

# EMT PHARMACOLOGY PRACTICE TEST (SAMPLE)

## STUDY GUIDE



## SAMPLE STUDY GUIDE WITH LIMITED 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. 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 route is used for injecting into the muscle and is usually absorbed quickly?**
  - A. Intramuscular injection
  - B. Intravenous injection
  - C. Sublingual
  - D. Inhalation
  
- 2. What is the typical onset and duration for sublingual nitroglycerin?**
  - A. Onset within 10 minutes; duration 1 hour.
  - B. Onset within 5–7 minutes; duration 40–60 minutes.
  - C. Onset within 1–3 minutes; duration about 20–30 minutes.
  - D. Onset within 30–60 seconds; duration 2–3 minutes.
  
- 3. 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
  
- 4. 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
  
- 5. 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.

- 6. Which is a common adverse effect of activated charcoal?**
- A. Hypertension
  - B. Vomiting
  - C. Rash
  - D. Weight gain
- 7. What is a key consideration when administering oxygen to a patient with suspected carbon monoxide poisoning?**
- A. Use a nasal cannula at 2 L/min to avoid oxygen toxicity.
  - B. Administer room air with no supplemental oxygen.
  - C. Provide 100% oxygen to displace CO and speed elimination; consider hyperbaric therapy if indicated.
  - D. Use low-flow oxygen via mask at 6 L/min.
- 8. Which condition is a contraindication to nebulized albuterol use in the field?**
- A. Known cardiac disease such as MI, Angina, CHF or arrhythmia
  - B. Allergies to pollen
  - C. Chronic kidney disease
  - D. Age over 70 years
- 9. Naloxone (intranasal) is indicated for which scenario?**
- A. Altered mental status with suspected narcotic overdose
  - B. Chest pain due to coronary artery disease
  - C. Shortness of breath from COPD
  - D. Hypoglycemia with confusion
- 10. Which statement correctly describes the dosing approach for pediatric albuterol compared with adults?**
- A. The dosing is standardized and the same for all children
  - B. Dosing for pediatric albuterol is weight-based and often uses lower per-dose volumes than adults
  - C. Dosing is based on age only
  - D. It is not recommended for children

## **Answers**

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

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## **Explanations**

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**1. Which route is used for injecting into the muscle and is usually absorbed quickly?**

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

*Placing the drug into muscle tissue is the intramuscular route, and it's absorbed quickly because muscle has a rich blood supply that carries the medication into the bloodstream fairly rapidly. This makes the onset faster than injections into subcutaneous tissue, though not as immediate as delivering the drug directly into a vein. The exact speed can depend on factors like the site (deltoid tends to absorb fairly quickly due to good perfusion), the volume injected, and whether the preparation is aqueous or oil-based (aqueous solutions generally enter circulation faster). In practice, intramuscular injections are used when IV access isn't available or when a rapid but not immediate effect is acceptable. By contrast, sublingual methods skip injection entirely and absorb through the mouth's mucosa, inhalation delivers medication via the lungs, and intravenous delivery goes straight into the bloodstream for the fastest possible onset.*

**2. What is the typical onset and duration for sublingual nitroglycerin?**

- A. Onset within 10 minutes; duration 1 hour.
- B. Onset within 5–7 minutes; duration 40–60 minutes.
- C. Onset within 1–3 minutes; duration about 20–30 minutes.**
- D. Onset within 30–60 seconds; duration 2–3 minutes.

*Sublingual nitroglycerin works quickly because it is absorbed directly through the mouth's mucous membrane into the bloodstream, bypassing the liver's first-pass metabolism. This fast absorption produces relief from angina in a short time. The typical onset is about 1–3 minutes, and the effects last around 20–30 minutes. That combination best matches rapid relief without an overly long duration, which is why this option is correct.*

**3. 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.*

**4. 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 med administration record, and a pulse oximeter reading is a monitoring value, not a standard required element of every med record unless specifically tied to that treatment.*

**5. 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.*

**6. Which is a common adverse effect of activated charcoal?**

- A. Hypertension
- B. Vomiting**
- C. Rash
- D. Weight gain

*Activated charcoal works by binding many ingested toxins in the gut to prevent absorption. The most common adverse effect is vomiting, because the charcoal can irritate the stomach lining and trigger the gag reflex. Vomiting is clinically important since it increases the risk of aspiration if the airway isn't protected. Rashes, hypertension, and weight gain aren't typical adverse effects of activated charcoal, though rare hypersensitivity reactions can occur; they are not as common or as clinically relevant as vomiting.*

**7. What is a key consideration when administering oxygen to a patient with suspected carbon monoxide poisoning?**

- A. Use a nasal cannula at 2 L/min to avoid oxygen toxicity.
- B. Administer room air with no supplemental oxygen.
- C. Provide 100% oxygen to displace CO and speed elimination; consider hyperbaric therapy if indicated.**
- D. Use low-flow oxygen via mask at 6 L/min.

