

NEURAL TUBE DEFECTS MYELOMENINGOCELE/ SPINA BIFIDA PRACTICE TEST (SAMPLE) STUDY GUIDE



Prepare with structure. Pass with confidence



Copyright © 2026 by Examzify - A Kaluba Technologies Inc. product.

ALL RIGHTS RESERVED.

No part of this book may be reproduced or transferred in any form or by any means, graphic, electronic, or mechanical, including photocopying, recording, web distribution, taping, or by any information storage retrieval system, without the written permission of the author.

Notice: Examzify makes every reasonable effort to obtain accurate, complete, and timely information about this product from reliable sources.

SAMPLE

Table of Contents

Copyright	1
Table of Contents	2
Introduction	3
How to Use This Guide	4
Questions	5
Answers	8
Explanations	10
Next Steps	15

SAMPLE

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

SAMPLE

- 1. For unilateral hip dislocation at high lumbar L1-L2, which strategy should be considered?**
 - A. Level the pelvis
 - B. Level the head
 - C. Increase hip abduction aggressively
 - D. Proceed with complete immobilization of the pelvis
- 2. Which term describes abnormal accumulation of CSF in the cranial vault?**
 - A. Hydrocephalus
 - B. Meningitis
 - C. Encephalopathy
 - D. Dandy-Walker
- 3. In preschool age intervention strategies, what is considered the first mobility option?**
 - A. Walking
 - B. Sitting
 - C. Crawling
 - D. Running
- 4. Which of the following factors is associated with a decreased incidence of spina bifida?**
 - A. Maternal vitamins
 - B. More accurate prenatal testing
 - C. Pregnancy termination
 - D. All of the above
- 5. What is the primary purpose of an ankle-foot orthosis (AFO) in low lumbar L4-L5 cases?**
 - A. Support the ankle
 - B. Brace the knee
 - C. Stabilize the pelvis
 - D. Restrict hip movement

- 6. Which statement is NOT listed as a risk factor for spina bifida?**
- A. Regular exercise
 - B. Low folic acid
 - C. Valproic acid exposure
 - D. Maternal hyperthermia
- 7. Children with spina bifida are at risk of progressive deterioration in which two domains?**
- A. Neurologic impairments and CNS deterioration
 - B. Endocrine changes and renal impairment
 - C. Muscle hypertrophy and joint stiffness
 - D. Respiratory failure and liver dysfunction
- 8. About myelomeningocele, what type of bladder is present in about 85% of patients?**
- A. Neurogenic
 - B. Reflex
 - C. Acontractile
 - D. Overflow
- 9. When can an orthotic program begin?**
- A. Within the first days of life.
 - B. At 6 months of age.
 - C. Only after motor milestones are achieved.
 - D. After the child starts walking.
- 10. Which level is the frog leg position associated with?**
- A. Thoracic level
 - B. High lumbar L1-L2
 - C. Cervical level
 - D. Lumbar level

Answers

SAMPLE

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

SAMPLE

Explanations

SAMPLE

1. For unilateral hip dislocation at high lumbar L1-L2, which strategy should be considered?

- A. Level the pelvis**
- B. Level the head
- C. Increase hip abduction aggressively
- D. Proceed with complete immobilization of the pelvis

Pelvic alignment has a direct impact on hip stability when a unilateral dislocation occurs with a high lumbar spinal level. Pelvic obliquity from L1–L2 involvement tilts the acetabulum relative to the femoral head, increasing misalignment and dislocating forces. Leveling the pelvis rebalances weight bearing and brings the acetabulum into a better position to match the dislocated hip, reducing the driving forces of the dislocation and improving overall alignment with next steps like bracing or targeted therapy. Leveling the head wouldn't address the hip-pelvis mechanics driving the dislocation. Aggressive hip abduction might temporarily influence position but can create new problems such as contractures or instability and doesn't fix the underlying obliquity. Complete immobilization of the pelvis is overly restrictive and risks skin breakdown and stiffness without solving the dislocation.

