

Ascorbic Acid (Vitamin C)

Nutrition · Answer Key · 30 Questions

1. What is another name for Vitamin C, and why is it called that?

- A) Ascorbic acid, because it is an antioxidant
- B) Antiscorbutic vitamin, because it prevents scurvy**
- C) Citric acid, because it is found in citrus fruits
- D) L-ascorbic acid, because it is the most active form

2. Which of the following are the most active forms of Vitamin C?

- A) L-ascorbic acid and diketogulonic acid
- B) L-dehydroascorbic acid and diketogulonic acid
- C) L-ascorbic acid and L-dehydroascorbic acid**
- D) D-ascorbic acid and L-ascorbic acid

3. What is the unit of measurement for Vitamin C?

- A) Milligrams (mgs)**
- B) Micrograms (mcgs)
- C) Grams (gs)
- D) International Units (IUs)

4. Vitamin C is crucial for the formation and maintenance of what substance that holds cells together?

- A) Cellular fluid
- B) Intercellular cementing substance**
- C) Mitochondria
- D) Ribosomes

5. Which of these bodily structures' integrity is NOT explicitly mentioned as being maintained by ascorbic acid?

- A) Capillary walls
- B) Bone marrow
- C) Nerve cells**
- D) Teeth

6. Vitamin C is necessary for the conversion of folic acid to its active form, known as:

- A) Folinic acid**
- B) Megaloblastic acid
- C) Pteroylglutamic acid
- D) Diketogulonic acid

7. What type of anemia is prevented by Vitamin C?

A) Iron deficiency anemia

B) Megaloblastic anemia

C) Hemolytic anemia

D) Sickle cell anemia

8. How does Vitamin C improve iron utilization?

A) By converting iron to a more absorbable form

B) By making iron more available for hemoglobin formation

C) By preventing iron loss from the body

D) By increasing the production of iron in the body

9. Vitamin C acts as an antioxidant by protecting normal cells from the damage of:

A) Excess glucose

B) Free radicals

C) High temperatures

D) Alkali substances

10. Which of these factors does NOT easily destroy Vitamin C?

A) Heat

B) Acid

C) Light

D) Cold

11. In the presence of which two metals is the destruction of Vitamin C hastened?

A) Iron and copper

B) Zinc and magnesium

C) Calcium and potassium

D) Sodium and chloride

12. Where is Vitamin C almost completely absorbed in the body?

A) Stomach

B) Large intestine

C) Small intestine

D) Esophagus

13. In cases of achlorhydria or gastrointestinal disorders, the absorption of Vitamin C may be affected. What is achlorhydria?

A) Excess stomach acid

B) Lack of HCl in the stomach

C) High levels of bile

D) Poor enzyme activity

14. Since there is hardly any storage of Vitamin C in tissues, what is used as an index of vitamin C saturation?

- A) Adrenal glands
- B) White blood cells
- C) Liver**
- D) Plasma

15. Which of these species, along with humans, cannot synthesize Vitamin C from glucose?

- A) Dogs and cats
- B) Rats and mice
- C) Guinea pigs and monkeys**
- D) Cows and sheep

16. What is the enzyme that converts L-gulononic acid to L-ascorbic acid, which is lacking in humans?

- A) Oxidase**
- B) Catalase
- C) Peroxidase
- D) Dehydrogenase

17. What is D-ascorbic acid to L-ascorbic acid?

- A) A precursor
- B) A byproduct
- C) A vitamin antagonist**
- D) An isomer

18. Which of the following is NOT a deficiency sign of Vitamin C at an early stage?

- A) Irritability
- B) Weakness
- C) Swollen gums**
- D) Lack of appetite

19. In severe deficiencies of Vitamin C, what is the deficiency disease called?

- A) Pellagra
- B) Rickets
- C) Scurvy**
- D) Beriberi

20. Which of these is a characteristic symptom of scurvy?

- A) Night blindness
- B) Bone deformities
- C) Bleeding gums**
- D) Dry skin

21. In infantile scurvy, why does the infant flex his legs for comfort, resulting in the "frog's position"?

- A) Due to swollen thighs and painful joints**
- B) Due to muscle spasms
- C) Due to fever
- D) Due to abdominal pain

22. Toxicity cases of Vitamin C (hypervitaminosis C) are rare because:

- A) It is stored in high amounts in the body
- B) Excess Vitamin C is easily excreted**
- C) The body develops a tolerance to high doses
- D) It is not absorbed in large quantities

23. Megadoses of Vitamin C may cause adverse effects in susceptible individuals, such as:

- A) Improved vision
- B) Strengthened bones
- C) Rashes and diarrhea**
- D) Increased energy levels

24. Who generally needs more Vitamin C than females?

- A) Children
- B) Older persons
- C) Males**
- D) Smokers

25. Vitamin C needs are increased during which life stages or conditions?

- A) Adulthood and old age
- B) Growth, pregnancy, and lactation**
- C) Sedentary lifestyle
- D) Low-stress environments

26. According to the Philippine RNI, what is the recommended daily allowance of Vitamin C for adult males (19 years and over)?

- A) 70 mg/day
- B) 75 mg/day**
- C) 105 mg/day
- D) 120 mg/day

27. What is the tolerable upper intake level for Vitamin C per day for adults, as stated by US-DRI?

- A) 1,000 mg/day
- B) 1,500 mg/day
- C) 2,000 mg/day**
- D) 2,500 mg/day

28. Which of these is considered the richest source of Vitamin C?

- A) Guava
- B) Papaya
- C) Puerto Rico cherry (acerola)**
- D) Orange

29. Which of the following local fruits in the Philippines is NOT listed as an excellent source of Vitamin C?

- A) Guava
- B) Mango
- C) Durian**
- D) Bayabas (guava)

30. Vitamin C is most easily destroyed by heat, oxidation, and:

- A) Cold
- B) Sunlight**
- C) Alkali
- D) Acid