Moderate-Severe Traumatic Brain Injury (TBI) Practice Exam (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

1. Which pattern describes SIADH after TBI, and what is a key management strategy?

- **A. Hyponatremia with edema and hypervolemia; treat with diuretics**
- **B. Hypernatremia with hypovolemia; treat with isotonic saline**
- **C. Hyponatremia with euvolemia; treat with fluid restriction and careful monitoring; consider hypertonic saline if symptomatic**
- **D. Hyperkalemia with metabolic acidosis; treat with bicarbonate**

2. Which Ranchos Los Amigos level is characterized by a localized response, understanding the location of stimuli and 1-step commands?

- **A. Level III - Localized response; Understands location of stimuli and 1-step commands**
- **B. Level II - Generalized response**
- **C. Level IV - Confused-Agitated**
- **D. Level I - No response**

3. Why is sedation used in the management of traumatic brain injury?

- **A. Increase blood pressure.**
- **B. Treat infection.**
- **C. Slow healing.**
- **D. Manage agitation and discomfort in patients with TBI.**

4. Which term describes a diffuse injury to white matter due to shearing forces?

- **A. Diffuse axonal injury**
- **B. Coup/contrecoup**
- **C. Penetrating injury**
- **D. Epidural hematoma**

5. What does GOSE stand for and what does it measure?

- **A. Global Outcome Scale-Extended; cognitive function.**
- **B. Glasgow Outcome Scale-Extended; functional outcome after brain injury.**
- **C. Glasgow Operational Scale-Extended; neurological status.**
- **D. General Outcome Scale for Epilepsy; seizure risk.**

6. Which statement is true about Ranchos Los Amigos Level VII?

- **A. Initiates social interactions**
- **B. Uses assistive memory devices to recall daily schedule**
- **C. Judgement is impaired**
- **D. Thinks about consequences of a decision/action with minimal assistance**

7. When using hypertonic saline, which parameters must be monitored?

- **A. Serum sodium, osmolality, and volume status**
- **B. Blood glucose, hematocrit, and platelet count**
- **C. Temperature, respiratory rate, and oxygen saturation**
- **D. Serum potassium, magnesium, and calcium**

8. Which Ranchos Los Amigos level is characterized by a generalized response; same response regardless of stimuli?

- **A. Level II - Generalized response; Same response regardless of stimuli**
- **B. Level III - Localized response**
- **C. Level I - No response**
- **D. Level IV - Confused-Agitated**

9. How long might a patient with moderate-severe TBI require ICU-level monitoring?

- **A. 2-3 days**
- **B. Days to weeks**
- **C. 6-12 weeks**
- **D. Several months**

10. Which endocrine disturbances can follow TBI?

- **A. Diabetes insipidus and SIADH with dysnatremia**
- **B. Hyperthyroidism and hypogonadism**
- **C. Hypercalcemia**
- **D. Addison disease**

Answers

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

Explanations

1. Which pattern describes SIADH after TBI, and what is a key management strategy?

A. Hyponatremia with edema and hypervolemia; treat with diuretics

B. Hypernatremia with hypovolemia; treat with isotonic saline

C. Hyponatremia with euvolemia; treat with fluid restriction and careful monitoring; consider hypertonic saline if symptomatic

D. Hyperkalemia with metabolic acidosis; treat with bicarbonate

A patient after traumatic brain injury can develop SIADH, where excessive ADH causes the kidneys to retain water. This dilutes the blood sodium, so you get hyponatremia, but the overall fluid status remains euvolemic—there isn't the edema you'd expect with true fluid overload. That combination—low sodium with normal or near-normal volume status—is the key pattern here. The best way to manage this is to restrict free water intake and monitor closely. Fluid restriction directly addresses the root problem: too much water relative to sodium. You'd watch sodium levels and neurologic status over time to ensure the count rises gradually and safely. If the patient becomes symptomatic from hyponatremia (for example, seizures or severe confusion) or the sodium is very low, a controlled, cautious use of hypertonic saline is appropriate to raise sodium a safe amount rather than rapidly. In SIADH, avoid giving hypotonic fluids or large-volume isotonic solutions, as they can worsen the hyponatremia.

