Back Muscles – Origin, Insertion, Action & Innervation Practice Test (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. The action of the splenius cervicis includes which movement?

A. Extends the neck; rotates head to the same side.

B. Flexes the neck; rotates head to opposite side.

C. Elevates the ribs during inspiration.

D. Stabilizes the pelvis.

2. Splenius cervicis action when acting unilaterally?

A. Ipsilateral flexion and rotation

B. Contralateral rotation

C. Bilateral head and neck extension

D. Lateral trunk flexion

3. What is the action of latissimus dorsi?

A. Extends, adducts, and medially rotates the humerus.

B. Abducts the humerus.

C. Flexes the elbow.

D. Laterally rotates the scapula.

4. Which structures form the origin of the trapezius muscle?

A. Nuchal ligament, spinous processes C7-T12, occipital protuberance

B. Clavicle and scapular spine

C. Spinous processes T2-T5

D. Thoracolumbar fascia

5. The erector spinae group Iliocostalis, Longissimus, Spinalis originates from which structure?

A. Thoracolumbar fascia

B. Spinous processes of the thoracic vertebrae

C. Sacroiliac ligaments

D. Cranial base

6. Origin of longissimus capitis?

- **A. Transverse processes of T1-T5 and articular processes of C4-C7**
- **B. Spinous processes of T1-T6**
- **C. Occipital bone**
- **D. Sacrum**

7. Which muscle originates from the sacrum and iliac crest via the thoracolumbar fascia?

- **A. Spinalis cervicis**
- **B. Latissimus dorsi**
- **C. Longissimus thoracis**
- **D. Quadratus lumborum**

8. Longissimus insertion includes which of the following?

- **A. Mastoid process and transverse processes of cervical and thoracic vertebrae**
- **B. Spinous processes of the vertebrae**
- **C. Ischial tuberosity**
- **D. Occipital condyle**

9. Which nerves innervate the splenius capitis?

- **A. Ventral rami of cervical nerves.**
- **B. Dorsal rami of cervical nerves.**
- **C. Dorsal rami of thoracic nerves.**
- **D. Spinal accessory nerve.**

10. Rotatores insert on the base of spinous processes how many levels above their origin?

- **A. Base of spinous processes 3-4 levels above the origin**
- **B. Base of spinous processes 1-2 levels above the origin**
- **C. Spinous processes at the same level**
- **D. Transverse processes two levels above**

Answers

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

Explanations

1. The action of the splenius cervicis includes which movement?

A. Extends the neck; rotates head to the same side.

B. Flexes the neck; rotates head to opposite side.

C. Elevates the ribs during inspiration.

D. Stabilizes the pelvis.

Splenius cervicis works in two ways: when both sides contract, it extends the neck; when it contracts on one side, it rotates the head to the same side. So extending the neck and rotating the head toward the same side is exactly what this muscle does, matching the described action. The other ideas aren't functions of this muscle—rib elevation is the job of inspiratory muscles, and pelvis stabilization isn't related to the splenius cervicis, while flexing the neck is more characteristic of other muscles that oppose its primary action.

2. Splenius cervicis action when acting unilaterally?

A. Ipsilateral flexion and rotation

B. Contralateral rotation

C. Bilateral head and neck extension

D. Lateral trunk flexion

Unilateral contraction of the splenius cervicis pulls the neck toward the same side and rotates the head to that side. This happens because the muscle runs from the lower thoracic spine up to the upper cervical transverse processes, so when it contracts on one side, it shortens and pulls those cervical segments laterally and rotates them toward that same side. Bilateral contraction, in contrast, extends the neck. So the action described—ipsilateral flexion (lateral bend) and rotation with a single-side contraction—fits the anatomy. The other possibilities describe actions seen with either the opposite-side rotation, bilateral extension, or trunk-level movements, which aren't the unilateral action of this neck muscle.

3. What is the action of latissimus dorsi?

A. Extends, adducts, and medially rotates the humerus.

B. Abducts the humerus.

C. Flexes the elbow.

D. Laterally rotates the scapula.

Latissimus dorsi primarily acts on the shoulder joint to extend the arm (move it backward), adduct it (pull it toward the body), and medially rotate it (turn the arm inward). Its fibers run from the lower spine and pelvis up to the humerus, so when it contracts it pulls the arm down and back and toward the midline. This combination of movements is why it's described as extending, adducting, and medially rotating the humerus. It's not responsible for abducting the arm (that's done by muscles like the deltoid and supraspinatus), nor for elbow flexion (elbow flexors like the biceps brachii do that), nor for lateral rotation of the scapula (scapular rotation involves trapezius and serratus anterior).

4. Which structures form the origin of the trapezius muscle?

A. Nuchal ligament, spinous processes C7-T12, occipital protuberance

B. Clavicle and scapular spine

C. Spinous processes T2-T5

D. Thoracolumbar fascia

The question tests where the trapezius begins on the skeleton. The trapezius originates from the skull base and the upper spine region: the external occipital protuberance and the superior nuchal line of the occipital bone, the nuchal ligament running down the back of the neck, and the spinous processes from C7 through T12. From these origins, the muscle fibers spread to insert on the lateral third of the clavicle, the acromion, and the spine of the scapula to move the shoulder girdle. Clavicle and scapular spine are insertion points, not origins, so they don't describe where the muscle starts. A limited range like only T2–T5 misses most of the midline attachments, and the thoracolumbar fascia isn't a trapezius origin.

