Certified Nutrition Specialist (CNS) Practice Exam (Sample)

Study Guide



Everything you need from our exam experts!

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Questions



- 1. Recommendations for a cancer patient with thickened saliva do not include:
 - A. Avoid carbonated beverages such as Seltzer.
 - B. Suggest using a cool mist humidifier at night.
 - C. Suggest trying Guafenisin to thin oral secretions.
 - D. Sip on liquids throughout the day.
- 2. What is a known effect of Valerian supplementation?
 - A. Helps with mild to moderate depression
 - B. May increase effects of certain anti-seizure medications
 - C. May decrease effectiveness of cytochrome P450 pathway medications
 - D. Increases risk of excessive bleeding
- 3. Which research design focuses on describing and interpreting individual cases?
 - A. Cross-sectional
 - B. Cohort
 - C. Case report
 - D. Ecological
- 4. Which nutrient is essential during preconception to lower the risk of spina bifida?
 - A. Magnesium
 - B. Methylcobalamin
 - C. Iron
 - D. Folate
- 5. Which calcium binding protein is associated with memory improvements in adults?
 - A. Garum armoricum
 - B. Theanine
 - C. Lactium
 - D. Apoaequorin

- 6. What dietary component is known for lowering cholesterol levels in the body?
 - A. Saturated fat
 - B. Soluble fiber
 - C. Simple sugars
 - D. Trans fats
- 7. Which vitamin is critical for male fertility and is related to sperm quality?
 - A. Vitamin E
 - B. Vitamin C
 - C. Vitamin B12
 - D. Vitamin D
- 8. Which hormone, when increased, leads to elevated calcium ion levels in the blood?
 - A. Leptin
 - **B.** Insulin
 - C. Parathyroid hormone
 - D. Ghrelin
- 9. Which vitamin deficiency is associated with nasal dyssebacea?
 - A. Vitamin B12
 - B. Vitamin C
 - C. Riboflavin
 - D. Vitamin D
- 10. What is the recommended height for storing food off the ground to prevent cross-contamination?
 - A. 2 inches
 - B. 4 inches
 - C. 6 inches
 - D. 8 inches

<u>Answers</u>



- 1. A 2. B 3. C 4. D 5. D 6. B 7. D 8. C 9. C 10. C



Explanations



1. Recommendations for a cancer patient with thickened saliva do not include:

- A. Avoid carbonated beverages such as Seltzer.
- B. Suggest using a cool mist humidifier at night.
- C. Suggest trying Guafenisin to thin oral secretions.
- D. Sip on liquids throughout the day.

In the context of managing thickened saliva in cancer patients, it is important to focus on strategies that help improve hydration and facilitate easier swallowing. The recommendation to avoid carbonated beverages, such as Seltzer, arises because carbonation may cause bloating or discomfort, which can be counterproductive for someone struggling with saliva thickness or swallowing difficulties. In contrast, suggesting the use of a cool mist humidifier at night can provide moisture to the air, helping to alleviate dryness in the mouth and throat, which is critical for patients with thickened saliva. Additionally, using Guafenisin, an expectorant, can be a helpful approach to thinning oral secretions and making them easier to manage. Finally, encouraging patients to sip on liquids throughout the day supports overall hydration and keeps saliva more fluid, counteracting the problems associated with thick secretions. These recommendations serve the purpose of ensuring that the patient remains comfortable and well-hydrated, thereby improving their overall quality of life during treatment.

2. What is a known effect of Valerian supplementation?

- A. Helps with mild to moderate depression
- B. May increase effects of certain anti-seizure medications
- C. May decrease effectiveness of cytochrome P450 pathway medications
- D. Increases risk of excessive bleeding

Valerian supplementation is primarily recognized for its potential benefits related to sleep and anxiety rather than affecting seizure medications. The effect noted regarding valerian's interaction with anti-seizure medications is relevant due to its ability to enhance the sedative properties of these drugs. This is significant because patients on anti-seizure medications may experience increased sedation or drowsiness when combined with valerian, which can have safety implications. While valerian has other interactions and potential effects, the specific connection to anti-seizure medications illustrates a notable area of concern within clinical settings. Understanding valerian's role in modulating the effects of these medications is essential for healthcare practitioners, especially when reviewing a patient's full list of supplements and medications, to prevent unwanted outcomes. The other options, such as the impact on cytochrome P450 medications or risks of bleeding, do not have substantial support in the existing literature regarding valerian. Valerian is not typically associated with causing depression nor does it generally increase bleeding risk when compared to conventional medications. This frames option B as the more accurate choice regarding valerian supplementation's known effects.

