

Fitness Illustrated

CORRESPONDENCE EDUCATION PROGRAM # 130.

Check your receipt for course expiration date.

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



Fitness Illustrated Course Objectives

1. Understand the physical and psychological benefits of activity and fitness.
2. Learn the 2008 Physical Activity Guidelines for Americans.
3. Understand the concept of aerobic fitness and muscular fitness.
4. Learn the risks associated with exertion and the basic health information to obtain before starting an exercise program.
5. Learn the benefits of aerobic fitness and ways to measure aerobic fitness.
6. Understand how the heart, lungs, and muscles adapt to aerobic endurance training.
7. Learn how intensity, duration, and frequency are used to improved aerobic fitness.
8. Understand how to set realistic expectations for progression of an aerobic program and the concept of specificity when choosing which type of aerobic exercise to incorporate into a program.
9. Be able to use the walk test and walk-jog test to determine where a person should start with their aerobic program.
10. Understand the progression of the Red Walking Program.
11. Understand the basis and progression of the White Walk-Jog Program.
12. Understand the basis and progression of the Blue Jogging Program, and then how to transition into the Intermediate Jog-Run Program.
13. Understand the Rating of Perceived Exertion and how to apply it appropriately to the Walking and Jogging Programs above.
14. Learn the ways to keep an advanced aerobic fitness training program productive and safe.
15. Learn how to set up a cycling and swimming program that has progression with frequency, intensity, and duration.
16. Understand the components of muscular fitness and how achieving muscular fitness can improve your quality of life.
17. Learn how muscles work and how they are regulated by motor neurons.

18. Understand the difference between muscular strength, muscular endurance and flexibility.
19. Learn the changes that occur at the molecular level that allow for muscular development both for fast twitch and slow twitch muscle fibers.
20. Understand the affect that flexibility has on individual muscle fibers.
21. Understand the definitions of speed, power, balance, agility, and coordination and how they can be improved with muscular training.
22. Learn the steps to changing the shape of one's body.
23. Learn muscular fitness test that can be used to measure level of fitness in both men and women.
24. Learn the concept of overload and how it applies to muscular fitness training.
25. Understand how to train based on experience and how to improve and maintain muscular strength and endurance.
26. Understand the purpose and types of stretching to improve flexibility, as well as stretches for different parts of the body.
27. Understand the purpose and benefits of core training, as well as individual exercises for the muscles of the core.
28. Learn the definition of repetition maximum and how to modulate it depending on fitness goals.
29. Learn the proper technique for upper and lower body exercises and how to design a program.
30. Understand the importance of nutrition for energy production, and learn the types of carbohydrates, fats, and proteins.
31. Understand how vitamins and minerals play a role in energy metabolism as well as the concept of calories in versus calories out.
32. Learn the dangers of dieting as well as other quick fixes for weight loss, such as pills, fasting, and surgery.
33. Learn healthy habits for longevity and understand when medical clearance or intervention is necessary when starting an exercise program.
34. Learn ways to prevent or treat common exercise problems, such as blisters, muscle soreness or pulls, muscle cramps, bone bruises, ankle sprains, shin splints and knee pain.
35. Learn exercise modifications for older adults, pregnancy and disease or disability.
36. Understand different types of research studies and how to interpret data.
37. Understand the training principles of readiness, adaptation, individual response, overload, progression, specificity, cross training, variation, and the importance of a warm-up and cool-down.



Fitness Illustrated Course Examination

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

1. Which of the following is **not** a feeling that one might have after several months of fitness training?
 - A. Wake up everyday with the ability to carry out daily activities with energy and alertness.
 - B. Be more tired.
 - C. Find more enjoyment in your leisure pursuits.
 - D. Have the muscular fitness to fulfill your daily activities.
2. All of the following are benefits of activity and fitness **except:**
 - A. Decrease your risk of hypertension, heart disease, and strokes.
 - B. Increase your chance of developing low back pain.
 - C. Decrease your risk of developing diabetes.
 - D. Increase bone mass.
3. Which of the following statements regarding the psychological benefits of exercise is correct?
 - A. Exercise can decrease depression and anxiety.
 - B. Only medications can decrease depression and anxiety.
 - C. Stress has more of an effect on people who are fit.
 - D. Exercise has never been shown to be as effective as psychotherapy for treating symptoms of depression.
4. Exercise has been shown to improve all of the following types of cognitive skills **except:**
 - A. Planning of mental procedures.
 - B. Skills requiring cognitive control.
 - C. Spatial skills.
 - D. Hearing.
5. What effect does exercise have on sleep?
 - A. Exercise will help you sleep better if performed right before going to bed.
 - B. Exercise will help you sleep better if performed long before going to bed.
 - C. Exercise will decrease your ability to sleep.
 - D. Exercise has no effect on sleep.

