

# Western Governors University (WGU) NURS2001 D440 Health and Wellness Through Nutritional Science Practice Exam (Sample)

## Study Guide



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

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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. 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.**

## **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. 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!**

## Questions

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- 1. Iron deficiency typically leads to which type of anemia?**
  - A. Microcytic anemia**
  - B. Macrocytic anemia**
  - C. Hemolytic anemia**
  - D. Normocytic anemia**
  
- 2. Which of the following is a common symptom of iron deficiency?**
  - A. Anemia**
  - B. Nausea**
  - C. Hypertension**
  - D. Headache**
  
- 3. Which of the following is NOT a source of vitamin D?**
  - A. Salt**
  - B. Sunlight**
  - C. Fatty fish**
  - D. Fortified milk**
  
- 4. Among the following, which is also a good dietary source of iron?**
  - A. Liver**
  - B. Banana**
  - C. Carrot**
  - D. Yogurt**
  
- 5. Which should be avoided on a UTI diet?**
  - A. Coffee and smoking**
  - B. Berries and yogurt**
  - C. Water**
  - D. Milk**

- 6. Which nutrient plays a key role in calcium absorption and bone mineralization?**
- A. Vitamin C**
  - B. Vitamin B12**
  - C. Vitamin D**
  - D. Iron**
- 7. What does energy density measure?**
- A. Grams of protein per serving**
  - B. Sugar content per serving**
  - C. Sodium content per serving**
  - D. Calories per gram of food**
- 8. A lacto-ovo vegetarian diet includes which foods?**
- A. Dairy and eggs**
  - B. Dairy only**
  - C. Eggs only**
  - D. Meat and dairy**
- 9. Why is C-reactive protein (CRP) relevant in nutrition assessment?**
- A. CRP is used to evaluate hydration status**
  - B. CRP is an inflammation biomarker linked to cardiovascular risk; diet can influence inflammatory status**
  - C. CRP measures muscle mass**
  - D. CRP is a measure of vitamin status**
- 10. Vitamin C deficiency causes which condition?**
- A. Scurvy**
  - B. Rickets**
  - C. Pellagra**
  - D. Beriberi**

## Answers

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

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## **Explanations**

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### 1. Iron deficiency typically leads to which type of anemia?

- A. Microcytic anemia**
- B. Macrocytic anemia**
- C. Hemolytic anemia**
- D. Normocytic anemia**

Iron is essential for making hemoglobin, so when iron stores are low, red blood cells are produced with less hemoglobin and less overall hemoglobin content. This leads to smaller-than-normal red blood cells (microcytosis) and pale cells (hypochromia) because each cell has less hemoglobin. As iron deficiency develops, the mean corpuscular volume (MCV) drops, producing microcytic anemia—the typical pattern you’d expect. Early in the process you might see normal-sized cells, but microcytosis becomes evident as the deficiency progresses. Macrocytic anemia would come from problems with DNA synthesis (like B12 or folate deficiency), hemolytic anemia from increased destruction of red cells, and normocytic anemia from other causes such as acute blood loss or anemia of chronic disease, none of which align with the classic iron-deficiency pattern.

### 2. Which of the following is a common symptom of iron deficiency?

- A. Anemia**
- B. Nausea**
- C. Hypertension**
- D. Headache**

Iron deficiency directly impairs hemoglobin synthesis, so the most consistent and common symptom is anemia. When there isn’t enough iron, red blood cells become smaller and paler (microcytic, hypochromic) and carry less oxygen to tissues. That reduced oxygen delivery manifests as fatigue, weakness, and pallor, which are hallmark signs of anemia. Other options aren’t as directly tied to iron lack: nausea isn’t a typical feature of iron deficiency itself, hypertension isn’t caused by low iron, and while headaches can occur with anemia, they’re not as specific or common as the overall anemia picture. The key takeaway is that iron deficiency most predictably presents as anemia due to diminished hemoglobin and oxygen transport.

### 3. Which of the following is NOT a source of vitamin D?

- A. Salt**
- B. Sunlight**
- C. Fatty fish**
- D. Fortified milk**

Vitamin D comes from two main avenues: your skin can synthesize it when exposed to sunlight, and certain foods provide it. Fatty fish is one of the natural dietary sources, and fortified milk (and other fortified foods) help people meet vitamin D needs. Salt, however, is not a source of vitamin D; it mainly supplies sodium and chloride, and sometimes iodine, but not the vitamin itself. So salt would not contribute to vitamin D status, whereas sun exposure and the listed dietary sources do.

**4. Among the following, which is also a good dietary source of iron?**

- A. Liver**
- B. Banana**
- C. Carrot**
- D. Yogurt**

Heme iron from animal foods is absorbed much more efficiently than non-heme iron from plants, so foods that provide heme iron are strong dietary iron sources. Liver supplies a high amount of heme iron, making it a standout choice for boosting iron intake. The other items contain only small amounts of iron, and yogurt isn't a major iron contributor; dairy calcium can even slow iron absorption when eaten with iron-rich foods. Bananas and carrots offer only modest amounts of iron. For iron absorption from plant sources, pairing with vitamin C helps, but among these choices, liver is the best source of dietary iron.