3. Which research design focuses on describing and interpreting individual cases?

- A. Cross-sectional
- **B.** Cohort
- C. Case report
- D. Ecological

The focus on describing and interpreting individual cases is best captured by a case report. This research design provides a detailed account of individual patients or incidents, allowing for an in-depth exploration of unique circumstances, treatments, and outcomes. Case reports are particularly valuable in recognizing new or rare conditions, documenting unusual responses to treatment, or generating hypotheses for further research. In contrast, cross-sectional studies assess the data at a single point in time across a population, making them unsuitable for detailed individual case analysis. Cohort studies are designed to follow a group over time to understand outcomes related to specific exposures or interventions, rather than focusing on singular cases. Ecological studies analyze data at the population or group level, rather than at the individual level, which also detracts from the specificity that a case report provides. Therefore, the case report design is uniquely positioned to deliver detailed insights into individual situations, making it the optimal answer.

4. Which nutrient is essential during preconception to lower the risk of spina bifida?

- A. Magnesium
- **B.** Methylcobalamin
- C. Iron
- D. Folate

Folate is a crucial nutrient during the preconception period as it plays a significant role in reducing the risk of neural tube defects, including spina bifida, in developing embryos. Folate is essential for DNA synthesis, repair, and methylation, as well as for cell division and growth. Adequate folate intake before conception and in the early stages of pregnancy is vital, as the neural tube, which eventually develops into the brain and spinal cord, forms in the first few weeks after conception, often before a woman may even realize she is pregnant. Studies have shown that women who consume sufficient folate, specifically in the form of supplements or fortified foods, have a significantly lower risk of having a baby with spina bifida and other neural tube defects. As a preventive measure, it is recommended that women planning to conceive take a daily supplement containing folic acid (the synthetic form of folate) at least one month before and during the first trimester of pregnancy. In the context of the other nutrients mentioned, while magnesium, methylcobalamin (a form of vitamin B12), and iron are important for overall health and play various roles in pregnancy and development, they do not have the same well-established link to reducing the risk of

5. Which calcium binding protein is associated with memory improvements in adults?

- A. Garum armoricum
- **B.** Theanine
- C. Lactium
- D. Apoaequorin

Apoaequorin is the calcium binding protein associated with memory improvements in adults. It has gained attention for its potential neuroprotective effects, particularly in enhancing cognitive function. Research suggests that apoaequorin can help regulate calcium levels in neurons, which is crucial for maintaining cellular health and signaling. This regulation is particularly important in the context of memory and learning processes, as calcium plays a significant role in synaptic plasticity—the ability of synapses to strengthen or weaken over time, which is essential for forming memories. While other options may have their own benefits, such as garum armoricum, theanine, and lactium, they are not directly identified with memory enhancement through calcium binding. Garum armoricum is a fermented protein source, theanine is an amino acid commonly found in tea that can promote relaxation without sedation, and lactium is a hydrolyzed casein extract that is often marketed for its calming effects. None of these has the specific role in calcium binding in relation to cognitive functions that apoaequorin has. Thus, apoaequorin's unique function ties it directly to improvements in memory through its interaction with calcium within the nervous system.

6. What dietary component is known for lowering cholesterol levels in the body?

- A. Saturated fat
- B. Soluble fiber
- C. Simple sugars
- D. Trans fats

Soluble fiber is recognized for its beneficial effects in lowering cholesterol levels in the body. When consumed, soluble fiber forms a gel-like substance in the digestive tract, which can bind to cholesterol and bile acids. This binding process helps to reduce the amount of cholesterol absorbed into the bloodstream, ultimately leading to lower levels of LDL (low-density lipoprotein) cholesterol, often referred to as "bad" cholesterol. Sources of soluble fiber include foods such as oats, barley, beans, lentils, fruits like apples and citrus, and vegetables. Regular consumption of these foods can contribute to heart health and may support overall cholesterol management. The other dietary components mentioned do not have the same cholesterol-lowering effects. Saturated fat and trans fats are associated with increased cholesterol levels, particularly LDL cholesterol, and are generally advised to be consumed in moderation or avoided. Simple sugars, on the other hand, can contribute to weight gain and other metabolic issues, which may indirectly affect cholesterol levels but do not offer a direct benefit in lowering them.

