

Pharmacology and Intravenous Therapies 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

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- 1. What is the drop rate in gtt/min for administering 1000 mL of 5% dextrose in water over 8 hours with a drop factor of 15 gtt/mL?**
 - A. 30
 - B. 31
 - C. 32
 - D. 33
- 2. Which side effect should the nurse inform a client taking baclofen (Lioresal) for muscle spasms may occur?**
 - A. Increased heart rate
 - B. Nasal congestion
 - C. Drowsiness
 - D. Blurred vision
- 3. What is the main purpose of using oxytocin (Pitocin) during labor?**
 - A. To relieve pain
 - B. To induce labor
 - C. To enhance fetal development
 - D. To manage post-delivery bleeding
- 4. After removing an IV line, what should the nurse obtain to apply pressure to the site?**
 - A. Alcohol swabs
 - B. Sterile 2 x 2 gauze
 - C. Bandaids
 - D. Non-sterile cloth
- 5. What laboratory value is important to monitor when a client is receiving furosemide?**
 - A. Sodium
 - B. Potassium
 - C. Calcium
 - D. Magnesium

6. What dosing advice should be given to a client taking zidovudine (AZT) for HIV infection?

- A. Take doses only when experiencing symptoms**
- B. Administer doses as needed**
- C. Space the doses evenly around the clock**
- D. Combine doses for convenience**

7. Why is it important to monitor a client for akathisia when taking antipsychotic medications?

- A. It can lead to dangerous weight gain**
- B. It is a common withdrawal symptom**
- C. It affects the client's ability to complete daily tasks**
- D. It may indicate an increased risk for suicidal thoughts**

8. In which situations are vasodilators typically administered?

- A. To treat skin infections**
- B. To manage hypertension and heart failure**
- C. To prevent blood clots**
- D. To relieve nausea and vomiting**

9. What symptom should a client taking erythromycin report to their healthcare provider?

- A. Nausea**
- B. Headache**
- C. Persistent diarrhea**
- D. Fatigue**

10. What does the term 'bioavailability' refer to in pharmacology?

- A. The degree and rate at which a drug is excreted**
- B. The extent to which a drug reaches systemic circulation**
- C. The duration of a drug's therapeutic effect**
- D. The speed at which a drug is metabolized**

Answers

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

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Explanations

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1. What is the drop rate in gtt/min for administering 1000 mL of 5% dextrose in water over 8 hours with a drop factor of 15 gtt/mL?

- A. 30
- B. 31**
- C. 32
- D. 33

To determine the drop rate in gtt/min for administering 1000 mL of 5% dextrose in water over 8 hours, you must first convert the total volume and duration into a rate applicable to the drop factor provided. 1. Start by calculating the total volume to be infused, which is 1000 mL. 2. Convert the infusion time from hours to minutes. Since there are 60 minutes in an hour, 8 hours is equivalent to 480 minutes ($8 \text{ hours} \times 60 \text{ minutes/hour} = 480 \text{ minutes}$). 3. Next, calculate the flow rate in mL/min by dividing the total volume by the total time in minutes: $\frac{\text{Flow rate in mL/min}}{\text{Total time (min)}} = \frac{\text{Total volume (mL)}}{\text{Total time (min)}} = \frac{1000 \text{ mL}}{480 \text{ min}} \approx 2.08 \text{ mL/min}$. 4. Now, apply the drop factor to convert the flow rate from mL/min to gtt/min. The drop factor is given as 15 gtt/mL: $\frac{\text{Drop rate in gtt/min}}{\text{Flow rate in mL/min}} = \frac{15 \text{ gtt/mL}}{2.08 \text{ mL/min}} \approx 7.27 \text{ gtt/min}$.

2. Which side effect should the nurse inform a client taking baclofen (Lioresal) for muscle spasms may occur?

- A. Increased heart rate
- B. Nasal congestion**
- C. Drowsiness
- D. Blurred vision

Informed clients about side effects related to baclofen is crucial for ensuring safe and effective use of the medication. Drowsiness is a common side effect associated with baclofen due to its effects on the central nervous system. Baclofen acts as a muscle relaxant by inhibiting excessive activity of the nerves that cause muscle contractions. Because of its sedative properties, patients frequently report feeling drowsy, fatigued, or sedated when taking this medication. Recognizing this side effect is especially important so that clients understand that they may experience decreased alertness or coordination, which could affect their ability to drive or operate machinery safely. Advising clients to avoid alcohol and other CNS depressants while taking baclofen is also a good practice because these substances can exacerbate sedation. When informing clients about potential side effects, it's beneficial to provide reassurance that not everyone will experience drowsiness, but they should be prepared for the possibility and know to report any significant effects to their healthcare provider.