6. According to the 2008 ***Physical Activity Guidelines for Americans***, how much moderate intensity activity should an adult engage in per week?
- A. 60 minutes.
 - B. 75 minutes.
 - C. 2 hours and 30 min.
 - D. 3 hours.
7. According to the 2008 ***Physical Activity Guidelines for Americans***, how much strength training should the average adult do per week?
- A. All major muscle groups at least 1 time per week.
 - B. All major muscle groups at least 2 times per week.
 - C. All major muscle groups at least 4 times per week.
 - D. All major muscle groups at least 5 times per week.
8. What is the number one killer of men and women in many industrialized nations?
- A. Heart Disease.
 - B. Diabetes.
 - C. Cancer.
 - D. Stroke.
9. Muscular fitness includes all of the following **except:**
- A. Strength.
 - B. Muscle Endurance.
 - C. Aerobic capacity.
 - D. Flexibility.
10. All of the following are risk factors for heart disease **except:**
- A. Depression.
 - B. Physical inactivity.
 - C. Hypertension.
 - D. High cholesterol.
11. If you are inactive, how much more likely are you to have a heart attack during exertion?
- A. 10 times.
 - B. 20 times.
 - C. 30 times.
 - D. 50 times.
12. All of the following are examples of aerobic exercises **except:**
- A. Walking.
 - B. Jogging.
 - C. Cycling.
 - D. Circuit training.

13. Which of the following is not a benefit of aerobic exercise?
- A. Lungs, heart, and muscles adapt to an increase in workload.
 - B. Decreased lifespan.
 - C. Improved quality of life physically, psychologically, and socially.
 - D. Improved self-confidence.
14. When fat or carbohydrates are used for energy by the muscles with oxygen, it is called?
- A. Oxidation.
 - B. Glyconeogenesis.
 - C. Glycolysis.
 - D. Rhabdomyolysis.
15. For the activity index, what score would indicate that you need to increase your physical activity?
- A. Less than 40.
 - B. Less than 50.
 - C. Less than 60.
 - D. Less than 70.
16. What is the altitude adjustment for 6000 feet in the run test?
- A. No adjustment.
 - B. Subtract 30 seconds.
 - C. Subtract 40 seconds.
 - D. Subtract 50 seconds.
17. What is the percentage of oxygen in air?
- A. 14%
 - B. 21%
 - C. 37%
 - D. 53%
18. Which of the following statements regarding respiration is correct?
- A. Trained individuals take smaller breaths, which means they have to take fewer breaths to get sufficient oxygen.
 - B. Untrained individuals take larger breaths, which means they take more breaths to get sufficient oxygen.
 - C. Untrained individuals take larger breaths, which means they take fewer breaths to get sufficient oxygen.
 - D. Trained individuals take larger breaths, which means they can take fewer breaths to get sufficient oxygen.
19. Which type of cell picks up oxygen in the lungs?
- A. Red blood cells.
 - B. White blood cells.
 - C. Monocytes.
 - D. Macrocytes.

20. What is the increase in blood volume that can occur as a result of training?

- A. 2 to 5%
- B. 5 to 10%
- C. 10 to 15%
- D. 15 to 20%

21. What is the definition of stroke volume?

- A. The number of times the heart beats per minute.
- B. The percentage of blood that is pumped out of the heart with each beat.
- C. The percentage of blood that remains in the heart after each beat.
- D. The amount of blood that is pumped per beat.

22. Which of the following is not a way that your health improves by doing aerobic endurance training?

- A. Decreased blood pressure.
- B. Improved arterial elasticity.
- C. Improved blood flow through the coronary arteries.
- D. Increased cholesterol and triglycerides.

23. What is the primary source of energy for light intensity activity?

- A. Mostly fat.
- B. Fat and carbohydrates.
- C. Primarily carbohydrates with some fat.
- D. Mostly carbohydrates.

24. What BMI value is the cutoff for obesity?

- A. 20
- B. 25
- C. 30
- D. 50

25. Which of the following is not a factor in how you will respond to training?

- A. Heredity
- B. Maturation
- C. Nutrition
- D. The time of day that you train.

26. Aerobic training leads to an increase density of what in the muscle cell?

- A. Sarcomeres.
- B. Mitochondria.
- C. Z bands
- D. Erythrocytes.

