

CORONARY ARTERY BYPASS GRAFT (CABG) SURGERY PRACTICE TEST (SAMPLE)

STUDY GUIDE



**SAMPLE STUDY GUIDE
WITH LIMITED QUESTIONS**

**VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE**

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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 role does veno-arterial extracorporeal membrane oxygenation (VA-ECMO) play in CABG-related complications?**
 - A. Permanent replacement for the heart.
 - B. Temporary circulatory and oxygenation support for patients with refractory cardiogenic shock or severe LV dysfunction not responding to other support.
 - C. Only used in pediatric patients.
 - D. It provides only oxygenation, not circulation.

- 2. What is the rationale for using bilateral internal mammary arteries (BIMA) versus single LIMA in CABG?**
 - A. BIMA can provide superior long-term patency and survival but increases risk of sternal wound complications; patient selection and risk stratification are important.
 - B. BIMA can provide lower risk of sternal wound infections
 - C. BIMA provides no patency advantage over LIMA
 - D. BIMA is never indicated in diabetics

- 3. In lipid management, what is the HDL goal?**
 - A. HDL >60 mg/dL
 - B. HDL >30 mg/dL
 - C. HDL >50 mg/dL
 - D. HDL >40 mg/dL

- 4. Which statement about cardiac rehabilitation after CABG is correct?**
 - A. Participation in cardiac rehabilitation is encouraged
 - B. Cardiac rehabilitation is not recommended
 - C. Exercise is contraindicated
 - D. Only after 1 year

- 5. Define complete revascularization in CABG and why it matters.**
 - A. Grafting only the most critical lesion with a single conduit
 - B. Revascularization of all significantly diseased territories with grafts; associated with improved long-term survival and reduced recurrent angina, though staged or tailored approaches may be used.
 - C. Focusing exclusively on venous grafts to all targets
 - D. Avoiding revascularization of nondominant arteries to shorten surgery

- 6. What is the purpose of sternotomy closure techniques and sternal closure devices in CABG?**
- A. To prevent any infection completely.
 - B. To restore chest wall stability, minimize infection risk, and promote healing; techniques include wires and closure devices to maintain sternal integrity.
 - C. To reduce breathing efficiency.
 - D. To increase sternal instability to allow more movement.
- 7. Which of the following is an expected postoperative assessment?**
- A. Pain
 - B. Incisional drainage
 - C. Bleeding
 - D. Fatigue
- 8. Which of the following is a strategy to achieve lipid level goals?**
- A. Heart healthy diet
 - B. Insulin therapy
 - C. Avoiding aerobic exercise
 - D. Smoking cessation classes
- 9. Which factor is nonmodifiable in the context of CABG risk factors?**
- A. Hypertension
 - B. Age
 - C. Smoking
 - D. Obesity
- 10. What is the impact of smoking status on CABG outcomes and graft patency?**
- A. Active smoking improves outcomes
 - B. Smoking status is irrelevant
 - C. Active smoking worsens outcomes but cessation improves
 - D. Smoking cessation has no effect

Answers

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

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Explanations

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1. What role does veno-arterial extracorporeal membrane oxygenation (VA-ECMO) play in CABG-related complications?

- A. Permanent replacement for the heart.
- B. Temporary circulatory and oxygenation support for patients with refractory cardiogenic shock or severe LV dysfunction not responding to other support.**
- C. Only used in pediatric patients.
- D. It provides only oxygenation, not circulation.

VA-ECMO after CABG is used as temporary circulatory and oxygenation support when the heart cannot maintain adequate output despite other measures. It works by draining venous blood, oxygenating it, and returning it to the arterial system, providing both heart and lung support. This gives the recovering myocardium time to regain function or serves as a bridge to a decision, transplant, or longer-term solution in cases of refractory cardiogenic shock or severe LV dysfunction that doesn't respond to inotropes or other devices. It is not a permanent heart replacement, and it isn't limited to pediatric patients; it's a life-saving option in adults as well for acute post-CABG complications. It provides more than just oxygenation—it delivers systemic circulatory support that maintains perfusion while the heart recovers.

