

Bodybuilding Anatomy

CORRESPONDENCE EDUCATION PROGRAM # 2013-101

This course will expire on December 31, 2014.

After that date no credit will be awarded for this program.





How to Complete this Program

Thank you for choosing an Exercise ETC correspondence program for your continuing education needs. To earn your CECs/CEUs you will need to read the enclosed book. After you have completed the book, take the test that is included with your program. Remember to choose the best or most correct answer.

Now Available: Instant Grading!

When you are ready to submit your test please go to our website at: www.exerciseetc.com. On the left side of your screen you will see a blue, vertical bar with a list of options; click on “**Administration**” and then click “**Correspondence Course Answer Sheets.**” Choose the title of the test that you are completing and then simply follow all instructions to submit your test. **Remember to complete all fields prior to submitting your test.**

Once you submit your answers **your purchase will be verified** and your test will be corrected instantly; if you score at least 70% you will be able to print your CE certificate immediately. (If you have less than 70% correct, you will need to take test over again in order to qualify for the CECs/CEUs.) **If we are unable to verify your purchase you will receive a message requesting that you call our office for instructions.**

VERY IMPORTANT: Please make sure you have access to a working printer when you submit your test as your CE Certificate must be printed before you close out your testing session.

Good luck! If you have any questions or comments, please feel free to call us any time at 1-800-244-1344 or e-mail us at: info@exerciseetc.com



Bodybuilding Anatomy- Learning Objectives

After completing the Bodybuilding Anatomy course, the participant will:

1. Learn the anatomy of the shoulders, as well as the primary and secondary muscles involved in traditional shoulder exercises.
2. Be able to properly execute exercises for the anterior, medial, and posterior deltoid and the rotator cuff.
3. Understand the role of hand positioning, range of motion, and positioning for traditional shoulder exercises, including possible variations of the movements.
4. Learn the anatomy of the chest, understand the three functional divisions of the pectoralis major, and be able to give the primary and secondary muscles involved with traditional chest exercises.
5. Understand proper technique of exercises for three regions of the chest, including trajectory, hand spacing, positioning, and range of motion.
6. Learn the anatomy of the upper, middle, and lower back.
7. Know the primary and secondary muscles involved in traditional back exercises.
8. Understand proper exercise technique for traditional back exercises, including hand spacing, trajectory, body positioning, range of motion, and common variations.
9. Learn the anatomy of the upper arm and forearm, as well as the primary and secondary muscles involved in bicep, tricep, and forearm exercises.
10. Be able to properly execute exercises for the biceps, triceps, and forearms, including hand spacing, grip, trajectory, range of motion, and body positioning, as well as possible variations to the exercises.

11. Learn the anatomy of the hips, thighs, and calves and the muscles responsible for all possible movements at the hip, knee, and ankle joint.
12. Know the primary and secondary muscles involved in each exercise for the hip extensors, quadriceps, hamstrings, and calves.
13. Understand proper exercise technique for traditional exercises for the hip extensors, quadriceps, hamstrings, and calves, including foot positioning, foot spacing, body positioning, range of motion, resistance, and possible variations of the movements.
14. Understand the anatomy and functional movements of the abdominal musculature.
15. Learn proper exercise technique for traditional abdominal exercises, including primary and secondary muscles involved, body positioning, range of motion, trajectory, and resistance variables.
16. Learn possible variations to traditional abdominal exercises.



Bodybuilding Anatomy- Course Examination

For each of the following questions, circle the letter of the answer that best answers the question.

1. Which of the following describes horizontal abduction?
 - A. The arm moves toward the midline of the body.
 - B. The arm rotates internally toward the midline of the body.
 - C. The arm moves in the horizontal plane away from the midline of the body.
 - D. The arm moves behind the body.

2. During adduction, the arm moves
 - A. Backward behind the body.
 - B. Forward in front of the body.
 - C. Up and out to the side of the body.
 - D. Toward the side of the body.

3. Which of the following is correct?
 - A. The three heads of the deltoid each have their own tendon attachment to the humerus.
 - B. The three heads of the deltoid have a single tendon attachment to the humerus.
 - C. The anterior deltoid attaches to the acromium.
 - D. The lateral deltoid attaches to the clavicle.

4. All of the following are muscles of the rotator cuff except
 - A. The supraspinatus.
 - B. The teres major.
 - C. The infraspinatus.
 - D. The subscapularis.

5. The deltoid tendon inserts on the:
 - A. Acromium process
 - B. Clavicle
 - C. Deltoid tuberosity on the humerus
 - D. Spine of the scapula

6. When doing a barbell shoulder press, the hands are placed:
 - A Shoulder-width apart
 - B Six inches apart
 - C Hip-width apart
 - D As far apart as possible.

7. Which of the following is not a muscle involved in the barbell shoulder press?
 - A Anterior Deltoid
 - B Lateral Deltoid
 - C Biceps
 - D Triceps

8. Which of the following is false regarding the machine shoulder press?
 - A It provides greater stability.
 - B It allow for the use of momentum by the legs
 - C It offers a choice of handgrips
 - D It is safer.

