# Kinesiology of Exercise Quizzes

Based on the Work of Dr. Michael Yessis



Volume 4 - Combination Hip and Knee Joint

**KinX Learning** 

#### Kinesiology of Exercise Quizzes by KinX Learning

Published by KinX Learning

www.kinxlearning.com

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1. What are the joint actions in the squat exercise?

- A. Hip extension, knee extension
- B. Hip flexion, knee flexion
- C. Hip abduction, knee extension
- D. Hip adduction, knee extension

2. Which muscle is not in the hamstring muscle group?

- A. Biceps Femoris
- **B.** Rectus Femoris
- C. Semitendinosus
- D. Semimembranosus

3. Which muscle is not in the quadriceps muscle group?

- A. Vastus lateralis
- B. Vastus medialis
- C. Vastus intermedius
- D. Gracilis

4. What major muscle is involved in the squat, leg press and lunge in addition to the hamstrings and quadriceps?

Α.	Gl	luteus	min	imus
,	<b>U</b>	accas		111145

B. Gluteus medius

C. Gluteus maximus

D. Gracilis

5. In the squat exercise, the knee extension action involves which muscle or muscle group?

- A. Hamstrings
- B. Quadriceps
- C. Gluteus maximus
- D. Gastrocnemius

6. In the squat exercise, the hip extension action involves which muscle or muscle group?

ΔNSWFR
D. A and C
C. Gluteus Maximus
B. Quadriceps
A. Hamstrings

- 7. Which muscles lie side by side on the inner back of the thigh.
  - A. Semitendinosus, semimembranosus
  - B. biceps femoris, rectus femoris
  - C. Adductor brevis, adductor longus
  - D. Adductor magnus, gracilis

8. Which muscle of the hamstring group has two heads?

A. Biceps femoris

B. Rectus femoris

C. Semitendinosus

D. Semimembranosus

9. Which is a large muscle positioned straight down the front of the thigh?

- A. Biceps Femoris
- B. Rectus femoris
- C. Semitendinosus
- D. Semimembranosus

10. Which muscle of the vastus muscles in the quadriceps group lies on the outer side of the thigh?

Α.	Vastus	lateral	lis
<i>,</i>	Vastas	ia ce i a	

B. Vastus medialis

C. Vastus intermedius

D. Vastus femoris

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

In the squat, extension occurs in the knee joint during the ascent (up phase). In this action, the thigh moves away from the shin as the leg straightens. The major muscle involved is the quadriceps femoris group.

In the hip joint, extension occurs as the thigh moves up and forward to be in line with the upper body. The major muscles involved in this action are the gluteus maximus and the hamstring muscle group. The ankle joint is also involved, but it is mostly passive. The erector spinae muscles contract isometrically to stabilize the spine.

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#### Α

Hip extension, knee extension

The hamstring muscle group includes the semitendinosus, semimembranosus, and the biceps femoris. These muscles flex the knee.

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B

**Rectus Femoris** 

The quadriceps femoris group, located on the anterior (front) side of the thigh includes the rectus femoris, vastus lateralis, vastus medialis, and vastus intermedius muscles, which extend the knee.

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Gracilis

Extension occurs in the knee joint during the ascent (up phase). In this action, the thigh moves away from the shin as the leg straightens. The major muscle involved is the quadriceps femoris group.

In the hip joint, extension occurs as the thigh moves up and forward to be in line with the upper body. The major muscles involved in this action are the gluteus maximus and the hamstring muscle group.

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C

Gluteus maximus

In the squat, extension occurs in the knee joint during the ascent (up phase). In this action, the thigh moves away from the shin as the leg straightens. The major muscle involved is the quadriceps femoris group.

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B

Quadriceps

In the squat, extension occurs in the knee joint during the ascent (up phase). In this action, the thigh moves away from the shin as the leg straightens. The major muscle involved is the quadriceps femoris group.

In the hip joint, extension occurs as the thigh moves up and forward to be in line with the upper body. The major muscles involved in this action are the gluteus maximus and the hamstring muscle group.

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D

A and C

The semimembranosus and semitendinosus muscles lie side by side on the inside back of the thigh. They are much thinner than the biceps femoris and have a unique relationship.

The semimembranosus has a long upper tendon and a short lower tendon, and the semitendinosus has a short upper tendon and a long lower tendon. Because of this, the muscle masses of each of these muscles are in line with one another and form a cylindrical mass. Therefore, when well developed they appear as one long muscle.

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A

The biceps femoris is the largest muscle of the hamstring group and has two heads. It flexes the knee.

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A

Biceps femoris

The rectus femoris is a large muscle positioned straight down the front of the thigh. It extends the knee.

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B

Rectus femoris

The vastus lateralis is a large muscle located halfway down the outer side of the thigh. It is involved in knee extension.

The vastus medialis is located on the medial (inner) side of the thigh, somewhat lower than the lateralis, and is partially covered by the rectus femoris.

The vastus intermedius is a close associate of the vastus medialis and lateralis. It lies between them and beneath the rectus femoris. It is difficult to see this muscle separate from the medialis and often the two are continuous for part of their length.

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A

Vastus lateralis

#### **Kinesiology of Exercise eBooks**

Volume 1 – The Ankle Joint
Volume 2 – The Knee Joint
Volume 3 – The Hip Joint and Pelvic Girdle
Volume 4 - Combination Hip and Knee Joint
Volume 5 - The Spine, Abdominals
Volume 6 - The Spine, Lower Back
Volume 7 - The Shoulder Joint
Volume 8 - The Elbow Joint
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