Muscle Actions and Functions – Anatomy and Movement 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. Which muscle extends the knee and flexes the hip?

A. Rectus Femoris

B. Vastus Lateralis

C. Vastus Medialis

D. Vastus Intermedius

2. Which is the primary hip flexor?

A. Rectus femoris

B. Iliopsoas

C. Gluteus maximus

D. Sartorius

3. Which muscle initiates shoulder abduction?

A. Supraspinatus

B. Latissimus Dorsi

C. Serratus Anterior

D. Frontalis

4. During a hip hinge movement such as a kettlebell swing, what is the primary role of the erector spinae?

A. Stabilizes the spine and supports upright posture

B. Initiates hip extension

C. Flexes the knee

D. Abducts the hip

5. In the context of aging, resistance training is most effective at which outcome?

A. Eliminating sarcopenia

B. Increasing bone length

C. Slowing the loss of muscle mass and maintaining strength

D. Reversing aging completely

6. Which muscle extends the knee and lies deep to the rectus femoris?

A. Vastus Intermedius

B. Rectus Femoris

C. Vastus Lateralis

D. Vastus Medialis

7. Which muscle flexes the wrist?

A. Palmaris Longus

B. Flexor Carpi Ulnaris

C. Extensor Carpi Radialis Longus

D. Extensor Digitorum

8. What action is performed by the anterior fibers of the deltoid?

A. Flexion and medial rotation

B. Abduction

C. Extension and lateral rotation

D. Retraction

9. Which muscle abducts the hip and medially rotates the hip?

A. Gluteus Medius

B. Adductor Longus

C. Sartorius

D. Iliopsoas

10. Which muscle expands the thorax and compresses the abdomen during respiration?

A. Diaphragm

B. Intercostal Muscles

C. Pectoralis Minor

D. External Oblique

Answers

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

Explanations

1. Which muscle extends the knee and flexes the hip?

A. Rectus Femoris

B. Vastus Lateralis

C. Vastus Medialis

D. Vastus Intermedius

Extending the knee while flexing the hip is the job of a muscle that crosses both joints. The rectus femoris does cross the hip and the knee, making it biarticular. When it contracts, it helps lift the thigh at the hip (hip flexion) and straighten the leg at the knee (knee extension). The other quadriceps muscles—vastus lateralis, vastus medialis, and vastus intermedius—attach across only the knee and thus act mainly to extend the knee, not to flex the hip. Because rectus femoris is the only one among them that spans both joints, it uniquely performs both actions.

2. Which is the primary hip flexor?

A. Rectus femoris

B. Iliopsoas

C. Gluteus maximus

D. Sartorius

The main idea being tested is which muscle acts as the chief driver of hip flexion. The iliopsoas is the primary hip flexor. It's formed by the psoas major and iliacus, and it crosses the hip joint from the lower spine and ilium to insert on the femur's lesser trochanter. Because of its favorable line of pull and large cross-sectional area, it produces the strongest torque to lift the thigh toward the pelvis, especially when the trunk is stabilized or fixed. Rectus femoris does help flex the hip since it crosses the hip joint, but as part of the quadriceps it's not the main driver of hip flexion; its primary role includes knee extension and it shares the work with other muscles. Gluteus maximus mainly extends and externally rotates the hip, so it's on the opposite side of the action. Sartorius can assist in hip flexion and has multiple actions at the hip and knee, but its contribution to pure hip flexion is limited compared to the iliopsoas.

3. Which muscle initiates shoulder abduction?

A. Supraspinatus

B. Latissimus Dorsi

C. Serratus Anterior

D. Frontalis

The initial lift of the arm away from the body is driven by the supraspinatus. This small rotator cuff muscle sits above the shoulder joint and its fibers attach to the humeral head to pull it up and away from the torso at the very start of abduction, roughly the first 10–15 degrees. This action also helps stabilize the humeral head in the glenoid as the arm begins to elevate, setting the stage for the deltoid to take over as abduction continues. Latissimus dorsi, by contrast, is more associated with pulling the arm downward and backward (adduction and extension), not initiating abduction. Serratus anterior primarily protracts and upwardly rotates the scapula, aiding overhead motion but not the start of abduction itself. Frontalis has no role in shoulder movement.

4. During a hip hinge movement such as a kettlebell swing, what is the primary role of the erector spinae?

A. Stabilizes the spine and supports upright posture

B. Initiates hip extension

C. Flexes the knee

D. Abducts the hip

During a hip hinge like a kettlebell swing, the main job of the erector spinae is to stabilize the spine and keep the torso upright as the hips hinge and the weight moves. These muscles run along the back and fire to hold the spine in a neutral or slightly extended position, resisting forward flexion and protecting the spinal discs as load shifts from the hips to the upper body. They provide a counter-moment to the hip extension driven by the glutes and hamstrings, helping transfer force efficiently up the spine and into the movement. They are not the primary drivers of hip extension—that role belongs to the gluteus maximus and the hamstrings. They also don't flex the knee or abduct the hip; those actions come from other muscle groups.