9. Which of the following is not part of the proper execution of the dumbbell shoulder press?
 - A. Begin with the dumbbells at shoulder level.
 - B. Press the dumbbells up, stopping the extension before the elbows are locked out.
 - C. Palms should be facing forward.
 - D. Lower the dumbbells back down with control until they are at shoulder level.

10. Which of the following is an accurate description of hand position in the dumbbell shoulder press?
 - A. Pressing with the palms pronated works only the lateral head of the deltoid.
 - B. Pressing upward with a neutral grip maximizes involvement of the lateral head of the deltoid.
 - C. Pressing upward with a neutral grip maximizes involvement of the anterior head of the deltoid.
 - D. Pressing upward with a supinated grip maximizes involvement of the posterior head of the deltoid.

11. Which of the following muscles is not involved in a dumbbell front raise?
 - A. Anterior Deltoid
 - B. Pectoralis Major
 - C. Trapezius
 - D. Bicep

12. A neutral grip or thumbs-up position during the dumbbell front raise emphasizes the:
- A. Anterior Deltoid
 - B. Lateral Deltoid
 - C. Biceps
 - D. Pectoralis Minor
13. Which of the following is incorrect regarding the barbell front raise?
- A. Start with a pronated shoulder-width grip.
 - B. Raise the barbell to eye level.
 - C. Allow slight bend in elbows during the complete range of motion
 - D. The movement begins and ends with the barbell at the thighs.
14. A narrower grip during the barbell front raise will emphasize which of the following:
- A. The lateral deltoid
 - B. The anterior deltoid
 - C. The pectoralis major
 - D. The trapezius
15. All of the following are proper execution of the cable front raise except:
- A. Use the D-handle attached to low pulley.
 - B. While facing the weight stack, raise the weight to shoulder level.
 - C. Elbow should remain stiff or locked out during the complete range of motion.
 - D. The D-handle should be held with a pronated grip.
16. Which of the following is not a muscle involved in the dumbbell lateral raise?
- A. Infraspinatus
 - B. Lateral Deltoid
 - C. Posterior Deltoid
 - D. Trapezius
17. Which of the following is an accurate statement regarding the dumbbell lateral raise?
- A. The trapezius does as much of the work as the lateral deltoid below shoulder level.
 - B. Involvement of the lateral deltoid is maximized when dumbbells are parallel to the ground.
 - C. Rotating the dumbbells to a thumbs-up position emphasizes the posterior deltoid.
 - D. The lateral deltoid is the only portion of the deltoid muscle that is involved in the dumbbell lateral raise.
18. How can the dumbbell lateral raise be modified to target more of the posterior deltoid?
- A. Lifting the dumbbells directly out to the sides of the body.
 - B. Lifting the dumbbells in front of the body with a forward arc.
 - C. Lifting the dumbbells so that the arc of motion is behind the body.
 - D. Lifting the dumbbells with the hands in neutral thumbs-up position.

19. In the cable one arm lateral raise, it is possible to increase the work done by the trapezius by:
- A. Terminating the movement below shoulder height.
 - B. Raising the handle higher than shoulder height.
 - C. Focusing on the first 30 degrees of the movement
 - D. Performing the raise out to the side and slightly in front of the body.
20. Which of the following statements regarding the machine lateral raise is incorrect?
- A. The machine raise provides a constant resistance throughout the entire range of motion.
 - B. A neutral grip externally rotates the shoulder and increases work done by the anterior deltoid.
 - C. The exercise can be done one arm at a time to improve isolation
 - D. The supraspinatus is an assistor if the elbows are raised above shoulder height.
21. Muscles involved in the bent-over dumbbell raise include all of the following except the:
- A. posterior deltoid
 - B. rhomboids
 - C. teres major
 - D. subscapularis
22. Which of the following statements regarding the bent-over dumbbell raise is correct:
- A. Hold the dumbbells with arms straight while bent at the waist in a posterior pelvic tilt.
 - B. Raise the dumbbells upward to ear level keeping the elbows locked out.
 - C. Holding the dumbbells with a neutral grip allows the anterior deltoid to be incorporated into the movement.
 - D. Because of the effect of gravity, the resistance is the highest at the highest point of the movement.
23. Supporting the head on an incline bench while doing the bent-over dumbbell raise will:
- A. Restrict movement in the spine and decrease the use of momentum.
 - B. Increase recruitment of the anterior deltoid
 - C. Allow for more weight to be used in the exercise
 - D. Rotate the shoulder internally thus increasing the work done by the lateral deltoid.
24. Which of the following statements regarding the execution of the bent-over cable raise is incorrect?
- A. The handles should be attached to a low pulley with the left-side handle in the right hand and the right-side handle in the left hand.
 - B. Stand in the middle of the two cables and bend forward at waist with a flat back keeping upper body parallel to the floor
 - C. Pull the handles out to the side until hands are above shoulder level.
 - D. Return to start position with right hand in front of left ankle and left hand in front of the right ankle.