27. When measuring exercise intensity, being able to talk in short sentences correlates with an activity that can be continued for:
- A. 4 to 8 hours.
 - B. 2 to 4 hours.
 - C. 1 to 2 hours.
 - D. 20 to 45 minutes.
28. What RPE on the Borg scale corresponds with working somewhat hard?
- A. 4 to 6
 - B. 7 to 12
 - C. 13 to 14
 - D. 15 to 19
29. Duration of exercise can be measured in terms of all of the following except:
- A. Exertion.
 - B. Time.
 - C. Distance.
 - D. Calories burned.
30. Approximately how many calories will a 150-pound person burn per mile?
- A. 113
 - B. 177
 - C. 212
 - D. 300
31. When using distance to measure duration of training, how many miles should a beginner be able to walk with the ability to sing partial phrases?
- A. Less than 1 mile
 - B. 1 to 2 miles
 - C. 2 to 4 miles
 - D. more than 4 miles.
32. Overtraining can lead to all of the following except:
- A. Improved performance.
 - B. Poor performance.
 - C. Overuse injuries.
 - D. Suppressed immune function.
33. What is the specific benefit of training at high intensity?
- A. Increases VO₂ max and speed.
 - B. Increases endurance and fat and calorie burning.
 - C. Decreases VO₂ max and speed.
 - D. Targets only fat stores.

34. How much does aerobic fitness or VO₂ max improve by on average after several months of training?
- A. 10%
 - B. 15%
 - C. 20%
 - D. 25%
35. Which type of cardio may be the most versatile type of aerobic exercise?
- A. Running.
 - B. Cycling.
 - C. Walking.
 - D. Swimming.
36. Which of the following statements regarding the keys to aerobic fitness training is correct?
- A. Increase frequency first.
 - B. Increase duration first.
 - C. Increase intensity as quickly as you can.
 - D. When you increase intensity, increase duration as well.
37. During the walk test, what would be the indication that you are ready for the white walk-jog program?
- A. You cannot walk for 5 minutes.
 - B. You can walk for 5 minutes, but not for 10 minutes.
 - C. You can walk for 10 minutes and feel somewhat tired afterwards.
 - D. You can walk for 10 minutes comfortably.
38. During the walk-jog test, how many steps do you walk and then jog?
- A. 50 steps.
 - B. 100 steps.
 - C. 150 steps.
 - D. 200 steps.
39. If you can do the 10-minute walk-jog test without discomfort, what walking or jogging program should you start with?
- A. Red walking program.
 - B. The 3rd week of the white walk-jog program.
 - C. The last week of the white walk-jog program.
 - D. Blue jogging program.
40. During the red walking program, how often should you walk?
- A. Twice per week.
 - B. Every 3rd day.
 - C. Every other day.
 - D. Every day.

41. During week 4 of the white walk-jog program, you will jog for how many seconds followed by a 1 min walk?
- A. 10 sec.
 - B. 20 sec.
 - C. 30 sec.
 - D. 60 sec.
42. How many days are you active during the blue jogging program?
- A. 3 days.
 - B. 4 days.
 - C. 5 days.
 - D. 6 days.
43. How many minutes should you be able to jog by week 7 of the blue jogging program followed by 1 min of walking to recover?
- A. 4 minutes.
 - B. 6 minutes.
 - C. 8 minutes.
 - D. 10 minutes.
44. At the start of the intermediate jog-run program, you should be able to jog 1 mile in how many minutes?
- A. 8 minutes.
 - B. 12 minutes.
 - C. 15 minutes.
 - D. 20 minutes.
45. By week 6 of the jog-run program, you should be able to do a slow jog for how many miles?
- A. 0.5 to 1 mile.
 - B. 1 to 2 miles.
 - C. 2 to 3 miles.
 - D. 3 to 4 miles.
46. By week 12 of the jog-run program, you should be able to do a slow jog for how many miles?
- A. 2 to 3 miles.
 - B. 3 to 4 miles.
 - C. 4 to 5 miles.
 - D. 4 to 6 miles.
47. What does it mean to do under-distance training?
- A. Short and fast.
 - B. Short and slow.
 - C. Long and fast.
 - D. Long and slow.