5. In the context of aging, resistance training is most effective at which outcome?

A. Eliminating sarcopenia

B. Increasing bone length

C. Slowing the loss of muscle mass and maintaining strength

D. Reversing aging completely

The main idea is that resistance training best preserves the muscle you have as you age. When older adults train with progressive overload, muscles respond by increasing protein synthesis, getting a bit larger, and improving how well the nervous system activates them. These adaptations slow the rate at which muscle mass is lost and help keep strength, which is key for daily tasks and independence. It also supports functional performance and balance, reducing fall risk. It doesn't erase sarcopenia entirely, doesn't change bone length, and can't reverse aging, but it is the most effective approach among the options for maintaining muscle mass and strength over time.

6. Which muscle extends the knee and lies deep to the rectus femoris?

A. Vastus Intermedius

B. Rectus Femoris

C. Vastus Lateralis

D. Vastus Medialis

Extending the knee is a main action of the quadriceps group. Among them, the vastus intermedius sits deepest, tucked under the rectus femoris right on the front of the femur and between the vastus medialis and vastus lateralis. Its fibers join the quadriceps tendon and patellar ligament to help straighten the knee. The rectus femoris is more superficial and also crosses the hip, while the other two vasti lie to the sides. Because it lies beneath the rectus femoris and contributes to knee extension, the vastus intermedius fits the description perfectly.

7. Which muscle flexes the wrist?

A. Palmaris Longus

B. Flexor Carpi Ulnaris

C. Extensor Carpi Radialis Longus

D. Extensor Digitorum

Wrist flexion is produced by muscles in the anterior forearm that cross the wrist joint. Palmaris longus is a superficial flexor of the wrist; when it contracts, it helps bend the hand at the wrist and also tenses the palmar aponeurosis to improve grip. Although it's a relatively weak flexor and is absent in some people, its action is specifically to flex the wrist, which matches the question. The other muscles listed either extend the wrist (Extensor Carpi Radialis Longus, Extensor Digitorum) or flex but with different primary actions and attachments (Flexor Carpi Ulnaris tends to flex and adduct the wrist, Flexor Carpi Radialis flexes and abducts). Because Palmaris longus directly contributes to wrist flexion, it is the best answer.

8. What action is performed by the anterior fibers of the deltoid?

A. Flexion and medial rotation

B. Abduction

C. Extension and lateral rotation

D. Retraction

The front (anterior) portion of the deltoid pulls the arm forward and toward the midline. When it contracts, it flexes the shoulder joint and medially rotates the humerus, which is the action you'd feel when lifting the arm in front of you or bringing the palm toward the body. This contrasts with the middle fibers, which lift the arm out to the side (abduction), and the back fibers, which extend and laterally rotate the arm. Retraction, or pulling the scapula back, isn't a primary action of the deltoid's anterior fibers.

9. Which muscle abducts the hip and medially rotates the hip?

A. Gluteus Medius

B. Adductor Longus

C. Sartorius

D. Iliopsoas

When a muscle both abducts the hip and medially rotates it, the gluteus medius is the best fit. It sits on the outer hip and is the primary hip abductor, with the anterior fibers capable of medially rotating the thigh as the hip flexes. This combination explains why it can perform both actions together. The other muscles don't match both actions as the primary role: adductor longus mainly pulls the thigh inward (adduction), iliopsoas is a powerful hip flexor, and the sartorius primarily flexes the hip while producing abduction and lateral rotation rather than medial rotation.

10. Which muscle expands the thorax and compresses the abdomen during respiration?

A. Diaphragm

B. Intercostal Muscles

C. Pectoralis Minor

D. External Oblique

During breathing, the diaphragm acts as the main inspiratory muscle. When it contracts, it moves downward, increasing the vertical dimension of the thoracic cavity and thereby expanding the chest. This expansion lowers intrathoracic pressure and draws air into the lungs. At the same time, the downward movement compresses the abdominal contents, elevating intra-abdominal pressure and causing the abdomen to be compressed outward. This combination— expanding the thorax while compressing the abdomen—fits how the diaphragm works during respiration. The other muscles either focus on moving the rib cage to expand the chest or on compressing the abdomen for forced expiration, but not both in this way.

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://muscleanatomyandmovement.examzify.com

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