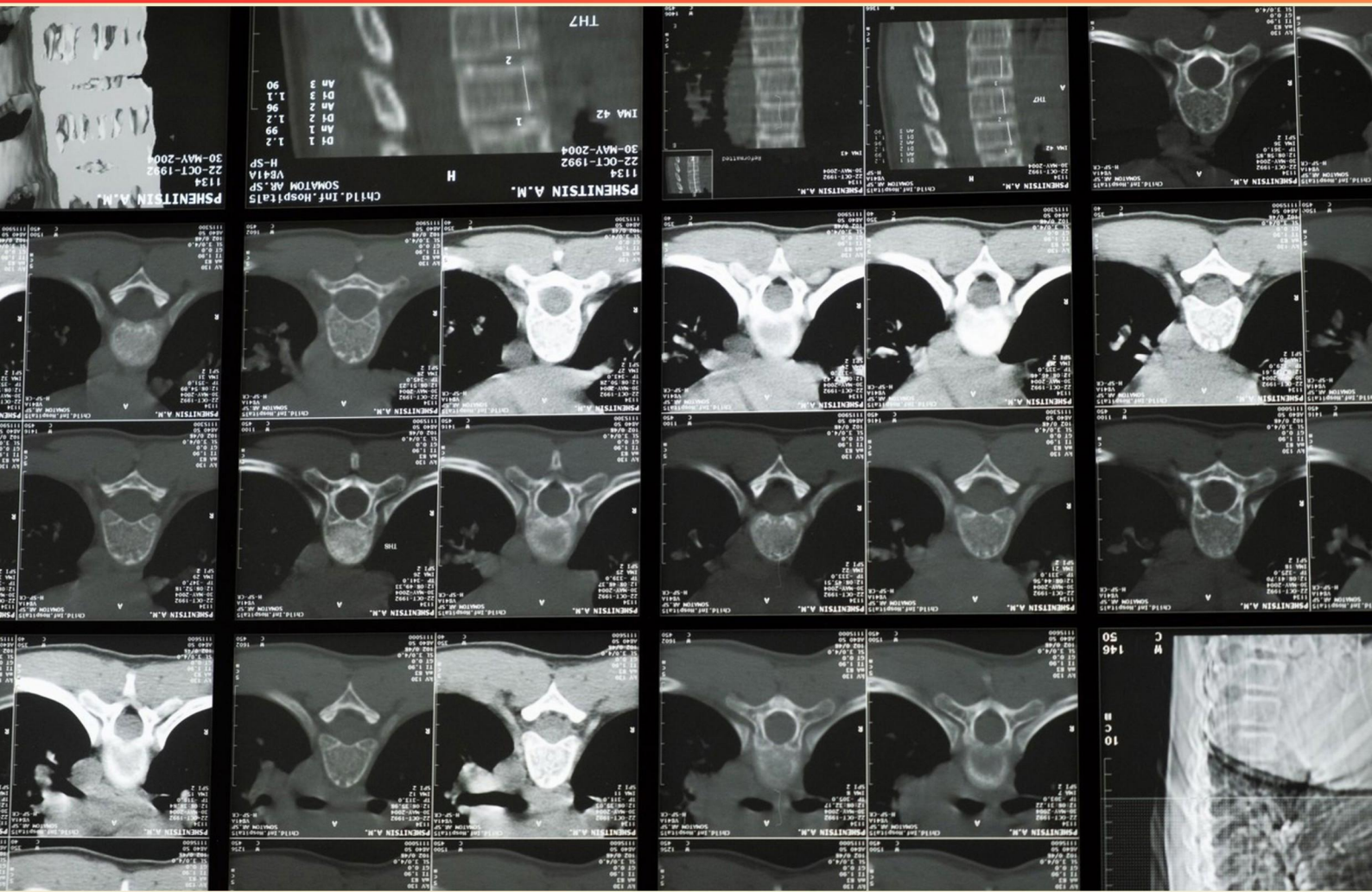


CERVICAL SPINE ORTHOPEDICS I PRACTICE EXAM (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

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THE FULL VERSION STUDY GUIDE

