ECCO Caring for Patients with Cardiovascular Disorders Part 1 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

1. Which ST-segment elevation pattern suggests a right ventricular MI?

A. ST elevation in leads I and aVL

B. ST elevation in leads II and III

C. ST depression in V5-V6

D. T-wave inversion in aVR

2. When caring for a patient after cardiac catheterization, with which sign should the nurse be most concerned?

A. Decreased pedal pulses

B. Increased appetite

C. Clear urine

D. Normal leg warmth

3. Which laboratory finding is most consistent with cardiogenic shock secondary to myocardial infarction?

A. Decreased troponin

B. Elevated troponin and BNP

C. Decreased CK-MB

D. Normal troponin

4. Morphine is used to relieve pain and anxiety. What other functions does morphine perform in a patient with ACS?

A. Increases systemic vascular resistance

B. Decreases preload and may decrease afterload

C. Dilates pulmonary arteries to raise oxygenation

D. Increases heart rate

5. What hemodynamic effect would you expect after nitroglycerin administration in ACS?

A. Increased afterload

B. No change in vascular tone

C. Decreased preload and possible decrease in afterload

D. Decreased preload only

6. How can the supply of oxygen to the myocardium be increased in a patient with suspected ACS?

- **A. Provide supplemental oxygen as needed**
- **B. Decrease oxygen delivery by lowering FiO2**
- **C. Delay oxygen until pain worsens**
- **D. Increase heart rate with stimulants**

7. Five days after an MI, a patient reports chest fullness and dyspnea. The nurse should assess for which symptoms?

- **A. Headache**
- **B. Abdominal pain**
- **C. Numbness in fingers**
- **D. Cough and dyspnea**

8. Which statement best characterizes NSTEMI?

- **A. ST elevation in leads II and III**
- **B. NSTEMI is not a form of ACS**
- **C. NSTEMI may not show ST elevation on ECG but troponin elevation**
- **D. NSTEMI shows ST elevation in V1-V3 exclusively**

9. Which of the following factors affects myocardial oxygen delivery?

- **A. Heart rate only**
- **B. Systemic blood pressure only**
- **C. Coronary perfusion pressure**
- **D. Ventricular size only**

10. Which sign would indicate edema in a patient admitted with STEMI?

- **A. Orthopnea and anxiety**
- **B. Jugular venous distention**
- **C. Peripheral edema**
- **D. Shortness of breath on exertion**

Answers

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

Explanations

1. Which ST-segment elevation pattern suggests a right ventricular MI?

A. ST elevation in leads I and aVL

B. ST elevation in leads II and III

C. ST depression in V5-V6

D. T-wave inversion in aVR

Right ventricular infarction is suggested on the ECG by ST-segment elevation in the right-sided chest leads, especially V4R, and it may accompany an inferior-wall MI. This reflects involvement of the thin-walled right ventricle, which sits on the right side of the heart. Because the RV is preload-dependent, recognizing RV MI is crucial for management: avoid nitrates and diuretics initially, and give IV fluids to support preload while you obtain right-sided leads to confirm RV involvement. In the patterns shown, there isn't a clear ST elevation in the right-sided leads, which is why these examples aren't definitive for RV MI. T-wave inversion in aVR can indicate diffuse ischemia or left main disease rather than an isolated RV infarct. If RV MI is suspected, a right-sided ECG (placing leads on the right chest) is the key confirmatory step.

2. When caring for a patient after cardiac catheterization, with which sign should the nurse be most concerned?

A. Decreased pedal pulses

B. Increased appetite

C. Clear urine

D. Normal leg warmth

After arterial access for a cardiac catheterization, monitoring distal perfusion to the leg is essential. A decrease in pedal pulses means blood flow beyond the catheter site is reduced, which can indicate arterial occlusion, thrombosis, or a compressive hematoma. This can rapidly lead to limb ischemia if not addressed, making it the most concerning sign. Other options don't point to an acute vascular complication: appetite changes aren't related to the procedure, clear urine reflects kidney function, and normal leg warmth suggests perfusion is still adequate, which is less alarming than diminished pulses. The nurse should promptly assess the limb's color, temperature, capillary refill, sensation, and movement; inspect the access site for bleeding or hematoma; keep the patient on bed rest per protocol; and inform the physician for urgent evaluation and possible intervention, such as Doppler studies or revascularization if needed.

