HESI GERONTOLOGY – AGE-RELATED RISKS CASE STUDY 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.

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. What acid-base disorder is indicated by an arterial pH of 7.05?

A. Metabolic acidosis

B. Metabolic alkalosis

C. Respiratory acidosis

D. Respiratory alkalosis

2. Why is adequate pain management critical in older adults, and what risk arises from undertreated pain?

A. Pain should be ignored to avoid medication side effects.

B. Pain limits activity and sleep, increasing falls and functional decline; undertreatment increases risk of falls and depression.

C. Pain has no impact on function.

D. Undertreatment pain reduces risk of falls.

3. Osmotic diuresis in diabetes occurs because which of the following?

A. Glucose in the urine pulls water with it, increasing urine output

B. Water retention due to hormonal changes

C. Ketone bodies attract water into the urine

D. Decreased glomerular filtration

4. A non-healing diabetic foot ulcer is at risk for which serious complication if not properly managed?

A. Amputation

B. Spontaneous healing without infection

C. No increase in infection risk

D. Worsening anemia but not infection risk

5. Hypovolemia from dehydration can cause a drop in blood pressure when standing. Which term describes this change?

A. Increased heart rate

B. Postural hypotension

C. Hypertension

D. Tachycardia

6. How can bowel incontinence be managed without restraints or punitive measures?

A. Withholding fluids to reduce urgency.

B. Scheduled toileting, adequate fiber and hydration, bowel regimens, and pelvic floor/sphincter training if appropriate.

C. Use of physical restraints to prevent accidents.

D. Punitive measures for accidents.

7. Which statement best describes the relationship between peripheral neuropathy and sensation?

A. Early neuropathy may cause loss of fine touch sensation.

B. Peripheral neuropathy increases overall muscle strength.

C. Neuropathy improves after a few hours of rest.

D. Neuropathy does not affect sensation.

8. Which statement about dehydration and drug half-life in older adults is correct?

A. Dehydration shortens the biological half-life of drugs.

B. Dehydration has no effect on drug half-life.

C. Dehydration decreases the half-life of drugs.

D. Dehydration can increase the half-life of drugs.

9. How do social determinants of health influence age-related risk, and give two examples.

A. They affect access to care, nutrition, safety; examples: housing quality and social isolation.

B. They influence only education level.

C. They have no impact on health in older adults.

D. They affect only financial status.

10. A urine culture shows greater than 100,000 CFU/mL of Escherichia coli. This finding most strongly supports which diagnosis?</n>

A. Urinary tract infection

B. Contamination of the specimen

C. A noninfectious bladder disorder

D. A kidney stone

Answers

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

Explanations

1. What acid-base disorder is indicated by an arterial pH of 7.05?

A. Metabolic acidosis

B. Metabolic alkalosis

C. Respiratory acidosis

D. Respiratory alkalosis

A pH of 7.05 shows acidemia, meaning the blood is too acidic. To identify the specific disorder we distinguish between metabolic and respiratory causes: metabolic changes alter bicarbonate (HCO_3^-), while respiratory changes alter carbon dioxide ($PaCO_2$). To decide which is primary you'd normally look at ABG values for $PaCO_2$ and HCO_3^-, because the same pH value can be due to either a metabolic or a respiratory problem depending on those numbers. Among the given options, a pH this low fits an acidosis. Metabolic acidosis is a common cause of significant acidemia and occurs when bicarbonate is lost or when acids accumulate (as in renal failure, lactic acidosis, sepsis, or diarrhea). It typically prompts the body to compensate by increasing ventilation to blow off CO_2, lowering $PaCO_2$ on the ABG if compensation is present. Respiratory acidosis would require a high $PaCO_2$, while metabolic alkalosis or respiratory alkalosis would present with alkalemia (pH above 7.45), which is not the case here. So, given the pH is severely acidemic and the available option set, metabolic acidosis is the most fitting choice, with the caveat that confirmation would come from the accompanying $PaCO_2$ and HCO_3^- values.

2. Why is adequate pain management critical in older adults, and what risk arises from undertreated pain?

A. Pain should be ignored to avoid medication side effects.

B. Pain limits activity and sleep, increasing falls and functional decline; undertreatment increases risk of falls and depression.

