

Advanced Dietetics: Human Physiology and Health

Dietetics · Practice Test · 8 Questions

1. Which micronutrient is essential for the synthesis of thyroxine and triiodothyronine, crucial hormones regulating metabolism?

- A) Selenium
- B) Iron
- C) Iodine
- D) Zinc

2. The absorption of which fat-soluble vitamin is significantly impaired in individuals with cystic fibrosis due to pancreatic exocrine insufficiency?

- A) Vitamin A
- B) Vitamin D
- C) Vitamin E
- D) Vitamin K

3. Which amino acid is a precursor for nitric oxide (NO) production, a potent vasodilator involved in cardiovascular health?

- A) Glycine
- B) Arginine
- C) Proline
- D) Lysine

4. A deficiency in which B vitamin can lead to megaloblastic anemia due to impaired DNA synthesis, affecting rapidly dividing cells like red blood cells?

- A) Pyridoxine (B6)
- B) Thiamine (B1)
- C) Riboflavin (B2)
- D) Folate (B9)

5. The metabolic pathway of gluconeogenesis primarily occurs in which organ, converting non-carbohydrate precursors into glucose?

- A) Skeletal Muscle
- B) Adipose Tissue
- C) Liver
- D) Brain

6. Which type of dietary fiber, when fermented by gut microbiota, produces short-chain fatty acids (SCFAs) like butyrate, which are a primary energy source for colonocytes?

- A) Lignin
- B) Pectin
- C) Cellulose
- D) Resistant Starch

7. The enzyme lipoprotein lipase (LPL) plays a critical role in the hydrolysis of triglycerides from circulating lipoproteins, primarily in which type of tissue?

- A) Liver
- B) Skeletal Muscle and Adipose Tissue
- C) Kidneys
- D) Central Nervous System

8. Which mineral is a cofactor for over 300 enzymes in the human body, including those involved in protein synthesis, wound healing, and immune function?

- A) Calcium
- B) Magnesium
- C) Copper
- D) Zinc