

Resuscitation Council UK (RCUK) Advanced Life Support (ALS) Practice Exam (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. For atrial flutter, what is the recommended energy level for synchronized cardioversion?**
 - A. 50-75 joules**
 - B. 70-120 joules**
 - C. 100-150 joules**
 - D. 150-200 joules**
- 2. What does the acronym CTH represent when assessing thromboembolic causes?**
 - A. Computed Tomography Head**
 - B. Chest Tube History**
 - C. Clear Trace Hemo**
 - D. Computerized Tomography Scan**
- 3. In cases of severe allergic reactions, what is the primary medication used for emergency treatment?**
 - A. Antihistamines**
 - B. Corticosteroids**
 - C. Adrenaline**
 - D. IV fluids**
- 4. Which medication is commonly used in the management of heart failure?**
 - A. Furosemide**
 - B. Amiodarone**
 - C. Atorvastatin**
 - D. Diltiazem**
- 5. What electrolyte imbalance can contribute to ventricular fibrillation?**
 - A. Hyperthyroidism**
 - B. Abnormal potassium concentration**
 - C. Oligemia**
 - D. Hypercalcemia**

6. Which is the most common cardiac arrest rhythm associated with the lowest survival rate?

- A. Ventricular Fibrillation**
- B. Non-shockable rhythms (PEA/Asystole)**
- C. Sinus arrest**
- D. Tachycardia**

7. Which of the following is NOT a reversible cause during resuscitation?

- A. Hypoxia**
- B. Hypovolemia**
- C. Hyperglycemia**
- D. Tension pneumothorax**

8. What action should be taken if a patient remains symptomatic despite adrenaline administration?

- A. Continue observing without further action**
- B. Administer another dose of adrenaline**
- C. Immediate transfer to the hospital**
- D. Provide antihistamines right away**

9. How does a healthcare provider assess the effectiveness of chest compressions?

- A. By checking blood pressure**
- B. By ensuring adequate depth, frequency, and full chest recoil**
- C. By listening for heart sounds**
- D. By monitoring respiratory rate**

10. When should adrenaline ideally be administered after cardiac arrest?

- A. Immediately before CPR**
- B. After the first shock if the arrest is shockable**
- C. Only after three cycles of CPR**
- D. Only if the patient is unconscious**

Answers

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

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Explanations

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1. For atrial flutter, what is the recommended energy level for synchronized cardioversion?

- A. 50-75 joules**
- B. 70-120 joules**
- C. 100-150 joules**
- D. 150-200 joules**

The recommended energy level for synchronized cardioversion in the case of atrial flutter is 70-120 joules. This range is considered effective for delivering the electrical shock needed to reset the heart's rhythm without causing significant harm to the myocardium. Using synchronized cardioversion is essential in atrial flutter because it allows for the shock to be timed with the R-wave of the QRS complex, minimizing the risk of inducing ventricular fibrillation, which could occur if the shock is delivered during the vulnerable period of the cardiac cycle. The choice of energy level is based on evidence that indicates this range strikes the right balance between efficacy and safety, ensuring successful conversion back to a normal sinus rhythm while minimizing the risk of complications associated with higher energy levels.

2. What does the acronym CTH represent when assessing thromboembolic causes?

- A. Computed Tomography Head**
- B. Chest Tube History**
- C. Clear Trace Hemo**
- D. Computerized Tomography Scan**

The acronym CTH stands for Computed Tomography Head, which is a crucial imaging tool used in the assessment of thromboembolic causes, particularly in cases involving strokes or other vascular emergencies in the brain. A CT head scan allows healthcare providers to visualize the brain's structure and identify potential issues such as hemorrhages, infarcts, or other pathologies that may result from a thromboembolic event. In the context of advanced life support, accurate and timely imaging can significantly affect the management and outcomes of patients experiencing acute neurological events. The CT scan helps in differentiating between ischemic strokes, which may benefit from thrombolysis, and hemorrhagic strokes, which require different management approaches. The other options do not align with the established terminology and practices in medical imaging for assessing thromboembolic causes. For instance, "Chest Tube History" and "Clear Trace Hemo" do not relate to brain imaging, and "Computerized Tomography Scan," while closely related, does not provide the specific context of assessing the head that is indicated by the term 'CTH.' Understanding the specific application of each term and acronym is essential for delivering effective patient care in emergency and critical situations.

3. In cases of severe allergic reactions, what is the primary medication used for emergency treatment?

- A. Antihistamines**
- B. Corticosteroids**
- C. Adrenaline**
- D. IV fluids**

In cases of severe allergic reactions, such as anaphylaxis, adrenaline is the primary medication used for emergency treatment. This is due to its rapid action in counteracting the severe symptoms associated with this life-threatening condition. Adrenaline works by causing vasoconstriction, which helps to improve blood pressure, and also leads to bronchodilation, thus alleviating respiratory distress. It can quickly reverse swelling and hives, providing vital support during critical moments. While antihistamines can be helpful in managing milder allergic reactions by blocking the effects of histamine, they do not have the same immediate and potent effects as adrenaline in severe cases.

