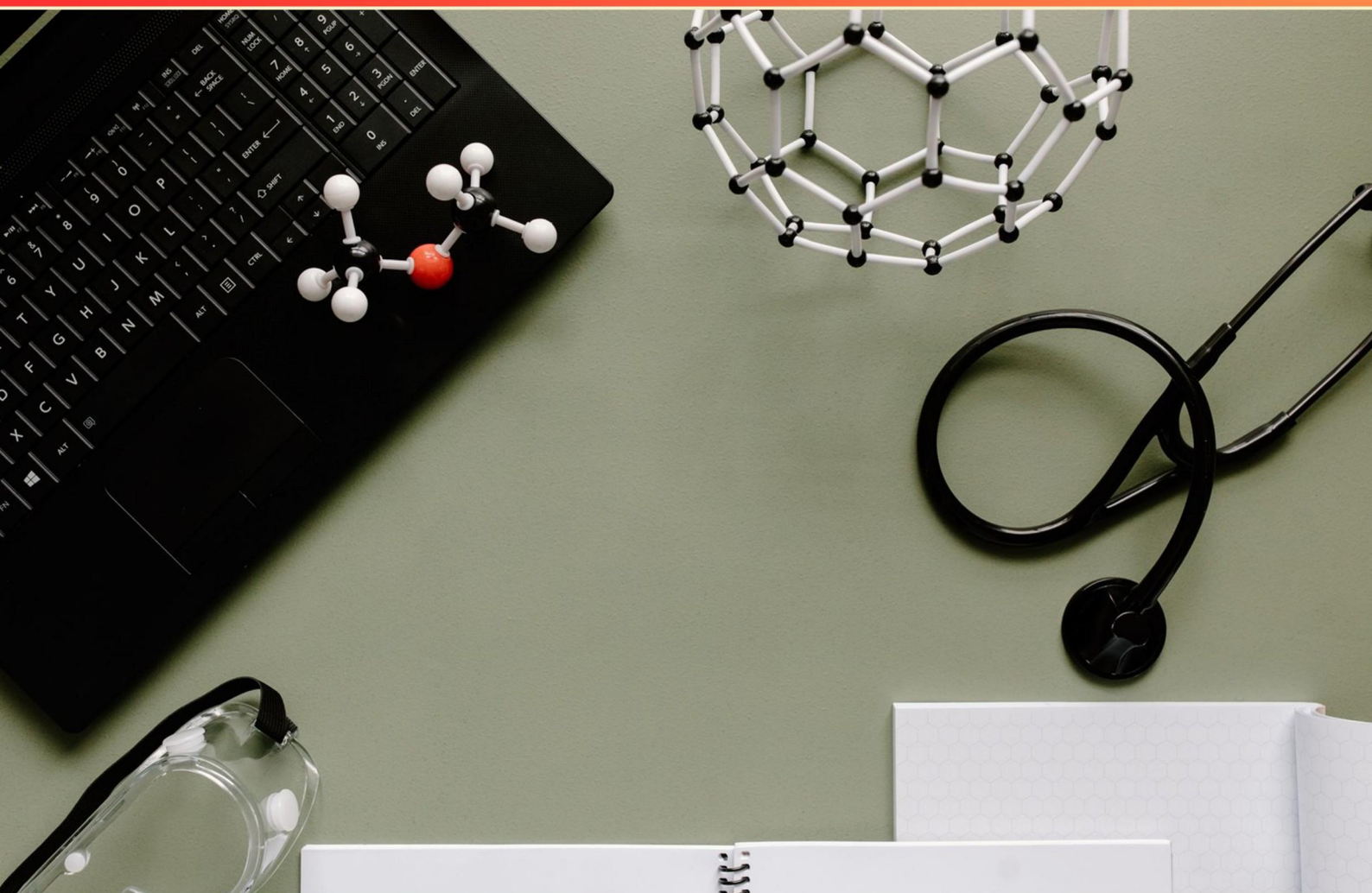


NBRC PHARMACOLOGY PRACTICE EXAM (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