25. Muscles involved in the reverse cable crossover include all of the following except:
- A. posterior deltoid
 - B. anterior deltoid
 - C. infraspinatus
 - D. teres major
26. In the reverse cable crossover, to target the posterior deltoid, the arms should move:
- A. Back and slightly upward.
 - B. Back and slightly downward.
 - C. Upward above shoulder height
 - D. Forward with the torso slightly forward.
27. All of the following statements regarding the grip during a machine rear deltoid fly are correct except:
- A. The grip will determine the degree of shoulder joint rotation.
 - B. Using a pronated grip is the best way to target the posterior deltoid.
 - C. Using a pronated grip internally rotates the shoulder.
 - D. Using a pronated grip allows the lateral deltoid to assist with the movement.
28. Performing the machine rear deltoid fly one arm at a time:
- A. Reduces the work done by the trapezius and scapular retractor muscles.
 - B. Increases the work done by the trapezius and scapular retractor muscles.
 - C. Decreases the range of motion.
 - D. Increases the work done by the lateral deltoid.
29. Muscles involved in external rotation include all of the following except the:
- A. Deltoid
 - B. Subscapularis
 - C. Infraspinatus
 - D. Teres minor
30. All of the following are correct statements regarding the execution of external rotation except:
- A. The cable is adjusted at waist level.
 - B. The hand moves in a horizontal arc
 - C. The forearm remains parallel to the floor throughout the range of motion.
 - D. The elbow is held 20 degrees away from the body.
31. Muscles involved in an incline side raise include all of the following except:
- A. Supraspinatus
 - B. Infraspinatus
 - C. Lateral deltoid
 - D. Anterior deltoid

32. Which of the following statements regarding the pectoralis major is incorrect?
- A. It has an upper clavicular head and a lower sternal head.
 - B. The clavicular and sternal head each have their own tendon attachment on the humerus.
 - C. The two heads merge into one tendon that attaches on the humerus
 - D. As the tendon inserts, the tendon twists, attaching the clavicular head below the sternal head.
33. How many functional divisions are there in the pectoralis major?
- A. one
 - B. two
 - C. three
 - D. four
34. What is the muscular action of the serratus anterior?
- A. scapular retraction
 - B. scapular protraction
 - D. scapular depression
 - E. Scapular elevation
35. The muscles involved in an incline barbell press include all of the following except:
- A. Pectoralis major
 - B. Biceps brachii
 - C. Anterior deltoid
 - D. Triceps
36. Which of the following statements regarding the incline barbell press is incorrect?
- A. As the incline of the bench increases, the focus shifts higher in the pectoral muscle.
 - B. The grip is shoulder-width and supinated.
 - C. An incline of greater than 60 degrees will move the focus to the anterior deltoid
 - D. The upper pectoral muscle is worked most efficiently at 30 to 45 degrees to the floor.
37. Which of the following regarding the incline dumbbell press is correct?
- A. Start the range of motion with the dumbbells at eye level.
 - B. Using a pronated grip generates a better contraction at the end of the range of motion.
 - C. A neutral grip allows for a better stretch as the dumbbells are lowered to the chest.
 - D. A shorter range of motion stopping just before the elbows are locked out keeps constant tension on the pectorals.
38. The two primary muscles worked during an incline dumbbell fly are the:
- A. Pectoralis major and serratus anterior.
 - B. The upper and lower pectorals.
 - C. Pectoralis major and triceps
 - D. Pectoralis major and anterior deltoid

39. The best hand position for the incline dumbbell fly is a:
- A. neutral grip
 - B. pronated grip
 - C. supinated grip
 - D. alternate grip
40. Which of the following statements regarding the low-pulley cable fly is incorrect?
- A. The D-handles should be attached to low pulleys.
 - B. Keep elbows stiff while returning to the start position.
 - C. Raise your hands up in an arc until the handles are at chest height.
 - D. Stand forward so the pulleys are slightly behind you at the starting point.
41. The grip during a barbell bench press should be:
- A. shoulder width
 - B. 2 feet apart
 - C. As wide as possible
 - D. 1.5 times shoulder width
42. The primary muscle worked during the barbell bench press is the:
- A. Anterior Deltoid
 - B. Pectoralis Major
 - C. Triceps
 - D. Serratus Anterior
43. Which of the following regarding the body position of the barbell bench press is incorrect?
- A. Torso should be flat on bench with head, shoulders, and hips in contact with the bench.
 - B. The feet should be firmly on the floor for stability.
 - C. Raising the feet off the floor may increase the challenge to the chest.
 - D. Using the legs to help push the weight up is an acceptable alternative.
44. All of the following will increase involvement of the triceps in the barbell bench press except:
- A. A narrow grip
 - B. Locking out the elbows at the end of the range of motion
 - C. A supinated grip
 - D. A shorter rep stopping before the elbows are locked out.
45. Which of the following is a secondary muscle used during a dumbbell bench press?
- A. Pectoralis major
 - B. Anterior deltoid
 - C. Lateral deltoid
 - D. Biceps brachii