Corticosteroids are often used in allergic reactions as part of a longer-term management plan and to reduce inflammation; however, they take longer to have an effect and are not suitable for treating anaphylaxis in the acute phase. IV fluids can be necessary to support circulation, especially in cases where there is significant hypotension, but they do not address the underlying cause of anaphylaxis and are not the primary treatment. Thus, the use of adrenaline as the primary medication reflects its critical role in the rapid reversal of severe allergic reactions, making it essential for emergency interventions in these situations.

4. Which medication is commonly used in the management of heart failure?

- A. Furosemide**
- B. Amiodarone**
- C. Atorvastatin**
- D. Diltiazem**

Furosemide is a loop diuretic commonly used in the management of heart failure to alleviate symptoms and improve quality of life. It works by reducing fluid overload, which is a common issue in heart failure patients. By promoting diuresis, Furosemide helps decrease the volume of fluid in the body, thereby reducing the workload on the heart and improving symptoms such as shortness of breath and edema. In contrast, while Amiodarone is an antiarrhythmic medication that might be used in cases where arrhythmias occur in heart failure patients, it is not primarily aimed at managing heart failure itself. Atorvastatin is a statin used for cholesterol management and has a role in cardiovascular risk reduction but does not directly address heart failure symptoms. Diltiazem, a calcium channel blocker, is typically used to manage hypertension and certain arrhythmias, but it is not a first-line medication in heart failure management due to its potential negative effects on cardiac function in this patient population. Therefore, Furosemide stands out as the most appropriate medication for effectively managing heart failure.

5. What electrolyte imbalance can contribute to ventricular fibrillation?

- A. Hyperthyroidism
- B. Abnormal potassium concentration**
- C. Oligemia
- D. Hypercalcemia

Ventricular fibrillation is a critical condition characterized by disorganized electrical activity in the heart, leading to ineffective pumping and loss of consciousness. One of the key factors that can lead to this arrhythmia is an abnormal potassium concentration, particularly hypokalemia (low potassium levels) or hyperkalemia (high potassium levels). Potassium is crucial for maintaining normal cardiac excitability and conduction; imbalances can disrupt the action potentials of cardiac myocytes, predisposing individuals to arrhythmias like ventricular fibrillation. In the context of cardiac function, potassium abnormalities can change the membrane potential and refractory period of myocardial cells, leading to increased automaticity and ectopic foci, which can trigger ventricular fibrillation. Therefore, recognizing and correcting abnormal potassium levels is essential in managing patients at risk of this dangerous arrhythmia. Other options may not have the same direct and immediate impact on the risk of ventricular fibrillation. For instance, hyperthyroidism primarily affects metabolism and can lead to various cardiovascular effects, but it is not directly linked to acute arrhythmias like ventricular fibrillation in the same way that potassium imbalances are. Oligemia relates to reduced blood volume, which can affect perfusion but does not directly cause electrical disturbances in the heart. Hyper

6. Which is the most common cardiac arrest rhythm associated with the lowest survival rate?

- A. Ventricular Fibrillation
- B. Non-shockable rhythms (PEA/Asystole)**
- C. Sinus arrest
- D. Tachycardia

The rhythm identified as having the lowest survival rate in cases of cardiac arrest is indeed Non-shockable rhythms, which include Pulseless Electrical Activity (PEA) and Asystole. These rhythms are characterized by the absence of effective cardiac output and may present with electrical activity on the ECG that does not result in effective heart contractions. Survival rates associated with these rhythms are significantly lower compared to other rhythms, such as Ventricular Fibrillation. This is primarily due to the underlying causes of PEA and Asystole, which often include severe underlying pathology that has resulted in the patient's critical state, such as hypoxia, hypovolemia, or severe metabolic disturbances. As a result, the chance of successfully reversing these conditions during a resuscitation attempt is often less favorable. Effective interventions for achieving return of spontaneous circulation (ROSC) with non-shockable rhythms involve high-quality CPR and addressing reversible causes immediately, highlighting the complexity and challenges associated with resuscitating patients in these states. In contrast, rhythms like Ventricular Fibrillation, although also serious, can often be treated successfully with defibrillation, leading to higher survival rates in otherwise reversible scenarios.

