

# Chemistry of the Human Body and Health

Introduction To Chemistry · Answer Key · 8 Questions

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**1. What is the primary role of iron (Fe) in the human body, particularly concerning oxygen transport?**

- A) It acts as a catalyst for nerve impulse transmission.
- B) It is a key component of hemoglobin, responsible for carrying oxygen in the blood.**
- C) It plays a crucial role in maintaining bone density.
- D) It is essential for the synthesis of vitamin D.

**2. Which essential mineral is a major component of bones and teeth, and also plays a role in muscle function and nerve signaling?**

- A) Sodium (Na)
- B) Potassium (K)
- C) Calcium (Ca)**
- D) Magnesium (Mg)

**3. What is the chemical element that forms the backbone of all organic molecules, including carbohydrates, lipids, proteins, and nucleic acids, which are fundamental to life?**

- A) Oxygen (O)
- B) Nitrogen (N)
- C) Carbon (C)**
- D) Hydrogen (H)

**4. The element Iodine (I) is crucial for the proper functioning of which gland in the human body?**

- A) Adrenal glands
- B) Pancreas
- C) Thyroid gland**
- D) Pituitary gland

**5. Which of the following is the most abundant element in the human body by mass, essential for respiration and as a component of water?**

- A) Carbon (C)
- B) Nitrogen (N)
- C) Hydrogen (H)
- D) Oxygen (O)**

**6. What is the primary function of electrolytes like Sodium (Na<sup>+</sup>), Potassium (K<sup>+</sup>), and Chloride (Cl<sup>-</sup>) in the human body?**

- A) To store energy for muscle contraction.
- B) To facilitate nerve impulse transmission and maintain fluid balance.**
- C) To build and repair cellular structures.
- D) To act as antioxidants, protecting cells from damage.

**7. Phosphorus (P) is a vital component of which key biomolecule that stores and transfers energy within cells?**

- A) DNA
- B) Hemoglobin
- C) ATP (Adenosine Triphosphate)**
- D) Collagen

**8. Which of these elements is a major component of proteins and nucleic acids, and is also involved in energy metabolism?**

- A) Sulfur (S)
- B) Nitrogen (N)**
- C) Phosphorus (P)
- D) Potassium (K)