2. Which term describes abnormal accumulation of CSF in the cranial vault?

- A. Hydrocephalus**
- B. Meningitis
- C. Encephalopathy
- D. Dandy-Walker

Abnormal accumulation of CSF in the cranial vault is hydrocephalus. CSF normally circulates through the ventricles and around the brain, then is absorbed into the venous system. When drainage is blocked or absorption is impaired (or CSF is overproduced, though that's rare), CSF builds up in the ventricles, causing them to enlarge and increasing intracranial pressure. In infants, this frequently shows as an enlarging head circumference or a bulging fontanelle, along with irritability and poor feeding; in older individuals, headaches, nausea, and cognitive or gait changes can occur. In the setting of neural tube defects like myelomeningocele, hydrocephalus is a common associated condition due to hindbrain and ventricular system involvement, making timely recognition important for management (such as shunting or other interventions). Meningitis is an infection of the protective membranes around the brain and spinal cord, not a CSF buildup. Encephalopathy refers to diffuse brain dysfunction from various causes, not specifically CSF accumulation. Dandy-Walker describes a distinct congenital malformation with cystic dilation of the fourth ventricle and an enlarged posterior fossa, which can be associated with hydrocephalus but is not the general term for CSF buildup.

3. In preschool age intervention strategies, what is considered the first mobility option?

- A. Walking**
- B. Sitting
- C. Crawling
- D. Running

Walking is the first mobility option because independent ambulation provides the most functional independence for a preschooler, letting them participate in play, classroom activities, and social interactions with peers. It's the most energy-efficient and practical way to move around in daily settings, and it lays the foundation for later skills like running and navigating different surfaces. While sitting and crawling are important early movements, they don't offer the same level of mobility and participation for a preschooler. Running typically develops after walking, once a stable walking pattern is established.

4. Which of the following factors is associated with a decreased incidence of spina bifida?

- A. Maternal vitamins
- B. More accurate prenatal testing
- C. Pregnancy termination
- D. All of the above**

Preventing neural tube defects involves stopping them before birth, catching them early, and making informed decisions when a flaw is detected. Taking folic acid as a vitamin before conception and in early pregnancy dramatically lowers the risk of neural tube defects like spina bifida, because it supports proper early neural tube formation. When prenatal screening is more accurate, doctors can detect spina bifida earlier in pregnancy, giving families and clinicians vital information to plan and respond. If a serious fetal defect is identified, some pregnancies are terminated, which reduces the number of births with spina bifida. Because of these prevention, detection, and decision-making factors, the overall incidence of spina bifida decreases.

5. What is the primary purpose of an ankle-foot orthosis (AFO) in low lumbar L4-L5 cases?

- A. Support the ankle**
- B. Brace the knee
- C. Stabilize the pelvis
- D. Restrict hip movement

An ankle-foot orthosis is meant to control the ankle and provide stability for the foot and lower leg when ankle muscles are weak or uncoordinated. In low lumbar L4–L5 scenarios, dorsiflexion is often affected, leading to foot drop. An AFO holds the ankle near a functional position, prevents unwanted plantarflexion during stance, and helps keep the foot in a stable, neutral alignment. This supports a smoother, safer gait by improving heel contact, toe clearance during swing, and overall stride stability. It doesn't purposefully strengthen or brace the knee, stabilize the pelvis, or restrict hip movement, which would require different interventions.

6. Which statement is NOT listed as a risk factor for spina bifida?

- A. Regular exercise**
- B. Low folic acid
- C. Valproic acid exposure
- D. Maternal hyperthermia

Regular exercise is not a risk factor for spina bifida. In fact, staying active during pregnancy is generally beneficial unless there are medical reasons to limit activity. The factors that do increase risk include low folic acid intake, which is well known to raise the chance of neural tube defects; exposure to certain medications like valproic acid that can be teratogenic; and maternal hyperthermia (fever) in early pregnancy, which can interfere with neural tube closure. Since spina bifida arises from imperfect neural tube formation very early in gestation, these findings are consistently associated with higher risk, making regular exercise the statement that does not fit as a risk factor.