C. Pain has no impact on function.

D. Undertreatment pain reduces risk of falls.

Adequate pain management in older adults is essential because pain directly limits activity, sleep, and participation in daily tasks. When pain isn't well controlled, activity wanes, strength and balance decline, and older adults become deconditioned, which raises the risk of falls. Pain also disrupts sleep, leading to daytime fatigue and reduced function, and it can contribute to depressive symptoms or social withdrawal. The statement that pain limits activity and sleep and that undertreatment increases falls and depression best captures how unmanaged pain worsens overall function and safety in later life. Ignore the idea of not treating pain to avoid side effects—that approach can leave pain unmanaged and worsen outcomes. Pain does affect function, so the claim that it has no impact is not correct. And undertreating pain does not reduce fall risk; it increases it, not only through impaired mobility but also through poorer sleep and mood.

3. Osmotic diuresis in diabetes occurs because which of the following?

A. Glucose in the urine pulls water with it, increasing urine output

B. Water retention due to hormonal changes

C. Ketone bodies attract water into the urine

D. Decreased glomerular filtration

Osmotic diuresis happens when an osmotically active substance stays in the urine and pulls water with it. In diabetes, blood glucose becomes very high, and the kidney can't reabsorb all of it beyond a certain limit. The excess glucose spills into the urine and remains in the tubular fluid, so water is drawn into the urine by osmosis. This increases urine volume (polyuria) and can lead to dehydration and thirst. The other ideas don't explain the big rise in urine output seen in this context: hormonal water retention would reduce, not increase, urine; ketone bodies can have osmotic effects in some diabetic states but aren't the primary driver of osmotic diuresis in typical diabetes; and a lower glomerular filtration rate would generally decrease urine formation rather than cause the glucose-driven water loss described here.

4. A non-healing diabetic foot ulcer is at risk for which serious complication if not properly managed?

A. Amputation

B. Spontaneous healing without infection

C. No increase in infection risk

D. Worsening anemia but not infection risk

Chronic non-healing diabetic foot ulcers signal that infection and tissue damage can escalate to involvement of deeper structures, including bone, and even systemic infection. In diabetes, impaired immune response and poor blood flow slow healing and allow bacteria to spread more easily. When infection and necrosis progress, the limb may become non-viable, and amputation can become necessary to remove the source of infection and prevent life-threatening sepsis. So, the most serious possible complication if such a wound isn't properly managed is amputation. Spontaneous healing without infection is unlikely in a non-healing diabetic ulcer, and while infection risk is real, it's the progression to severe damage and potential amputation that represents the critical danger. Worsening anemia is not the primary concern driving the urgency in this context.

5. Hypovolemia from dehydration can cause a drop in blood pressure when standing. Which term describes this change?

A. Increased heart rate

B. Postural hypotension

C. Hypertension

D. Tachycardia

Postural hypotension occurs when blood pressure falls after standing, especially when volume is low from dehydration. When you stand, gravity pulls blood into the legs, and if the circulating volume is reduced, the return of blood to the heart (venous return) and the amount the heart can pump (preload) drop. That can cause a noticeable drop in blood pressure upon standing, sometimes with dizziness or lightheadedness. The body normally tries to compensate by increasing heart rate and constricting vessels, but with hypovolemia, these mechanisms may not fully prevent the drop. So this term describes the BP change tied to changing position. Increased heart rate is a compensatory response, not the description of the BP change itself. Tachycardia is just fast heart rate, and hypertension is high blood pressure, which don't describe a drop in BP when standing.

6. How can bowel incontinence be managed without restraints or punitive measures?

A. Withholding fluids to reduce urgency.

B. Scheduled toileting, adequate fiber and hydration, bowel regimens, and pelvic floor/sphincter training if appropriate.

C. Use of physical restraints to prevent accidents.

D. Punitive measures for accidents.

A plan that respects dignity and promotes independence focuses on predictable routines, diet, medications, and muscle training to improve continence. Scheduling regular toileting gives the person a known opportunity to defecate before the urge becomes urgent, which reduces accidents. Adequate fiber with proper hydration helps create regular, soft stools and prevents constipation or stool withholding, both of which can contribute to incontinence or overflow. A bowel regimen tailored to the individual—often including timing and, if needed, stool-softening or laxative agents—can establish a consistent pattern of bowel movements, making accidents less likely. Pelvic floor and sphincter training, when appropriate, strengthens the muscles involved in control and supports better continence, especially with guidance from a clinician or therapist. It's also important to address contributing factors such as medications, infections, mobility or cognitive challenges, and to emphasize skin care and comfort. Restraints and punitive measures are not appropriate. They don't address the underlying issues, can cause harm, violate dignity, and may actually worsen outcomes. This approach aims for safer, more dignified management that supports function and quality of life.