46. Which of the following statements regarding the dumbbell bench press is incorrect?
- A. Using a pronated grip provides a better stretch as the weight is returned to the start position.
 - B. Body position is lying flat on a bench
 - C. The dumbbells should move vertically up and down at shoulder height.
 - D. A shorter range of motion will decrease tricep assistance and keep more tension on the pectorals.
47. Which of the following statements regarding the machine fly is correct?
- A. Pull the handles together until they touch in front of the chest while fully extending the elbows.
 - B. The exercise works best with a pronated grip.
 - C. To emphasize the inner pecs, decrease the range of motion keeping the contraction on the pecs constant.
 - D. It's safer to allow the handles to go slightly behind the body at the end of the rep to increase the stretch on the pectorals.
48. In a decline press, the best angle to the floor to target the lower pectorals is:
- A. 10-15 degrees
 - B. 20-40 degrees
 - C. 40-50 degrees
 - D. 50-60 degrees
49. The hand position that targets the outer pectorals the most in a decline press is:
- A. Shoulder-width.
 - B. Narrow grip
 - C. Wide grip
 - D. Reverse grip
50. All of the following muscles are involved in the cable crossover except:
- A. Triceps
 - B. Anterior deltoid
 - C. Lower Pectorals
 - D. Upper Pectorals
51. Which of the following statements regarding the cable crossover is incorrect?
- A. The D-handles should be attached to the high pulleys of a cable machine.
 - B. Pull the handles together until the hands touch in front of the shoulders.
 - C. The torso should be upright or tilted slightly forward.
 - D. Crossing the hands at the end of the range of motion increases the range of motion.

52. How would you increase tricep involvement in the chest dip?
- A. Lowering your torso as far as possible into the range of motion.
 - B. Having a slight forward tilt in the pectorals.
 - C. Bending forward more into the movement.
 - D. Using a standard grip on the parallel bars
53. The trapezius is responsible for all of the following joint actions except:
- A. Scapular protraction
 - B. Scapular elevation
 - C. Scapular retraction
 - E. Scapular depression
54. Which of the following is not a muscle responsible for anchoring the scapula to the spine?
- A. Teres Major
 - B. Levator scapula
 - C. Rhomboid major
 - D. Rhomboid minor
55. The levator scapula is an assistor for which of the following muscles?
- A. Latissimus dorsi
 - B. Rhomboids
 - C. Upper traps
 - D. Mid traps
56. The latissimus dorsi attaches to the:
- A. Acromium process
 - B. Humerus
 - C. Clavicle
 - D. Scapula
57. Which of the following is not one of the erector spinae muscles?
- A. Iliocostalis
 - B. Longissimus
 - C. Spinalis
 - D. Latissimus
58. All of the following target the back muscles except:
- A. Pulldowns
 - B. Pull-ups
 - C. Dips
 - D. Rows

59. The primary muscle involved in the barbell shrug is the:
- A. Levator scapulae
 - B. Trapezius
 - C. Deltoid
 - D. Erector spinae
60. Which of the following statements regarding the barbell shrug is incorrect?
- A. A shoulder-width grip will emphasize the trapezius.
 - B. Lift the bar by shrugging the shoulders as high as possible and then rotate the shoulders back.
 - C. Leaning backwards slightly from the waist targets the upper traps in the neck.
 - D. Leaning forward slightly emphasizes the middle traps.
61. During a dumbbell shrug, which of the following grips will target the middle trapezius?
- A. Neutral grip
 - B. Supinated grip
 - C. Reverse grip
 - D. Pronated grip
62. One of the primary muscles involved in the barbell upright row is:
- A. Trapezius
 - B. Levator scapulae
 - C. Forearms
 - D. Erector spinae
63. Which of the following regarding the barbell upright row is not correct?
- A. A narrow grip will emphasize the deltoid
 - B. Standing up straight emphasizes the upper traps.
 - C. Lifting the bar higher makes the trapezius work harder but increases the risk of shoulder impingement.
 - D. Doing a shrug with a cable provides a variable resistance throughout the movement.
64. A secondary muscle involved in the seated cable row is the:
- A. Middle trapezius
 - B. Lower trapezius
 - C. Rhomboids
 - D. Latissimus dorsi
65. Which of the following statements regarding the seated cable row is incorrect?
- A. Keeping your hands further apart will emphasize the outer trapezius.
 - B. Keeping your hands closer together will emphasize the inner trapezius.
 - C. A pronated grip will emphasize the upper and middle trapezius
 - D. A supinated grip will emphasize the rhomboids.

66. The primary muscle involved in the wide-grip pulldown is the:
- A. Latissimus dorsi
 - B. Rear deltoid
 - C. Trapezius
 - D. Rhomboids
67. Which of the following statements regarding the wide-grip pulldown is correct?
- A. Spacing the hands further apart shifts the focus to the outermost portion of the latissimus dorsi.
 - B. The outermost portion of the latissimus dorsi is responsible for making the back wider.
 - C. An alternate grip works best with the wide-grip lat pulldown
 - D. A and B
68. Which of the following is not an advantage to using the angled ends of a wide-grip pulldown bar instead of a straight pulldown bar?
- A. There is an improved trajectory of the exercise.
 - B. There is less stress to the wrist joint.
 - C. It allows for a few more inches in the range of motion.
 - D. It decreases involvement of the biceps brachialis.
69. During a close-grip pulldown, how far apart should the hands be spaced?
- A. As close together as possible
 - B. 6 to 12 inches apart
 - C. Shoulder width apart
 - D. 12 to 18 inches apart
70. What is the primary muscle involved in the barbell row?
- A. Latissimus dorsi
 - B. Rhomboids
 - C. Erector spinae
 - D. Middle trapezius
71. Which of the following statements regarding the barbell row is incorrect?
- A. Using a wider grip will target the inner section of the latissimus.
 - B. An underhand grip allows for a closer hand position.
 - C. An underhand grip emphasizes shoulder extension
 - D. Pulling the bar towards the chest will emphasize the upper latissimus and trapezius.