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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. When are platelets administered to a patient?**
 - A. When infection is suspected
 - B. When active bleeding is suspected
 - C. When preparing for surgery
 - D. When the patient has low hemoglobin levels
- 2. What type of medication is Etomidate?**
 - A. Sedative that decreases blood pressure slightly
 - B. Anesthetizing agent
 - C. Vasodilator
 - D. Opioid analgesic
- 3. Which medication is classified as a calcium channel blocker?**
 - A. Propranolol
 - B. Warfarin
 - C. Nicardipine
 - D. Lidocaine
- 4. What effect does nifedipine have on blood pressure?**
 - A. Increases BP
 - B. Lowers BP
 - C. Has no effect
 - D. Stabilizes BP
- 5. What action does nitroglycerin perform in the body?**
 - A. Increases heart contractility
 - B. Relaxes smooth muscle tissue
 - C. Increases blood viscosity
 - D. Decreases respiratory rate
- 6. What is the primary use of lidocaine in cardiac care?**
 - A. To increase heart rate
 - B. As an antidiuretic
 - C. To decrease heart rate and serve as a vasodilator
 - D. To enhance blood coagulation

- 7. What medication is commonly used to treat thrush?**
- A. Fluconazole
 - B. Nystatin
 - C. Amphotericin B
 - D. Clotrimazole
- 8. What action do leukotriene receptor antagonists perform?**
- A. Stimulate bronchoconstriction
 - B. Promote inflammation
 - C. Block the receptors for leukotrienes
 - D. Increase mucus viscosity
- 9. What drug is often used for the management of chronic pain, especially long-term therapy?**
- A. Ibuprofen
 - B. Aspirin
 - C. Fentanyl
 - D. Acetaminophen
- 10. What is the generic name of the drug known to treat central sleep apnea?**
- A. Albuterol
 - B. Doxapram
 - C. Prednisone
 - D. Salmeterol

Answers

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

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Explanations

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1. When are platelets administered to a patient?

- A. When infection is suspected
- B. When active bleeding is suspected**
- C. When preparing for surgery
- D. When the patient has low hemoglobin levels

Platelet administration is specifically indicated in scenarios where there is active bleeding. Platelets are crucial components of the blood that help form clots and prevent or control bleeding. In cases of active bleeding, especially due to a low platelet count or dysfunction in platelet activity, transfusing platelets becomes essential to help restore hemostatic function and manage the bleeding effectively. For instance, patients undergoing treatments such as chemotherapy may experience thrombocytopenia (a low platelet count), leading to an increased risk of bleeding. When these patients have active bleeding, administering platelets helps to quickly increase the platelet levels in the bloodstream, making it easier for the body to form clots and stop the bleeding. While infection, preparation for surgery, and low hemoglobin levels may all warrant attention and may involve different types of blood products or treatments, they are not specific indications for platelet transfusion as directly as active bleeding is. Therefore, transfusing platelets is primarily focused on the immediate need to control and manage bleeding episodes effectively.

2. What type of medication is Etomidate?

- A. Sedative that decreases blood pressure slightly**
- B. Anesthetizing agent
- C. Vasodilator
- D. Opioid analgesic

Etomidate is classified as an anesthetic agent, specifically designed for induction during procedural sedation or general anesthesia. It works by enhancing the activity of gamma-aminobutyric acid (GABA) at the GABA-A receptor, which leads to sedation and hypnosis. While it is true that Etomidate can have minimal cardiovascular effects and does not typically lower blood pressure significantly, its primary function is as an anesthetic rather than a sedative agent in the context of general use. It is particularly advantageous in patients where maintaining hemodynamic stability is critical, as it typically preserves cardiovascular function better than many other anesthetics. In contrast, sedatives that primarily act to decrease blood pressure would include medications that alter cardiovascular dynamics more significantly than Etomidate does. The other options, such as vasodilators and opioid analgesics, do not accurately describe Etomidate's properties, as they serve entirely different therapeutic functions and mechanisms of action.