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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 set of tests is recommended initially for a patient with neck pain and radicular symptoms to support a diagnosis of spondylosis with radiculopathy?**
 - A. Lhermitte sign, Hoffman sign, Babinski, deep tendon reflexes
 - B. Upper limb tension, Spurling, Distraction, Cervical ROM less than 60 degrees to the ipsilateral side
 - C. Neck flexion ROM, facet loading test, axial compression, vibration sense
 - D. MRI, CT, X-ray, ultrasound
- 2. Which structure is primarily involved in facet syndrome?**
 - A. Disc
 - B. Uncovertebral joint
 - C. Facet
 - D. Lamina
- 3. If esophageal compression is suspected due to cervical spine pathology, which imaging test is indicated?**
 - A. Barium swallow (x-ray)
 - B. MRI
 - C. CT
 - D. Ultrasound
- 4. Which imaging modality is used to check for cord or nerve root compression?**
 - A. X-ray
 - B. MRI
 - C. CT
 - D. Ultrasound
- 5. Describe a Hangman fracture and its typical mechanism.**
 - A. Bilateral pars interarticularis fracture of C2 with anterior subluxation of C2 on C3 due to hyperextension injury
 - B. Burst fracture of C1 from axial load
 - C. Fracture of the odontoid base
 - D. Fracture of C5 facet

- 6. The open-mouth radiographic view primarily assesses alignment between which structures?**
- A. The atlas (C1) and axis (C2) relationship and odontoid process
 - B. The C5-C7 facet alignment
 - C. The intervertebral discs between C3-C4
 - D. The occipital condyles with cervical spine
- 7. Which odontoid fracture type has the highest risk for nonunion?**
- A. Type II
 - B. Type I
 - C. Type III
 - D. Type IV
- 8. Which structures contribute most to anterior column compromise in degenerative cervical stenosis?**
- A. Facet joint hypertrophy
 - B. Posterior longitudinal ligament hypertrophy
 - C. Disc space collapse with osteophyte formation and uncovertebral joint hypertrophy
 - D. Spinous process hypertrophy
- 9. Which of the following findings is commonly associated with cervical spondylosis?**
- A. Osteophytes
 - B. Loss of joint space
 - C. Eburnation
 - D. Calcification
- 10. For evaluating both cord compression and degenerative changes in a single study, which modality is preferred?**
- A. Barium swallow
 - B. X-ray
 - C. CT
 - D. MRI

Answers

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

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Explanations

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1. Which set of tests is recommended initially for a patient with neck pain and radicular symptoms to support a diagnosis of spondylosis with radiculopathy?

- A. Lhermitte sign, Hoffman sign, Babinski, deep tendon reflexes
- B. Upper limb tension, Spurling, Distraction, Cervical ROM less than 60 degrees to the ipsilateral side**
- C. Neck flexion ROM, facet loading test, axial compression, vibration sense
- D. MRI, CT, X-ray, ultrasound

A practical approach for suspected cervical radiculopathy uses a small cluster of provocative, nerve-root-sensitizing tests at the bedside. The goal is to reproduce the patient's radicular symptoms and localize irritation to a cervical nerve root, supporting degenerative foraminal compression from spondylosis. Upper limb tension tests check neural tissue sensitivity along the brachial plexus and nerve roots, so a positive result suggests nerve-root irritation rather than pure joint pain. Spurling's test directly loads the foraminal space to provoke radicular pain when a compressed nerve root is present, helping localize the problem to neural impingement. The distraction test unloads the cervical spine and foraminal space; relief of symptoms with distraction strongly supports radiculopathy due to nerve compression rather than non-neurologic neck pain. A cervical range of motion limited to the ipsilateral side, particularly with rotation reduced to about 60 degrees or less, further points to mechanical impingement at the level affecting the nerve root. Together, these maneuvers form a useful initial screen because they are quick, noninvasive, and increase diagnostic confidence for nerve-root involvement before imaging. By contrast, signs like Lhermitte, Hoffman, or Babinski lean toward myelopathy or central nervous system involvement rather than radiculopathy, and imaging studies (MRI, CT, X-ray, ultrasound) provide structural information rather than a primary, bedside diagnostic cluster.