**5. Which should be avoided on a UTI diet?**

- A. Coffee and smoking**
- B. Berries and yogurt**
- C. Water**
- D. Milk**

Bladder irritation is a key factor to manage during a urinary tract infection, so substances that irritate the bladder should be avoided to reduce symptoms and support healing. Coffee contains caffeine and other compounds that stimulate the bladder and can increase urgency, frequency, and discomfort. Smoking introduces toxins and irritants that inflame the urinary tract lining and can slow healing, making symptoms feel worse. Avoiding these helps lessen irritation and supports recovery. Hydration with water is encouraged to help flush bacteria from the urinary tract, and dairy products like milk and yogurt are generally tolerated and can provide nutrients; yogurt even offers probiotics that may support healthy flora. Berries are not typically restricted and can be included unless they irritate an individual's symptoms (and cranberry products are often discussed for their potential UTI-preventive benefits).

**6. Which nutrient plays a key role in calcium absorption and bone mineralization?**

- A. Vitamin C**
- B. Vitamin B12**
- C. Vitamin D**
- D. Iron**

Vitamin D enables calcium absorption and bone mineralization. It increases the intestine's ability to absorb calcium (and phosphate) by promoting the production of calcium-binding proteins in enterocytes, which helps calcium move from the gut into the bloodstream. With more calcium available in the blood, bone mineralization proceeds more effectively as calcium and phosphate are deposited into the bone matrix. Vitamin D also supports bone health by acting on bone cells to promote mineral deposition and by helping regulate calcium levels in cooperation with parathyroid hormone. When vitamin D is deficient, calcium absorption falls, serum calcium drops, and bones become weaker, leading to issues like rickets in children or osteomalacia in adults. Vitamin D can come from sun exposure, foods such as fatty fish and fortified products, and supplements. Other nutrients have different roles. Vitamin C is important for collagen synthesis in the bone matrix, vitamin B12 supports red blood cell formation and nerve function, and iron is essential for oxygen transport and other metabolic processes; none directly regulate calcium absorption and bone mineralization as vitamin D does.

**7. What does energy density measure?**

- A. Grams of protein per serving**
- B. Sugar content per serving**
- C. Sodium content per serving**
- D. Calories per gram of food**

Energy density is about how much energy, in calories, is packed into a given weight of food. It's expressed as calories per gram, which lets you compare how calorically rich foods are for the same portion size. Foods with high energy density deliver many calories in a small amount (think nuts or fried items), while foods with low energy density provide fewer calories for the same weight (like most vegetables and fruits) because they have more water and fiber. The essential idea is calories per unit weight, not the amount of any single nutrient. Grams of protein per serving, sugar per serving, and sodium per serving describe specific nutrients, not the overall energy available per gram of food.

**8. A lacto-ovo vegetarian diet includes which foods?**

- A. Dairy and eggs**
- B. Dairy only**
- C. Eggs only**
- D. Meat and dairy**

A lacto-ovo vegetarian diet includes dairy products and eggs, but excludes meat, poultry, and fish. That means foods like milk, cheese, yogurt, and eggs are allowed. The option that lists dairy and eggs together is the best description. Dairy-only describes a lacto-vegetarian pattern (no eggs), eggs-only describes an ovo-vegetarian pattern (no dairy), and meat with dairy would not fit a vegetarian diet at all.

**9. Why is C-reactive protein (CRP) relevant in nutrition assessment?**

- A. CRP is used to evaluate hydration status
- B. CRP is an inflammation biomarker linked to cardiovascular risk; diet can influence inflammatory status**
- C. CRP measures muscle mass
- D. CRP is a measure of vitamin status

CRP reflects systemic inflammation, which is important in nutrition assessment because even subtle, chronic inflammation can alter how nutrients are metabolized and how other biochemical markers are interpreted. This makes CRP a useful tool to gauge inflammatory status and helps clinicians distinguish whether low protein markers or iron markers reflect true nutrient deficiency or an inflammatory state. Inflammation is itself linked to higher cardiovascular risk, and diet can modulate inflammation: anti-inflammatory dietary patterns (for example, those rich in omega-3s, soluble fiber, antioxidants, and overall Mediterranean-style foods) tend to lower CRP, while diets high in refined sugars, trans fats, and processed foods may raise it. So CRP is relevant because it ties dietary patterns to inflammation and cardiovascular risk, and it guides how to interpret nutritional biomarkers in the context of inflammatory status.

**10. Vitamin C deficiency causes which condition?**

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

Vitamin C is essential for collagen synthesis, so a deficiency disrupts collagen formation and weakens connective tissue. Without adequate ascorbate, you see gum disease, easy bruising, poor wound healing, and skin and bone changes characteristic of scurvy. Rickets, pellagra, and beriberi are caused by deficiencies of vitamin D, niacin, and thiamine, respectively, not vitamin C. Therefore, the condition produced by vitamin C deficiency is scurvy.

## 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://wgu-nurs2001d440.examzify.com>**

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

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