

EMT Pharmacology Practice Test (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. Which is the standard dose of activated charcoal for adults?**
 - A. 0.5 g/kg**
 - B. 1 g/kg up to 50 g**
 - C. 2 g/kg**
 - D. 3 g/kg**

- 2. Which statement best describes a metered-dose inhaler?**
 - A. A spray canister directs substance through the mouth and into the lungs.**
 - B. They are used only for topical skin conditions.**
 - C. They deliver a variable amount of medication with each actuation.**
 - D. They are swallowed to deliver medication.**

- 3. Which route is used for delivering medication into muscle tissue?**
 - A. Intravenous**
 - B. Intramuscular**
 - C. Intranasal**
 - D. Sublingual**

- 4. What is the purpose of medical direction and standing orders?**
 - A. To schedule shifts**
 - B. To authorize medication administration under predefined criteria and provide oversight**
 - C. To manage inventory**
 - D. To conduct patient follow-up calls**

- 5. Naloxone is administered by which route when intravenous access is not available?**
 - A. Intravenous**
 - B. Intramuscular**
 - C. Intranasal**
 - D. Subcutaneous**

- 6. How should EMS consider patient consent when giving medications in an emergency?**
- A. Written consent is always required.**
 - B. Consent is not needed in emergencies.**
 - C. Consent must be obtained from a power of attorney only.**
 - D. Implied or presumed consent applies; obtain consent when feasible and document.**
- 7. What are potential adverse effects of naloxone administration?**
- A. Sedation**
 - B. Hypertension**
 - C. Acute withdrawal symptoms in opioid-dependent patients, agitation, nausea, vomiting**
 - D. Hypoglycemia**
- 8. What is the purpose of using dextrose 50% concentration in EMS?**
- A. To rapidly raise blood glucose in hypoglycemia.**
 - B. To treat dehydration.**
 - C. To promote wound healing.**
 - D. To alkalinize the blood.**
- 9. After administering naloxone, which elements should you monitor?**
- A. Airway, breathing, circulation; reassess mental status; prepare for possible airway support**
 - B. Monitor only heart rate**
 - C. Check blood glucose only**
 - D. No monitoring needed after naloxone**
- 10. Which type of drug typically requires a physician's order?**
- A. Over-the-counter (OTC)**
 - B. Prescription drugs**
 - C. Herbal remedies**
 - D. Vitamin supplements**

Answers

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

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Explanations

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1. Which is the standard dose of activated charcoal for adults?

- A. 0.5 g/kg
- B. 1 g/kg up to 50 g**
- C. 2 g/kg
- D. 3 g/kg

Activated charcoal works by adsorbing many ingested toxins in the gut, lowering how much poison gets absorbed into the bloodstream. The standard dose for adults is 1 gram per kilogram of body weight, with a maximum single dose of 50 grams. This means a person who weighs 40 kg would get 40 g, while someone weighing 60 kg would still receive 50 g because of the cap. Doses like 0.5 g/kg are generally under the typical adult amount, whereas 2 g/kg or 3 g/kg would push past the safe single-dose limit and aren't used. In practice, charcoal is given as soon as possible after ingestion and only for toxins known to be adsorbed by charcoal, not for caustics, hydrocarbons, heavy metals, or alcohols.

2. Which statement best describes a metered-dose inhaler?

- A. A spray canister directs substance through the mouth and into the lungs.**
- B. They are used only for topical skin conditions.
- C. They deliver a variable amount of medication with each actuation.
- D. They are swallowed to deliver medication.

Metered-dose inhalers deliver a measured, pressurized spray of medication through the mouth and into the lungs. With every puff, a fixed amount of drug is released, and the patient inhales to carry that dose deep into the airways. Technique matters, and spacers can help improve deposition in the lungs while reducing irritation to the mouth and throat. They are intended for inhalation, not topical skin use, and the drug is not meant to be swallowed. The defining feature is that each actuation provides a known dose, designed for delivery to the respiratory tract.

3. Which route is used for delivering medication into muscle tissue?

- A. Intravenous
- B. Intramuscular**
- C. Intranasal
- D. Sublingual

The route that places medication into muscle tissue is intramuscular. Muscle tissue has a rich blood supply, so drugs delivered into the muscle are absorbed into the bloodstream relatively quickly, giving a predictable and faster onset than some other routes while avoiding the digestive tract and first-pass metabolism. This makes intramuscular administration a preferred option for meds that need quicker effect than oral routes but don't require direct IV delivery. In contrast, intravenous administration goes straight into a vein for the fastest possible onset, intranasal delivers across the nasal mucosa, and sublingual is absorbed under the tongue; none of these target muscle tissue.

4. What is the purpose of medical direction and standing orders?

- A. To schedule shifts
- B. To authorize medication administration under predefined criteria and provide oversight**
- C. To manage inventory
- D. To conduct patient follow-up calls

The main idea is to enable timely, safe patient care through predefined medical authority. Medical direction provides the physician-led oversight and protocols that define when and how medications can be given in the field. Standing orders are the specific, preapproved criteria and dosing guidelines that let EMS providers administer certain drugs without needing a physician's order for every patient, as long as the patient meets the set conditions and safety checks. This combination speeds treatment, standardizes care, and ensures decisions stay within a medically approved framework. For example, a standing order might allow a paramedic to administer a medication for chest pain if the patient meets predefined criteria (symptoms, vital signs, allergies, contraindications) and monitor for adverse effects, with the ability to escalate or call medical control if anything is outside those criteria. Scheduling shifts, managing inventory, and making follow-up calls are administrative or logistical tasks and do not reflect the clinical oversight and authorization function of medical direction and standing orders.