48. All of the following are suggestions to keep your training sessions productive and safe **except**:
- A. Warm up before an exercise session.
 - B. Stretch before the warm up.
 - C. Vary the distance, intensity, and location of exercise.
 - D. Include recover time into your program by having an easier week every 3 to 4 weeks.
49. During the cycling program, what should your RPE be on the hills day?
- A. 13.
 - B. 14.
 - C. 15.
 - D. 16.
50. During week 8 of the swimming program, how long should the over-distance swim be on Fridays?
- A. 25 min.
 - B. 30 min.
 - C. 40 min.
 - D. 50 min.
51. Which of the following is **not** a benefit of cross-training?
- A. Cross-training will enhance performance in other sports.
 - B. Cross-training with running, swimming, and cycling will aid in training for a triathlon.
 - C. Cross-training will add variety to your program and decrease boredom.
 - D. Cross-training and reduce impact and the risk of overuse injuries.
52. If you are running faster than a jog, all of these are changes in technique **except**:
- A. Lean forward slightly.
 - B. Lift knees higher.
 - C. Push off slower.
 - D. Use more arm action.
53. All of the following are ways that muscular fitness may improve quality of life except:
- A. Increased muscular mass will lead to increased fat burning.
 - B. Improved muscular fitness helps avoid osteoporosis.
 - C. Improved muscular fitness reduces the risk of low back pain and repetitive strain injuries.
 - D. Increased muscular fitness decreases independence and mobility in later years.
54. Which of the following is **not** a component of muscular fitness?
- A. Strength.
 - B. Aerobic endurance.
 - C. Muscular endurance.
 - D. Flexibility.

55. What is sarcopenia?

- A. Loss of muscle fibers.
- B. Gain of muscle fibers.
- C. Loss of mitochondria.
- D. Gain of mitochondria.

56. All of the following regarding fast twitch muscle fibers are correct **except**:

- A. Fast twitch muscle fibers are smaller than slow twitch muscle fibers.
- B. Fast twitch muscle fibers have fewer capillaries than slow twitch muscle fibers.
- C. Fast twitch muscle fibers contract fast and fatigue fast.
- D. Fast twitch muscle fibers are best suited for short, intense effort.

57. How many muscle fibers does a motor neuron activate on average?

- A. 50.
- B. 100.
- C. 150.
- D. 200.

58. The maximal amount of force that can be exerted in one voluntary contraction is also called:

- A. 1-repetition maximum.
- B. 10 repetition maximum.
- C. Hypertrophy.
- D. Glycolysis.

59. Strength training predominantly improves which type of muscle fiber?

- A. Slow twitch muscle fibers.
- B. Fast twitch muscle fibers.
- C. Mitochondrial muscle fibers.
- D. Sarcoplasmic muscle fibers.

60. Training for muscular endurance improves which type of muscle fiber?

- A. Slow twitch muscle fibers.
- B. Fast twitch muscle fibers.
- C. Glycolytic muscle fibers.
- D. Sarcoplasmic muscle fibers.

61. What is responsible, on a molecular level, for the transfer of amino acids and formation of protein?

- A. INA.
- B. ANA.
- C. RNA.
- D. ZNA.

62. Strength is improved by applying sufficient:

- A. VO2 max.
- B. 1 repetition maximum.
- C. Oxygen demand.
- D. Overload.

63. All of the following are adaptations to muscular endurance training **except**:

- A. Increased diameter of fast twitch muscle fibers.
- B. Increased aerobic enzymes.
- C. Increased capillary density.
- D. Increased size and number of mitochondria.

64. Which type of training will help build muscular strength?

- A. Low-resistance repetitions.
- B. High-resistance training.
- C. Decreased weight with more repetitions.
- D. Running.

65. Stretching initially affects which portion of the muscle fiber?

- A. Mitochondria.
- B. Glycolytic enzymes.
- C. Sarcomeres.
- D. Nucleus.

66. Power is a combination of which of the following components of muscular strength?

- A. Speed and strength.
- B. Strength and flexibility.
- C. Strength and endurance.
- D. Speed and flexibility.

67. What is the definition of static balance?

- A. Ability to maintain balance while the body is moving.
- B. Ability to maintain balance while the body is not moving.
- C. Ability to maintain balance while doing an exercise.
- D. Ability to maintain balance while doing squats on a BOSU.

68. Balance depends on your ability to integrate all of the following except:

- A. Visual Input.
- B. Balance receptors in inner ear.
- C. Receptors in muscles and joints.
- D. Neurotransmitters .

69. What is the definition of agility?

- A. Ability to exert maximal force with one repetition.
- B. Ability to combine strength and power.
- C. Ability to balance while body is not moving.
- D. Ability to change position and direction rapidly and precisely without losing balance.

70. What is coordination?

- A. Ability to generate a smooth flow of movement while you execute a task.
- B. Ability to execute sudden changes of direction.
- C. Ability to modulate speed and power.
- D. Ability to combine strength and speed.

71. All of the following are steps toward reshaping your body except:

- A. Lose extra weight.
- B. Decrease muscle tone.
- C. Improve posture.
- D. Increase muscle size.

72. Weight loss requires that you:

- A. Burn more calories than you consume.
- B. Burn fewer calories than you consume.
- C. Burn the same amount of calories that you consume.
- D. Burn calories by consuming fat burners.