2. Which Ranchos Los Amigos level is characterized by a localized response, understanding the location of stimuli and 1-step commands?

A. Level III - Localized response; Understands location of stimuli and 1-step commands

B. Level II - Generalized response

C. Level IV - Confused-Agitated

D. Level I - No response

In this stage of recovery, the person begins to show responses that are tied to a specific stimulus rather than random or reflexive movements. They can localize the source of a stimulus, such as turning toward a touch or sound, and they can understand and follow simple, one-step commands like "squeeze my hand" or "look at me." This combination—being able to locate where a stimulus comes from and respond to a basic instruction—signals the emergence of more purposeful, though still limited, behavior. It differentiates from earlier stages where responses are generalized or non-purposeful, and from later stages where agitation or confusion predominates.

3. Why is sedation used in the management of traumatic brain injury?

A. Increase blood pressure.

B. Treat infection.

C. Slow healing.

D. Manage agitation and discomfort in patients with TBI.

Sedation is used in traumatic brain injury to control agitation and discomfort. When a patient is anxious, in pain, or moves ramptly, sympathetic activation raises heart rate and blood pressure and increases metabolic demand and ICP, which can worsen brain injury. By calming the patient, reducing pain, and minimizing movement, sedation lowers metabolic demand, helps protect cerebral perfusion and intracranial pressure, and makes it safer to manage ventilation and perform neuromonitoring. It's not about increasing blood pressure, treating infection, or slowing healing—the goal is to keep the brain in a more stable, protected state by reducing agitation and discomfort.

4. Which term describes a diffuse injury to white matter due to shearing forces?

A. Diffuse axonal injury

B. Coup/contrecoup

C. Penetrating injury

D. Epidural hematoma

Diffuse axonal injury describes widespread damage to white matter from rapid, twisting forces that shear axons as the head undergoes acceleration–deceleration. This mechanism disrupts the axonal cytoskeleton and axonal transport across many tracts, so the injury is diffuse rather than anchored to a single spot. Clinically, it often leads to immediate or prolonged coma because large networks of communication are disrupted, not just a localized lesion. On imaging, tiny hemorrhages and white-matter changes are frequently seen at the gray–white junction and in the corpus callosum or brainstem, especially with advanced MRI sequences. Other injuries listed describe localized lesions: a coup/contrecoup injury is a focal contusion at the site of impact and opposite side from brain movement, a penetrating injury involves a foreign object entering the skull creating a focal tract, and an epidural hematoma is a focal arterial bleed between the skull and dura with mass effect. These do not capture the diffuse, shearing axonal disruption characteristic of diffuse axonal injury.

5. What does GOSE stand for and what does it measure?

A. Global Outcome Scale-Extended; cognitive function.

B. Glasgow Outcome Scale-Extended; functional outcome after brain injury.

C. Glasgow Operational Scale-Extended; neurological status.

D. General Outcome Scale for Epilepsy; seizure risk.

GOSE stands for Glasgow Outcome Scale-Extended. It measures functional outcome after brain injury. It expands the original Glasgow Outcome Scale into eight levels to give a finer picture of how well someone is functioning in daily life after injury. Clinically and in research, it's used at follow-up (often several months post-injury) to capture independence, ability to work or attend school, living situation, and need for supervision or assistance. It focuses on overall functional status rather than specific cognitive tests or neurological findings, and it isn't about seizure risk. The scale ranges from death to upper good recovery, with intermediate levels reflecting varying degrees of disability. This combination—the extended categories and emphasis on daily functioning—makes it the standard tool for assessing functional outcome after brain injury.

6. Which statement is true about Ranchos Los Amigos Level VII?

A. Initiates social interactions

B. Uses assistive memory devices to recall daily schedule

C. Judgement is impaired

D. Thinks about consequences of a decision/action with minimal assistance

In Level VII, often labeled automatic-appropriate, individuals perform daily routines automatically and interact with others in a socially appropriate way with minimal supervision. A defining feature at this level is they initiate social interactions rather than waiting to be prompted, so they engage with others and start conversations as part of their usual behavior, even though their responses may be somewhat automatic and they may lack deeper insight into their deficits. The other statements don't fit as well. They typically don't rely on assistive memory devices for their daily schedule because their routines are automatic and largely self-managed. Judgment remains impaired compared with fully independent functioning, but the hallmark trait at this level is the ability to initiate social contact rather than the broader judgment deficit emphasized in lower levels. Thinking through the consequences of actions with minimal assistance is more characteristic of higher levels where planning and foresight are more intact.

