

- 1. Which vitamin can become deficient if one does not have adequate sun exposure?**
    - a. Vitamin D
    - b. Potassium
    - c. Vitamin B-12
    - d. Magnesium
  - 2. Which one of the following is the most abundant cation in the body?**
    - a. Folate
    - b. Magnesium
    - c. Vitamin D
    - d. Calcium
  - 3. Hypokalemia is associated with an increase in hospital mortality due to its serious side effects, at what magnitude?**
    - a. 2-fold
    - b. 10-fold
    - c. 5-fold
    - d. 20-fold
  - 4. Which of the following is the best choice for elderly patients due to better absorption?**
    - a. Calcium lactate
    - b. Calcium citrate
    - c. Calcium carbonate
    - d. Calcium gluconate
  - 5. What are the two forms of dietary iron?**
    - a. Primary heme and secondary heme
    - b. Ferosol and Ferosul
    - c. Heme and non-heme
    - d. Ferrous sulfate and ferrous fumarate
  - 6. Which labs can be used to calculate a patient's transferrin saturation (t-sat)?**
    - a. Ferritin and serum iron
    - b. Hemoglobin and ferritin
    - c. Ferritin and total iron binding capacity (TIBC)
    - d. Serum iron and total iron binding capacity (TIBC)
  - 7. Which deficiency is commonly seen in pregnant women and alcoholics?**
    - a. Folate
    - b. Magnesium
    - c. Calcium
    - d. Vitamin D
  - 8. Vitamin B-12 is a water-soluble vitamin that is vital to which of the following functions:**
    - a. Neurologic function
    - b. Red blood cell production
    - c. DNA synthesis
    - d. All of the above
  - 9. Which vitamin deficiency is a common cause of megaloblastic anemia?**
    - a. Iron
    - b. Vitamin B-12
    - c. Magnesium
    - d. Calcium
  - 10. What is the upper normal limit of folic acid that an adult should take daily?**
    - a. 500 mcg
    - b. 750 mcg
    - c. 2500 mcg
    - d. 1000 mcg
  - 11. Which nutrient below is a cofactor in more than 300 enzyme systems that regulate a variety of biochemical reactions in the body?**
    - a. Folate
    - b. Vitamin D
    - c. Magnesium
    - d. Vitamin B-12
  - 12. Patients with a vitamin D deficiency are at increased risk of what problems below?**
    - a. Falls
    - b. Decreasing calcium levels
    - c. Decreased bone mass
    - d. All of the above
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**13. Magnesium plays a role in the active transport of what two ions?**

- a. Calcium and sodium
- b. Sodium and chloride
- c. Calcium and potassium
- d. Copper and calcium

**14. Which of the following medications can cause a deficiency in vitamin B-12?**

- a. Thiazide diuretics
- b. Beta agonist
- c. Metformin
- d. Lisinopril

**15. Which of the following populations is a common group to have vitamin deficiencies?**

- a. Vegetarians
- b. Obese patients
- c. Children
- d. Athletes

**16. Which of the following is NOT a treatment option for hyperkalemia?**

- a. Furosemide
- b. Insulin
- c. Albuterol
- d. Bactrim
- e. Calcium

**17. What is most common side effect experienced with calcium supplements?**

- a. Bitter taste
- b. CNS effects
- c. Constipation
- d. Diarrhea

**18. Which of the following medication classes can cause hypokalemia?**

- a. ACE inhibitors
- b. Insulin
- c. Potassium-sparing diuretics
- d. NSAIDs

**19. Which of the following is the preferred formulation of vitamin D?**

- a. Ergocalciferol (Vitamin D2)
- b. Cholecalciferol (Vitamin D3)
- c. Vitamin D1
- d. Vitamin D6

**20. Which of the following is the preferred salt form of iron?**

- a. Ferrous sulfate
  - b. Ferrous fumarate
  - c. Ferric oxide
  - d. Ferric chloride
-

## Participant Information:

AL License # \_\_\_\_\_

Name \_\_\_\_\_

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City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

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How long did it take you to read the article and complete this test?

\_\_\_\_\_ hours \_\_\_\_\_ minutes

My signature certifies that I have independently taken this CE examination.

\_\_\_\_\_

## CE Assessment Answers

Please circle your answers (one answer per question)

|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| 1.  | A | B | C | D |   |
| 2.  | A | B | C | D |   |
| 3.  | A | B | C | D |   |
| 4.  | A | B | C | D |   |
| 5.  | A | B | C | D |   |
| 6.  | A | B | C | D |   |
| 7.  | A | B | C | D |   |
| 8.  | A | B | C | D |   |
| 9.  | A | B | C | D |   |
| 10. | A | B | C | D |   |
| 11. | A | B | C | D |   |
| 12. | A | B | C | D |   |
| 13. | A | B | C | D |   |
| 14. | A | B | C | D |   |
| 15. | A | B | C | D |   |
| 16. | A | B | C | D | E |
| 17. | A | B | C | D |   |
| 18. | A | B | C | D |   |
| 19. | A | B | C | D |   |
| 20. | A | B | C | D |   |

## Program Evaluation – Must be completed for credit.

Please rate the following items on a scale from 1 (poor) to 4 (excellent).

- |                                   |   |   |   |   |
|-----------------------------------|---|---|---|---|
| 1. Overall quality of the article | 1 | 2 | 3 | 4 |
| 2. Relevance to pharmacy practice | 1 | 2 | 3 | 4 |
| 3. Value of the content           | 1 | 2 | 3 | 4 |

Please answer each question, marking whether you agree or disagree.

4. This course met the learning objectives.  Agree  Disagree
5. The article did not promote a particular product or company.  Yes  No

### Impact of the Activity

The information presented (check all that apply):

6.  Reinforced my current practice/treatment habits  Will improve my practice/patient outcomes  
 Provided new ideas or information I expect to use  Adds to my knowledge
7. Will the information presented cause you to make any changes in how you do your job?  Yes  No
8. How committed are you to making these changes?  
 (Not committed) 1 2 3 4 (Very committed).
9. Do you feel future activities on this subject matter are necessary and/or important?  Yes  No

### Follow-Up

As part of our ongoing quality-improvement effort, we would like to be able to contact you in the event we conduct a follow-up survey to assess the impact of our educational interventions on professional practice. Are you willing to participate in such a survey?

Yes  No



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