73. What is the rep range that will give the best results for increasing muscle size?

- A. 2 to 5.
- B. 5 to 10.
- C. 10 to 15.
- D. 15 to 20.

74. A woman with a medium level of muscular fitness would be expected to do how many push-ups during a push-up test?

- A. 1 to 5.
- B. 5 to 10.
- C. 10 to 20.
- D. More than 20.

75. What would the vertical jump for a man with a high level of power be?

- A. 10 inches.
- B. 17 inches.
- C. 20 inches.
- D. 24 inches.

76. All of the following statements regarding overload are correct **except**:
- A. In order to gain improvements, you must provide overload to the body.
 - B. To increase strength, you must create an overload that exceeds 100% of a muscle's maximal force.
 - C. As the body adapts, you must increase the load to continue getting results.
 - D. Gains in training depend on the intensity, duration, and frequency of training.
77. What is the recommended type of resistance for a beginner?
- A. Resistance bands and light weights.
 - B. Calisthenics and weight machines.
 - C. Free weights.
 - D. Barbells.
78. Delayed onset muscle soreness can be attributed to all of the following except:
- A. Slight tears in connective tissue.
 - B. Lactic acid accumulation.
 - C. Damage to muscle fibers.
 - D. Accumulation of edema.
79. How much of an increase in strength can you generally expect per week?
- A. 1 to 3% per week.
 - B. 3 to 5% per week.
 - C. 5 to 10% per week.
 - D. Greater than 10% per week.
80. Muscular endurance can be improved by 10% per week when doing how many repetitions?
- A. 2 to 4.
 - B. 10 to 12.
 - C. 15 to 25.
 - D. 25 to 35.
81. Which of the following explains how to do "Contract-and-Relax" stretching?
- A. Stretching in sport specific motions.
 - B. Using the strength of the antagonist muscle to stretch the agonist.
 - C. Moving slowly into the stretch to the point of tension and holding the position for 5 to 10 seconds.
 - D. Perform a static stretch, relax, contract the muscle being stretched for a few seconds, and then repeat the static stretch.
82. All of the following statements regarding stretching are correct except:
- A. Warm up before stretching.
 - B. After stretching, finish the warm-up with more vigorous activity or start your exercise program.
 - C. Skill rehearsal, such as a tennis stroke, can be substituted for stretching.
 - D. Do the warm-up and stretching before beginning competition.

83. Core exercises involve all of the following body parts except:

- A. Abdominals.
- B. Back.
- C. Hips.
- D. Calves.

84. All of the following statements regarding developing a strong core are correct **except**:

- A. Core training has no effect on the ability to transfer power.
- B. Core training will lead to a stronger trunk.
- C. A stronger trunk is better able to transfer power from legs and trunk to the arms.
- D. A strong core reduces the risk of back injury.

85. Having muscular fitness early in life will positively effect you as you get older in all of the following ways except:

- A. Maintaining muscle mass.
- B. Maintaining mobility.
- C. Maintaining quality of life.
- D. Increased risk of osteoporosis.

86. Which of the following is not a way to stretch the shoulders?

- A. Turn head slowly to each side as far as is comfortable possible and hold it.
- B. Grasp your hands together over your head with the palms facing up and push the arms upward and slightly back.
- C. With the opposite arm, grasp the arm of the shoulder you want to stretch above the elbow and pull it across your chest.
- D. Grasp your hands behind your back, turn the elbows inward, and raise your arms behind you while maintaining an erect posture.

87. Which of the following is not a step when performing a back stretch?

- A. Hold onto a support at chest height.
- B. Keep knees fully extended.
- C. Let torso drop forward.
- D. Keep hips directly above your feet.

88. All of the following body parts are being stretched when you place your foot on a fixed surface, keep your support leg and foot pointing forward, and push your hips forward toward the front foot except:

- A. Groin.
- B. Hamstring.
- C. Upper back.
- D. Front of hip.