2. What is the rationale for using bilateral internal mammary arteries (BIMA) versus single LIMA in CABG?

- A. BIMA can provide superior long-term patency and survival but increases risk of sternal wound complications; patient selection and risk stratification are important.**
- B. BIMA can provide lower risk of sternal wound infections
- C. BIMA provides no patency advantage over LIMA
- D. BIMA is never indicated in diabetics

Using two internal mammary arteries aims to maximize long-term graft durability because arterial conduits stay patent longer and resist atherosclerosis better than vein grafts. This benefit often translates into improved long-term survival, especially in younger patients with a longer expected remaining lifespan who will live with the grafts for many years. But harvesting both mammaries increases the extent of chest wall dissection, raising the risk of sternal wound complications, including infection and mediastinitis. That risk tends to be higher in patients with diabetes, obesity, COPD, or poor wound healing, and it can offset the long-term gains in certain individuals. Therefore, the rationale hinges on selecting patients who are likely to derive meaningful long-term benefit from the superior patency of arterial grafts while weighing them against the higher risk of sternal wound problems. In some patients, a single LIMA to the LAD provides most of the durable benefit with a lower infection risk, and additional grafts can be planned to minimize wound complications. Techniques such as skeletonized harvesting can reduce wound risk and may expand BIMA use in select cases, but the basic trade-off remains: better long-term graft patency and potential survival benefit with BIMA, balanced against a higher risk of sternal wound complications requiring careful patient selection.

3. In lipid management, what is the HDL goal?

- A. HDL >60 mg/dL
- B. HDL >30 mg/dL
- C. HDL >50 mg/dL
- D. HDL >40 mg/dL**

HDL is the "good" cholesterol, and higher levels help remove cholesterol from arterial walls, reducing atherogenic risk. Because of this protective role, a practical goal in lipid management is to keep HDL above 40 mg/dL. Levels at or below this point are associated with higher cardiovascular risk, while higher levels confer added protection. While some populations may benefit from even higher targets (for example, women often have higher HDL and guidelines sometimes advocate aiming higher in certain groups), the commonly used general target in many questions and guidelines is greater than 40 mg/dL. The other options either set a too-low threshold or imply a higher target that isn't universally established as the standard goal.

4. Which statement about cardiac rehabilitation after CABG is correct?

- A. Participation in cardiac rehabilitation is encouraged**
- B. Cardiac rehabilitation is not recommended
- C. Exercise is contraindicated
- D. Only after 1 year

Participation in cardiac rehabilitation after CABG is encouraged because a structured program, started once medically cleared, supports recovery, improves functional capacity, and reduces future cardiovascular risk. Rehab combines supervised aerobic and resistance exercise with education on risk factor modification, medication adherence, nutrition, smoking cessation, and stress management, all tailored to the individual's healing stage and fitness level. Starting rehab soon after discharge is the standard approach to help patients regain independence and return to daily activities, rather than waiting a full year. Exercise is a central, safe component when properly prescribed and monitored, so saying exercise is contraindicated is not correct. Likewise, rehab is not reserved only for a year after surgery, making the other statements incorrect.

5. Define complete revascularization in CABG and why it matters.

- A. Grafting only the most critical lesion with a single conduit
- B. Revascularization of all significantly diseased territories with grafts; associated with improved long-term survival and reduced recurrent angina, though staged or tailored approaches may be used.**
- C. Focusing exclusively on venous grafts to all targets
- D. Avoiding revascularization of nondominant arteries to shorten surgery

Complete revascularization in CABG means bypassing all coronary regions with significant disease so that every area of myocardium at risk receives an adequate blood supply. The aim is to restore perfusion to all major diseased territories rather than addressing just a single culprit lesion. This approach matters because when all significant blocks are grafted, the heart muscle has better overall blood flow, which tends to reduce ongoing ischemia, lessen the likelihood of recurrent angina, and improve long-term survival. In real-world practice, surgeons may stage or tailor the plan, addressing the most critical areas first or when patient risk is high, then treating additional territories later or using hybrid strategies. The concept balances achieving as complete a revascularization as feasible with the patient's safety, anatomy, and overall condition.

6. What is the purpose of sternotomy closure techniques and sternal closure devices in CABG?

- A. To prevent any infection completely.
- B. To restore chest wall stability, minimize infection risk, and promote healing; techniques include wires and closure devices to maintain sternal integrity.**
- C. To reduce breathing efficiency.
- D. To increase sternal instability to allow more movement.