72. All of the following are accurate descriptions of the dumbbell row except:
- A. A neutral grip is the best way to hold the dumbbell.
 - B. The exercise involves pulling the dumbbell vertically up and then rotating the torso in the direction of pull.
 - C. Pulling the dumbbell towards the chest instead of the waist will emphasize the upper latissimus and lower trapezius.
 - D. Allow the latissimus to stretch at the bottom of the motion and raise the dumbbell as high as possible at the top of the range of motion.
73. Which of the following muscles is the primary muscle involved in a machine row?
- A. Middle trapezius
 - B. Biceps brachialis
 - C. Latissimus dorsi
 - D. Rhomboids
74. Which of the following is a way to target the lower latissimus during a machine row?
- A. Space hands farther apart.
 - B. Space hands closer together
 - C. Use a pronated grip
 - D. Use a supinated grip
75. During lumbar extension, the correct bend at the waist at the starting position is:
- A. 45 degrees
 - B. 60 degrees
 - C. 90 degrees
 - D. 180 degrees
76. Which of the following regarding lumbar extension is correct?
- A. The primary muscle involved is the gluteus maximus.
 - B. Performing the exercise from an incline position decreases the intensity of the exercise.
 - C. Resistance can be added to the exercise by holding a weight over the head
 - D. Incline lumbar extension shifts the emphasis to the spinal erectors.
77. Which of the following is not a primary muscle involved in the deadlift?
- A. Latissimus dorsi
 - B. Erector spinae
 - C. Gluteals
 - D. Hamstring

78. Which of the following regarding a deadlift is incorrect?
- A. Using a shoulder-width grip on the barbell, squat and lower the barbell to the floor.
 - B. An over-under grip, or an alternate grip, allows the bar to roll forward during the range of motion.
 - C. Feet should be positioned directly below the hips with the toes pointing forward.
 - D. The erector spinae stabilizes the spine, and the glutes and hamstrings extend the hips.
79. The variation of the deadlift which shifts the focus from the erector spinae to the glutes and hamstrings is the:
- A. Romanian deadlift
 - B. Stiff-leg deadlift
 - C. Sumo-style deadlift
 - D. Cable pull-through deadlift
80. Which of the following is not a secondary muscle involved in the good morning lift?
- A. Latissimus dorsi
 - B. Gluteus maximus
 - C. Hamstrings
 - D. Erector spinae
81. The bone in the upper arm is called the:
- A. Radius
 - B. Ulna
 - C. Humerus
 - D. Fibula
82. The bone on the little finger side of the forearm is the:
- A. Ulna
 - B. Radius
 - C. Fibula
 - D. Tibia
83. Which of the following is a movement that occurs at the elbow joint?
- A. Flexion
 - B. Internal Rotation
 - C. Abduction
 - D. Adduction
84. The long head of the biceps originates from the:
- A. Clavicle
 - B. Coracoid process
 - C. Above the glenoid
 - D. Radius

85. Which of the following muscles is not responsible for bending the elbow?
- A. Biceps
 - B. Brachialis
 - C. Brachioradialis
 - D. Rectus femoris
86. Two of the three heads of the triceps originate on the:
- A. Clavicle
 - B. Humerus
 - C. Sternum
 - D. Acromium process
87. Which of the following is a muscle involved in pronation?
- A. Pronator teres
 - B. Pronator biceps
 - C. Pronator longus
 - D. Pronator brevis
88. Which of the following is a wrist extender?
- A. Brachioradialis
 - B. Flexor digitorum superficialis
 - C. Extensor digitorum
 - D. Extensor carpi radialis longus
89. Which of the following is a superficial muscle in the forearm?
- A. Flexor pollicis longus
 - B. Abductor pollicis
 - C. Flexor digitorum superficialis
 - D. Palmaris longus
90. Which of the following is not a secondary muscle involved in the barbell curl?
- A. Anterior deltoid
 - B. Brachioradialis
 - C. Biceps
 - D. Brachialis
91. The grip that focuses on the short head of the biceps during a barbell curl is a:
- A. Shoulder-width grip
 - B. Wide grip
 - C. Narrow grip
 - D. Pronated grip