5. Naloxone is administered by which route when intravenous access is not available?

- A. Intravenous
- B. Intramuscular
- C. Intranasal**
- D. Subcutaneous

When intravenous access isn't available, delivering naloxone intranasally provides the fastest, easiest way to get the drug into the bloodstream without needles. The nasal mucosa has rich blood flow, so the medication is absorbed quickly and can reverse opioid-induced respiratory depression promptly. This route is especially practical in prehospital settings or with bystanders, since it requires no IV line, reduces the risk of needle-stick injury, and can be administered with a simple spray device. Remember that naloxone is a competitive opioid receptor antagonist, so it displaces opioid molecules at the receptor and restores respiration. Because the opioid once there may outlast the naloxone dose, monitoring the patient and repeating dosing if needed are important steps after administration.

- 6. How should EMS consider patient consent when giving medications in an emergency?**
- A. Written consent is always required.**
 - B. Consent is not needed in emergencies.**
 - C. Consent must be obtained from a power of attorney only.**
 - D. Implied or presumed consent applies; obtain consent when feasible and document.**

In emergencies, consent is presumed when a patient cannot provide it and immediate treatment is needed to save life or prevent harm. This implied or presumed consent allows EMS to administer medications and perform necessary interventions without waiting for formal consent. As soon as feasible, seek the patient's permission or obtain consent from a legally authorized representative, and if the patient regains decision-making capacity, proceed with explicit consent for ongoing care. Thorough documentation is essential: note the patient's condition, the reasons consent could not be obtained beforehand, the treatments given, and any attempts to obtain consent. Written consent is not required in most true emergencies, since waiting for it could delay life-saving care. Consent is not automatically waived in emergencies, and relying solely on a power of attorney is not appropriate when immediate treatment is needed.

- 7. What are potential adverse effects of naloxone administration?**
- A. Sedation**
 - B. Hypertension**
 - C. Acute withdrawal symptoms in opioid-dependent patients, agitation, nausea, vomiting**
 - D. Hypoglycemia**

Naloxone is an opioid receptor antagonist that rapidly displaces opioid agonists from mu receptors. In someone who is opioid-dependent, this sudden blockade can precipitate withdrawal because the body abruptly loses the opioid effects it has adapted to. The adverse effects most likely seen with naloxone in these patients are acute withdrawal symptoms, including agitation, nausea, and vomiting, often accompanied by sweating, tachycardia, and anxiety. Sedation is not typical here since naloxone removes opioid effects rather than causing sedation; while some patients may experience a rise in blood pressure as part of the withdrawal surge, the hallmark adverse effect is the abrupt withdrawal syndrome with GI symptoms. Hypoglycemia is not associated with naloxone administration.

8. What is the purpose of using dextrose 50% concentration in EMS?

- A. To rapidly raise blood glucose in hypoglycemia.**
- B. To treat dehydration.**
- C. To promote wound healing.**
- D. To alkalinize the blood.**

Dextrose 50% is used in EMS to rapidly raise blood glucose in patients who are hypoglycemic. Giving a concentrated glucose solution directly into a vein provides glucose quickly, which is crucial when a patient cannot swallow or is unconscious and cannot take oral sugar. The rapid rise in plasma glucose helps restore brain energy and reduce signs of hypoglycemia, such as confusion or seizures. Because D50 is highly hyperosmolar, it should be delivered IV, typically as a bolus (about 25 g, which is 50 mL of 50% dextrose) in adults, with weight-based dosing in children, and it's important to monitor for IV infiltration and tissue injury. The other options don't fit because dehydration is addressed with fluids, wound healing isn't an immediate purpose of a glucose bolus, and alkalinizing the blood is accomplished with bicarbonate, not dextrose.

9. After administering naloxone, which elements should you monitor?

- A. Airway, breathing, circulation; reassess mental status; prepare for possible airway support**
- B. Monitor only heart rate**
- C. Check blood glucose only**
- D. No monitoring needed after naloxone**

Protecting the airway and watching the patient's ventilation and circulation is essential after naloxone. Naloxone reverses opioid-induced respiratory depression, but its effect can wear off before the opioid's does, so breathing can worsen again. So you continuously assess airway patency and adequacy of breathing (rate, effort, oxygen saturation) and keep an eye on circulation (heart rate, blood pressure). Reassessing mental status is also important because improvement, agitation, or withdrawal symptoms guides further care and potential additional dosing. Be ready to provide airway support if needed (oxygen, suction, bag-valve-mask, or advanced airway). This approach, rather than focusing on a single parameter or assuming no monitoring is required, keeps the patient safe as the effects of opioids wear off.

10. Which type of drug typically requires a physician's order?

A. Over-the-counter (OTC)

B. Prescription drugs

C. Herbal remedies

D. Vitamin supplements

Prescription drugs require a clinician's order because their use, dosing, and potential risks need careful medical supervision. A physician evaluates the patient, determines the appropriate drug and dose, considers medical history and possible interactions with other medications, and monitors for side effects. This safeguards safety and effectiveness, especially for medications that can be potent or have narrow therapeutic ranges. Over-the-counter products are designed for use without a doctor's directive and come with labeled directions intended for laypersons, though they should still be used carefully. Herbal remedies and vitamin supplements are often available without a prescription as dietary supplements, and while they can be used safely with medical advice, they do not typically require a physician's order.

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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://emtparmacology.examzify.com>

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

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