

# National Academy of Sports Medicine (NASM) Certified Nutrition Coach (CNC) Practice Exam (Sample)

## Study Guide



**Everything you need from our exam experts!**

**This is a sample study guide. To access the full version with hundreds of questions,**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Don't worry about getting everything right, your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations, and take breaks to retain information better.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning.**

## **7. Use Other Tools**

**Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly — adapt the tips above to fit your pace and learning style. You've got this!**

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## **Questions**

- 1. Which macronutrient is primarily responsible for quick energy during high-intensity exercise?**
  - A. Protein**
  - B. Vitamins**
  - C. Carbohydrates**
  - D. Fats**
- 2. Which term describes a glycerol molecule and three free fatty acids, serving as the main lipid in the food supply?**
  - A. Phospholipids**
  - B. Steroids**
  - C. Triglycerides**
  - D. Cholesterol**
- 3. Should a client exceed fat intake to meet protein needs for body composition goals?**
  - A. Yes, it can be beneficial**
  - B. No, it's inadvisable**
  - C. Only if necessary**
  - D. It depends on the food sources**
- 4. What is the normal range for the extracellular concentration of sodium?**
  - A. 120 to 135 millimolar**
  - B. 136 to 151 millimolar**
  - C. 150 to 160 millimolar**
  - D. 160 to 170 millimolar**
- 5. Which of the following components is part of the 6 dimensions of wellness?**
  - A. Financial**
  - B. Emotional**
  - C. Environmental**
  - D. Spiritual**



- 6. How much total ATP can be created by the complete anaerobic and aerobic metabolism of 1 molecule of glucose?**
- A. 32 molecules**
  - B. 36 molecules**
  - C. 38 molecules**
  - D. 30 molecules**
- 7. Approximately what percentage of daily energy expenditure is due to the thermic effect of activity (TEA)?**
- A. 5-10%**
  - B. 10-15%**
  - C. 15-30%**
  - D. 30-40%**
- 8. Which vitamin is vital for collagen synthesis?**
- A. Vitamin A**
  - B. Vitamin C**
  - C. Vitamin D**
  - D. Vitamin K**
- 9. What relationship exists between smoking and preventable deaths?**
- A. Smoking is correlated with lower rates of preventable death**
  - B. Smoking has no impact on preventable death**
  - C. Smoking is a leading cause of preventable death**
  - D. Smoking is a minor contributor to preventable deaths**
- 10. Which of the following represents a weakness of observational studies?**
- A. Correlation does not equal causation**
  - B. Small number of subjects**
  - C. Lack of peer-reviewed sources**
  - D. Fixed evidence**

## **Answers**

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

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## **Explanations**

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**1. Which macronutrient is primarily responsible for quick energy during high-intensity exercise?**

- A. Protein**
- B. Vitamins**
- C. Carbohydrates**
- D. Fats**

Carbohydrates are the primary macronutrient responsible for providing quick energy during high-intensity exercise. This is because carbohydrates are rapidly broken down into glucose, which the body can readily use to fuel muscles during intense physical activity. When engaging in high-intensity exercises, such as sprinting or heavy lifting, the body's demand for energy increases sharply. Carbohydrates provide a swift source of energy: they can be stored in the muscles and liver as glycogen, which can be quickly converted back into glucose to be utilized immediately for energy. Additionally, the anaerobic pathways used for quick energy production rely heavily on glucose derived from carbohydrates, making them particularly effective during short bursts of intense activity. In contrast, while protein and fats serve important roles in the body, they are not the primary energy sources during high-intensity exercise. Protein is primarily used for tissue repair and recovery rather than immediate energy production, while fats are used predominantly during lower-intensity, longer-duration exercise, as they are metabolized at a slower rate compared to carbohydrates. Vitamins, while essential for various bodily functions, do not provide energy themselves. Thus, carbohydrates are clearly the key macronutrient for quick energy needs during high-intensity workouts.

