

INBDE PHARMACOLOGY PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

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THE FULL VERSION STUDY GUIDE**

<https://inbdepharmacology.examzify.com>



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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. Additive drug effect means that the combination is?**
 - A. SUM of individual effects
 - B. Exceeds the sum of individual effects
 - C. Less than the sum of individual effects
 - D. Has no interaction
- 2. Which of the following conditions is a contraindication to barbiturate use?**
 - A. Intermittent Porphyria (Exacerbates Condition)
 - B. COPD (Respiratory Depression)
 - C. Undiagnosed Severe Pain (NO Analgesia)
 - D. All of the above
- 3. Which drug is a short-acting local anesthetic?**
 - A. Lidocaine
 - B. Procaine
 - C. Prilocaine
 - D. Bupivacaine
- 4. Which class irreversibly inhibits acetylcholinesterase?**
 - A. Organophosphates
 - B. Reversible anticholinesterases
 - C. Neostigmine
 - D. Physostigmine
- 5. Which drug has the potential for liver toxicity with alcohol or excessive daily dosing?**
 - A. Acetaminophen
 - B. Ibuprofen
 - C. Aspirin
 - D. Diflunisal
- 6. The 3rd generation cephalosporins have which spectrum?**
 - A. Narrow Spectrum (Mostly Gram-Negative)
 - B. Broad Spectrum (Mostly Gram-Positive)
 - C. Only Gram-Positives
 - D. Only Gram-Negatives

- 7. If a drug is metabolized by Phase I, where does it get excreted?**
- A. Urine
 - B. Feces
 - C. Sweat
 - D. Exhaled Air
- 8. Which antibiotic ester form is associated with allergic cholestatic hepatitis?**
- A. Chloramphenicol
 - B. Clindamycin
 - C. Penicillin G
 - D. Erythromycin Estolate
- 9. Lidocaine is categorized as which type of acting local anesthetic?**
- A. Short acting
 - B. Moderate acting
 - C. Long acting
 - D. Unknown
- 10. Tylenol 4 contains which combination?**
- A. 300 mg Acetaminophen + 8 mg Codeine
 - B. 300 mg Acetaminophen + 60 mg Codeine
 - C. 300 mg Acetaminophen + 15 mg Codeine
 - D. 300 mg Acetaminophen + 30 mg Codeine

Answers

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

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Explanations

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1. Additive drug effect means that the combination is?

- A. SUM of individual effects**
- B. Exceeds the sum of individual effects
- C. Less than the sum of individual effects
- D. Has no interaction

Additive effect means the two drugs' effects simply add together. When each drug has a certain amount of effect on its own, the combined effect equals the arithmetic sum of those individual effects (up to the maximum possible response). For example, if one drug provides 20% relief and another provides 15% relief, the combination yields about 35% relief. This is different from synergy, where the combo exceeds the sum, or antagonism, where the combo is less than the sum.

2. Which of the following conditions is a contraindication to barbiturate use?

- A. Intermittent Porphyria (Exacerbates Condition)
- B. COPD (Respiratory Depression)
- C. Undiagnosed Severe Pain (NO Analgesia)
- D. All of the above**

Barbiturates are strong CNS depressants with a real risk of respiratory depression and they can trigger metabolic conditions in susceptible individuals. Intermittent porphyria is a contraindication because barbiturates induce hepatic enzymes and increase porphyrin synthesis, precipitating acute attacks. In COPD, the already compromised airflow and gas exchange mean additional respiratory depression from barbiturates can lead to dangerous hypoventilation and hypoxemia. For undiagnosed severe pain, a barbiturate would not provide analgesia and could sedate the patient without addressing pain, potentially masking symptoms and delaying diagnosis or appropriate treatment. Taken together, all of these conditions make barbiturate use inappropriate, so the correct approach is recognizing that all of the above are contraindications.

3. Which drug is a short-acting local anesthetic?

- A. Lidocaine
- B. Procaine**
- C. Prilocaine
- D. Bupivacaine

Local anesthetics differ in how long they last based on their chemical structure. Esters are typically hydrolyzed quickly in the blood by plasma cholinesterases, which shortens their duration. Procaine is an ester-type local anesthetic, so it is broken down rapidly and provides only a brief duration of anesthesia. In contrast, lidocaine and prilocaine are amides with longer duration, and bupivacaine is long-acting. Therefore, procaine best matches a short-acting local anesthetic.

4. Which class irreversibly inhibits acetylcholinesterase?

- A. Organophosphates
- B. Reversible anticholinesterases
- C. Neostigmine
- D. Physostigmine**

Irreversible inhibition of acetylcholinesterase is caused by organophosphates. They permanently phosphorylate the serine in the enzyme's active site, forming a covalent bond that is very slow to reverse. With time, aging of this phosphorylated complex makes reactivation essentially impossible, leading to prolonged acetylcholine signaling. In contrast, physostigmine is a reversible anticholinesterase (carbamate inhibitor); it temporarily blocks the enzyme, but the bond is hydrolyzed and enzyme activity returns. Neostigmine is also reversible. So the class that irreversibly inhibits acetylcholinesterase is organophosphates.

