in the ingredient list.

**Look at the Snapple label in the label document.**

24. The **NUTRITION FACTS** on this label are for how much of the Snapple?
- \_\_\_\_\_

25. The **entire bottle** of the Snapple is how much? \_\_\_\_\_

26. If you drank the **entire bottle**, how many teaspoons of sugar would you be getting?

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27. Consider a snack of Ak Mak crackers. The cracker **ingredients** include 100% stone ground whole wheat flour, water, honey, sesame oil, sesame seeds, yeast and salt. (See label document)

What **carbohydrates**, in that snack of Ak Mak crackers would you say need to be **enzymatically** digested? See the handout **Food Sources of Macronutrients and also Leculture Outline** for help.

a) Starch	e) Galactose
b) Glucose	f) Sucrose
c) Maltose	g) Fructose
d) Lactose	h) Fiber

28. After eating this snack of Ak Mak crackers, what carbohydrates are absorbed into the cells lining the small intestine (& then lymph or blood)?

a) Starch	e) Galactose
b) Glucose	f) Sucrose
c) Maltose	g) Fructose
d) Lactose	h) Fiber

29. Calculate how many grams of starch are in a serving of the Ak Mak crackers in the “Labels” document posted in moodle. \_\_\_\_\_

30. Why might a snack of saltine crackers promote cavities?

31. Which of the following statements below are TRUE?

- a) The use of sugar substitutes in food products is increasing.
- b) There is strong evidence that artificial sweeteners cause cancer.
- c) There is growing concern that sugar substitutes may alter the gut microbiome and metabolic health.
- d) Stevia and monk fruit extract are natural sugar substitutes and therefore inherently safer than artificial sweeteners.

32. If you’re trying to reduce your sugar consumption AND wish to avoid sugar substitutes, which of the following would be your best beverage choices? Select all that apply.

- a) Coca-Cola Classic
- b) Caffeine-free Coke
- c) Diet Coke
- d) Sparkling water (unsweetened)
- e) Milk
- f) Sweetened iced tea
- g) Diet iced tea
- h) Unsweetened iced tea
- i) Tap water

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**33. PRINTOUT QUESTIONS.** Take a look at the Actual Intake vs. Recommended Intake report from the analysis you did last week of your 3-days of food records. Answer the following question.

**If you got enough fiber answer the following questions:**

How many grams of fiber did you have? \_\_\_\_\_

What was the recommendation of fiber for you? \_\_\_\_\_

Based on the information in this chapter, what do you think were the TWO foods that gave *you* the most *fiber*? \_\_\_\_\_

**If you did not get enough fiber**, go to the diet analysis site and adjust your intake for a day. You can add foods if you were not eating enough, or you can modify what you ate to see if you can bring up your fiber intake. Make sure your changes are realistic.

How many grams of fiber did you have? \_\_\_\_\_

What was the recommendation of fiber for you? \_\_\_\_\_

If you did not have enough fiber, what foods did you replace and what foods did you add?

Make sure you include amounts. \_\_\_\_\_

What is your new total for grams of fiber you took in? \_\_\_\_\_

Were you able to reach “Recommendation or Acceptable Range”? \_\_\_\_\_

**MYSTERY QUESTION(S)**. For this one, have in front of your Chapter 4 LECTURE OUTLINE (with your notes). You will be asked 1 or more questions about something from one of the blanks or one of the questions that are asked in the LECTURE OUTLINE and were answered in Lecture 3A or 3B. There will also be questions from the Chili Label Activity, so make sure you complete that activity BEFORE submitting these study questions.

Take a look at the FORUM for Week **3** (last week). Do you find two postings done by you? \_\_\_\_\_