89. What stretch are you performing when you squat down with the feet flat, knees above your toes, and toes pointed out slightly?
- A. Groin and Hamstring stretch.
 - B. Calf Stretch.
 - C. Squat stretch.
 - D. Upper-Hamstring and Hip stretch.
90. All of the following are steps in the Inchworm dynamic stretch **except**:
- A. Start with feet shoulder-width apart and knees slightly bent.
 - B. Place hands on the floor shoulder-width apart and shift body weight forward so all weight is in the hands.
 - C. In the start position, the buttocks should be high in the air so you are making an inverted V with your body.
 - D. Walk your hands out in front of your body until you reach a push up position and then walk the legs back up to the hands.
91. What is the dynamic stretch that involves stepping forward with one leg so that the front knee is right over the front foot, lowering the back knee almost to the floor, then reaching up and over toward the side of the front leg with the opposite arm?
- A. Lunge with Twist.
 - B. Walking Knee Lift.
 - C. Dynamic Walking Exercise.
 - D. Dynamic Jogging Stretches.
92. All of the following are benefits of core training **except**:
- A. Improved back health.
 - B. Enhanced transfer of power from legs to arms.
 - C. Reduced risk of injury.
 - D. Increased fatigue in activities that involve transferring power through the core.
93. All of the following are steps in performing a crunch **except**:
- A. Lie on your back with your knees bent at approximately 90 degrees.
 - B. Place your hands behind your head to minimize neck strain.
 - C. Keep lower back flat on the floor throughout the exercise.
 - D. Raise head and shoulders off the ground until shoulder blades are approximately 3 to 4 inches off the ground.
94. Which of the following exercises is good for developing back strength and endurance and involves lying face down and lifting both legs off the floor together while avoiding hyperextension?
- A. Basket Hang.
 - B. Trunk Lift.
 - C. Leg Lift.
 - D. Side Trunk Lift.

95. Which of the following is **not** one of the steps to performing a Hip Raise?
- A. Lie on your backs with your arms out to your sides.
 - B. Start with legs extended out straight then swing them up to the head as forcefully as possible.
 - C. Raise your hips slowly.
 - D. Keep legs vertical right above hips.
96. All of the following are steps for doing a Bench Press **except**:
- A. Lie flat on the bench with the feet flat on the floor.
 - B. Eyes should be directly below the racked bar.
 - C. Use an open grip on the bar.
 - D. Lower the bar toward your chest and push the bar up until elbows are extended.
97. When doing a stability ball push-up, how far away from the ground should your head be in the down position?
- A. 1 to 2 inches.
 - B. 3 to 5 inches.
 - C. 5 to 7 inches.
 - D. 10 inches.
98. Which of the following is **not** a correct step in doing a Bridge with Thigh Lift?
- A. Lie on the floor with knees bent and feet parallel to each other.
 - B. Press feet into the floor and lift the hips up to the bridge position.
 - C. While maintaining the bridge position, lift one leg until it is parallel to the floor.
 - D. While maintaining the bridge position, exhale and lift one leg until the thigh is perpendicular to the floor.
99. What percentage of your 1RM should you train at to achieve muscular endurance?
- A. Greater than 90%.
 - B. 70-80%.
 - C. 50-70%.
 - D. Less than 30%.
100. All of the following are steps for doing a lunge correctly **except**:
- A. Start with hands on your hips and take a large step forward.
 - B. Bend the front leg while lowering the back leg down toward the floor.
 - C. Flex the front knee to approximately 90 degrees.
 - D. The lower part of the lead leg should be parallel to the floor.
101. All of the following are guidelines to follow when designing a personal resistance program **except**:
- A. Select 1 to 2 exercises that meet your training goals.
 - B. Start easy at first with lighter weights and less sets.
 - C. Don't hold your breath while performing a lift.
 - D. When using free weights, always have a spotter.

102. If you participate in vigorous effort, your caloric burn can increase from 1.2 calories per minute at rest to more than how many per minute?
- A. 5 calories.
 - B. 10 calories.
 - C. 15 calories.
 - D. 20 calories.
103. What percentage of the daily caloric intake comes from protein in a typical diet?
- A. 10 to 15%.
 - B. 25 to 30%.
 - C. 35 to 40%.
 - D. 45 to 50%.
104. Which of the following would be considered to be a low glycemic index food?
- A. Honey.
 - B. Rice.
 - C. Milk.
 - D. Oatmeal.
105. What are ingested proteins broken down into in the body?
- A. Glucose.
 - B. Trans-fatty acids.
 - C. Amino Acids.
 - D. Glycogen.
106. How many grams of protein per kilogram does someone need if they are a strength athlete?
- A. 0.8 grams per kilogram.
 - B. 1.2 to 1.4 grams per kilogram.
 - C. 1.4 to 1.8 grams per kilogram.
 - D. 2.0 to 3.0 grams per kilogram.
107. Which of the following is **not** a fat-soluble vitamin?
- A. Vitamin A.
 - B. Vitamin B.
 - C. Vitamin E.
 - D. Vitamin K.
108. Which of the following is **not** an antioxidant vitamin?
- A. Beta-carotene.
 - B. Vitamin C.
 - C. Vitamin E.
 - D. Vitamin K.