5. Which drug has the potential for liver toxicity with alcohol or excessive daily dosing?

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

Acetaminophen has the potential for liver toxicity when combined with alcohol or taken in excessive daily doses because it can form a reactive metabolite that damages liver cells. Most acetaminophen is safely processed into non-toxic substances, but a small amount is oxidized by liver enzymes to NAPQI, a highly reactive compound. Under normal dosing, NAPQI is quickly detoxified by glutathione and eliminated. When dosing is too high or alcohol is involved, more acetaminophen is shunted toward the NAPQI pathway, and glutathione stores can be depleted. The excess NAPQI then binds to liver cell proteins, causing oxidative stress and hepatocellular injury, which can progress to liver failure. Chronic alcohol use increases the production of NAPQI by inducing enzymes like CYP2E1, raising the risk. If treated early, N-acetylcysteine helps replenish glutathione and neutralize NAPQI. The other drugs listed don't have this specific, alcohol-triggered liver-toxic pathway linked to their usual therapeutic use.

6. The 3rd generation cephalosporins have which spectrum?

- A. Narrow Spectrum (Mostly Gram-Negative)**
- B. Broad Spectrum (Mostly Gram-Positive)
- C. Only Gram-Positives
- D. Only Gram-Negatives

Third-generation cephalosporins are broad-spectrum antibiotics with particularly strong activity against Gram-negative bacteria, including many Enterobacteriaceae, and, for some agents like ceftazidime, even activity against Pseudomonas aeruginosa. Their Gram-positive activity is comparatively weaker than that of the first two generations. Because of this broad Gram-negative coverage, they are described as broad-spectrum rather than narrow-spectrum. Descriptions that frame them as narrow-spectrum or as primarily targeting Gram-positives don't fit their typical pattern. In practice, think of them as broad-spectrum antibiotics with a focus on Gram-negative bacteria, though they may still have some Gram-positive activity.

7. If a drug is metabolized by Phase I, where does it get excreted?

- A. Urine**
- B. Feces
- C. Sweat
- D. Exhaled Air

Phase I metabolism adds or exposes polar functional groups (oxidation, reduction, or hydrolysis), making the drug more water-soluble. This increased polarity lets the kidneys filter and eliminate the metabolite efficiently, so most Phase I metabolites are excreted in urine. Fecal excretion is more common for drugs or metabolites that are excreted via bile after Phase II conjugation, while exhaled air is typical for volatile substances, and sweat is a minor route. So, the primary excretion after Phase I processing is urine.

8. Which antibiotic ester form is associated with allergic cholestatic hepatitis?

- A. Chloramphenicol
- B. Clindamycin
- C. Penicillin G
- D. Erythromycin Estolate**

Allergic cholestatic hepatitis is a drug-induced liver injury where bile flow is disrupted, often through an immune-related reaction in the biliary system. The antibiotic ester form classically linked to this specific reaction is erythromycin estolate. This esterified macrolide was associated with a higher risk of cholestasis and hypersensitivity-type liver injury than erythromycin base or other antibiotics. Patients typically develop jaundice with signs of cholestasis after some exposure to the drug. The other antibiotics listed have different primary toxicities or mechanisms (chloramphenicol with bone marrow suppression, clindamycin hepatotoxicity is rare, penicillin G can cause various hypersensitivity reactions) and are not the classic estolate-associated cause of allergic cholestatic hepatitis.

9. Lidocaine is categorized as which type of acting local anesthetic?

- A. Short acting
- B. Moderate acting**
- C. Long acting
- D. Unknown

Local anesthetics are grouped by how long they keep the area numb: short-acting, intermediate (moderate) acting, and long-acting. Lidocaine fits in the intermediate-acting category because it has a rapid onset but a mid-length duration of anesthesia. Its duration is notably extended when a vasoconstrictor like epinephrine is used, which slows systemic absorption and keeps the drug active longer. In clinical practice, lidocaine is often paired with epinephrine to achieve longer-lasting anesthesia. By contrast, short-acting options wear off quickly, and long-acting options provide a much longer duration. So lidocaine is best described as moderate-acting.

10. Tylenol 4 contains which combination?

- A. 300 mg Acetaminophen + 8 mg Codeine
- B. 300 mg Acetaminophen + 60 mg Codeine**
- C. 300 mg Acetaminophen + 15 mg Codeine
- D. 300 mg Acetaminophen + 30 mg Codeine

Tylenol 4 is a fixed-dose combination analgesic that pairs acetaminophen with an opioid to provide stronger pain relief than acetaminophen alone. The standard formulation for Tylenol 4 is 300 mg of acetaminophen combined with 60 mg of codeine per tablet. The codeine is a prodrug that, after metabolic activation, provides additional opioid analgesia, which is why this product is used for moderate to moderately severe pain. Among the options, the only one that matches the familiar Tylenol 4 strength is the tablet containing 300 mg acetaminophen and 60 mg codeine. The other listed codeine amounts correspond to other (less potent) Tylenol-with-codeine products, not Tylenol 4. Keep in mind the acetaminophen dose adds up with repeated dosing, so be mindful of the daily maximum to avoid liver toxicity, and be aware that codeine carries risks of sedation and dependence and is affected by individual metabolic differences.

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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://inbdepharmacology.examzify.com>

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

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