5. The erector spinae group Iliocostalis, Longissimus, Spinalis originates from which structure?

A. Thoracolumbar fascia

B. Spinous processes of the thoracic vertebrae

C. Sacroiliac ligaments

D. Cranial base

The key idea is that the erector spinae group shares a strong, common origin from the thoracolumbar fascia. This fascial layer along the posterior trunk provides the broad base from which all three muscles—the iliocostalis, longissimus, and spinalis—rise (with additional attachments toward the iliac crest and sacrum). From this fascia, they course upward to their respective insertions, enabling the spine to extend and laterally flex. The other structures listed don't serve as the primary origin for the whole muscle group. Spinous processes of the thoracic vertebrae are more associated with insertion points for parts of the erector spinae, not the shared origin. Sacroiliac ligaments are part of the pelvic joints, not muscular origins. The cranial base is unrelated to where these back muscles originate.

6. Origin of longissimus capitis?

A. Transverse processes of T1-T5 and articular processes of C4-C7

B. Spinous processes of T1-T6

C. Occipital bone

D. Sacrum

Longissimus capitis starts from the transverse processes of the upper thoracic vertebrae and from the articular processes of the lower cervical vertebrae, then ascends to attach to the mastoid process of the temporal bone. This origin arrangement lets the muscle pull upward to extend and rotate the head. The other options don't fit because they point to origins that belong to different muscles (spinous processes of the upper thoracic spine would be for other back muscles; the sacrum isn't an origin for this muscle; and the occipital bone is where this muscle inserts, not where it originates).

7. Which muscle originates from the sacrum and iliac crest via the thoracolumbar fascia?

A. Spinalis cervicis

B. Latissimus dorsi

C. Longissimus thoracis

D. Quadratus lumborum

The statement describes a muscle with a broad origin from the sacrum and iliac crest through the thoracolumbar fascia. That pattern is characteristic of the latissimus dorsi. The thoracolumbar fascia provides a strong, continuous origin across the lower back and pelvis, tying the sacrum and iliac crest into a single sheet from which the latissimus dorsi can arise. This large back muscle then runs up to insert on the humerus, enabling actions like shoulder extension, adduction, and medial rotation. The other muscles listed don't match this origin pattern. Spinalis cervicis is a neck-focused muscle that originates along the spine higher up. Longissimus thoracis mainly arises from lumbar transverse processes and thoracic region attachments, with its origin not classically described as from the sacrum and iliac crest via the thoracolumbar fascia. Quadratus lumborum does attach near the iliac crest and interacts with the thoracolumbar fascia, but it doesn't originate from the sacrum and iliac crest via that fascia in the same broad, fascia-contained way as latissimus dorsi.

8. Longissimus insertion includes which of the following?

A. Mastoid process and transverse processes of cervical and thoracic vertebrae

B. Spinous processes of the vertebrae

C. Ischial tuberosity

D. Occipital condyle

Longissimus is a major erector spinae muscle with fibers that attach to the mastoid process of the temporal bone and to the transverse processes of the cervical and thoracic vertebrae. The capitis portion inserts on the mastoid process, while the cervicis and thoracis portions insert on the transverse processes (and, for thoracis, into the ribs as well). So, inserting at the mastoid process and the transverse processes of the cervical and thoracic vertebrae is exactly what this muscle does. Spinous processes are typical insertion for spinalis, the ischial tuberosity is for some hip/ thigh muscles, and the occipital condyle is not a standard insertion site for longissimus.

9. Which nerves innervate the splenius capitis?

A. Ventral rami of cervical nerves.

B. Dorsal rami of cervical nerves.

C. Dorsal rami of thoracic nerves.

D. Spinal accessory nerve.

Splenius capitis is part of the deep back muscles that move and stabilize the head, and it receives motor innervation from the posterior (dorsal) rami of the cervical spinal nerves. These dorsal rami supply the intrinsic back muscles, including the splenius group, and provide sensory input to the skin over the back. In contrast, the ventral rami of the cervical nerves mostly innervate the limbs and the anterior/lateral trunk, not the splenius capitis. The dorsal rami of the thoracic nerves would target thoracic back muscles, not the neck muscle here. The spinal accessory nerve innervates the sternocleidomastoid and trapezius, not splenius capitis.

10. Rotatores insert on the base of spinous processes how many levels above their origin?

A. Base of spinous processes 3-4 levels above the origin

B. Base of spinous processes 1-2 levels above the origin

C. Spinous processes at the same level

D. Transverse processes two levels above

Rotatores are tiny deep back muscles that belong to the transversospinalis group. They run from the transverse process of one vertebra up to the base of the spinous process of a higher vertebra. Short rotatores insert on the spinous process of the vertebra right above them, while the longer ones reach the spinous process two levels above. So, they insert on the base of spinous processes one to two levels above their origin. This arrangement supports subtle spinal rotation and stability. They do not reach three or four levels away, nor do they insert on the same level or on transverse processes for this purpose.

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://backmusclesorigin.examzify.com

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