

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. When documenting a medication administration, which item should be included?**
 - A. Time given and vitals**
 - B. Drug name, dose, route, time given, patient response, and vitals**
 - C. Patient age**
 - D. Battery of a pulse oximeter reading**

- 2. What is the recommended action if you are unsure about a medication dose in the field?**
 - A. Administer based on patient weight only.**
 - B. Administer a standard adult dose.**
 - C. Do not administer; contact medical control or follow protocol for dosing.**
 - D. Administer half the calculated dose.**

- 3. Which route is administered by mouth and typically takes more than an hour to absorb?**
 - A. Oral administration**
 - B. Intravenous injection**
 - C. Sublingual**
 - D. Inhalation**

- 4. 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**

- 5. Which route provides the fastest delivery to the bloodstream?**
 - A. Intravenous injection**
 - B. Intramuscular injection**
 - C. Oral administration**
 - D. Inhalation**

- 6. Which statement accurately reflects oxygen administration in EMS?**
- A. Oxygen should not be withheld from a hypoxic patient.**
 - B. Oxygen should be withheld unless the patient asks for it.**
 - C. Oxygen is only for patients with pulmonary edema.**
 - D. Oxygen should always be given regardless of oxygen saturation.**
- 7. Oxygen is most commonly administered via which device and flow rate?**
- A. Nonrebreathing mask 10-15 L/min**
 - B. Nasal cannula 2-6 L/min**
 - C. Simple face mask 6-10 L/min**
 - D. Venturi mask 4-8 L/min**
- 8. If a drug has a narrow therapeutic index, what does that imply?**
- A. Very safe.**
 - B. Small margin between effective and toxic doses.**
 - C. No side effects.**
 - D. Long half-life.**
- 9. PO is the abbreviation for which route of administration?**
- A. Oral**
 - B. Intramuscular**
 - C. Inhalation**
 - D. Intravenous**
- 10. Which route is fastest but not suitable for all medications?**
- A. Intravenous injection**
 - B. Intraosseous injection**
 - C. Intramuscular injection**
 - D. Sublingual**

Answers

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

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Explanations

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1. When documenting a medication administration, which item should be included?

A. Time given and vitals

B. Drug name, dose, route, time given, patient response, and vitals

C. Patient age

D. Battery of a pulse oximeter reading

When documenting a medication administration, you need a complete record of what was given, how much, and how the patient responded, along with current monitoring. The best choice includes the drug name, dose, route, time given, patient response, and vitals. This combination ensures clear traceability, supports ongoing care, and helps evaluate effectiveness or adverse effects. Recording only the time given and vitals misses the drug identity, amount, and the patient's response. Similarly, patient age isn't part of the medication administration record, and a pulse oximeter reading is a monitoring value, not a standard required element of every medication record unless specifically tied to that treatment.

2. What is the recommended action if you are unsure about a medication dose in the field?

A. Administer based on patient weight only.

B. Administer a standard adult dose.

C. Do not administer; contact medical control or follow protocol for dosing.

D. Administer half the calculated dose.

In the field, patient safety is the top priority when dosing a medication. If you're unsure about the dose, the safest move is to pause and obtain guidance from medical control or follow established dosing protocols. These protocols and real-time orders are there to prevent dosing errors that can harm the patient, especially since dosing often depends on weight, age, and specific clinical factors. By contacting medical control or sticking to protocol, you ensure you're acting under established, evidence-based guidance rather than guessing. Relying on a guessed weight-based amount, using a standard adult dose when the patient isn't an adult, or halving the dose without justification can all lead to underdosing or overdosing. When in doubt, seek authoritative direction before administering.

3. Which route is administered by mouth and typically takes more than an hour to absorb?

- A. Oral administration**
- B. Intravenous injection**
- C. Sublingual**
- D. Inhalation**

Absorption rate depends on the route of administration. When a drug is taken by mouth, it must dissolve in the gastrointestinal tract and pass through the intestinal lining, with most absorption occurring in the small intestine. This process is slower and more variable, often taking more than an hour to reach systemic circulation because of factors like gastric emptying, intestinal transit time, and first-pass metabolism in the liver. That slower, digestion-driven pathway distinguishes the oral route from others that deliver drugs more rapidly. Intravenous injection delivers the drug directly into the bloodstream, so onset is immediate or extremely fast. Sublingual administration places the drug under the tongue for rapid absorption through the oral mucosa and bypasses first-pass metabolism. Inhalation brings the drug into the lungs for very fast absorption through the alveoli.

4. 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.

5. Which route provides the fastest delivery to the bloodstream?

- A. Intravenous injection**
- B. Intramuscular injection**
- C. Oral administration**
- D. Inhalation**

The fastest way a drug reaches the bloodstream is when it is delivered directly into the circulatory system, bypassing any absorption barriers. Intravenous injection does just that—drug goes straight into the veins, entering the bloodstream immediately with essentially 100% bioavailability. There's no waiting for intestinal or muscle absorption, and no first-pass metabolism to contend with. Other routes must cross barriers before reaching the blood: oral administration must pass through the GI lining and liver first, intramuscular absorption depends on diffusion into capillaries in muscle, and inhalation, while rapid, still involves diffusion from the alveoli into blood. So intravenous delivery is the fastest route to the bloodstream.