92. Which of the following regarding the barbell curl is incorrect?
- A. Use a supinated grip with a straight bar.
 - B. Motion should occur at the elbow but not the shoulder.
 - C. Tilting the torso forward slightly will make the movement more difficult.
 - D. Leaning backwards slightly will allow for cheating at the end of the range of motion.
93. Which of the following regarding the use of the EZ curl bar is incorrect?
- A. Performing the curl with the EZ bar makes the exercise easier and allows more weight to be lifted.
 - B. The hands change from a supinated grip to almost a neutral grip
 - C. The hand position with the EZ curl bar targets the long head of the biceps and the brachialis.
 - D. Using the EZ curl bar is less stressful to the wrist joint.
94. Which of the following regarding the dumbbell curl is correct?
- A. Start with the hands in a neutral grip at the bottom of the range of motion and then supinate as the weights are lifted.
 - B. The dumbbell curl works the biceps through elbow flexion and forearm pronation.
 - C. It is better to grasp the dumbbell with the thumb against the outside of the plate to increase the load on the biceps during supination.
 - D. Moving the torso during the range of motion is a common method of cheating.
95. Which portion of the biceps is emphasized during an incline dumbbell curl?
- A. Upper biceps
 - B. Inner biceps
 - C. Outer biceps
 - D. Lower biceps
96. Which of the following regarding a concentration curl is incorrect?
- A. The arm is supported against the inside of the thigh.
 - B. The hand should remain in a pronated grip to maximize the contraction of the biceps.
 - C. Resistance is increased when the shoulder is directly above the elbow.
 - D. When the arm is at an incline with the elbow in front of the shoulder, the resistance is the greatest at the start of the exercise, and the lower biceps is emphasized.
97. Which of the following is a primary muscle involved in a concentration curl?
- A. Brachialis
 - B. Brachioradialis
 - C. Biceps
 - D. Forearm muscles.

98. A wider than shoulder width grip in a cable curl emphasizes the:
- A. Outer biceps
 - B. Lower biceps
 - C. Inner biceps
 - D. Upper biceps
99. During a high-pulley bicep curl, the arms should be held:
- A. At shoulder height
 - B. Below shoulder height
 - C. Slightly above shoulder height
 - D. Slightly behind the shoulders.
100. Which of the following regarding the preacher curl is incorrect?
- A. Start the exercise with the upper arms resting on the preacher bench with a shoulder-width pronated grip on the bar.
 - B. Having the arms supported on an incline increases the emphasis on the lower biceps.
 - C. Keeping the arms on the bench prevents movement at the shoulders which increases the emphasis on the biceps.
 - D. Stopping the range of motion before the elbows are fully extended maintains the tension on the biceps.
101. Which of the following regarding the machine bicep curl is correct?
- A. A wider grip will put more emphasis on the long head of the biceps.
 - B. A narrow grip will put more emphasis on the short head of the biceps.
 - C. An inclined pad on the machine will put more emphasis on the upper biceps.
 - D. The resistance is constant throughout the range of motion.
102. A secondary muscle involved in a triceps pushdown is the:
- A. Triceps
 - B. Brachioradialis
 - C. Deltoid
 - D. Serratus anterior
103. Which of the following statements regarding the triceps pushdown is incorrect?
- A. Using a wider grip will put more emphasis on the long head of the triceps.
 - B. Using a narrow grip pull put more emphasis on the long head of the triceps.
 - C. Using a pronated grip will put more emphasis on the lateral head of the triceps.
 - D. Using a neutral grip will emphasize all three heads of the triceps.
104. Which of the following is not a muscle involved in a tricep dip?
- A. Triceps
 - B. Biceps
 - C. Pectoralis major
 - D. Anterior deltoid

105. Which of the following statements regarding the lying triceps extension is correct?
- A. Start with an overhand or pronated grip with the hands spaced approximately 15 inches apart.
 - B. The elbows are close to the body at the start of the range of motion, but then flare out to the sides during the concentric phase of the exercise.
 - C. Lowering the bar past the forehead increases the stretch on the long head of the triceps.
 - D. Lowering the bar toward the face or chin will increase the work done by the medial head of the triceps.
106. Which grip during a seated triceps press will work all three heads of the triceps?
- A. Wide grip
 - B. Narrow grip
 - C. Pronated grip
 - D. Neutral grip
107. Which of the following is a secondary muscle involved in the close-grip bench press?
- A. Anterior deltoid
 - B. Posterior deltoid
 - C. Triceps
 - D. Pectoralis major
108. Which of the following muscles is not involved in a dumbbell kickback?
- A. Triceps
 - B. Pectoralis major
 - C. Posterior deltoid
 - D. Latissimus dorsi
109. Which of the following statements regarding the dumbbell kickback is incorrect?
- A. Movement should not occur at the shoulder joint.
 - B. The resistance will increase as the dumbbell is lifted against gravity.
 - C. A neutral grip at the end of the ROM will target the lateral head of the triceps.
 - D. The torso should be maintained at slightly above parallel to the floor, and the upper arm should remain parallel to the floor.
110. An advantage to using a thumbless grip on the barbell during a wrist curl is:
- A. It minimizes stress in the wrist joint.
 - B. It increases the range of motion and the emphasis on the finger flexors.
 - C. It shifts the resistance so that it is maximal at the beginning of the range of motion.
 - D. It shifts the resistance so that it is maximal at the end of the range of motion.

