ANDERSON HEMODIALYSIS FOR NURSES AND DIALYSIS PERSONNEL (HEMOTECH21) CONTINUING EDUCATION (CE) PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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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.

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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!

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Questions

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1. What is the maximum safe fluid removal rate during a standard hemodialysis treatment?

A. No more than 20% of total body weight.

B. 30% of fluid weight if blood pressure is normal.

C. Ultrafiltration rate of 13/mL/hr or less.

D. No more than 1 liter/hour.

2. Which venous access sites should be avoided in patients with stage 4 or 5 CKD to prevent complications?

A. Arteriovenous fistula and graft

B. Subclavian vein catheter and peripherally inserted central catheter

C. Arteriovenous graft and subclavian vein catheter

D. Arteriovenous fistula and peripherally inserted central catheter

3. What are the system requirements for high-flux dialysis?

A. Reliable blood flow rate of at least 200 mL/min.

B. High dialysate flow rate.

C. Precise control of ultrafiltration volume.

D. Use of synthetic membrane filters.

4. How long does a patient typically stay in the hospital after undergoing a kidney transplant?

A. One month, if no complications

B. Two to three months, until the kidney is functioning to full capacity

C. Three to five days for most recipients

D. Ten to twelve days if blood chemistry is back to normal ranges

5. What is the proper hand hygiene technique recommended for healthcare personnel?

A. Using bar soap and a scrub brush

B. Using antiseptic soap and water

C. Using alcohol-based hand rub with at least 40% ethanol

D. Using alcohol-based hand rub with 60% to 90% alcohol

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6. What blood pressure category would a 13-year-old with 140/90 for three days be diagnosed with?

A. Normal blood pressure for age.

B. Slightly elevated blood pressure.

C. Stage 1 hypertension.

D. Stage 2 hypertension.

7. Who likely made the report about the coaching required in patients to select a suitable modality?

A. Dialysis nurse.

B. Psychiatrist.

C. Utilization review.

D. Case Management.

8. Which buffer is considered the major plasma buffer important during dialysis?

A. Phosphate

B. Bicarbonate

C. Amino Acid

D. Protein

9. What percentage of facility payment can be reduced if quality standards are not met according to CMS?

A. 1%

B. 2%

C. 3%

D. 4%

10. What is the correct composition of physiological saline?

A. 0.9 g of sodium chloride in 100 mL of water

B. 10% salt added to one cup of water

C. Albumin

D. Fresh frozen plasma

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Answers

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

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Explanations

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1. What is the maximum safe fluid removal rate during a standard hemodialysis treatment?

A. No more than 20% of total body weight.

B. 30% of fluid weight if blood pressure is normal.

C. Ultrafiltration rate of 13/mL/hr or less.

D. No more than 1 liter/hour.

The maximum safe fluid removal rate during a standard hemodialysis treatment is generally considered to be a specific ultrafiltration rate to minimize the risk of complications, such as hypotension. An ultrafiltration rate of 13 mL/hr or less is aligned with best practices to ensure patient safety. This rate helps to prevent excessive volume depletion, which can lead to adverse events, including cardiovascular instability and cramping. Monitoring the ultrafiltration rate ensures that the patient's hemodynamic status remains stable throughout the treatment. It is critical for clinicians to assess individual patient conditions, including their residual kidney function, overall health status, and tolerance to fluid removal, to determine the appropriate ultrafiltration rate. In contrast, the other options present potentially unsafe guidelines for fluid removal. For example, removing a percentage of total body weight or a set liter amount per hour can lead to significant osmotic shifts and cardiovascular stress, particularly in vulnerable patients. Thus, emphasizing a specific ultrafiltration rate helps to standardize care while ensuring patient safety throughout the dialysis process.

2. Which venous access sites should be avoided in patients with stage 4 or 5 CKD to prevent complications?

A. Arteriovenous fistula and graft

B. Subclavian vein catheter and peripherally inserted central catheter

C. Arteriovenous graft and subclavian vein catheter

D. Arteriovenous fistula and peripherally inserted central catheter

Selecting the right venous access site for patients with stage 4 or 5 chronic kidney disease (CKD) is crucial to minimize the risk of complications. In these advanced stages of CKD, patients often require regular dialysis treatments, making it essential to preserve appropriate access points for future use. The subclavian vein catheter, while it can provide access, has been associated with a higher risk of complications such as thrombosis and infection, especially in patients with deteriorating renal function. Additionally, the placement of a subclavian catheter can have long-term effects, complicating future access through other methods. The peripherally inserted central catheter (PICC) is another option, but it's also connected to higher rates of infection and thrombosis. In patients with advanced CKD, where vascular access is vital for ongoing treatment, the less preferable options become even more critical. In contrast, arteriovenous fistulas and grafts are more stable, durable options and generally recommended for long-term use in dialysis patients. However, they take time to mature and should ideally be created well before the need for dialysis arises. Thus, avoiding the subclavian vein catheter and PICC in patients with advanced CKD is essential to prevent complications and

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3. What are the system requirements for high-flux dialysis?