*When carbon monoxide poisoning is suspected, the priority is to maximize oxygen delivery and rapidly outcompete CO for binding to hemoglobin. CO binds hemoglobin with a much higher affinity than oxygen, so even with normal air, tissues can remain hypoxic. Providing 100% oxygen raises the partial pressure of oxygen in the blood and increases the amount dissolved in plasma, which displaces CO from hemoglobin more quickly and speeds its elimination from the body. This is why the recommended treatment is to deliver high-flow, 100% oxygen right away. In practice, that means delivering oxygen with a high-flow system (such as a non-rebreather mask at high rate, or a bag-valve mask with 100% O<sub>2</sub>) rather than relying on room air or low-flow methods. Room air or low-flow oxygen would not effectively displace CO or substantially improve tissue oxygenation. Hyperbaric oxygen therapy is considered if there are signs of significant poisoning or specific risk factors—such as neurologic symptoms (confusion, seizures, loss of consciousness), metabolic acidosis, pregnancy, or very high CO exposure—because the elevated pressure further accelerates CO elimination and can improve neurologic outcomes.*

**8. Which condition is a contraindication to nebulized albuterol use in the field?**

- A. Known cardiac disease such as MI, Angina, CHF or arrhythmia**
- B. Allergies to pollen
- C. Chronic kidney disease
- D. Age over 70 years

*Nebulized albuterol can stimulate the heart as well as the lungs, so its use is avoided in patients with known cardiac disease because the drug can provoke tachycardia, arrhythmias, or increased myocardial oxygen demand, potentially worsening ischemia or heart failure. This makes cardiac disease a contraindication in the field. The other options do not represent absolute contraindications: pollen allergies don't bar albuterol use, chronic kidney disease isn't a contraindication, and age alone isn't a contraindication.*

**9. Naloxone (intranasal) is indicated for which scenario?**

- A. Altered mental status with suspected narcotic overdose**
- B. Chest pain due to coronary artery disease
- C. Shortness of breath from COPD
- D. Hypoglycemia with confusion

*Naloxone reverses opioid effects by blocking mu-opioid receptors, so it's used when there is respiratory depression and altered mental status suspected to be from opioid overdose. When someone has an altered level of consciousness with potential narcotic overdose, intranasal naloxone can quickly displace opioids and restore breathing and awareness, buying time for transport and further treatment. The intranasal route is practical in the field because it doesn't require IV access and still works rapidly. The other scenarios aren't related to opioid effects—chest pain from coronary disease, COPD-related shortness of breath, and hypoglycemia with confusion each have different, specific treatments—so they don't indicate naloxone use.*

10. Which statement correctly describes the dosing approach for pediatric albuterol compared with adults?

- A. The dosing is standardized and the same for all children
- B. Dosing for pediatric albuterol is weight-based and often uses lower per-dose volumes than adults**
- C. Dosing is based on age only
- D. It is not recommended for children

*Dosing for pediatric albuterol is weight-based and typically uses lower per-dose volumes than in adults. Children vary widely in body size, airway dimensions, and how they metabolize drugs, so giving a fixed amount to every child can lead to under-treatment in larger children or excessive dosing in smaller ones. To tailor therapy and reduce systemic exposure, clinicians dose by weight (for example, around 0.15 mg/kg per nebulized dose, up to a maximum per treatment). In contrast, adult dosing uses a fixed amount that doesn't scale with weight, because adults have larger bodies and different pharmacokinetics. That's why this statement is the best choice: it reflects that pediatric dosing is weight-based and generally uses smaller per-dose volumes than adult dosing. The other options imply a one-size-fits-all approach, rely on age alone, or suggest the therapy isn't recommended for children, none of which align with standard pediatric practice.*

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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](mailto:hello@examzify.com).

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

<https://emtpharmacology.examzify.com>

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

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