3. What is the main purpose of using oxytocin (Pitocin) during labor?

- A. To relieve pain**
- B. To induce labor**
- C. To enhance fetal development**
- D. To manage post-delivery bleeding**

The main purpose of using oxytocin (Pitocin) during labor is to induce labor. Oxytocin is a naturally occurring hormone that plays a crucial role in the initiation and progression of labor. It stimulates uterine contractions, which helps to initiate and strengthen labor when it is not progressing adequately. By promoting contractions, oxytocin assists in the dilation of the cervix and the eventual delivery of the fetus. While oxytocin can also have effects after delivery, such as promoting uterine contractions to manage postpartum bleeding, its primary and most well-known use in the context of labor is to induce or augment the labor process itself. This hormone allows healthcare providers to better control the timing of labor and may improve outcomes for both the mother and the baby when labor is not progressing as expected. The other options do not capture the primary function of oxytocin during labor. Pain relief is typically managed with other medications, fetal development is unrelated to the use of oxytocin in labor induction, and although oxytocin can be utilized to reduce postpartum bleeding, this effect is secondary to its role in labor induction.

4. After removing an IV line, what should the nurse obtain to apply pressure to the site?

- A. Alcohol swabs**
- B. Sterile 2 × 2 gauze**
- C. Bandaids**
- D. Non-sterile cloth**

After removing an IV line, it's essential to apply pressure to the site to prevent bleeding and facilitate the formation of a clot. Sterile 2 × 2 gauze is the most appropriate choice because it maintains a clean environment and reduces the risk of introducing bacteria into the site, which could lead to infection. Using sterile gauze ensures that the area remains uncontaminated during the critical period of hemostasis. The gauze can effectively absorb any blood and provides adequate pressure over the puncture site. While alcohol swabs are used primarily for disinfection before procedures, they do not have the properties necessary for applying pressure effectively. Bandaids, though they might seem sufficient, typically are not designed for immediate post-IV care and may not provide adequate pressure or sterility. Non-sterile cloth is less ideal as it lacks the necessary sterility, increasing the risk of infection at the site of removal. Therefore, the sterile 2 × 2 gauze is the appropriate choice for this procedure.

5. What laboratory value is important to monitor when a client is receiving furosemide?

- A. Sodium**
- B. Potassium**
- C. Calcium**
- D. Magnesium**

Monitoring potassium levels is crucial when a client is receiving furosemide, a loop diuretic commonly used to treat conditions such as heart failure and edema. Furosemide promotes the excretion of sodium and water but also leads to the loss of potassium through the urine. This can result in hypokalemia, a condition characterized by abnormally low levels of potassium in the blood, which can cause serious cardiovascular complications, muscle weakness, and other health issues. Maintaining appropriate potassium levels is imperative because potassium plays an essential role in numerous physiological functions, including nerve transmission, muscle contraction, and maintaining heart rhythm. Therefore, healthcare providers will closely monitor potassium levels in patients on furosemide therapy to prevent the adverse effects of hypokalemia. This practice may also involve the administration of potassium supplements or dietary recommendations to help mitigate this risk. While sodium, calcium, and magnesium are also important electrolytes to monitor in various clinical settings, they do not have the same critical association with the use of furosemide as potassium does. Sodium is important for fluid balance, calcium has roles in bone health and muscle function, and magnesium is involved in numerous biochemical reactions in the body, but the direct link between furosemide and potassium loss is

6. What dosing advice should be given to a client taking zidovudine (AZT) for HIV infection?

- A. Take doses only when experiencing symptoms**
- B. Administer doses as needed**
- C. Space the doses evenly around the clock**
- D. Combine doses for convenience**

Zidovudine (AZT) is an antiretroviral medication used to manage HIV infection. The effectiveness of AZT relies heavily on maintaining a consistent drug concentration in the bloodstream, which can be achieved by spacing doses evenly around the clock. This approach ensures that the antiviral activity remains stable and continuous, reducing the viral load and preventing the development of drug resistance. Consistent dosing is crucial in HIV treatment; irregular dosing can lead to suboptimal drug levels, thereby increasing the risk of treatment failure and leading to the potential development of resistant strains of the virus. Therefore, clients are advised to take zidovudine on a strict schedule, ideally every 4 to 6 hours, to maintain therapeutic levels. Other options, such as taking doses only when experiencing symptoms or administering doses as needed, compromise the medication's effectiveness. Additionally, combining doses for convenience could lead to missed doses and potential peaks in medication levels, which is not advisable for steady antiviral action. Thus, the correct approach is to space doses evenly around the clock to ensure optimal management of the HIV infection.