7. Which of the following is NOT a reversible cause during resuscitation?

- A. Hypoxia**
- B. Hypovolemia**
- C. Hyperglycemia**
- D. Tension pneumothorax**

In the context of advanced life support, recognizing reversible causes of cardiac arrest is crucial for effective resuscitation. Among the options listed, hyperglycemia is not typically classified as a reversible cause during resuscitation. Reversible causes are conditions that can be quickly identified and treated in the resuscitation setting, allowing for the possibility of restoring normal cardiac function. Hypoxia and hypovolemia can be addressed immediately through actions such as ensuring adequate ventilation and fluid resuscitation, while tension pneumothorax can be relieved through procedures such as needle decompression or chest tube placement, both of which can rapidly improve hemodynamics and oxygenation. Hyperglycemia, while it may require management in the context of overall patient care, is not an urgent cause that can be immediately reversed during the resuscitation process. It generally necessitates a more prolonged intervention, such as insulin administration, rather than an immediate life-saving measure. This distinguishes it from the other options, which can be swiftly acted upon to stabilize the patient during a critical emergency.

8. What action should be taken if a patient remains symptomatic despite adrenaline administration?

- A. Continue observing without further action**
- B. Administer another dose of adrenaline**
- C. Immediate transfer to the hospital**
- D. Provide antihistamines right away**

In the context of managing anaphylaxis or severe allergic reactions, administration of adrenaline is a crucial intervention. If a patient remains symptomatic after the initial dose of adrenaline, administering another dose of adrenaline is appropriate due to its role as a first-line treatment. Adrenaline works to reverse the life-threatening symptoms associated with severe allergic reactions, including airway constriction, hypotension, and cardiovascular collapse. The rationale for administering a second dose lies in the fact that sometimes the initial intervention may not be sufficient to alleviate all symptoms, especially if the reaction is particularly severe or the response to adrenaline is diminished. The standard practice within guidelines is that a second dose may be given after a set interval, typically about 5 to 15 minutes, depending on the patient's ongoing assessment and clinical status. This decision is made in the context of the dynamic nature of anaphylaxis, where symptoms can progress rapidly. Continuous monitoring and reassessment of the patient's response to treatment is paramount, and additional doses of adrenaline may be necessary to achieve a more favorable outcome. Observing the patient without further action doesn't address their immediate needs and could lead to deterioration. Immediate transfer to the hospital is necessary in cases of severe anaphylaxis, but this should not replace the administration of necessary treatments like

9. How does a healthcare provider assess the effectiveness of chest compressions?

- A. By checking blood pressure
- B. By ensuring adequate depth, frequency, and full chest recoil**
- C. By listening for heart sounds
- D. By monitoring respiratory rate

The effectiveness of chest compressions during cardiopulmonary resuscitation (CPR) is primarily assessed by ensuring that the compressions are of adequate depth, frequency, and allowing full chest recoil. Proper depth refers to compressing the chest to at least 5 cm (2 inches) in adults, while the frequency should be around 100 to 120 compressions per minute. Ensuring full chest recoil between compressions is crucial, as it allows for adequate filling of the heart, which is important for effective circulation. This combination helps to maximize blood flow to vital organs during cardiac arrest, increasing the chances of survival. While checking blood pressure, listening for heart sounds, or monitoring respiratory rate may provide some information about a patient's overall condition, they are not reliable indicators of the effectiveness of chest compressions during CPR. Blood pressure can be difficult to assess accurately in a patient undergoing CPR, and heart sounds may be muffled or absent. Additionally, respiratory rate is not directly related to the effectiveness of compressions, especially in an unresponsive patient in cardiac arrest. Thus, the assessment of chest compressions focuses on the specific aspects that contribute directly to effective circulation during resuscitation efforts.

10. When should adrenaline ideally be administered after cardiac arrest?

- A. Immediately before CPR
- B. After the first shock if the arrest is shockable**
- C. Only after three cycles of CPR
- D. Only if the patient is unconscious

Administering adrenaline after a cardiac arrest is crucial for improving chances of survival, particularly in cases of shockable rhythms like ventricular fibrillation or pulseless ventricular tachycardia. The correct timing for administering adrenaline, especially in the context of Advanced Life Support protocols, is right after the first shock when the patient is in a shockable rhythm. This is because delivering adrenaline immediately following a shock can enhance myocardial perfusion and increase the likelihood of restoring a perfusing rhythm. The rationale is based on the physiological need to maximize the effectiveness of defibrillation, as adrenaline causes peripheral vasoconstriction, thereby increasing coronary and cerebral blood flow during CPR, especially immediately after a shock is delivered. In contrast, administering adrenaline before CPR or waiting too long, such as after three cycles of CPR or only when the patient is unconscious, would not optimally exploit the therapeutic benefits of adrenaline during the critical early moments post-cardiac arrest. The goal is to deliver adrenaline in a timely manner that complements the resuscitation efforts without compromising subsequent interventions.

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://rcukals.examzify.com>

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

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