

Name: _____ Date: _____

Answer Key: Your Blueprint for Vitality: A 10th Grade Nutrition Guide

How does your body convert fuel into cellular power? Use this formative assessment to check recall on macronutrients and micronutrient functions.

1. Which of these is considered a 'trace mineral,' meaning the body requires it in very small amounts to function properly?

Answer: C) Selenium

While minerals like calcium and potassium are macrominerals, selenium is a trace mineral necessary in small quantities for antioxidant enzyme function.

2. True or False: Fat-soluble vitamins, such as Vitamin A and Vitamin D, are stored in the body's liver and fatty tissues.

Answer: A) True

Unlike water-soluble vitamins (like B and C) which are excreted, fat-soluble vitamins (A, D, E, K) are stored in the body's adipose tissue.

3. The primary role of _____ in the human body is to serve as the building blocks for enzymes, hormones, and antibody production.

Answer: B) Proteins

Proteins are composed of amino acids which the body uses to synthesize essential structures like enzymes and neurotransmitters.

4. If a person is looking to increase their intake of Omega-3 fatty acids for brain health, which of these foods is the most appropriate choice?

Answer: A) Walnuts

Walnuts are a significant plant-based source of Alpha-linolenic acid (ALA), a type of Omega-3 fatty acid.

5. Nutritionists recommend consuming _____ carbohydrates, such as lentils or oats, because they take longer to break down and provide steady energy.

Answer: D) Complex

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Complex carbohydrates contain longer chains of sugar molecules and fiber, resulting in a lower glycemic response compared to simple sugars.

6. True or False: Dehydration can lead to a decrease in cognitive performance and physical coordination even before a person feels thirsty.

Answer: A) True

Thirst is often a delayed signal of dehydration; mild fluid loss can impact focus and physical output earlier in the process.

7. Which of the following is a primary function of insoluble fiber in the digestive system?

Answer: B) Increasing the speed of waste moving through the intestines

Insoluble fiber adds bulk to the stool and helps food pass more quickly through the stomach and intestines.

8. Anemia is a condition often caused by a deficiency in _____, which is necessary for the production of hemoglobin in red blood cells.

Answer: C) Iron

Iron is a critical component of hemoglobin, the protein in red blood cells that carries oxygen from the lungs to the body.

9. Which of these food combinations represents a 'complementary protein' source, often used by people on a plant-based diet to get all essential amino acids?

Answer: B) Rice and black beans

While individual plant foods may lack certain amino acids, combining grains (like rice) and legumes (like beans) provides a complete amino acid profile.

10. True or False: Low-density lipoprotein (LDL) is often called 'good' cholesterol because it removes excess cholesterol from the arteries.

Answer: B) False

HDL is the 'good' cholesterol; LDL is known as 'bad' cholesterol because high levels can lead to plaque buildup in arteries.