7. Children with spina bifida are at risk of progressive deterioration in which two domains?

A. Neurologic impairments and CNS deterioration

B. Endocrine changes and renal impairment

C. Muscle hypertrophy and joint stiffness

D. Respiratory failure and liver dysfunction

The main concept is that spina bifida can lead to ongoing changes in the nervous system, not just static physical findings. Children with this condition are at risk for progressive deterioration in two related areas: neurologic impairments, meaning increasing weakness, sensory loss, or changes in reflexes and coordination; and central nervous system deterioration, which reflects evolving problems in the brain and spinal cord itself, such as hydrocephalus progression, Chiari II malformation effects, or syringomyelia. Over time, issues like tethered cord syndrome can cause the spinal cord to be stretched as a child grows, leading to new or worsening motor and sensory deficits. Syringomyelia can form a syrinx within the spinal cord, producing gradual changes in sensation and strength. Concurrent CNS changes, including worsening hydrocephalus or hindbrain herniation, can produce headaches, cognitive or balance problems, and other central nervous system signs. Together, these processes explain why deterioration may appear in both functional neurologic abilities and central nervous system structure and function. In contrast, the other options describe problems that aren't the primary progressive domains linked to spina bifida in the same way: endocrine or renal changes, or purely musculoskeletal or visceral failures, don't capture the dual risk to both neurologic function and CNS integrity that characterizes progression in this condition.

8. About myelomeningocele, what type of bladder is present in about 85% of patients?

A. Neurogenic

B. Reflex

C. Acontractile

D. Overflow

When the spinal cord is disrupted in myelomeningocele, neural control of the bladder and external sphincter is lost. This produces a neurogenic bladder, the pattern most commonly seen in these patients. The lesion often leaves the reflex arc intact while removing higher-level voluntary control, so the bladder tends to contract reflexively (detrusor hyperactivity) with poor coordination to the sphincter (detrusor-sphincter dyssynergia). This neurogenic dysfunction is why about 85% of patients with myelomeningocele have a neurogenic bladder. Overflow would imply underactive detrusor or obstruction, and an acontractile pattern implies little to no detrusor contraction—neither of these best describes the typical MMC presentation. A reflex description can be part of the neurogenic picture, but the broad and correct category for this condition is neurogenic bladder.

9. When can an orthotic program begin?

- A. Within the first days of life.**
- B. At 6 months of age.
- C. Only after motor milestones are achieved.
- D. After the child starts walking.

Starting an orthotic program in the newborn period is appropriate and often beneficial. For babies with spinal dysraphism like myelomeningocele, joints and muscles are developing quickly, and early orthotic support helps keep hips, knees, and feet in good alignment, reduces the risk of contractures, and provides a stable base for early care and therapy. Fitting and adapting an orthotic device soon after birth allows families to become comfortable with its use and gives clinicians time to tailor it as the child grows, rather than waiting for milestones to be reached or for the child to start walking. Delaying initiation to six months, after motor milestones, or only after walking can permit deformities to progress and limit the effectiveness of later orthotic intervention. So, beginning the orthotic program within the first days of life aligns with promoting proper alignment and early development.

10. Which level is the frog leg position associated with?

- A. Thoracic level**
- B. High lumbar L1-L2
- C. Cervical level
- D. Lumbar level

Leg position at rest mirrors the level of spinal involvement—the higher the lesion, the more dramatic the abnormal posture in the legs. A frog-leg posture—hips flexed and abducted with knees flexed and feet rotated outward—signals a high spinal involvement, such as the thoracic level. When control from higher up is lost, the muscles around the hips and thighs balance in a way that leaves the legs in this flexed, externally rotated stance. Lower-level lesions tend to produce different configurations because more distal muscles are affected and the patterns of weakness and spasticity shift accordingly. So, the frog-leg resting posture is most consistent with a thoracic-level lesion, reflecting widespread disruption of supraspinal control over the lower limbs.

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://neuraltubedefects.examzify.com>

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

SAMPLE