A. Reliable blood flow rate of at least 200 mL/min.

B. High dialysate flow rate.

C. Precise control of ultrafiltration volume.

D. Use of synthetic membrane filters.

The correct answer is associated with the use of synthetic membrane filters, which are essential for high-flux dialysis. High-flux dialysis refers to a type of treatment that allows for the removal of larger molecules and a greater volume of solute clearance due to the properties of the membrane used. Synthetic membranes have larger pore sizes compared to traditional cellulose membranes, which enhances their capacity to filter out larger particles from the blood, making them more effective in the dialysis process. These membranes enable higher transport rates for both solutes and water, which is why they are fundamental to high-flux dialysis. By using synthetic materials, the dialysis process can achieve better outcomes in terms of patient well-being and clearance of toxins, especially in patients with higher toxin loads or larger molecules, such as beta-2 microglobulin. The other options, while they may have relevance to dialysis in general, do not specifically define the requirements for high-flux dialysis. A reliable blood flow rate is critical for effective dialysis, but it is not unique to high-flux systems. High dialysate flow rates contribute to efficiency but are not exclusive to high-flux membranes. Precise control of ultrafiltration volume is important for managing fluid balance, but again, it is not exclusive to high

4. How long does a patient typically stay in the hospital after undergoing a kidney transplant?

A. One month, if no complications

B. Two to three months, until the kidney is functioning to full capacity

C. Three to five days for most recipients

D. Ten to twelve days if blood chemistry is back to normal ranges

Patients typically stay in the hospital for three to five days after undergoing a kidney transplant due to several considerations. This period allows healthcare providers to monitor the patient closely for signs of rejection, infection, or complications related to the transplantation procedure. While the initial phase post-transplant can include intensive care and monitoring, most patients stabilize enough within this timeframe to be transitioned to outpatient care. During this hospital stay, the medical team assesses the function of the transplanted kidney and ensures that the patient's vital signs and overall condition are stable before discharge. It's important that the patient is closely monitored for any immediate post-operative issues as well, which can include adjusting immunosuppressive medications duly to prevent organ rejection.

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5. What is the proper hand hygiene technique recommended for healthcare personnel?

A. Using bar soap and a scrub brush

B. Using antiseptic soap and water

C. Using alcohol-based hand rub with at least 40% ethanol

D. Using alcohol-based hand rub with 60% to 90% alcohol

The recommended proper hand hygiene technique for healthcare personnel involves using an alcohol-based hand rub that contains between 60% to 90% alcohol. This range of alcohol concentration is effective in rapidly killing a wide variety of pathogens, including bacteria and viruses, by denaturing their proteins and disrupting their cell membranes. Alcohol-based hand rubs are preferred in many healthcare settings because they are quick to apply, require no rinsing, and can be more effective than soap and water in reducing microbial counts on the hands. While antiseptic soap and water (which aligns with the answer given) can be effective for specific purposes, such as when hands are visibly soiled or in certain clinical scenarios, the general consensus in infection control guidelines supports the use of alcohol-based hand rubs as the primary method for routine hand hygiene in healthcare settings. This is because alcohol-based rubs have the advantage of being more convenient while providing excellent antimicrobial activity. Thus, although using antiseptic soap is beneficial, it does not surpass the efficacy and practicality of alcohol-based hand rubs with the recommended alcohol concentration.

6. What blood pressure category would a 13-year-old with 140/90 for three days be diagnosed with?

A. Normal blood pressure for age.

B. Slightly elevated blood pressure.

C. Stage 1 hypertension.

D. Stage 2 hypertension.

A 13-year-old with blood pressure readings of 140/90 for three consecutive days would be diagnosed with Stage 2 hypertension. In pediatric patients, blood pressure norms are often categorized based on percentile graphs for age, sex, and height. For children and adolescents, Stage 2 hypertension is classified as a systolic or diastolic blood pressure consistently at or above the 95th percentile. In this case, a reading of 140/90 exceeds these thresholds, indicating a more severe level of hypertension. Understanding the classifications of blood pressure in children is essential for early identification and management of hypertension, which is critical to prevent long-term health issues. Recognizing the difference between stages allows healthcare professionals to implement appropriate interventions and provide education to families about lifestyle modifications and when further evaluation may be necessary.

