

# Comprehensive Respiratory and Infectious Disease Nursing 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. Which statement best describes how COPD affects exercise tolerance?**
  - A. Patients typically have improved exercise tolerance in the morning.**
  - B. Exercise tolerance is unaffected by secretions.**
  - C. Patients may have reduced exercise capacity, especially in the morning due to accumulated pulmonary secretions.**
  - D. Exercise tolerance is only affected after meals.**
  
- 2. What causes increased tactile fremitus?**
  - A. Pneumothorax**
  - B. Lung consolidation, where air in healthy lung is replaced with inflammatory exudate, blood, pus, or cells**
  - C. Pleural effusion**
  - D. Normal lungs with deep inspiration**
  
- 3. What are common postoperative pulmonary complications and strategies to prevent atelectasis and pneumonia?**
  - A. Atelectasis is the only concern; prevention includes deep breathing and incentive spirometry.**
  - B. Pulmonary edema is most common; prevention includes early ambulation only.**
  - C. Atelectasis, pneumonia, and pulmonary edema are possible; prevention includes incentive spirometry, deep breathing, early ambulation, adequate pain control, coughing technique, hydration.**
  - D. Pneumonia prevented solely by prophylactic antibiotics; no ambulation.**
  
- 4. Which action best supports patient-centered care while implementing isolation precautions?**
  - A. Explain rationale for precautions and involve family while preserving privacy**
  - B. Restrict all communication**
  - C. Isolate the patient without informing them**
  - D. Sacrifice privacy for safety**

- 5. Which option indicates a favorable response to respiratory therapy in pneumonia?**
- A. Lungs clear to auscultation and absence of infection**
  - B. Increased sputum production**
  - C. Elevated fever**
  - D. Worsening crackles**
- 6. Which statement best describes the consequence of polycythemia seen in COPD?**
- A. It reduces risk of thrombotic events**
  - B. It results from chronic hypoxia and increases blood viscosity, leading to complications**
  - C. It improves oxygen delivery by increasing red blood cell mass**
  - D. It has no impact on exercise tolerance**
- 7. What chest X-ray features help differentiate pneumonia from edema, and how should a nurse interpret radiology in patient care planning?**
- A. Pneumonia shows focal consolidation; edema shows diffuse interstitial markings and cardiomegaly; correlate with clinical exam and labs to guide antibiotics versus diuresis and heart failure management.**
  - B. Pneumonia and edema are indistinguishable radiographically; radiographs have no role in planning.**
  - C. Pneumonia is diffuse interstitial; edema focal consolidation.**
  - D. Pneumonia always shows pleural effusion; edema never shows effusions.**
- 8. What are the risks of prolonged high FiO<sub>2</sub> and how can nurses mitigate oxygen toxicity in long-term therapy?**
- A. Dehydration and electrolyte imbalance; mitigate by fluid restriction.**
  - B. Headache only; mitigate with analgesics.**
  - C. Oxygen toxicity with mucous membrane drying; mitigate with humidification.**
  - D. Risks include absorption atelectasis, oxidative stress, and lung injury; mitigation includes using the lowest FiO<sub>2</sub> to maintain target SpO<sub>2</sub>, continuous monitoring, ABG evaluation, titration, and periodic reassessment for toxic effects.**

**9. Which statement accurately differentiates aspiration pneumonia from chemical pneumonitis and describes the corresponding antibiotic approach and nursing considerations?**

- A. Aspiration pneumonia is a bacterial infection after aspiration and antibiotics are commonly indicated; chemical pneumonitis is chemical injury from gastric contents and antibiotics are reserved for secondary infection; nursing includes swallow assessment and NPO until evaluated.**
- B. Chemical pneumonitis is a bacterial infection after aspiration and antibiotics are commonly indicated; aspiration pneumonia is chemical injury and is treated primarily with supportive care.**
- C. Both conditions require identical antibiotic strategies and identical nursing care.**
- D. Avoiding swallowing assessment is essential in aspiration risk management.**

**10. What is thoracentesis?**

- A. A procedure to remove fluid from the pleural space around the lungs**
- B. A method to drain air from the pleural space**
- C. A test to evaluate kidney function**
- D. A procedure to repair a damaged rib**

