

MODULE 3 QUIZ

Started: Dec 1 at 8:12p.m.

Quiz Instructions

This quiz is based on the material from Module 3.

There is no time limit, but you have only one attempt. Remember to submit your quiz. Quercus does not do this automatically for untimed quizzes.

The quiz is open book.

Select the best answer.

Question 1

1 pts

Which combination of symptoms leads to hyponatremia?

- ☐ Excessive sweating, no drinking of water, no replacement of electrolytes
- ☐ No sweating, no drinking of water, no replacement of electrolytes
- ☐ Excessive sweating, excessive drinking of water, no replacement of electrolytes
- ☐ No sweating, excessive drinking of water, no replacement of electrolytes

Question 2

1 pts

Which is NOT a function of vitamin D?

- ☐ Increasing urinary excretion of calcium
- ☐ Increasing the absorption of calcium.
- ☐ Maintaining blood calcium levels.
- ☐ Increasing the synthesis of the calcium transport protein.

Question 3**1 pts**

Which of the following is not a function of calcium or is associated with calcium?

- ☐ Reducing the risk of colon cancer
- ☐ Functioning in muscle contraction.
- ☐ Lowering blood pressure
- ☐ Reducing blood clot formation.

Question 4**1 pts**

“A vitamin is bound to a protein synthesized in the body and this combination catalyzes a chemical reaction.” What is being described?

- ☐ Hormone activity
- ☐ Coenzyme function
- ☐ Bioavailability
- ☐ Storage in the body

Question 5**1 pts**

A child in the developing world enters a clinic. Her diet contains a lot of whole grains but no meat and she has suffered from repeated infections. What nutrient deficiency do you suspect?

- ☐ Chromium
- ☐ Zinc

- ☐ Iodine
- ☐ Phosphorus

Question 6

1 pts

Which is NOT correctly matched?

- ☐ Transferrin: an iron transport protein
- ☐ Transferrin receptor: Cell membrane protein that takes iron from the blood stream and brings it into the cell
- ☐ Serum ferritin: an iron storage protein
- ☐ Superoxide dismutase: an iron-containing enzyme that functions to reduce oxidative stress

Question 7

1 pts

Which statement does NOT describe a B vitamin?

- ☐ A ligand for a nuclear receptor controlling cell differentiation.
- ☐ A vitamin that reduces the risk of spina bifida.
- ☐ A coenzyme in the metabolic pathway that converts amino acids to energy.
- ☐ A coenzyme in the metabolic pathway that converts fatty acids to energy.

Question 8

1 pts

Why was a CDRR established for sodium?

- ☐ Sodium is a nutrient that protects against hypertension and the CDRR determines the minimum nutrient intake at which beneficial health benefits begin.
- ☐ The CDRR reflects the toxic effects of sodium unrelated to hypertension.
- ☐ Sodium is a nutrient that contributes to hypertension and the CDRR determines the nutrient intake above which significant disease risk occurs.
- ☐ A review of the scientific literature indicated that the minimum intake for sodium for adults should be 1500 mg daily.

Question 9

1 pts

What do phytates, tannins, and oxalates have in common?

- ☐ These compounds bind to minerals, increasing their solubility
- ☐ These compounds interfere with the absorption of minerals.
- ☐ These compounds increase the bioavailability of minerals.
- ☐ These compounds have no effect on the bioavailability of minerals.

Question 10

1 pts

Which statement best describes calcium absorption?

- ☐ Humans absorb calcium from food inefficiently, but absorption is enhanced because vitamin D promotes the synthesis of calcium transport proteins in the enterocyte.
- ☐ Humans absorb calcium from food inefficiently because insoluble complexes form when calcium binds to the calcium transport proteins in the enterocyte.
- ☐ Humans absorb most of the calcium in food because vitamin D promotes the synthesis of calcium transport proteins in the enterocyte.
- ☐ Humans absorb about 30% of the calcium in food because vitamin C promotes the synthesis of calcium transport proteins in the enterocyte.

Question 11**1 pts**

Which statement best describes the relationship between vitamin C and vitamin E?

- ☐ Vitamin C converts a vitamin E free radical to a fully functional vitamin E molecule; this molecule promotes oxidative stress.
- ☐ Vitamin E spares vitamin C.
- ☐ Vitamin C converts a vitamin E free radical to a fully functional vitamin E molecule; this molecule reduces oxidative stress.
- ☐ Vitamin C converts to vitamin E to its free radical form; this free radical form reduces oxidative stress.

Question 12**1 pts**

By what mechanism does Vitamin A deficiency cause xerophthalmia?

- ☐ By preventing the differentiation of keratin-containing cells into antibody-secreting cells.
- ☐ By reducing the formation of keratin-containing cells.
- ☐ By increasing the differentiation of keratin-containing cells into mucus-secreting cells.
- ☐ By preventing the differentiation of newly-formed epithelial cells into mucus-secreting cells.

Question 13**1 pts**

Which statement best describes the relationship between thyroid stimulating hormone and iodine intake?

- ☐ Low iodine intakes lead to low thyroid hormone levels. As a result, thyroid stimulating hormone is released, but little thyroid hormone is synthesized and the thyroid gland enlarges.

- ☐ There is no relationship between iodine intake and the thyroid stimulating hormone.
- ☐ Normal iodine intakes lead to high thyroid hormone levels. As a result, thyroid stimulating hormone is released and thyroid hormone is synthesized causing the thyroid gland to enlarge.
- ☐ Low iodine intakes lead to low thyroid hormone levels. As a result, only very small amounts of thyroid stimulating hormone are released and the thyroid gland shrinks in size.

Question 14

1 pts

Which is a reaction illustrating single carbon metabolism?

- ☐ The conversion of homocysteine to methionine with the simultaneous conversion of methyl vitamin B6 to vitamin B6.
- ☐ The conversion of homocysteine to methionine with the simultaneous conversion of vitamin B12 to methyl-vitamin B12.
- ☐ The conversion of methionine to homocysteine with the simultaneous conversion of vitamin B12 to methyl-vitamin B12.
- ☐ The conversion of homocysteine to methionine with the simultaneous conversion of methyl vitamin B12 to vitamin B12.

Question 15

1 pts

What is the difference between megaloblastic anemia and pernicious anemia?

- ☐ There is no difference symptomatically between the two anemias, but one is caused by an autoimmune response.
- ☐ Megaloblastic anemia is characterized by abnormal cells called megaloblasts while pernicious anemia is characterized by the presence of macrocytes.
- ☐ There is no difference between the two anemias.
- ☐ Megaloblastic anemia is caused by a deficiency of folate, while pernicious anemia is caused

by a deficiency of vitamin B12.

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