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7. Who likely made the report about the coaching required in patients to select a suitable modality?

A. Dialysis nurse.

B. Psychiatrist.

C. Utilization review.

D. Case Management.

The report about the coaching required in patients to select an appropriate dialysis modality is most likely made by case management. Case managers are trained healthcare professionals who work to ensure patients receive the necessary support and resources throughout their treatment journey. They often play a pivotal role in patient education, helping individuals understand their options and the implications of each modality. In the context of dialysis, case management encompasses evaluating patients' needs, preferences, and sociocultural factors that might influence their choice of treatment modality. This role emphasizes collaboration with other healthcare team members to ensure that the patient is fully informed and supported, which includes offering coaching and guidance on selecting the most suitable modality. While dialysis nurses provide direct care and education to patients, their focus is typically more on the technical and clinical aspects of care rather than broader coaching on healthcare decision-making. Psychiatrists primarily address mental health issues and wouldn't be directly involved in coaching patients about dialysis modalities. Utilization review professionals focus on evaluating the appropriateness of care and resource usage, but they generally do not engage directly with patients in the educational or coaching aspects critical to helping them choose a treatment path.

8. Which buffer is considered the major plasma buffer important during dialysis?

A. Phosphate

B. Bicarbonate

C. Amino Acid

D. Protein

Bicarbonate is recognized as the major plasma buffer important during dialysis. This is primarily due to its ability to effectively maintain acid-base balance in the body. Bicarbonate buffers excess hydrogen ions in the plasma, thereby helping to prevent acidosis, which is particularly significant for patients undergoing hemodialysis who may be at risk for changes in their acid-base status. During dialysis, the removal of excess acids and toxins is crucial, and bicarbonate is often used in dialysate solutions to replenish the bicarbonate levels in the patient's blood. This process promotes the neutralization of acids and aids in restoring the body's normal pH levels. Therefore, bicarbonate plays a central role in both the physiological buffering system and the clinical management of patients receiving dialysis. In contrast, the other buffers mentioned, while they can play supportive roles in maintaining pH balance, do not have the same level of prominence or clinical application in the context of dialysis as bicarbonate. Phosphate, for instance, serves as a buffer in the intracellular environment and in specific pathological conditions, but it is not the primary buffer used in the plasma during dialysis. Similarly, amino acids and proteins can have buffering capabilities, but they are not as effective in the quick adjustments needed during the dialysis

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9. What percentage of facility payment can be reduced if quality standards are not met according to CMS?

A. 1%

B. 2%

C. 3%

D. 4%

The percentage of facility payment that can be reduced if quality standards are not met, according to CMS (Centers for Medicare & Medicaid Services), is 2%. This reduction serves as an incentive for healthcare facilities to maintain high-quality care and meet established performance measures. The payment adjustment is designed to encourage facilities to focus on improving patient outcomes and enhancing the overall quality of care provided to patients undergoing hemodialysis. Facilities that fail to adhere to specific quality benchmarks may face financial penalties, underscoring the importance of complying with these standards to ensure operational viability and excellence in patient care. The emphasis on quality in healthcare financing reflects an ongoing shift towards value-based care models, where payment is tied not only to the volume of services delivered but also to the quality of those services.

10. What is the correct composition of physiological saline?

A. 0.9 g of sodium chloride in 100 mL of water

B. 10% salt added to one cup of water

C. Albumin

D. Fresh frozen plasma

The correct composition of physiological saline is defined as a solution containing 0.9 grams of sodium chloride dissolved in 100 milliliters of water. This formulation creates an isotonic solution that matches the osmolarity of body fluids, which is crucial for maintaining cellular stability and proper hydration when administered to patients. In medical settings, physiological saline is commonly used for various purposes, including hydration, as a diluent for medications, and during intravenous therapy to replace lost fluids or electrolytes. Its isotonic property helps to prevent cellular lysis or shrinkage, making it particularly useful in various treatments, including hemodialysis, where maintaining osmotic balance is essential. The other options do not describe physiological saline accurately. A 10% salt solution would result in a hypertonic solution, while albumin and fresh frozen plasma are blood products, not saline solutions. Therefore, they cannot serve the same functions as physiological saline in medical practices.

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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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