3. Which laboratory finding is most consistent with cardiogenic shock secondary to myocardial infarction?

A. Decreased troponin

B. Elevated troponin and BNP

C. Decreased CK-MB

D. Normal troponin

When a myocardial infarction leads to cardiogenic shock, labs reflect both myocardial injury and the heart's failing pump. Troponin rises when heart muscle is damaged, so elevated troponin is expected after an MI. BNP is released in response to increased ventricular wall stress from poor pumping and elevated filling pressures; in cardiogenic shock the ventricle is under heavy strain, so BNP levels rise too. Seeing both elevated troponin and BNP best fits the picture of an infarct causing severe cardiac pump failure. A normal or decreased troponin wouldn't indicate active myocardial injury, and decreased CK-MB doesn't align with the typical injury pattern seen in MI.

4. Morphine is used to relieve pain and anxiety. What other functions does morphine perform in a patient with ACS?

A. Increases systemic vascular resistance

B. Decreases preload and may decrease afterload

C. Dilates pulmonary arteries to raise oxygenation

D. Increases heart rate

Morphine in ACS helps reduce the heart's workload by lowering both the venous return and, to some extent, the arterial resistance. The primary effect is venodilation, which decreases preload—the amount of blood filling the heart before it contracts. When preload drops, the heart stretches less, so the oxygen demand to pump that blood down the circulation falls. There can also be some arterial dilation, which lowers systemic vascular resistance and may decrease afterload, further reducing myocardial oxygen consumption. This combination helps relieve ischemia beyond pain and anxiety relief. It does not raise systemic vascular resistance, so the idea that morphine increases afterload isn't accurate. It doesn't primarily dilate pulmonary arteries to improve oxygenation, which isn't a primary or reliable effect of morphine. It also doesn't typically increase heart rate; it usually reduces sympathetic drive, which can blunt or slow the heart rate rather than raise it.

5. What hemodynamic effect would you expect after nitroglycerin administration in ACS?

A. Increased afterload

B. No change in vascular tone

C. Decreased preload and possible decrease in afterload

D. Decreased preload only

Nitroglycerin's main action is venodilation, which lowers the amount of blood returning to the heart. In ACS this reduces preload, meaning the left ventricle fills with less volume and pressure (lower LV end-diastolic pressure and wall stress). At higher doses it also dilates arteries, which can lower afterload as systemic vascular resistance falls. Together, decreased preload and the potential decrease in afterload reduce myocardial wall tension and oxygen demand, helping relieve ischemia. So the expected hemodynamic change is decreased preload, with a possible decrease in afterload depending on the dose.

6. How can the supply of oxygen to the myocardium be increased in a patient with suspected ACS?

A. Provide supplemental oxygen as needed

B. Decrease oxygen delivery by lowering FiO2

C. Delay oxygen until pain worsens

D. Increase heart rate with stimulants

Maintaining adequate oxygen delivery to the heart relies on both how much oxygen is carried in the blood and how well blood flows to the myocardium. When a patient with suspected ACS is hypoxemic, giving supplemental oxygen raises the arterial oxygen content and PaO2, increasing the amount of oxygen available to the heart muscle and helping to meet its metabolic needs during ischemia. Lowering FiO2 would reduce oxygen content and worsen delivery. Delaying oxygen until pain worsens misses an opportunity to support the myocardium early. Increasing heart rate with stimulants raises oxygen demand, which can worsen ischemia rather than improve supply.