111. The primary muscles involved in a reverse wrist curl are the:
- A. Forearm flexors
 - B. Finger flexors
 - C. Finger extensors
 - D. Forearm extensors
112. Which of the following regarding a reverse wrist curl is incorrect?
- A. The hands should be spaced shoulder width apart and directly in line with the forearms.
 - B. The hands should be pronated with thumbs around the bar.
 - C. If the wrists are positioned lower than the elbows, resistance is maximal at the beginning of the range of motion.
 - D. The forearms can be positioned between your legs on a flat bench.
113. The primary muscle involved in a hammer curl is the:
- A. Brachioradialis
 - B. Brachialis
 - C. Biceps brachii
 - D. Forearm extensors
114. The large bone in the thigh is called the:
- A. Radius
 - B. Tibia
 - C. Fibula
 - D. Femur
115. During hip extension, the leg moves:
- A. Toward the abdomen
 - B. Out to the side
 - C. Toward the other leg
 - D. Behind the body.
116. During ankle dorsiflexion, the toes move:
- A. Towards the shin
 - B. Towards the floor
 - C. Towards the other foot
 - D. Away from the other foot
117. Which of the following is not one of the quadriceps muscles?
- A. Biceps femoris
 - B. Vastus medialis
 - C. Vastus lateralis
 - D. Rectus femoris

118. Which of the quadriceps muscles straightens the knee and flexes the hip?
- A. Vastus medialis
 - B. Vastus lateralis
 - C. Biceps femoris
 - D. Rectus femoris
119. All of the following are part of the hamstrings except:
- A. Biceps femoris
 - B. Gracilis
 - C. Semimembranosus
 - D. Semitendinosus
120. Which of the following is not a hip abductor?
- A. Iliopsoas
 - B. Tensor fascia latae
 - C. Gluteus minimus
 - D. Gluteus medius
121. Which of the following is a plantar flexor when the knees are bent?
- A. Peroneus longus
 - B. Tibialis anterior
 - C. Soleus
 - D. Gastrocnemius
122. What is the muscle involved in ankle inversion?
- A. Tibialis anterior
 - B. Tibialis posterior
 - C. Flexor digitorum longus
 - D. Extensor hallucis longus.
123. Which of the following statements regarding the leg extension is incorrect?
- A. Keeping the toes pointing upward will work all sections of the quadriceps.
 - B. Keeping the feet closer together on the pad will help target the inner quadriceps.
 - C. The range of motion should be 90 degrees.
 - D. Performing this exercise one leg at a time will help in correcting thigh asymmetry.
124. Which of the following is a primary muscle involved in a barbell squat?
- A. Quadriceps
 - B. Hamstrings
 - C. Adductors
 - D. Abdominals

125. Which of the following statements regarding the barbell squat is incorrect?
- A. With your feet shoulder-width apart and the barbell across the shoulders, slowly bend the knees and hips until the thighs are parallel with the ground.
 - B. A wider stance will put more of the emphasis on the inner quads and adductors.
 - C. Placing a small block under each heel will shift the emphasis to the glutes.
 - D. Bending the torso forward during the range of motion can result in back injury.
126. Which of the following is statements regarding the leg press is correct?
- A. Placing the feet on the lower half of the footplate will shift the emphasis to the hamstrings.
 - B. Moving the feet to the top of the footplate will shift the emphasis to the hamstrings and gluteals.
 - C. Moving the feet closer together will place more emphasis on the vastus medialis and sartorius.
 - D. Pushing the weight with the balls of your feet will further emphasize the gluteals.
127. The primary muscle involved in a hacksquat is the:
- A. Gluteus maximus
 - B. Gluteus minimus
 - C. Hamstrings
 - D. Quadriceps
128. Which of the following statements regarding a lunge is incorrect?
- A. Starting with the feet shoulder-width apart, step forward and bend the front leg until the thigh is parallel to the ground.
 - B. Maintaining a shoulder-width stance as you step out will help with balance.
 - C. Taking a smaller step forward will place more emphasis on the gluteals and hamstrings.
 - D. The body weight should be shifted forward as you step forward so it is over the leading leg.
129. The primary muscle involved in a lying leg curl is the:
- A. Quadriceps
 - B. Gluteus maximus
 - C. Gastrocnemius
 - D. Hamstrings
130. Which of the following statements regarding the standing leg curl is incorrect?
- A. Pointing the toes inward during the range of motion will emphasize the biceps femoris.
 - B. The torso is bent forward to increase the stretch of the hamstrings.
 - C. During the range of motion, the knee should bend as much as possible.
 - D. By performing the exercise one leg at a time, muscle asymmetry can be corrected.

