

Advanced *Sports Nutrition*

CORRESPONDENCE EDUCATION PROGRAM # 2012-90

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LEARNING OBJECTIVES

After reading Advanced Sports Nutrition, the participant will be able to:

1. Identify the sources and roles of the various macronutrients and their impact on athletic performance and recovery.
2. Understand the need for vitamins and minerals and their roles in tissue building, fluid balance and reducing oxidative stress.
3. Learn the strategies for maintaining good hydration status and electrolyte balance.
4. Understand the effect dehydration can have on an athlete's performance.
5. Be able to discuss the pros and cons of various ergogenic aids and their potential positive impact on performance.
6. Understand the methods to use to evaluate the benefits and safety of various ergogenic aids.
7. Understand good food consumption strategies.
8. Understand the digestion and food absorption processes.
9. Understand the effects age related changes have on energy expenditure.
10. Identify the most common nutritional deficiency among athletes.

11. Identify the potential impacts of travel on athletes' nutritional needs.
12. Understand the effects of high altitude on exercise performance and understand how to minimize the effects of jet lag.
13. Understand the various energy systems utilized for both power and endurance activities.
14. Identify the warning signs of eating disorders.
15. Develop nutritional plans for specific sports.
16. Understand the use of food exchange lists in developing balanced meal plans.



CEC/CEU TEST FOR: Advanced Sports Nutrition

Please choose the best answer. Put all answers on the answer sheet.

- 1. Which of the following energy sources helps mediate insulin response by slowing the rate at which other energy sources enter the bloodstream?**
 - a. Bran
 - b. Glucose
 - c. Starch
 - d. Sugar

- 2. The right amount of _____ at the right time optimizes _____ stores and improves endurance performance.**
 - a. Protein, carbohydrate
 - b. Carbohydrate, carbohydrate
 - c. Fat, carbohydrate
 - d. Protein, protein

- 3. Indigestible complex carbohydrates are commonly referred to as _____.**
 - a. Oligosaccharides
 - b. Fiber
 - c. Sugar
 - d. Polymers

- 4. Humans can store approximately 350 grams or _____ kilocalories of glycogen in the form of muscle glycogen.**
 - a. 1000
 - b. 1200
 - c. 1400
 - d. 3150

- 5. Glucose is released by the liver to sustain blood sugar and the rate at which it is released is determined by _____.**
- a. Timing of last meal
 - b. Exercise intensity
 - c. Genetics
 - d. Fitness level
- 6. Which of the following symptoms can occur as a result of lactose intolerance?**
- a. Bloating
 - b. Abdominal pain and diarrhea
 - c. Dehydration
 - d. All of the above
- 7. Which of the following is NOT one of the four energy metabolic systems?**
- a. Anabolic glycolysis
 - b. Anaerobic glycolysis
 - c. Aerobic glycolysis
 - d. Phosphocreatine
- 8. Gluconeogenesis refers to the process of making glucose from _____ sources.**
- a. Fat
 - b. Protein
 - c. Carbohydrate
 - d. Non-carbohydrate
- 9. Which of the following factors does not decrease the relative energy expenditure from carbohydrate?**
- a. High intensity activity
 - b. Endurance training
 - c. Temperature adaptation
 - d. Gender
- 10. The average minimal usage of glucose by the brain is _____ grams per day.**
- a. 45
 - b. 75
 - c. 110
 - d. 130

- 11. Between _____ and _____ grams of carbohydrate per kilogram of body weight per day is the recommended carbohydrate intake for endurance trained athletes.**
- a. 3, 5
 - b. 5, 7
 - c. 7, 8
 - d. 7, 9
- 12. What is the adult AMDR for total fat intake?**
- a. 10 to 20% of total calories
 - b. 15 to 25% of total calories
 - c. 20 to 25% of total calories
 - d. 20 to 35% of total calories
- 13. Athletes interested in lowering body fat should exercise at least as high as _____ of VO₂ max to optimize fat burned.**
- a. 40 percent
 - b. 55 percent
 - c. 65 percent
 - d. 75 percent
- 14. _____ is the only nutrient that contains nitrogen, making it both essential and potentially toxic.**
- a. Carbohydrate
 - b. Protein
 - c. Fat
 - d. None of the above
- 15. Which of the following is NOT a valid reason why athletes require a higher protein intake than non-athletes?**
- a. Endurance activities use more protein
 - b. Protein is the primary fuel for exercise
 - c. Muscle damage from exercise increases the protein requirement
 - d. Exercise may cause protein to be lost in the urine
- 16. The Diet Reference Intakes (DRIs) are based on all of the following sources except:**
- a. The Food Guide Pyramid
 - b. The Recommended Dietary allowance
 - c. The Adequate Intake
 - d. The Tolerable Upper Intake

- 17. Taking greater than 500 mg/day of water-soluble Vitamin B6 can result in which of the following?**
- a. Dehydration
 - b. Vomiting
 - c. Peripheral Neuropathy
 - d. Scurvy
- 18. Vitamin B6 deficiency can cause which of the following symptoms?**
- a. Depression
 - b. Irritability
 - c. Muscle weakness
 - d. All of the above
- 19. Vitamin B12 has a major involvement in all of the following except:**
- a. Red blood cell formation
 - b. DNA synthesis
 - c. Nerve development
 - d. Bone development
- 20. Which of the following is NOT a function of minerals?**
- a. Assists with skeleton strength and structure
 - b. Controls blood and tissue acid-base balance
 - c. Provides energy
 - d. Serves as bridges for electrical impulses that stimulate muscular movements
- 21. What is the key ingredient in sports drinks that drives the desire to drink?**
- a. Potassium
 - b. Sodium
 - c. Calcium
 - d. Magnesium
- 22. When sweat losses are high, athletes may require more than _____ grams of sodium per day.**
- a. 10
 - b. 8
 - c. 5
 - d. 3