**2. Which term describes a glycerol molecule and three free fatty acids, serving as the main lipid in the food supply?**

- A. Phospholipids**
- B. Steroids**
- C. Triglycerides**
- D. Cholesterol**

The term that describes a glycerol molecule bonded to three free fatty acids is triglycerides. Triglycerides are the main form of fat found in both the food supply and the human body, and they serve as a major source of energy. The structure of triglycerides consists of a glycerol backbone to which three fatty acid chains are attached through ester bonds. This structure is key as triglycerides can be stored in adipose tissue for energy reserves or transported in the bloodstream to provide energy to cells. They play a crucial role in metabolism and overall health, influencing everything from energy levels to hormone production. In contrast, while phospholipids are also a type of lipid, they consist of two fatty acids and a phosphate group and are important in cell membrane structure but do not serve as the main dietary lipid. Steroids are a class of lipids that include cholesterol and hormones, characterized by a four-ring carbon structure, and do not fit the description given in the question. Cholesterol refers specifically to cholesterol, which is a type of steroid that is also found in bodily membranes and is a precursor for various hormones but is not comprised of a glycerol and three fatty acids.

**3. Should a client exceed fat intake to meet protein needs for body composition goals?**

- A. Yes, it can be beneficial**
- B. No, it's inadvisable**
- C. Only if necessary**
- D. It depends on the food sources**

Exceeding fat intake to meet protein needs is generally inadvisable for clients focused on body composition goals. The primary reason for this is that each macronutrient serves specific functions in the body, and an imbalance can hinder progress. A high-fat diet can contribute to excessive calorie consumption, which may ultimately be counterproductive for those aiming to lose fat or gain lean muscle. For optimal body composition, protein intake should be prioritized to support muscle repair and growth, particularly for those engaged in regular resistance or endurance training. It's essential to meet protein needs adequately without compromising overall macronutrient balance. Additionally, while fats are a necessary part of a healthy diet, they are energy-dense, and consuming them in excess can lead to unwanted weight gain. Ultimately, focusing on whole food sources, including lean proteins and maintaining a balanced intake of carbohydrates and fats, will benefit body composition pursuits more than adjusting fat intake excessively to meet protein needs.

**4. What is the normal range for the extracellular concentration of sodium?**

- A. 120 to 135 millimolar**
- B. 136 to 151 millimolar**
- C. 150 to 160 millimolar**
- D. 160 to 170 millimolar**

The normal range for the extracellular concentration of sodium is approximately 136 to 145 millimolar. This range is crucial for various physiological functions, including maintaining fluid balance, nerve transmission, and muscle contraction. Sodium plays a vital role in regulating osmotic pressure and hydration in the body. The choice of 136 to 151 millimolar may include the upper limit of normal, as some references can extend slightly beyond the classic range of 136 to 145 millimolar but still generally recognizes 145 millimolar as the upper threshold for physiological normality. Therefore, while it might be a slightly broader range, it aligns with physiological considerations. Understanding this concentration is important for analyzing conditions like hyponatremia or hypernatremia, both of which have significant health implications. The options that suggest lower or considerably higher ranges do not reflect the accepted normal physiological concentrations of sodium in extracellular fluid.

**5. Which of the following components is part of the 6 dimensions of wellness?**

- A. Financial**
- B. Emotional**
- C. Environmental**
- D. Spiritual**

The concept of the six dimensions of wellness includes various aspects that contribute to an individual's overall well-being. One of these dimensions is emotional wellness, which focuses on understanding and managing feelings, coping with stress, and developing resilience. Emotional well-being is crucial because it allows individuals to face life's challenges with a positive attitude, maintain meaningful relationships, and make informed choices that enhance their quality of life. While other dimensions like financial, environmental, and spiritual wellness are also important, emotional wellness specifically addresses the awareness, acceptance, and management of one's emotions, which is fundamental to achieving holistic health and wellness. This dimension emphasizes the importance of mental health, emotional balance, and psychological resilience, making it a vital component of the overall wellness framework.

**6. How much total ATP can be created by the complete anaerobic and aerobic metabolism of 1 molecule of glucose?**

- A. 32 molecules**
- B. 36 molecules**
- C. 38 molecules**
- D. 30 molecules**

The total ATP generated from the complete metabolism of one molecule of glucose through both anaerobic and aerobic pathways can be understood by examining the two processes involved: glycolysis (anaerobic) and cellular respiration (aerobic). In anaerobic metabolism, glycolysis breaks down glucose into pyruvate, generating 2 ATP molecules. If pyruvate is metabolized anaerobically through fermentation, such as in muscle cells during intense exercise, it produces lactic acid without additional ATP yield. In aerobic metabolism, once glycolysis has occurred and if oxygen is available, pyruvate is converted into Acetyl-CoA, entering the Krebs Cycle (also known as the Citric Acid Cycle). In this cycle, one glucose molecule results in a significant yield of ATP, primarily through the electron transport chain, where a total of about 30-32 ATP molecules (depending on various factors like the efficiency of the system and the shuttle mechanisms used to transport electrons) can be produced. Adding the ATP from glycolysis (2) to the ATP produced from the Krebs cycle and oxidative phosphorylation (which can range from 30-32), the total for aerobic metabolism can reach up to 36 molecules of ATP. Thus, considering all aspects of aerobic metabolism