## **Answers**

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

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## **Explanations**

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**1. Which statement best describes how COPD affects exercise tolerance?**

- A. Patients typically have improved exercise tolerance in the morning.**
- B. Exercise tolerance is unaffected by secretions.**
- C. Patients may have reduced exercise capacity, especially in the morning due to accumulated pulmonary secretions.**
- D. Exercise tolerance is only affected after meals.**

The main idea is that COPD lowers how well the body can tolerate exercise because the airways are narrowed, mucus clearance is impaired, and the lungs can't deliver enough air to meet the muscles' demands during activity. This leads to more breathing effort, faster fatigue, and more shortness of breath during exercise. In COPD, overnight mucus can pool and become thicker, especially with chronic bronchitis. When morning comes, there is more airway resistance and coughing, which makes breathing harder just as you start activity. That combination—increased work of breathing, reduced ventilation, and poorer gas exchange—tends to blunt exercise capacity, so people often tolerate less exertion in the morning. The other ideas don't fit with the typical COPD pattern. Secretions do affect exercise tolerance, and exercise capacity isn't limited only after meals. It's not accurate to say tolerance is unaffected by secretions or that it improves in the morning.

**2. What causes increased tactile fremitus?**

- A. Pneumothorax**
- B. Lung consolidation, where air in healthy lung is replaced with inflammatory exudate, blood, pus, or cells**
- C. Pleural effusion**
- D. Normal lungs with deep inspiration**

Tactile fremitus reflects how well voice vibrations travel through the thorax. When the lung tissue becomes denser—such as in consolidation, where air is replaced by inflammatory exudate, blood, pus, or cells—the vibrations transmit more efficiently to the chest wall, making fremitus feel stronger. This is why consolidation increases tactile fremitus. In contrast, conditions that add air or fluid between the lung and chest wall, like a pneumothorax or a pleural effusion, dampen those vibrations and reduce fremitus. Normal lungs with deep inspiration contain more air, which also dampens vibration transmission, so fremitus is not increased.

**3. What are common postoperative pulmonary complications and strategies to prevent atelectasis and pneumonia?**

- A. Atelectasis is the only concern; prevention includes deep breathing and incentive spirometry.**
- B. Pulmonary edema is most common; prevention includes early ambulation only.**
- C. Atelectasis, pneumonia, and pulmonary edema are possible; prevention includes incentive spirometry, deep breathing, early ambulation, adequate pain control, coughing technique, hydration.**
- D. Pneumonia prevented solely by prophylactic antibiotics; no ambulation.**

Postoperative lung problems come from multiple sources, and prevention works best with a combination approach that supports lung expansion, airway clearance, and pain control. After surgery, shallow breaths and mucus buildup can cause alveolar collapse (atelectasis) and set the stage for pneumonia. Pulmonary edema can also occur in some patients, especially with fluid shifts or cardiac strain, so it's realistic to consider more than one pulmonary issue. The strongest answer recognizes that several complications are possible and that prevention includes a bundle of strategies: incentive spirometry and deep breathing to re-expand and keep the airways open; early ambulation to promote ventilation and mucus clearance; adequate pain control so patients can take deep breaths and cough effectively; coughing technique to mobilize secretions; and hydration to keep mucus thin and easier to clear. Together, these measures address the root causes of atelectasis and help prevent pneumonia, while also acknowledging that edema is a potential concern in the postoperative period. Options that focus on only one issue or rely on a single measure miss the breadth of prevention needed. For example, suggesting only deep breathing or assuming pneumonia is prevented by antibiotics alone ignores the multifactorial nature of these complications and the importance of mobilization and airway clearance strategies.