2. Which structure is primarily involved in facet syndrome?

- A. Disc
- B. Uncovertebral joint
- C. Facet**
- D. Lamina

Facet syndrome is centered on the zygapophyseal (facet) joints themselves. These are the synovial joints between the superior and inferior articular processes of adjacent vertebrae. When they degenerate or become inflamed, the joint capsule and synovium generate most of the pain, especially with movements that load the facets—extension and rotation in the cervical region. The resulting pain is typically felt in the paraspinal area and may be provoked by specific extension-rotation maneuvers. The other structures are not the primary source in facet syndrome. The disc can cause axial or radicular pain from disc degeneration or herniation, but that's a different pain generator. Uncovertebral joints and the lamina can contribute to other cervical pathology, but they are not the main structures involved in facet syndrome.

3. If esophageal compression is suspected due to cervical spine pathology, which imaging test is indicated?

A. Barium swallow (x-ray)

B. MRI

C. CT

D. Ultrasound

When external compression of the esophagus from cervical spine disease is suspected, the test of choice is a contrast esophagram (barium swallow). This study directly outlines the esophageal lumen while the patient swallows, revealing any indentation or narrowing caused by posterior cervical osteophytes, disc-osteophyte complexes, or retropharyngeal soft tissue. It provides functional and anatomic information about how the esophagus is being compressed, which helps confirm the diagnosis and gauge severity. While MRI or CT can show the cervical pathology and its relationship to the esophagus, they don't visualize the esophageal lumen during swallowing as effectively as a barium swallow. Ultrasound isn't useful for evaluating the cervical esophagus in this context.

4. Which imaging modality is used to check for cord or nerve root compression?

A. X-ray

B. MRI

C. CT

D. Ultrasound

The key idea is using an imaging study that directly visualizes neural structures within the spinal canal. MRI provides superior soft-tissue contrast, allowing clear visualization of the spinal cord, nerve roots, intervertebral discs, and surrounding ligaments. This makes it highly sensitive for detecting compression from herniated discs, foraminal stenosis, or other soft-tissue pathology, as well as any associated cord signal changes (myelopathy). X-ray mainly shows bone alignment and can't reveal neural elements. CT excels at bone detail but has limited soft-tissue resolution for neural structures. Ultrasound isn't practical for evaluating the spinal canal. So MRI is the imaging modality of choice for assessing cord or nerve root compression.

5. Describe a Hangman fracture and its typical mechanism.

A. Bilateral pars interarticularis fracture of C2 with anterior subluxation of C2 on C3 due to hyperextension injury

B. Burst fracture of C1 from axial load

C. Fracture of the odontoid base

D. Fracture of C5 facet

Hangman fracture is a traumatic spondylolysis of the axis (C2) with bilateral fractures through the pars interarticularis and forward (anterior) displacement of C2 on C3. This pattern arises from a hyperextension injury to the neck, often with an axial load, which drives the posterior elements to fail on both sides of C2 and allows C2 to translate forward relative to C3. It's a distinct mechanism from other cervical injuries: a Jefferson fracture is a burst of C1 from axial load, a base fracture involves the dens, and a facet fracture at a lower level involves the facet joints.

6. The open-mouth radiographic view primarily assesses alignment between which structures?

- A. The atlas (C1) and axis (C2) relationship and odontoid process
- B. The C5-C7 facet alignment
- C. The intervertebral discs between C3-C4**
- D. The occipital condyles with cervical spine

Open-mouth radiographs are designed to visualize the upper cervical spine, especially the atlas (C1) and axis (C2) region and the dens. In this view, you look at how the odontoid process sits in relation to the anterior arch of C1 and how the C1–C2 junction lines up, which is essential for detecting atlantoaxial dislocations, dens fractures, or atlas ring injuries. The projection isn't meant to show the C3–C4 intervertebral discs or the lower cervical facet alignments—those structures are better evaluated with lateral or other views, or with MRI if needed. Likewise, the occipital condyles' relationship to the cervical spine can be glimpsed only tangentially here, not assessed as the primary target.