**7. Approximately what percentage of daily energy expenditure is due to the thermic effect of activity (TEA)?**

- A. 5-10%**
- B. 10-15%**
- C. 15-30%**
- D. 30-40%**

The thermic effect of activity (TEA) refers to the energy expended during any physical activity, including exercise and movement throughout the day. Generally, TEA accounts for a significant portion of total daily energy expenditure. It is influenced by factors such as the intensity and duration of physical activity, as well as an individual's overall lifestyle. Choosing the range of 15-30% as the appropriate percentage for TEA aligns well with research on energy expenditure. This percentage indicates that TEA typically contributes a substantial amount to total daily energy expenditure, especially in active individuals or those who incorporate regular, vigorous exercise into their routines. This understanding is critical for nutrition coaching, as it emphasizes the importance of physical activity in managing energy balance and achieving fitness goals. It also supports strategies that focus on increasing activity levels to enhance overall energy expenditure and improve health outcomes.

**8. Which vitamin is vital for collagen synthesis?**

- A. Vitamin A**
- B. Vitamin C**
- C. Vitamin D**
- D. Vitamin K**

Vitamin C is essential for collagen synthesis because it plays a critical role as a cofactor in the enzymatic reactions that help stabilize and cross-link collagen molecules, which are vital for the structural integrity of connective tissues, skin, and various other systems in the body. Collagen is the most abundant protein in the human body, and its production relies significantly on the presence of vitamin C to ensure that the collagen produced has the proper structure and functionality. In addition to this, vitamin C has antioxidant properties that help protect cells from oxidative stress, further supporting overall health as collagen supports skin, joint, and tendon integrity. The synthesis of collagen is not just important for aesthetic purposes; it is also crucial for healing wounds and maintaining healthy blood vessels, cartilage, and bones. While other vitamins such as A, D, and K have important roles in other bodily functions, they do not directly influence the synthesis of collagen in the way that vitamin C does.



**9. What relationship exists between smoking and preventable deaths?**

- A. Smoking is correlated with lower rates of preventable death**
- B. Smoking has no impact on preventable death**
- C. Smoking is a leading cause of preventable death**
- D. Smoking is a minor contributor to preventable deaths**

Smoking is recognized as a leading cause of preventable death, which stems from its association with numerous serious health conditions. Research has established that smoking significantly increases the risk of developing diseases such as lung cancer, cardiovascular diseases, respiratory diseases, and various other health problems. Because of these well-documented health risks, smoking contributes substantially to overall mortality rates, thus making it a major public health issue. The classification of smoking as a leading cause of preventable death emphasizes the importance of smoking cessation initiatives and public health campaigns aimed at reducing tobacco use. Understanding this relationship is crucial for health professionals and nutrition coaches, as they often work with clients to improve their overall health and develop strategies to mitigate the impact of lifestyle choices on longevity and wellbeing.

**10. Which of the following represents a weakness of observational studies?**

- A. Correlation does not equal causation**
- B. Small number of subjects**
- C. Lack of peer-reviewed sources**
- D. Fixed evidence**

The selected option highlights a fundamental issue in observational studies: correlation does not imply causation. Observational studies can identify relationships between variables and demonstrate trends; however, they cannot definitively determine if one variable causes changes in another. For instance, if an observational study finds a correlation between increased fruit consumption and reduced heart disease risk, it cannot conclude that eating more fruit directly prevents heart disease. Other confounding factors, such as overall lifestyle choices or genetic predispositions, could be responsible for the observed relationship. This limitation is critical in nutrition and health research, where establishing cause-and-effect relationships is vital for effective interventions and recommendations. Recognizing this weakness helps researchers and practitioners remain cautious in their interpretations of data and highlights the importance of designing future studies, particularly randomized controlled trials, to test causal hypotheses more rigorously. The other choices may describe specific limitations that can occur in singular cases, but the issue of correlation versus causation is a broad and well-recognized weakness that applies widely to observational research.

# Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://nasm-certifiednutritioncoach.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**