3. Which medication is classified as a calcium channel blocker?

- A. Propranolol
- B. Warfarin
- C. Nicardipine**
- D. Lidocaine

Nicardipine is classified as a calcium channel blocker, which is a type of medication that inhibits the influx of calcium ions into cardiac and smooth muscle cells through voltage-gated calcium channels. This action leads to relaxation of vascular smooth muscle, resulting in vasodilation and a decrease in blood pressure. Calcium channel blockers are primarily used in the management of hypertension, angina, and certain types of arrhythmias. The mechanism of action of nicardipine focuses on reducing the contractility of the heart and the systemic vascular resistance. This makes it effective for treating conditions like high blood pressure or angina, as it lowers the heart's workload and oxygen demand. The other medications listed do not belong to this category. Propranolol is a non-selective beta-adrenergic blocker, used primarily for hypertension and anxiety. Warfarin is an anticoagulant that works by inhibiting vitamin K-dependent clotting factors in the liver. Lidocaine is an antiarrhythmic agent that stabilizes the cardiac membrane, primarily used for ventricular arrhythmias. Each of these medications operates through different mechanisms and is indicated for different clinical scenarios, underscoring the specificity of nicardipine as a calcium channel blocker.

4. What effect does nipride have on blood pressure?

- A. Increases BP
- B. Lowers BP**
- C. Has no effect
- D. Stabilizes BP

Nipride, also known as sodium nitroprusside, is a potent vasodilator used primarily in treating acute hypertensive emergencies. It works by relaxing the smooth muscle in blood vessels, which leads to a decrease in systemic vascular resistance and a resultant lowering of blood pressure. By dilating both arterial and venous blood vessels, Nipride reduces preload and afterload on the heart, making it particularly effective for acute management of conditions like congestive heart failure and severe hypertension. The mechanism of action primarily involves the release of nitric oxide, which enhances the production of cyclic guanosine monophosphate (cGMP) in vascular smooth muscle cells, leading to relaxation of those muscles and subsequent vasodilation. This physiological response is significant in critical care settings where rapid blood pressure control is necessary. While other medications may have various effects on blood pressure, Nipride's specific properties and intended use clearly establish its role as a potent agent for lowering blood pressure in acute scenarios.

5. What action does nitroglycerin perform in the body?

- A. Increases heart contractility
- B. Relaxes smooth muscle tissue**
- C. Increases blood viscosity
- D. Decreases respiratory rate

Nitroglycerin primarily acts as a vasodilator, meaning it relaxes smooth muscle tissue in blood vessels. When nitroglycerin is administered, it is converted to nitric oxide (NO) in the body, which initiates a cascade of events leading to the relaxation and dilation of the smooth muscles lining the blood vessels. This action helps to reduce the workload on the heart by decreasing the amount of oxygen required by the heart muscle, making it especially effective in the treatment of angina pectoris. The relaxation of smooth muscle tissue leads to the dilation of both arteries and veins. This results in a decrease in venous return to the heart and lowered blood pressure, which alleviates chest pain. The primary therapeutic effect of nitroglycerin is its ability to improve blood flow and reduce myocardial oxygen demand through this mechanism of smooth muscle relaxation. In contrast, the other options involve actions that are not characteristic of nitroglycerin. For example, increasing heart contractility is more associated with medications like inotropes, while increasing blood viscosity and decreasing respiratory rate do not relate to the pharmacological effects of nitroglycerin. Thus, the ability of nitroglycerin to relax smooth muscle tissue is what makes it an effective treatment.

6. What is the primary use of lidocaine in cardiac care?

- A. To increase heart rate
- B. As an antidiuretic
- C. To decrease heart rate and serve as a vasodilator**
- D. To enhance blood coagulation

Lidocaine is primarily used in cardiac care as an antiarrhythmic agent. Its main purpose is to stabilize cardiac membrane excitability, specifically in cases of ventricular arrhythmias. When administered, lidocaine works by blocking sodium channels during the cardiac action potential, which helps to reduce the occurrence and severity of abnormal electrical activity in the heart. This action can indirectly lead to a decrease in heart rate, particularly in conditions where there is rapid ventricular activation. In terms of vasodilation, while lidocaine does not have a primary effect as a vasodilator, its ability to help restore normal heart rhythm can contribute to improved cardiac output and perfusion, indirectly affecting vascular resistance. This function supports overall cardiovascular health, particularly in emergency care settings, such as during or after a myocardial infarction, where rhythm stabilization is critical. The other choices do not accurately represent the primary action and purpose of lidocaine in cardiac care. It is not used to increase heart rate, serve as an antidiuretic, or enhance blood coagulation. Therefore, the focus on both heart rate regulation and the indirect effects on vascular response aligns with the correct choice.