7. When using hypertonic saline, which parameters must be monitored?

A. Serum sodium, osmolality, and volume status

B. Blood glucose, hematocrit, and platelet count

C. Temperature, respiratory rate, and oxygen saturation

D. Serum potassium, magnesium, and calcium

When hypertonic saline is used, the main goal is to draw excess water out of swollen brain tissue by raising serum osmolality, so the key things to watch are serum sodium, serum osmolality, and volume status. Monitoring serum sodium prevents dangerous rapid rises or extreme hypernatremia; tracking osmolality ensures the therapy is achieving the intended effect without crossing safe limits; and watching volume status helps maintain adequate cerebral perfusion and avoid fluid imbalance that could worsen intracranial pressure. While other vital signs and labs are important in neurocritical care, they do not directly address the safety and efficacy concerns specific to hypertonic saline as clearly as these three parameters.

8. Which Ranchos Los Amigos level is characterized by a generalized response; same response regardless of stimuli?

A. Level II - Generalized response; Same response regardless of stimuli

B. Level III - Localized response

C. Level I - No response

D. Level IV - Confused-Agitated

Generalized, non-specific, inconsistent responses to stimuli reflect a very low level of arousal and awareness after brain injury. In this stage, the person reacts but not in a way that's tied to the actual stimulus. For example, you might touch them, call their name, or show a familiar object, and their movements or vocalizations occur in a general, nonspecific way—often the same regardless of what you did. They may grimace, move limbs, or become briefly aroused, but there's no deliberate, localized response directed toward the stimulus. This is different from no response (no observable reaction at all), a localized response (turning toward or focusing on a particular stimulus), or a confused and agitated state (severe disorganization and agitation). Because the pattern described is exactly the generalized, nonlocalized response characteristic, it best fits this level.

9. How long might a patient with moderate-severe TBI require ICU-level monitoring?

A. 2-3 days

B. Days to weeks

C. 6-12 weeks

D. Several months

The main idea here is that keeping a patient with moderate to severe TBI in the ICU is often necessary for an extended period because the risk of secondary brain injury remains high in the days after the initial injury. Close neuro-monitoring is required to manage intracranial pressure, ensure adequate cerebral perfusion, adjust ventilation and oxygenation, and control blood pressure while injuries evolve and treatment decisions (such as surgical interventions or weaning from machines) are made. Because these processes can unfold over several days, the typical ICU-level monitoring window falls into days to weeks rather than just a couple of days or many weeks. While some patients may need longer stays if complications occur, weeks-long monitoring is more common than months-long ICU-level care, which usually transitions to rehabilitation or long-term care.

10. Which endocrine disturbances can follow TBI?

A. Diabetes insipidus and SIADH with dysnatremia

B. Hyperthyroidism and hypogonadism

C. Hypercalcemia

D. Addison disease

The key idea is that injuries to the hypothalamic–pituitary axis after brain trauma commonly disrupt ADH regulation. This can produce two classic problems: diabetes insipidus, from a deficiency of antidiuretic hormone, and SIADH, from inappropriately excessive ADH release. Diabetes insipidus causes polyuria with risk of dehydration and tends to lead to high serum sodium (hypernatremia) if not matched by water intake. SIADH causes water retention with dilutional hyponatremia, leading to low serum sodium. The combination of DI and SIADH with dysnatremias is a well-recognized endocrine consequence after traumatic brain injury. Other endocrine issues like hyperthyroidism or hypogonadism, adrenal insufficiency (Addison disease), or hypercalcemia can occur with pituitary or hypothalamic injury but are not as characteristic or as common in the acute post-traumatic period as DI and SIADH with dysnatremia.

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:

https://moderateseveretbi.examzify.com

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