**4. Which action best supports patient-centered care while implementing isolation precautions?**

- A. Explain rationale for precautions and involve family while preserving privacy**
- B. Restrict all communication**
- C. Isolate the patient without informing them**
- D. Sacrifice privacy for safety**

In patient-centered care during isolation, the focus is on informing the patient, involving family when appropriate, and protecting privacy. Explaining the rationale for precautions helps the patient understand why these measures are needed, which reduces anxiety, builds trust, and encourages cooperation with both care and infection-control practices. Involving family or designated support people provides emotional support and practical help with the care plan, while still respecting the patient's confidentiality. Maintaining privacy is essential to honor autonomy and dignity; information should be shared with the patient and those they authorize, ensuring safety without unnecessary disclosure. Restricting all communication undermines understanding and trust; isolating the patient without informing them violates autonomy and can increase fear and noncompliance. Sacrificing privacy for safety or informing without appropriate consent also runs counter to patient-centered care, as it can erode trust and expose the patient to unnecessary distress.

**5. Which option indicates a favorable response to respiratory therapy in pneumonia?**

- A. Lungs clear to auscultation and absence of infection**
- B. Increased sputum production**
- C. Elevated fever**
- D. Worsening crackles**

Favorable response to respiratory therapy in pneumonia is shown by clear lung sounds and signs that the infection is resolving. When treatment works, the inflammatory exudate in the airways and alveoli is cleared, air moves more freely, and adventitious sounds like crackles diminish or disappear. Fevers typically fall as the infection is controlled, and secretions decrease or normalize as healing occurs. So lungs that are clear to auscultation and show no ongoing infection best indicate improvement. In contrast, if there is more sputum production, a fever remains elevated, or crackles worsen, these suggest ongoing inflammation or deterioration rather than a favorable response.

**6. Which statement best describes the consequence of polycythemia seen in COPD?**

- A. It reduces risk of thrombotic events**
- B. It results from chronic hypoxia and increases blood viscosity, leading to complications**
- C. It improves oxygen delivery by increasing red blood cell mass**
- D. It has no impact on exercise tolerance**

In COPD, chronic low oxygen levels stimulate the body to produce more red blood cells, a response known as secondary polycythemia. This increases the red cell mass and hematocrit, which makes the blood thicker or more viscous. The higher viscosity slows blood flow, raises the workload on the heart, and increases the risk of clotting and vascular complications such as thrombosis, stroke, and pulmonary hypertension. While having more red blood cells can improve oxygen-carrying capacity to some extent, the downsides of increased viscosity often outweigh this benefit, and tissue oxygen delivery can actually be impaired rather than improved. This explains why the consequence described is an increase in blood viscosity with associated complications, rather than a reduced thrombotic risk, no impact on exercise tolerance, or a straightforward improvement in oxygen delivery.

**7. What chest X-ray features help differentiate pneumonia from edema, and how should a nurse interpret radiology in patient care planning?**

- A. Pneumonia shows focal consolidation; edema shows diffuse interstitial markings and cardiomegaly; correlate with clinical exam and labs to guide antibiotics versus diuresis and heart failure management.**
- B. Pneumonia and edema are indistinguishable radiographically; radiographs have no role in planning.**
- C. Pneumonia is diffuse interstitial; edema focal consolidation.**
- D. Pneumonia always shows pleural effusion; edema never shows effusions.**

Recognize the pattern on the chest X-ray. Pneumonia typically shows focal air-space consolidation in one area or lobe, sometimes with air bronchograms, reflecting alveolar filling from infection. Edema from heart failure, on the other hand, usually presents with diffuse interstitial markings, vascular congestion around the hila, and an enlarged heart. This combination points toward fluid overload and impaired cardiac function rather than an infectious process. Because imaging is only part of the picture, always integrate radiology with the clinical exam and labs. If the film shows focal consolidation and the patient has fever, leukocytosis, and a productive cough, the likely plan involves antibiotics for pneumonia. If the film shows diffuse interstitial edema with cardiomegaly and signs of volume overload, focus the care plan on diuresis, fluid management, and heart failure optimization. Remember that pleural effusions can occur with either condition, so their presence doesn't reliably distinguish pneumonia from edema. In practice, radiology guides management but is interpreted in the context of the whole patient.