The main idea is to protect the healing chest after the sternum has been split for CABG by securely reapproximating and stabilizing the two halves of the sternum. Closure techniques and devices are used to restore chest wall stability, minimize movement at the wound, and promote healing. Wires have long been used to hold the sternum together, while modern closure devices can provide more rigid fixation and even force distribution, which helps reduce sternal dehiscence, pain, and infection risk. When the sternum is securely closed and stable, patients breathe more effectively, recover faster, and complications related to poor wound healing are less likely. The other options don't fit because complete infection prevention isn't guaranteed, reducing breathing efficiency would be harmful, and increasing instability would clearly hinder healing.

7. Which of the following is an expected postoperative assessment?

- A. Pain
- B. Incisional drainage
- C. Bleeding**
- D. Fatigue

After CABG, some bleeding is expected because surgery with heparinization and tissue manipulation leaves a normal amount of blood loss that chest tubes are placed to drain. The key postoperative assessment is monitoring chest tube drainage to gauge bleeding and hemodynamic stability. A normal pattern is a measurable drainage that gradually decreases over the first hours; a sudden or large increase in drainage signals potential mediastinal bleeding or tamponade and requires prompt action. While pain and fatigue are common after any major surgery and incisional drainage is also expected, the most critical objective measure in the immediate postoperative period is the amount and trend of bleeding discerned from the chest tube output.

8. Which of the following is a strategy to achieve lipid level goals?

- A. Heart healthy diet**
- B. Insulin therapy
- C. Avoiding aerobic exercise
- D. Smoking cessation classes

A heart-healthy diet directly targets lipid levels by changing what you eat. Reducing saturated fats and eliminating trans fats lowers LDL cholesterol, while including soluble fiber and healthy fats (like those from fish, olive oil, nuts, and seeds) helps reduce triglycerides and can modestly raise HDL. This dietary pattern also supports weight management and overall metabolic health, making it a foundational strategy for reaching lipid goals. Insulin therapy is aimed at controlling blood sugar, not lipids, so it doesn't directly drive lipid improvements. Avoiding aerobic exercise would remove a powerful stimulus that typically lowers LDL and triglycerides and raises HDL. Smoking cessation classes are valuable for reducing cardiovascular risk and can modestly improve HDL, but the primary direct strategy to achieve lipid targets among these options is adopting a heart-healthy diet.

9. Which factor is nonmodifiable in the context of CABG risk factors?

- A. Hypertension
- B. Age**
- C. Smoking
- D. Obesity

In CABG risk assessment, distinguishing factors you can influence from those you can't helps guide preoperative planning. Age is nonmodifiable because you cannot change a patient's age; it reflects cumulative vascular disease and reduced physiological reserve, which naturally raises perioperative and long-term risks as someone gets older. The other factors are modifiable. Hypertension can be treated and controlled with medications and lifestyle changes to lower cardiovascular strain and perioperative hazards. Smoking cessation reduces pulmonary complications, wound infections, and overall cardiovascular risk. Obesity can be addressed through weight management and nutritional optimization, which can lessen operative difficulty and reduce postoperative complications. Because these are changeable, they are considered modifiable risk factors. So the factor that cannot be altered is age.

10. What is the impact of smoking status on CABG outcomes and graft patency?

- A. Active smoking improves outcomes
- B. Smoking status is irrelevant
- C. Active smoking worsens outcomes but cessation improves**
- D. Smoking cessation has no effect

Active smoking introduces factors that worsen both the perioperative course and the long-term success of grafts. Nicotine and other smoke constituents cause vasoconstriction, increased heart rate, and a higher tendency for platelet aggregation, which raise the risk of graft thrombosis and early occlusion. They also impair oxygen delivery, promote inflammation, and hinder wound healing, leading to more pulmonary complications, infections, and longer hospital stays after CABG. Quitting before surgery reduces these risks: improved oxygen carrying capacity, better endothelial function, and a less thrombogenic environment help protect graft patency and overall outcomes. When patients stop smoking, they typically experience better short-term recovery and improved long-term graft durability, whereas continuing to smoke maintains higher risk.

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:

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

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