- 7. Which vitamin is critical for male fertility and is related to sperm quality?
 - A. Vitamin E
 - **B.** Vitamin C
 - C. Vitamin B12
 - D. Vitamin D

Vitamin D is indeed critical for male fertility and has been associated with improved sperm quality. Research indicates that adequate levels of vitamin D are necessary for the proper functioning of the male reproductive system. This vitamin plays a role in various physiological processes, including the regulation of calcium levels and hormonal balance, which are important for sperm production and maturation. Vitamin D can influence testosterone levels, which are crucial for sperm production; a deficiency may lead to lower testosterone, potentially impacting fertility. Additionally, some studies suggest that vitamin D has antioxidant properties, which can help protect sperm from oxidative stress and improve overall sperm motility and function. While other vitamins like Vitamin E and Vitamin C also contribute to reproductive health and play antioxidant roles, the specific link between vitamin D and male fertility makes it particularly important in the context of sperm quality. Understanding these relationships is vital for recognizing how nutrition can influence reproductive health.

- 8. Which hormone, when increased, leads to elevated calcium ion levels in the blood?
 - A. Leptin
 - **B.** Insulin
 - C. Parathyroid hormone
 - D. Ghrelin

The hormone that leads to elevated calcium ion levels in the blood is parathyroid hormone. This hormone is produced by the parathyroid glands, which are four small glands located in the neck, behind the thyroid gland. When blood calcium levels drop below normal, parathyroid hormone is released to help regulate and increase those levels. Parathyroid hormone acts on the bones, kidneys, and intestines to increase calcium availability in the bloodstream. It stimulates the release of calcium from bones into the bloodstream, promotes reabsorption of calcium in the kidneys to reduce urinary excretion, and enhances the intestinal absorption of calcium through its action on vitamin D. Other hormones listed do not have a direct role in regulating blood calcium levels. For example, leptin is primarily involved in regulating energy balance and appetite, insulin is key to glucose metabolism, and ghrelin is known as the "hunger hormone" that stimulates appetite. Their physiological effects do not include the modulation of calcium levels, hence parathyroid hormone is the clear answer in this context.

- 9. Which vitamin deficiency is associated with nasal dyssebacea?
 - A. Vitamin B12
 - **B.** Vitamin C
 - C. Riboflavin
 - D. Vitamin D

Nasal dyssebacea refers to the condition commonly known as "angular cheilitis," which involves cracks or sores at the corners of the mouth and is often associated with riboflavin (vitamin B2) deficiency. Riboflavin plays a critical role in maintaining healthy mucous membranes, and a deficiency can lead to symptoms affecting the skin and mucous membranes, including those around the mouth and nose. In instances of riboflavin deficiency, the integrity of the skin can be compromised, resulting in symptoms like angular cheilitis. This necessitates the absorption or adequate intake of riboflavin-rich foods or supplements to alleviate the condition. The other vitamins listed do not typically present with nasal dyssebacea as a primary symptom in deficiency states.

- 10. What is the recommended height for storing food off the ground to prevent cross-contamination?
 - A. 2 inches
 - **B.** 4 inches
 - C. 6 inches
 - D. 8 inches

Storing food off the ground at a height of 6 inches is widely recommended as it helps prevent cross-contamination from soil, pests, and moisture that can reside on floors. By ensuring that food items are elevated to at least this height, you reduce the risk of contamination from spills, pests, or debris that may accumulate in the environment. This practice is part of proper food safety protocols to maintain the quality and safety of food items. Additionally, this height is manageable for cleaning staff, allowing for easier maintenance of clean storage areas while promoting good hygiene practices in food storage environments.