**8. What are the risks of prolonged high FiO<sub>2</sub> and how can nurses mitigate oxygen toxicity in long-term therapy?**

- A. Dehydration and electrolyte imbalance; mitigate by fluid restriction.**
- B. Headache only; mitigate with analgesics.**
- C. Oxygen toxicity with mucous membrane drying; mitigate with humidification.**
- D. Risks include absorption atelectasis, oxidative stress, and lung injury; mitigation includes using the lowest FiO<sub>2</sub> to maintain target SpO<sub>2</sub>, continuous monitoring, ABG evaluation, titration, and periodic reassessment for toxic effects.**

When oxygen is given at high concentrations for a long time, the body can experience oxygen toxicity because excess oxygen forms reactive oxygen species that damage lung tissue. The main risks are absorption atelectasis from nitrogen washout leading to alveolar collapse, oxidative stress that injures the alveolar-capillary membrane and can cause edema, and potential progression to lung injury with ongoing exposure. Mitigation hinges on using the lowest FiO<sub>2</sub> that achieves the patient's target oxygenation. Monitor continuously with pulse oximetry and use arterial blood gases to guide adjustments and confirm adequate, not excessive, oxygenation. Titrate FiO<sub>2</sub> and reassess frequently to determine if levels can be reduced, and watch for early signs of toxicity. Humidification helps comfort and mucosal hydration but does not prevent oxygen toxicity.

**9. Which statement accurately differentiates aspiration pneumonia from chemical pneumonitis and describes the corresponding antibiotic approach and nursing considerations?**

- A. Aspiration pneumonia is a bacterial infection after aspiration and antibiotics are commonly indicated; chemical pneumonitis is chemical injury from gastric contents and antibiotics are reserved for secondary infection; nursing includes swallow assessment and NPO until evaluated.**
- B. Chemical pneumonitis is a bacterial infection after aspiration and antibiotics are commonly indicated; aspiration pneumonia is chemical injury and is treated primarily with supportive care.**
- C. Both conditions require identical antibiotic strategies and identical nursing care.**
- D. Avoiding swallowing assessment is essential in aspiration risk management.**

The key idea is that aspiration events can cause two distinct problems with different treatments: aspiration pneumonia, which is a bacterial infection after aspiration, and chemical pneumonitis, which is chemical injury from caustic gastric contents. Because of this, the antibiotic approach and nursing focus differ. Aspiration pneumonia results from inhaling oropharyngeal or gastric bacteria into the lungs, leading to infection. Antibiotics are commonly indicated to treat the bacterial infection and prevent progression. Nursing care emphasizes protecting the airway and preventing further aspiration, including performing a swallow assessment and keeping the patient NPO until the swallow screen is completed or a more thorough evaluation is done. Elevating the head of the bed, monitoring respiratory status, and arranging for timely speech therapy or radiographic swallow studies are important steps. Chemical pneumonitis occurs when gastric contents cause an inflammatory chemical injury to the lungs. Antibiotics are not routinely given unless there is evidence of a secondary bacterial infection. The nursing plan centers on supportive care for inflammation and airway management, along with measures to prevent further aspiration, such as careful assessment of swallowing and keeping the patient NPO until safe swallowing is confirmed. Why the other ideas don't fit: mischaracterize chemical pneumonitis as primarily a bacterial infection, or suggest identical antibiotic strategies for both conditions, or de-emphasize swallowing assessment. The correct approach distinguishes infection-driven management from chemical injury and emphasizes swallow evaluation and NPO status until safety is established.

## 10. What is thoracentesis?

- A. A procedure to remove fluid from the pleural space around the lungs**
- B. A method to drain air from the pleural space**
- C. A test to evaluate kidney function**
- D. A procedure to repair a damaged rib**

Removing fluid from the pleural space around the lungs is what thoracentesis accomplishes. This bedside procedure, usually done with local anesthesia and sometimes guided by ultrasound, uses a fine needle or small catheter to access the pleural space between the ribs. It serves both diagnostic and therapeutic purposes: pleural fluid can be sampled for analysis to help determine the cause of an effusion (infection, cancer, heart failure, etc.) and its composition (transudate vs exudate, pH, protein, cytology, cultures), while removing fluid can relieve shortness of breath when the effusion is large. Potential risks include pneumothorax, bleeding, infection, and reaccumulation of fluid. Draining air from the pleural space would require a chest tube or needle decompression, not thoracentesis; evaluating kidney function or repairing a rib are unrelated to this procedure.

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

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

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