

Nutritional Biochemistry of Carbohydrates

Nutrition · Practice Test · 15 Questions

1. What is the primary metabolic pathway for carbohydrates to produce energy?

- A) Glucose -> ATP -> Energy
- B) Protein -> ATP -> Glucose
- C) Fat -> Glucose -> Energy
- D) Starch -> Protein -> ATP

2. Chemically, how are carbohydrates defined?

- A) Simple sugars only
- B) Polyhydroxy aldehydes or ketones
- C) Hydrocarbons with oxygen
- D) Proteins attached to glucose

3. Which carbohydrate is known as blood sugar?

- A) Fructose
- B) Galactose
- C) Glucose
- D) Sucrose

4. What is the chemical composition of sucrose?

- A) Glucose + Glucose
- B) Glucose + Fructose
- C) Glucose + Galactose
- D) Fructose + Galactose

5. Which hormone is responsible for lowering blood glucose levels?

- A) Glucagon
- B) Insulin
- C) Thyroxine
- D) Adrenaline

6. What is the storage form of glucose in animals?

- A) Starch
- B) Cellulose
- C) Glycogen
- D) Pectin

7. How much energy is provided by one gram of carbohydrates?

- A) 4 kilocalories
- B) 9 kilocalories
- C) 7 kilocalories
- D) 2 kilocalories

8. Which organ is primarily responsible for maintaining blood glucose levels?

- A) Liver
- B) Kidney
- C) Endocrine system
- D) Heart

9. What is the primary structural component of plant cell walls?

- A) Starch
- B) Glycogen
- C) Cellulose
- D) Lactose

10. Which type of diabetes is characterized by insulin insensitivity?

- A) Type I
- B) Type II
- C) Gestational
- D) Hypoglycemia

11. What is the recommended daily intake of carbohydrates for adults?

- A) 50g
- B) 130g
- C) 300g
- D) 500g

12. Which monosaccharide is considered the sweetest?

- A) Glucose
- B) Galactose
- C) Fructose
- D) Maltose

13. What is the process of synthesizing glucose from non-carbohydrate sources called?

- A) Glycolysis
- B) Glycogenesis
- C) Gluconeogenesis
- D) Glycogenolysis

14. What happens when there is an insufficient amount of carbohydrates for fat metabolism?

- A) Protein sparing
- B) Ketosis
- C) Hyperglycemia
- D) Insulin resistance

15. What is the Glycemic Index (GI) used to measure?

- A) Total fiber content
- B) Speed of blood glucose rise
- C) Caloric density
- D) Protein quality