

Chapter 5: Study Guide

Define:

- Carbohydrates
- Monosaccharide
- Disaccharide
- Glucose
- Fructose
- Galactose
- Maltose
- Sucrose
- Lactose
- Nutritive sweeteners
- Added Sugars
- Alternative sweeteners
- Nonnutritive sweetener
- Complex carbohydrates
- Starch
- Glycogen
- Dietary fiber
- Soluble fiber
- Insoluble fiber
- Salivary amylase
- Pancreatic amylase
- Sucrase
- Lactase
- Insulin
- Glucagon
- Glycogenolysis
- Lipolysis
- Ketone bodies
- Diabetes mellitus
- Hyperglycemia
- Hypoglycemia
- Epinephrine
- Metabolic syndrome
- Syndrome
- Lactose intolerance
- Diverticula

Concept Questions

1. What is the major function of carbohydrates in the body?
2. Identify the 3 most important monosaccharides.
3. What are the chemical names for blood sugar, table sugar, milk sugar, & malt sugar? Which monosaccharides comprise each molecule of maltose, lactose, and sucrose?
4. What is the difference between a nutritive and nonnutritive sweetener?
5. Parents of a child with PKU can give their child a drink sweetened with sucralose or one containing aspartame. Which should they choose and why?
6. What is starch? What is glycogen?
7. What is dietary fiber? Identify at least 2 food sources of soluble and insoluble fiber.
8. Sherita ate some whole-wheat crackers with grape jelly. Discuss what happened to the starch, sucrose, and fiber as it passes through the regions of her digestive tract.
9. What is the difference between viscous and fermentation-resistant forms of dietary fiber?
10. What is a ketone body? Under what conditions does the body form excessive ketone bodies?
11. What effects do insulin and glucagon have on blood glucose levels?
12. What is the primary source of added sugars in the typical American diet?

13. Instead of drinking orange juice, should you choose a beverage called "Orange-Ade"? Explain why or why not.
14. According to the nutrition facts panel, a serving of ready to eat cereal contains 44g of total carbohydrate, 5 g of dietary fiber, and 10g of sugars. Estimate the grams of starch in a serving of this cereal.
15. What are the signs & symptoms of type 1 and type 2 diabetes?
16. What health-related lifestyle practices can Erika follow to reduce her risk of developing Type 2 diabetes?
17. Identify at least 3 signs of metabolic syndrome.
18. What is lactose intolerance?
19. List at least 3 ways to increase your dietary fiber intake.
20. Discuss the health benefits of including soluble and insoluble fiber in diets.
21. How can a person easily determine the carbohydrate & fiber content in a serving of packaged food?