109. What is the storage form of carbohydrates in the body?
- A. Glycogen.
 - B. Adipose.
 - C. Fatty acids.
 - D. Amino acids.
110. What is the predominant source of energy for light and moderate intensity exercise?
- A. Carbohydrates.
 - B. Fat.
 - C. Protein.
 - D. Vitamins.
111. What is the basis of diminished metabolic rate that occurs with prolonged or multiple cycles of dieting?
- A. A resetting of the number of calories your body will burn with physical activity.
 - B. A loss of muscle mass because proteins are used for energy when adequate calories are not provided.
 - C. A change in fat cells that gives them a greater propensity for storing fat.
 - D. A slowing of the metabolism due to hormonal regulation of the liver.
112. Improving your fitness levels leads to all of the following **except**:
- A. Increased caloric expenditure.
 - B. Increased fat utilization.
 - C. Decreased levels of cholesterol and triglycerides.
 - D. Decreased amounts of muscle.
113. Approximately what percent of metabolically active cells is lost per decade after the age of 25?
- A. 2%.
 - B. 4%.
 - C. 8%.
 - D. 10%.
114. Which of the following is **not** a characteristic/statistic of people who've lost significant weight and kept it off long term?
- A. 78% have breakfast everyday.
 - B. 75% weigh themselves a minimum of once per week.
 - C. 62% watch more than 10 hours of TV per week.
 - D. 90% are physically active for about 1 hour per day.
115. What should be a weight loss goal per week?
- A. 1 to 2 pounds.
 - B. 2 to 4 pounds.
 - C. 4 to 6 pounds.
 - D. 6 to 8 pounds.

116. According to the 2008 ***Physical Activity Guidelines for Americans***, how often should muscle strengthening activities for all major muscle groups be done per week?
- A. 1 day per week.
 - B. 2 days per week.
 - C. 4 days per week.
 - D. 5 days per week.
117. What percentage of the United States population is overweight or obese?
- A. 25%.
 - B. 52%.
 - C. 67%.
 - D. 81%.
118. Which of the following would **not** be a lifestyle habit to improve one's health?
- A. Not losing weight.
 - B. Eating better.
 - C. Not smoking.
 - D. Wearing a seat belt.
119. All of the following would be reason to consult a physician before starting an exercise program **except**:
- A. Hypertension.
 - B. Smoking.
 - C. Elevated cholesterol.
 - D. Being 40 years old.
120. Which of the following is **not** a sign that you should stop exercising immediately and consult a physician?
- A. Abnormal heart action.
 - B. Chest Pain.
 - C. Sudden loss of coordination.
 - D. Nausea after exercise.
121. Which of the following would **not** be considered an abnormal heart action?
- A. Irregular pulse.
 - B. Elevated heart rate with vigorous activity.
 - C. Fluttering.
 - D. Palpitations.
122. All of the following are symptoms that can be alleviated by decreasing exercise intensity and don't require medical intervention **except**:
- A. Nausea or vomiting after exercise.
 - B. A sudden change in heart rhythm.
 - C. Prolonged fatigue.
 - D. Side stitch.

123. Which of the following would **not** be a way to prevent or treat blisters?
- A. Shoes that fit properly.
 - B. Don't wear socks.
 - C. Use a lubricant on hot spots.
 - D. Cover a blister with duct tape.
124. All of the following can be causes of muscle cramps **except**:
- A. Delayed onset muscle soreness.
 - B. Dehydration.
 - C. Exercising in high temperatures.
 - D. Electrolytes.
125. Which of the following is **not** part of the RICES approach to an acute injury such as an ankle sprain?
- A. Rest the affected area.
 - B. Ice for 20 minutes acutely and then several times a day.
 - C. Keep the affected area below the level of the heart.
 - D. Use a wrap to apply compression to the injured area.
126. All of the following are ways to prevent shin splints **except**:
- A. Run on hard surfaces.
 - B. Transition gradually into training.
 - C. Do resistance exercises.
 - D. Stretch.
127. Which of the following statements regarding knee pain is **not** correct?
- A. Running does not harm healthy knees.
 - B. Running will cause osteoarthritis of the knee.
 - C. Knee pain may be diminished by changing shoes.
 - D. Orthotics may be necessary while running to correct pronation.
128. All of the following would be appropriate choices to see for an activity injury **except**:
- A. Athletic trainer.
 - B. Orthopedic doctor.
 - C. Physical therapist.
 - D. Personal trainer.
129. All of the following are precaution guidelines for pregnant women while exercising **except**:
- A. Keep heart rate below 140 beats per minute.
 - B. Avoid high impact activities.
 - C. Avoid exposure to high temperatures.
 - D. Avoid yoga.

