

# Coronary Artery Bypass Graft (CABG) Surgery 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. What is cardiac tamponade?**
  - A. A life-threatening complication of CABG surgery in which the heart is being compressed by an excessive amount of blood between the heart and chest wall**
  - B. A mild arrhythmia due to electrolyte imbalance**
  - C. A pulmonary embolism**
  - D. Acute myocardial infarction**
  
- 2. Which parameter should be monitored to assess perfusion and hemodynamic status in a patient with cardiac tamponade?**
  - A. CO, CI, CVP, PAP, PAOP, and SVR**
  - B. Temperature and wound tenderness**
  - C. Urine specific gravity**
  - D. Lung auscultation only**
  
- 3. Mediastinitis is defined as infection of the sternal wound involving which space?**
  - A. Posterior mediastinal space**
  - B. Pericardial space**
  - C. Anterior mediastinal space**
  - D. Left pleural space**
  
- 4. Why is ambulation started early after CABG?**
  - A. To prevent deep vein thrombosis**
  - B. To prevent pneumonia**
  - C. To increase blood loss**
  - D. To prolong hospital stay**
  
- 5. What is postpericardiotomy syndrome?**
  - A. A postoperative arrhythmia**
  - B. A type of heart failure after CABG**
  - C. An inflammatory reaction involving the pleura & pericardium; cause thought to be autoimmune & may be associated w/ blood remaining in the pericardial sac**
  - D. A bacterial infection of the mediastinal tissue**

- 6. Which of the following is a possible nursing diagnosis after CABG?**
- A. Risk for infection**
  - B. Imbalanced nutrition < body requirements**
  - C. Activity intolerance**
  - D. Risk for decreased CO**
- 7. Which incision is used to harvest the saphenous vein for CABG?**
- A. Median sternotomy**
  - B. Leg incision to harvest the saphenous vein**
  - C. Wrist incision to harvest the radial artery**
  - D. Neck incision**
- 8. Which option describes the function of the water seal chamber in the chest drainage system?**
- A. Maintains negative pressure**
  - B. Maintains positive pressure in chest**
  - C. Stores collected blood**
  - D. Delivers oxygen to patient**
- 9. Which sign is associated with postpericardiotomy syndrome?**
- A. Toothache**
  - B. Friction rub, pleural effusion, & pericarditis**
  - C. Shortness of breath due to asthma**
  - D. Abdominal pain after meals**
- 10. Which statement reflects a belief commonly affecting CABG care?**
- A. Jehovah's Witnesses do not believe in receiving blood products**
  - B. Jehovah's Witnesses require aspirin for all surgeries**
  - C. Jehovah's Witnesses can never consent to anesthesia**
  - D. Jehovah's Witnesses demand immediate surgery without consent**

## **Answers**

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

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## **Explanations**

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## 1. What is cardiac tamponade?

- A. A life-threatening complication of CABG surgery in which the heart is being compressed by an excessive amount of blood between the heart and chest wall**
- B. A mild arrhythmia due to electrolyte imbalance**
- C. A pulmonary embolism**
- D. Acute myocardial infarction**

Cardiac tamponade is a life-threatening situation where blood collects in the pericardial space after surgery, externally compressing the heart and preventing it from filling properly. In the CABG setting, postoperative bleeding or oozing into the pericardial sac can cause this compression, leading to reduced venous return, decreased stroke volume, and shock. Clinically, you'd see rapid hypotension with tachycardia and signs of poor perfusion, sometimes with elevated filling pressures and muffled heart sounds; urgent drainage is required, with pericardiocentesis as a temporizing step and surgical reexploration to evacuate the blood. This condition is distinct from a mild electrolyte-related arrhythmia, a pulmonary embolism, or an acute myocardial infarction, which involve different mechanisms and presentations.

## 2. Which parameter should be monitored to assess perfusion and hemodynamic status in a patient with cardiac tamponade?