131. A secondary muscle involved with a stiff-leg deadlift is the:
- A. Erector spinae
 - B. Hamstrings
 - C. Gluteals
 - D. Tibialis anterior
132. Which of the following regarding the stiff-leg deadlift is incorrect?
- A. The feet should be under the hips, and the toes should point forward.
 - B. Range of motion can be increased by standing on a bench or step which will increase the effectiveness of the exercise.
 - C. The lumbar spine should never round as this significantly increases the risk of injury.
 - D. This exercise can also be done using dumbbells with the same exercise technique.
133. Which of the following regarding a standing calf raise is correct?
- A. Positioning the toes outward during the exercise will emphasize the lateral head of the gastrocnemius.
 - B. Positioning your toes inward will emphasize the medial head of the gastrocnemius.
 - C. A wider than hip-width stance will emphasize the lateral head of the gastrocnemius.
 - D. Keeping the knees stiff increases the stretch on the gastrocnemius.
134. Which of the following is not part of the side wall of the abdominals?
- A. Rectus abdominis
 - B. External oblique
 - C. Internal oblique
 - D. Transverse abdominis
135. Which of the following regarding the abdominals is incorrect?
- A. The external and internal obliques are separated by the linea alba.
 - B. The external oblique is the only part of the sidewall that is visible.
 - C. Contraction of the obliques on both sides simultaneously will assist the rectus abdominis with spinal flexion.
 - D. The fibers of the external and internal obliques pass each other at a right angle.
136. Which of the following is not a muscle involved in a sit-up?
- A. Rectus abdominis
 - B. Quadriceps
 - C. Hip flexors
 - D. Hamstrings
137. Which of the following hand positions during a crunch will make the resistance the greatest?
- A. Arms at your sides
 - B. Arms over the head
 - C. Hands clasped behind the head
 - D. Arms crossed on the chest.

138. Which of the following regarding an abdominal crunch is incorrect?
- A. Start lying on the floor with the hips bent at 90 degrees.
 - B. Resistance is decreased when the feet are elevated.
 - C. The movement occurs in the upper spine as the shoulders are elevated a few inches off the floor.
 - D. The lower back stays in contact with the floor, and there is no motion at the hips.
139. Which of the following is not a muscle involved with a rope crunch?
- A. External obliques
 - B. Rectus abdominis
 - C. Serratus anterior
 - D. Iliopsoas
140. During a rope crunch, a way to increase the range of motion is to:
- A. Face away from the cable
 - B. Bending at the hips as well as the waist.
 - C. Holding your hands higher above your head
 - D. Position yourself further away from the cable.
141. The primary muscle involved in an incline leg raise is the:
- A. Obliques
 - B. Iliopsoas
 - C. Rectus abdominis
 - D. Rectus femoris
142. Which of the following regarding an incline leg raise is incorrect?
- A. While lying on an incline abdominal bench, pull the legs toward your chest while keeping the legs completely straight.
 - B. The hands stabilize the torso by holding onto the bench over the head
 - C. At the top of the range of motion, lift the pelvis off the bench slightly to further isolate the lower abs.
 - D. To maintain tension on the lower abs, do not allow the feet to touch the floor at the bottom of the range of motion.
143. Which of the following regarding the hanging leg raise is incorrect?
- A. The exercise can be performed hanging from a chin-up bar by the hands or by hanging by the elbows in a pair of ab slings.
 - B. Use a shoulder-width supinated grip with the elbows slightly bent.
 - C. The torso should remain vertical.
 - D. Using an apparatus with a backrest will help prevent swinging of the legs and torso.

144. Which of the following is a way to increase the range of motion during a knee-up?
- A. Hold a dumbbell between your ankles.
 - B. Keep the knees bent at 90 degrees.
 - C. Leaning the torso back so the torso makes an angle to the bench of less than 45 degrees.
 - D. Fold the arms across the chest instead of holding onto the bench behind you.
145. All of the following are secondary muscles involved in the reverse crunch except:
- A. External obliques
 - B. Iliopsoas
 - C. Internal obliques
 - D. Rectus abdominis
146. Which of the following statements regarding the twisting sit-up is incorrect?
- A. While positioned on a decline bench with the hands behind your head, sit up while twisting your torso so that your right elbow moves toward your left knee.
 - B. When lowering back to the start position, lean back as far as possible to increase the tension on the abdominal muscles.
 - C. Having the decline bench at a steeper angle will increase the intensity of the exercise.
 - D. The feet must be secured on the bench.
147. A secondary muscle involved with an oblique crunch is the:
- A. Serratus anterior
 - B. External obliques
 - C. Internal obliques
 - D. Rectus abdominis
148. Which of the following regarding the cable oblique crunch is incorrect?
- A. The D-handle attachment is used attached to the low pulley of a cable machine.
 - B. The exercise can be performed sitting, kneeling or standing.
 - C. The exercise can be performed facing towards or away from the cable.
 - D. Crunch while moving the elbow toward the opposite knee until the torso is almost parallel to the floor.
149. Which of the following is not involved in a dumbbell side bend?
- A. Serratus anterior
 - B. Rectus abdominis
 - C. Quadratus lumborum
 - D. Latissimus dorsi

150. Which of the following regarding a dumbbell pullover is incorrect?
- A. The starting position is lying with the upper back supported on a flat bench while holding a dumbbell straight above the chest.
 - B. During the movement, the hips will rise as the weight moves over the head and drop as the weight is brought back over the chest.
 - C. The dumbbell moves through a 90 degree arc.
 - D. Using a heavy weight increases the risk of shoulder injury.