7. Which statement best describes the relationship between peripheral neuropathy and sensation?

A. Early neuropathy may cause loss of fine touch sensation.

B. Peripheral neuropathy increases overall muscle strength.

C. Neuropathy improves after a few hours of rest.

D. Neuropathy does not affect sensation.

Peripheral neuropathy damages the nerves that carry sensory information, so changes in sensation are a hallmark of the condition. Early on, fine touch and vibration are often affected because those sensations rely on small, delicate nerve fibers that are commonly impacted first. This means a person may notice numbness, tingling, or a reduced ability to feel delicate textures or light touch in the feet or hands. Unlike what some might assume, neuropathy does not typically cause a quick boost in muscle strength; in fact, motor symptoms can appear later as motor fibers become involved. Rest does not reverse nerve damage in neuropathy, so symptoms persist or progress without treatment. Therefore, stating that early neuropathy can cause loss of fine touch best captures how sensation is related to peripheral nerve damage.

8. Which statement about dehydration and drug half-life in older adults is correct?

A. Dehydration shortens the biological half-life of drugs.

B. Dehydration has no effect on drug half-life.

C. Dehydration decreases the half-life of drugs.

D. Dehydration can increase the half-life of drugs.

In pharmacokinetics, a drug's half-life is shaped by clearance and the volume of distribution. Dehydration in older adults reduces circulating blood volume and renal perfusion, which lowers kidney filtration (and can impair liver clearance as well). When clearance drops, the body removes the drug more slowly, so the half-life lengthens. This is especially important for drugs cleared by the kidney, where accumulated drug can lead to toxicity. So, dehydration can increase how long a drug stays in the body, raising the risk of adverse effects if doses aren't adjusted.

9. How do social determinants of health influence age-related risk, and give two examples.

A. They affect access to care, nutrition, safety; examples: housing quality and social isolation.

B. They influence only education level.

C. They have no impact on health in older adults.

D. They affect only financial status.

Social determinants of health shape age-related risk by affecting the resources and environments older adults rely on to stay healthy. Factors like where someone lives, who they can rely on, and what they can afford influence access to care, nutrition, and safety, all of which are critical for aging well. Two concrete examples are housing quality and social isolation. Housing quality directly impacts safety and health: well-maintained housing reduces fall risk, protects against extreme temperatures and mold, and supports proper medication storage and daily functioning. When the living environment is unsafe or unstable, older adults are more prone to injuries, worsened chronic conditions, and difficulty adhering to care plans. Social isolation matters because loneliness and weak social networks can worsen mental health, contribute to cognitive decline, and hinder timely help-seeking and adherence to treatment. Isolation also affects daily routines like meal preparation and getting to appointments, which can lead to poorer nutrition and missed care. The other options miss important parts of what shapes health in later life. Limiting the influence to education, or to financial status alone, ignores housing, social connections, neighborhood safety, transportation, and access to care—all of which play critical roles in aging health. The impact is broad and multifaceted, which is why access to care, nutrition, and safety are best understood through these social determinants.

10. A urine culture shows greater than 100,000 CFU/mL of Escherichia coli. This finding most strongly supports which diagnosis?</n>

A. Urinary tract infection

B. Contamination of the specimen

C. A noninfectious bladder disorder

D. A kidney stone

A high level of bacteria in the urine coming from a clean specimen, especially when a single organism like Escherichia coli is predominant, strongly points to an infection of the urinary tract. The threshold of 10^5 colony-forming units per milliliter is a conventional sign of significant bacteriuria, meaning the bacteria are actively growing in the urinary tract rather than merely being introduced by the collection process. Escherichia coli is the most common culprit in UTIs, so its predominance in the culture reinforces this interpretation. A noninfectious bladder disorder would not produce such a significant bacteriuria. While a kidney stone can be associated with UTIs, the culture result alone does not indicate a stone. Thus, the finding most strongly supports a urinary tract infection.

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!