- A. CO, CI, CVP, PAP, PAOP, and SVR**
- B. Temperature and wound tenderness**
- C. Urine specific gravity**
- D. Lung auscultation only**

In cardiac tamponade, the heart's filling is restricted by pressure in the pericardial sac, so forward blood flow and tissue perfusion can quickly deteriorate even if volumes are high. To gauge how well perfusion is maintained and how the circulatory system is coping, you need a profile that covers preload, pump function, and afterload. Measuring cardiac output (and its index) tells you the actual overall blood flow to tissues. Central venous pressure reflects right-sided filling pressure and venous return, while pulmonary artery pressures and the pulmonary artery wedge pressure (left-sided filling pressure) show how well the heart chambers are being filled and how pressures are transmitted through the pulmonary circuit. Systemic vascular resistance adds understanding of the afterload the heart faces. Together, these hemodynamic parameters provide a comprehensive view of perfusion status and the heart's ability to respond to tamponade and intervention. The other options don't give this physiologic picture. Temperature and wound tenderness relate to infection risk rather than real-time perfusion; urine specific gravity indicates renal concentrating ability but not cardiac preload or output; lung auscultation alone cannot quantify hemodynamics or perfusion.

**3. Mediastinitis is defined as infection of the sternal wound involving which space?**

- A. Posterior mediastinal space**
- B. Pericardial space**
- C. Anterior mediastinal space**
- D. Left pleural space**

Mediastinitis is infection of the mediastinal tissues. After a sternotomy, the infection that tracks from the sternal wound most commonly involves the anterior mediastinal space—the area directly behind the sternum and in front of the pericardium. This is the region at highest risk because the sternum forms the anterior boundary of the mediastinum. In contrast, the posterior mediastinal space lies behind the heart and pericardium, the pericardial space is the sac around the heart (which would be purulent pericarditis if infected), and the left pleural space is a lateral thoracic compartment. So, the space involved in mediastinitis originating from a sternal wound is the anterior mediastinal space.

**4. Why is ambulation started early after CABG?**

- A. To prevent deep vein thrombosis**
- B. To prevent pneumonia**
- C. To increase blood loss**
- D. To prolong hospital stay**

Early ambulation after CABG focuses on reducing postoperative complications by promoting venous return and better lung mechanics. The main reason for getting patients moving soon after surgery is to prevent deep vein thrombosis by decreasing venous stasis in the legs. When a patient is immobile, blood flow in the legs slows, increasing clot risk; standing and walking exercises engage the leg muscle pumps that drive venous return, lowering this risk. While there are secondary benefits—like helping clear the lungs and reducing pneumonia—these are not the primary driver in this question. Early ambulation does not increase blood loss and, in fact, tends to help shorten recovery time and hospital stay.

**5. What is postpericardiotomy syndrome?**

- A. A postoperative arrhythmia**
- B. A type of heart failure after CABG**
- C. An inflammatory reaction involving the pleura & pericardium; cause thought to be autoimmune & may be associated w/ blood remaining in the pericardial sac**
- D. A bacterial infection of the mediastinal tissue**

Postpericardiotomy syndrome is an inflammatory reaction that occurs after surgical opening or manipulation of the heart, affecting both the pericardium and the adjacent pleura. The condition is thought to be autoimmune in origin, triggered by exposure of cardiac antigens during surgery, and it can be worsened if blood remains in the pericardial sac. Clinically, it presents with chest pain, fever, a pericardial friction rub, and often pleural effusions or pericardial effusion weeks after surgery. It is not a rhythm disturbance, not a form of heart failure from poor pumping, and not a bacterial infection. Treatment focuses on anti-inflammatory therapy, such as NSAIDs and sometimes colchicine, with careful monitoring of effusions.