7. Which odontoid fracture type has the highest risk for nonunion?

- A. Type II**
- B. Type I
- C. Type III
- D. Type IV

The most important idea here is how the location of the dens fracture affects blood supply and stability, which in turn governs healing. Fractures at the base of the dens have the highest risk of nonunion. This base region has relatively limited blood supply and is subjected to motion and shear forces at the C1–C2 joint, creating poor conditions for bone healing. As a result, these fractures are the most prone to failing to unite without intervention, and they are the pattern most often associated with persistent instability if not treated appropriately. In contrast, fractures at the tip heal well with standard immobilization because the tip is supplied by vessels that promote healing and it is more stable overall. Fractures that extend into the body of the axis (into cancellous bone) tend to heal readily due to better vascularity and bone stock, leading to higher union rates. The less common vertical fracture through the body has its own distinct considerations and does not share the same high nonunion risk as base fractures. So, the base-of-dens fracture stands out as the one with the greatest likelihood of nonunion.

8. Which structures contribute most to anterior column compromise in degenerative cervical stenosis?

- A. Facet joint hypertrophy
- B. Posterior longitudinal ligament hypertrophy
- C. Disc space collapse with osteophyte formation and uncovertebral joint hypertrophy**
- D. Spinous process hypertrophy

Anterior canal narrowing in degenerative cervical stenosis mainly comes from changes in the front of the spine. When the intervertebral disc loses height and osteophytes form along the vertebral bodies, the anterior column encroaches into the canal. Add hypertrophy of the uncovertebral joints (between the uncinate process and the adjacent vertebra), which also projects osteophytes into the canal, and you get the most significant anterior compromise of the spinal canal. Facet joint hypertrophy tends to affect the posterior aspects and the lateral recess/foramina, not the primary anterior canal. Posterior longitudinal ligament thickening acts from behind, narrowing the canal from the posterior aspect. Spinous process hypertrophy is a posterior element change and is not a major driver of anterior canal compromise. Thus, disc space collapse with osteophyte formation and uncovertebral joint hypertrophy best account for anterior column compromise.

9. Which of the following findings is commonly associated with cervical spondylosis?

- A. Osteophytes**
- B. Loss of joint space
- C. Eburnation
- D. Calcification

Degeneration of the cervical spine with aging often triggers bony outgrowths at the margins of the vertebral bodies and around the uncovertebral joints. These osteophytes are the most characteristic and commonly observed radiographic change in cervical spondylosis, reflecting the spine's attempt to stabilize a degenerating motion segment. As discs lose height and facet joints wear, the body responds by forming bone spurs that can contribute to foraminal narrowing and nerve root irritation over time. While loss of joint space can occur with disc degeneration, it's not as specific to cervical spondylosis as osteophyte formation. Eburnation points to advanced cartilage loss with polished bone surface seen in severe osteoarthritis of some joints, but it's not the defining feature of cervical spondylosis. Calcification isn't a typical hallmark of this condition.

10. For evaluating both cord compression and degenerative changes in a single study, which modality is preferred?

A. Barium swallow

B. X-ray

C. CT

D. MRI

Magnetic resonance imaging is the best choice because it provides detailed visualization of soft tissues, allowing you to see the spinal cord and nerve roots as well as the intervertebral discs and ligaments. This lets you detect cord compression directly from herniated discs, osteophytes, or ligamentous thickening, while also assessing degenerative changes such as disc degeneration, facet arthropathy, and canal stenosis in the same study. MRI can also reveal edema or myelopathy within the cord, which is crucial for prognosis and treatment decisions. X-ray mainly shows bone and alignment and misses soft-tissue details. CT excels at bone anatomy and bony stenosis but lacks the soft-tissue contrast to evaluate the cord, discs, and ligaments comprehensively. Barium swallow is unrelated to spine assessment. Therefore, MRI provides the most comprehensive single-study assessment of both cord compression and degenerative changes.

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://cervicalspineortho1.examzify.com>

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

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