7. Five days after an MI, a patient reports chest fullness and dyspnea. The nurse should assess for which symptoms?

A. Headache

B. Abdominal pain

C. Numbness in fingers

D. Cough and dyspnea

The main concept here is recognizing signs of left-sided heart failure with pulmonary congestion after a myocardial infarction. Five days after an MI, new or worsening chest fullness and shortness of breath often point to developing heart failure as the damaged heart struggles to pump effectively. The best symptom to assess in this situation is a cough that accompanies the dyspnea, because cough is a classic manifestation of pulmonary edema resulting from fluid backing up into the lungs. This dyspnea-cough combination reflects impaired gas exchange from fluid in the alveoli and is often accompanied by lung crackles, possible orthopnea, and, if more advanced, frothy sputum. Other symptoms listed—headache, abdominal pain, or numbness in the fingers—don't align with this scenario of post-MI left-sided heart failure and pulmonary congestion, so they're not the priority signs to evaluate here. If coughing and dyspnea are present, the nurse should further assess respiratory status and signs of heart failure and prepare for appropriate interventions as ordered.

8. Which statement best characterizes NSTEMI?

A. ST elevation in leads II and III

B. NSTEMI is not a form of ACS

C. NSTEMI may not show ST elevation on ECG but troponin elevation

D. NSTEMI shows ST elevation in V1-V3 exclusively

NSTEMI means non-ST-elevation myocardial infarction, a type of acute coronary syndrome where there is myocardial injury with troponin release but without ST-segment elevation on the ECG. The absence of ST elevation reflects subendocardial, not transmural, injury. Troponin elevation confirms the presence of myocardial necrosis even when the ECG doesn't show a classic ST-elevation pattern. This is why the statement that NSTEMI may not show ST elevation on ECG but troponin elevation is the best description. ST elevations in specific leads, like II and III, point to a STEMI of the inferior wall, not NSTEMI. Saying NSTEMI is not a form of ACS is incorrect because NSTEMI is part of acute coronary syndrome. ST elevation in V1-V3 would suggest an anterior STEMI rather than NSTEMI.

9. Which of the following factors affects myocardial oxygen delivery?

A. Heart rate only

B. Systemic blood pressure only

C. Coronary perfusion pressure

D. Ventricular size only

Oxygen delivery to the heart muscle hinges on coronary blood flow, which is governed by the driving pressure across the coronary circulation—coronary perfusion pressure. This pressure is essentially the gradient pushing blood through the coronary vessels, and during the heart's relaxation phase (diastole) it matters most because coronary flow occurs mainly then. Coronary perfusion pressure is roughly the aortic diastolic pressure minus the right atrial pressure; when this gradient falls (lower diastolic pressure or higher right atrial pressure), myocardial oxygen delivery drops due to reduced coronary flow. Among the options, coronary perfusion pressure best represents the direct determinant of coronary blood flow and thus myocardial oxygen delivery. Heart rate can influence delivery indirectly by shortening diastole and reducing filling time, systemic blood pressure contributes to the gradient but is not the direct measure of coronary flow, and ventricular size affects oxygen demand more than supply.

10. Which sign would indicate edema in a patient admitted with STEMI?

A. Orthopnea and anxiety

B. Jugular venous distention

C. Peripheral edema

D. Shortness of breath on exertion

Edema from heart failure after STEMI often presents with orthopnea—shortness of breath that worsens when lying flat because fluid shifts toward the chest and lungs, causing pulmonary congestion. The accompanying anxiety reflects the distress from breathing difficulty. This combination directly signals fluid overload in the lungs, i.e., edema. While jugular venous distention indicates elevated venous pressures, and peripheral edema shows fluid buildup, they're less specific to the acute pulmonary edema that orthopnea points to. Shortness of breath on exertion is a broad symptom that can occur for many reasons and doesn't specifically indicate edema.

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://eccocaringforcardiovasculardisorders1.examzify.com

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