6. Which statement accurately reflects oxygen administration in EMS?

- A. Oxygen should not be withheld from a hypoxic patient.**
- B. Oxygen should be withheld unless the patient asks for it.**
- C. Oxygen is only for patients with pulmonary edema.**
- D. Oxygen should always be given regardless of oxygen saturation.**

Oxygen is a medication that must be given when there is hypoxia to ensure tissues receive enough oxygen. In EMS, you rapidly assess a patient's oxygen saturation and signs of hypoxia, and you start supplemental oxygen promptly if there is true hypoxia. The goal is to maintain a target saturation (typically around 94% in most adults; lower targets like 88-92% in certain chronic lung disease) rather than letting oxygen delivery remain inadequate. Use the right device to achieve that goal: a nasal cannula for milder need, a nonrebreather mask for more significant hypoxia, and adjust flow to reach the target saturation while monitoring the patient. That's why the statement about not withholding oxygen from a hypoxic patient is the best answer. It reflects acting to correct a dangerous condition rather than waiting for the patient to ask or assuming oxygen is only for one condition like pulmonary edema, or giving it without regard to saturation. In some conditions, you don't aim for 100% oxygen (for example, COPD with hypercapnia you may target a lower saturation), but the key principle remains: do not withhold oxygen when hypoxia is present.

7. Oxygen is most commonly administered via which device and flow rate?

- A. Nonbreathing mask 10-15 L/min**
- B. Nasal cannula 2-6 L/min**
- C. Simple face mask 6-10 L/min**
- D. Venturi mask 4-8 L/min**

Oxygen delivery effectiveness depends on how much oxygen concentration you can reliably deliver to the patient and how well you can meet their inspiratory flow needs. The nonbreathing mask with a reservoir and one-way valves is designed to push a high fraction of oxygen toward the patient while minimizing rebreathing of exhaled air. When you set flow at 10-15 L/min and ensure the bag stays inflated, most of what the patient inhales comes from the mask's oxygen reservoir rather than the room air, yielding a very high FiO₂ (typically near 80-95% depending on fit and leakage). This high concentration is often what's needed quickly in hypoxic or critically ill patients, making it the most commonly used initial device for oxygen therapy in emergency scenarios. Other devices deliver lower or more variable oxygen concentrations: a nasal cannula provides a modest FiO₂ suitable for mild hypoxemia, a simple face mask offers moderate oxygen but less reliable high concentrations, and a Venturi mask can deliver a precise, but lower, FiO₂ and is used when specific oxygen levels must be maintained rather than delivering the maximum possible oxygen.

8. If a drug has a narrow therapeutic index, what does that imply?

- A. Very safe.**
- B. Small margin between effective and toxic doses.**
- C. No side effects.**
- D. Long half-life.**

Having a narrow therapeutic index means there is only a small safety margin between the dose that provides benefit and the dose that can cause harm. In other words, even tiny changes in dose, timing, absorption, or patient factors (like kidney or liver function or interactions with other drugs) can push the drug from therapeutic to toxic. Because of this small margin, these drugs require careful dosing and often monitoring of drug levels or clinical effects to stay within a safe range. It's not about being very safe—these drugs carry a higher risk of toxicity relative to their therapeutic effect. It doesn't mean there are no side effects at all, since adverse effects can occur even at therapeutic doses. The concept isn't defined by a long half-life; half-life affects how long the drug stays in the body, not the size of the safety margin between efficacy and toxicity.

9. PO is the abbreviation for which route of administration?

- A. Oral**
- B. Intramuscular**
- C. Inhalation**
- D. Intravenous**

PO stands for per os, a Latin term meaning by mouth. This shorthand is used to indicate that the medication should be taken orally—swallowed or taken via the mouth. The other routes listed correspond to different administration methods: intramuscular is via injection into muscle, inhalation is breathed in through the lungs, and intravenous is delivered directly into a vein. Because per os explicitly means through the mouth, PO is the best indication for oral administration. If the patient cannot swallow, an alternative route would be needed, but PO itself specifically denotes oral intake.

10. Which route is fastest but not suitable for all medications?

- A. Intravenous injection**
- B. Intraosseous injection**
- C. Intramuscular injection**
- D. Sublingual**

Getting a drug into the bloodstream as quickly as possible is the goal when immediate effect is needed. Intravenous administration achieves that by delivering the medication directly into a vein, so it enters systemic circulation without needing to cross absorption barriers. That makes the onset of action essentially immediate and the fastest route for a systemic effect. But this isn't suitable for every medication. Some drugs irritate veins or can cause severe reactions if given too rapidly, so they must be infused slowly or delivered in a controlled rate. Others aren't available in a stable or compatible IV formulation, or they require specific diluents or conditions that aren't suitable for IV use. There are also risks unique to IV access, such as infection, phlebitis, air or particulate embolism, and fluid overload, and it demands sterile technique and careful monitoring. All of these factors mean intravenous administration, while the fastest, isn't appropriate for every drug.

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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