

# Nutritional Biochemistry of Carbohydrates

Nutrition · Answer Key · 15 Questions

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## 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