130. Which of the following would **not** be a way to incorporate exercise into work and travel?
- A. Walk to or from work.
 - B. Take the stairs instead of the elevator.
 - C. Taking the moving walkways at the airport.
 - D. Taking exercise equipment with you while traveling.
131. All of the following would be reasons to join a fitness club **except**:
- A. Facility is clean and well maintained.
 - B. The facility has equipment that meets your needs.
 - C. The facility staff is well educated and qualified.
 - D. The facility offers discounted sign up fees if you agree to a long contract.
132. Which of the following would **not** be a key to health issues and exercise tip?
- A. The best time to start exercising is now.
 - B. Try to meet the physical activity guidelines.
 - C. If you become ill, continue to exercise.
 - D. Be active when you travel by bringing exercise equipment with you or selecting a hotel with a fitness center.
133. Which type of study allows us to draw cause and effect conclusions?
- A. Experimental study.
 - B. Status study.
 - C. Comparison study.
 - D. Correlation study.
134. All of the following are ways in which to improve your readiness for physical activity **except**:
- A. Adequate nutrition.
 - B. Inadequate rest.
 - C. Commitment to training.
 - D. Able to accept delayed gratification.
135. Which of the following is **not** an adaptation after weeks and months of training?
- A. Increased respiratory function.
 - B. Decreased heart function.
 - C. Increased muscular endurance.
 - D. Increased power.
136. Which of the following is **not** a way of increasing overload?
- A. Working out with a friend.
 - B. Increasing frequency.
 - C. Increasing intensity.
 - D. Increasing time.

137. Which of the following methods may help to avoid overuse injuries?
- A. Heavy resistance training.
 - B. High-intensity training.
 - C. Cross training.
 - D. Sport-specific training.
138. A warm-up before a workout does all of the following **except**:
- A. Increase body temperature.
 - B. Increase your respiration and heart rate.
 - C. Decrease your risk of muscle, tendon, or ligament strain.
 - D. Decrease strength.
139. All of the following are benefits of a cool-down **except**:
- A. Decreased cramping and soreness.
 - B. Increased muscle gains.
 - C. Removes excess norepinephrine.
 - D. Remove metabolic wastes.
140. What does the concept of reversibility mean in fitness?
- A. Vary your program to prevent boredom and maintain interest.
 - B. Adaptations created by physical activity will be lost if activity is not maintained.
 - C. Too much of any physical activity can be bad for you.
 - D. There is a maximal level of performance that anyone will be able to obtain.
141. Which of the following statements regarding "No Pain, No Gain" is incorrect?
- A. Pain is a natural response to physical activity.
 - B. Pain indicates a problem that needs to be addressed.
 - C. Intense exercise stimulates production of endorphins, which create a euphoric state.
 - D. Discomfort can be associated with heavy lifting, intense interval training, and long-distance endurance training due to the production of lactic acid.
142. Which of the following is **not** a cause of delayed onset muscle soreness 24 to 48 hours after exercise?
- A. Lifting excessive weight.
 - B. Long distance running with significant downhill stretches that eccentrically works the muscles.
 - C. Lactic acid build-up.
 - D. Micro trauma in muscle and connective tissue.
143. Which of the following statements is true?
- A. With inactivity, muscle turns into fat.
 - B. With activity, muscle fibers get smaller in size.
 - C. With activity, muscle fibers get larger in size.
 - D. With excess caloric consumption, fat cells get smaller in size.

144. How much more likely are the "least-fit people" to die from any cause?
- A. Two times.
 - B. Three times.
 - C. Four times.
 - D. Six times.
145. Which of the following is **not** a habit associated with health and longevity?
- A. Adequate sleep.
 - B. Eating a good breakfast.
 - C. Regular meals while avoiding snacks.
 - D. Smoking.
146. By following 6 of the 7 "Healthy Habits," how many years can be added to a woman's life?
- A. 2 years.
 - B. 5 years.
 - C. 7 years.
 - D. 11 years.
147. What is probably the best predictor of physiological age?
- A. Aerobic fitness.
 - B. Muscular strength.
 - C. Muscular endurance.
 - D. Flexibility.
148. Which of the following is **not** a characteristic associated with longevity?
- A. Moderation.
 - B. Psychological flexibility.
 - C. Relationships.
 - D. Negative outlook on life.
149. Living an active life can be beneficial in all of the following ways **except**:
- A. Health.
 - B. Mobility.
 - C. Economically.
 - D. Inadaptability.
150. Which stage of life commonly defines success in terms of education and material things?
- A. Young adult.
 - B. Adult.
 - C. Senior.
 - D. Elder.