**6. Which of the following is a possible nursing diagnosis after CABG?**

- A. Risk for infection**
- B. Imbalanced nutrition < body requirements**
- C. Activity intolerance**
- D. Risk for decreased CO**

After CABG, the heart's ability to pump effectively can be temporarily impaired by factors from the surgery and bypass, such as myocardial stunning, edema, ischemia, and rhythm problems. This makes the risk of decreased cardiac output the most critical concern because it directly affects tissue perfusion and organ function. A nursing diagnosis that flags this risk—decreased cardiac output—guides urgent monitoring and interventions to support preload and contractility, prevent hypotension, and maintain oxygen delivery. Signs to watch for include low blood pressure, rapid or irregular pulse, reduced urine output, cool or mottled skin, and altered mental status. While infection risk, nutritional imbalances, or activity intolerance can also arise after CABG, they are secondary to the immediate threat of compromised cardiac output in the early postoperative period.

**7. Which incision is used to harvest the saphenous vein for CABG?**

- A. Median sternotomy**
- B. Leg incision to harvest the saphenous vein**
- C. Wrist incision to harvest the radial artery**
- D. Neck incision**

The saphenous vein graft is taken from the leg, so the incision is placed along the leg to harvest the vein. The saphenous vein runs superficially in the leg, and a leg incision (often along the medial side) allows the surgeon to expose, mobilize, and remove a segment for use in bypass grafting. Opening the chest with a median sternotomy is how the heart is accessed, not how the vein is harvested. Harvesting the radial artery from the wrist is a different conduit option, and a neck incision would not be used to obtain the saphenous vein.

**8. Which option describes the function of the water seal chamber in the chest drainage system?**

- A. Maintains negative pressure**
- B. Maintains positive pressure in chest**
- C. Stores collected blood**
- D. Delivers oxygen to patient**

The water-seal chamber functions as a one-way barrier that preserves negative pressure in the pleural space. As air and fluid leave the chest through the chest tube, the water seal allows air to escape to the atmosphere but prevents atmospheric air from flowing back into the chest. This keeps the intrapleural space subatmospheric, helping the lung to expand and aiding drainage. The other parts of the chest drainage system have different roles—the collection chamber stores drained fluid or blood, and the suction control chamber applies suction when needed. Oxygen delivery is not a function of the drainage system.

**9. Which sign is associated with postpericardiotomy syndrome?**

- A. Toothache**
- B. Friction rub, pleural effusion, & pericarditis**
- C. Shortness of breath due to asthma**
- D. Abdominal pain after meals**

Postpericardiotomy syndrome is an inflammatory reaction after heart or pericardial surgery that targets the pericardium and nearby pleura. The hallmark signs are friction rub from pericarditis, pleural effusions from pleuritis, and the pericarditis itself. This combination—friction rub, pleural effusion, and pericarditis—best fits the syndrome, since it reflects the inflammatory process affecting both the pericardium and the adjacent pleural space. The other options don't fit PCS: a toothache is unrelated to the heart or pericardium; shortness of breath can occur but isn't specific to PCS and would not alone define it; abdominal pain after meals points to a gastrointestinal issue rather than postpericardiotomy inflammation.

**10. Which statement reflects a belief commonly affecting CABG care?**

- A. Jehovah's Witnesses do not believe in receiving blood products**
- B. Jehovah's Witnesses require aspirin for all surgeries**
- C. Jehovah's Witnesses can never consent to anesthesia**
- D. Jehovah's Witnesses demand immediate surgery without consent**

Beliefs about blood transfusion commonly affect CABG care. Jehovah's Witnesses often refuse blood products for religious reasons, so the care team plans around potential blood loss and uses strategies to preserve the patient's blood, such as blood-conservation techniques and exploring acceptable alternatives before surgery. This is why the statement about refusal of blood transfusions best captures a belief that can shape perioperative management. The other ideas don't fit common patient beliefs in this context: aspirin use is not universally required for all surgeries, consent to anesthesia is not categorically denied, and there is no general demand for immediate surgery without consent.

## 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://cabgsurgery.examzify.com>**

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

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