7. What medication is commonly used to treat thrush?

- A. Fluconazole
- B. Nystatin**
- C. Amphotericin B
- D. Clotrimazole

Nystatin is a medication specifically used to treat oral thrush, which is a fungal infection caused by Candida species, typically Candida albicans. It works by binding to ergosterol, a vital component of fungal cell membranes, leading to cell death. Nystatin is particularly effective for topical fungal infections, including those in the mouth, because it is not absorbed into the bloodstream when administered orally, making it safe for treating localized infections like thrush. Fluconazole is an antifungal that is effective against a variety of fungal infections, including systemic infections and other forms of candidiasis. However, it is usually used in cases where nystatin is ineffective or in systemic infections. Amphotericin B is a potent antifungal used primarily for severe systemic fungal infections and is not typically indicated for localized infections such as thrush due to its potential for severe side effects and toxicity. Clotrimazole is an antifungal agent that can be used for oral candidiasis but is less commonly prescribed than nystatin for thrush. It is often used in topical formulations for skin infections. Overall, nystatin remains the first-line treatment for oral thrush due to its safety profile and direct effectiveness at the site of infection.

8. What action do leukotriene receptor antagonists perform?

- A. Stimulate bronchoconstriction
- B. Promote inflammation
- C. Block the receptors for leukotrienes**
- D. Increase mucus viscosity

Leukotriene receptor antagonists function by blocking the receptors for leukotrienes, which are inflammatory mediators that contribute to asthma and allergic rhinitis. Leukotrienes can cause bronchoconstriction, increase mucus production, and promote inflammation in the airways. By inhibiting the action of these mediators at their receptors, leukotriene receptor antagonists help to reduce airway inflammation and relieve bronchoconstriction, leading to improved breathing in patients with asthma or allergic conditions. This mechanism is fundamental to their therapeutic role, as it directly opposes the negative effects that leukotrienes have on respiratory function.

9. What drug is often used for the management of chronic pain, especially long-term therapy?

- A. Ibuprofen
- B. Aspirin
- C. Fentanyl**
- D. Acetaminophen

Fentanyl is a potent synthetic opioid that is frequently used in the management of chronic pain, particularly in patients requiring long-term pain relief. Its effectiveness comes from its strong analgesic properties, making it suitable for severe or persistent pain conditions. Fentanyl can be administered via various routes, including transdermal patches and intravenous formulations, allowing for flexible and consistent pain management. This drug is particularly beneficial in chronic pain scenarios as it not only provides immediate relief but also maintains effective pain control over an extended period, which is crucial in managing conditions that require ongoing therapy. In contrast, while ibuprofen, aspirin, and acetaminophen may be used for pain relief, they are generally more suitable for mild to moderate pain or for short-term use. Additionally, their mechanisms and potential side effects differ significantly from those of fentanyl, which is specifically designed for more severe pain management.

10. What is the generic name of the drug known to treat central sleep apnea?

- A. Albuterol
- B. Doxapram**
- C. Prednisone
- D. Salmeterol

The drug that is most appropriate for treating central sleep apnea from the provided list is doxapram. Doxapram is a central respiratory stimulant that acts on the chemoreceptors in the carotid body and the brainstem to stimulate respiration, making it useful in managing conditions like central sleep apnea where there is a disruption in the normal respiratory drive. Albuterol is primarily a bronchodilator used to treat conditions such as asthma and chronic obstructive pulmonary disease (COPD) and does not directly address the central causes of sleep apnea. Prednisone is a corticosteroid that is often prescribed to reduce inflammation but is not specifically indicated for the treatment of sleep apnea. Salmeterol, like albuterol, is a long-acting beta-agonist used for bronchospasm relief. It helps with airway management in respiratory conditions, but again, it does not have a role in treating central sleep apnea. Therefore, doxapram stands out as the only option that effectively addresses the underlying respiratory drive issues seen in central sleep apnea.

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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.

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

<https://nbcpharmacology.examzify.com>

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

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