7. Why is it important to monitor a client for akathisia when taking antipsychotic medications?

- A. It can lead to dangerous weight gain**
- B. It is a common withdrawal symptom**
- C. It affects the client's ability to complete daily tasks**
- D. It may indicate an increased risk for suicidal thoughts**

Monitoring a client for akathisia while on antipsychotic medications is crucial because this condition significantly impacts the individual's ability to engage in daily activities. Akathisia is characterized by a state of inner restlessness and an uncontrollable need to be in constant motion, which can make it challenging for clients to focus or complete tasks. As a result, the disruption caused by akathisia can lead to decreased functionality in social, occupational, and personal domains of life. It's essential for healthcare providers to assess and manage this side effect to enhance the quality of life for the client and ensure they can maintain their daily routines effectively. In addition to the primary reason for monitoring, it's also vital to understand the implications of akathisia in the context of overall treatment and the psychological well-being of the individual. If not addressed, the distress that accompanies akathisia may contribute to complications in treatment adherence and overall mental health.

8. In which situations are vasodilators typically administered?

- A. To treat skin infections**
- B. To manage hypertension and heart failure**
- C. To prevent blood clots**
- D. To relieve nausea and vomiting**

Vasodilators are primarily used to manage conditions that involve elevated blood pressure and heart failure. The rationale for their use lies in their ability to relax and widen blood vessels, which decreases vascular resistance and allows blood to flow more easily. This effect can lower blood pressure effectively, making vasodilators valuable in the treatment of hypertension. In the context of heart failure, these medications reduce the workload on the heart by improving cardiac output and reducing the heart's oxygen demands. By decreasing the pressure in the arteries and improving blood flow, vasodilators can alleviate symptoms associated with heart failure, such as shortness of breath and fluid retention. In summary, the administration of vasodilators is typically associated with the management of hypertension and heart failure due to their capacity to promote vasodilation and enhance blood flow, thereby addressing the physiological challenges posed by these conditions.

9. What symptom should a client taking erythromycin report to their healthcare provider?

- A. Nausea**
- B. Headache**
- C. Persistent diarrhea**
- D. Fatigue**

Clients taking erythromycin should monitor for gastrointestinal symptoms due to the medication's potential effect on the digestive system. Persistent diarrhea is particularly significant because it may indicate an imbalance in gut flora or the development of a secondary infection, such as *Clostridium difficile*-associated diarrhea, which is a serious condition. It is essential for clients to report this symptom to their healthcare provider, as it may require immediate medical attention or a change in medication. In contrast, nausea, headache, and fatigue, while they can also occur with erythromycin use, are more common and less alarming side effects. These symptoms may not necessitate urgent intervention compared to the potential risks associated with persistent diarrhea. Proper monitoring and reporting of gastrointestinal discomfort can help ensure the client's safety and effectiveness of the therapy.

10. What does the term 'bioavailability' refer to in pharmacology?

- A. The degree and rate at which a drug is excreted**
- B. The extent to which a drug reaches systemic circulation**
- C. The duration of a drug's therapeutic effect**
- D. The speed at which a drug is metabolized**

The term 'bioavailability' in pharmacology specifically refers to the extent to which a drug reaches systemic circulation. This is a critical aspect because it determines how much of the administered drug is available for the body to use in achieving its therapeutic effect. When a drug is administered, particularly via routes other than intravenous (e.g., oral or intramuscular), it must pass through various biological barriers and go through processes such as absorption and metabolism before it can enter the bloodstream. The bioavailability is influenced by factors such as the formulation of the drug, the route of administration, the presence of food, and individual patient factors. Understanding bioavailability is essential for dosing and achieving optimal therapeutic outcomes; a drug with high bioavailability will have more available to exert its effects, while one with low bioavailability may require higher doses or may not be as effective.

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://pharmacologyintravenoustherapies.examzify.com>

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

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