- 23. Which of the following is NOT a symptom of iron deficiency?**
- a. Increased oxygen carrying capacity
 - b. Poor immune function
 - c. Short attention span
 - d. Irritability
- 24. Which of the following is the single most important factor associated with sustaining a high level of athletic performance?**
- a. Getting adequate sleep
 - b. Eating 6 meals per day
 - c. Maintaining fluid balance
 - d. Consuming caffeine
- 25. During exercise almost all heat loss from the body occurs via _____.**
- a. Conduction
 - b. Radiation
 - c. Convection
 - d. Evaporation
- 26. The thirst sensation is not a good indicator of fluid needs because it doesn't surface until _____ liters of body water is lost.**
- a. .5 – 1.0
 - b. 1.0 – 1.5
 - c. 1.5 – 2.0
 - d. 2.0 – 2.5
- 27. Gastric emptying time decreases when carbohydrate concentration exceeds _____ percent.**
- a. 4
 - b. 5
 - c. 6
 - d. 7
- 28. Which of the following is NOT a body adjustment that occurs during acclimatization?**
- a. Muscle glycogen increases
 - b. Heart pumps more blood per beat
 - c. Sweat glands hypertrophy
 - d. Sweating starts at a lower temperature

- 29. Signs and symptoms of low blood sodium (hyponatremia) include which of the following?**
- a. Bloating stomach
 - b. Headache
 - c. Cramping
 - d. All of the above
- 30. Which of the following is NOT a valid hydration guideline for an athlete to follow before exercise?**
- a. Athletes should consume enough fluids before exercise to produce clear urine
 - b. Athletes should wait until they feel thirsty and then consume one cup of fluid
 - c. Athletes should carry fluid with them wherever they go
 - d. Athletes should avoid foods and drinks that may have a diuretic effect
- 31. Sodium in sports drinks is not always palatable so which of the following food alternatives should an athlete consume after exercise?**
- a. Pretzels
 - b. Gummi bears
 - c. Power bar
 - d. Jelly beans
- 32. Which of the following is NOT a good method to use when evaluating supplements?**
- a. Look for accurate claims
 - b. Look for supporting research
 - c. Look for a product that is highly advertised as the best available
 - d. Look for the USP symbol on the label
- 33. To reduce protein breakdown and promote protein synthesis, how many grams of carbohydrate per kilogram of body weight should an athlete consume after exercise?**
- a. 1
 - b. 3
 - c. 5
 - d. 7

- 34. It appears that when caffeine is consumed at doses of _____ milligrams/day, it has an ergogenic benefit in long-endurance activity.**
- a. 1 – 3
 - b. 2 – 4
 - c. 3 – 9
 - d. 6 – 12
- 35. Medium chain triglycerides offer all of the following benefits except:**
- a. Provide a quick source of energy
 - b. Help mobilize body fat stores for energy
 - c. Decrease the metabolic rate
 - d. Spare muscle
- 36. Which of the following statements is true regarding the research on the use of anabolic steroids as an ergogenic aid?**
- a. Using anabolic steroids is recommended because there are no known negative side effects
 - b. Using anabolic steroids is a safe and acceptable way to increase lean muscle mass and strength
 - c. Using anabolic steroids will increase lean muscle mass and strength but with significantly dangerous side effects
 - d. Using anabolic steroids increases lean muscle mass but decreases exercise motivation
- 37. Which substance used as an ergogenic aid is banned by the IOC?**
- a. Amphetamines
 - b. Ma huang
 - c. Antioxidants
 - d. Bee pollen
- 38. Which of the following can cause gastritis when used excessively by an athlete?**
- a. Tums
 - b. Non-steroidal anti-inflammatory drugs
 - c. High fiber foods
 - d. None of the above

- 39. Which of the following factors does NOT affect gastric emptying?**
- a. Ingested volume
 - b. Energy concentration
 - c. Type of carbohydrate
 - d. Type of exercise
- 40. The common eating pattern of athletes, emphasizing large end-of-day meals, promotes which of the following?**
- a. Higher body fat levels
 - b. Increased energy levels
 - c. Increased lean body mass
 - d. None of the above
- 41. Low blood sugar and large meals are associated with _____.**
- a. Gastritis
 - b. Hyperinsulinemia
 - c. Low energy levels
 - d. Hypoglycemia
- 42. Under-hydrated athletes could be at heatstroke risk within _____ minutes after starting to exercise.**
- a. 26
 - b. 33
 - c. 45
 - d. 57
- 43. Thirst sensation is not a good indicator of when to drink because it doesn't occur until after _____ to _____ liters of body water are lost.**
- a. 1, 2
 - b. 2, 3
 - c. 3, 4
 - d. 4, 5
- 44. Which of the following is NOT one of the major goals that should be met by the sequence of events occurring in the week prior to a competition?**
- a. Get gradual rest
 - b. Cross train in an alternate sport
 - c. Build up muscle glycogen stores
 - d. Become well hydrated

- 45. Consumption of carbohydrate containing substances during exercise delays fatigue by all of the following mechanisms except:**
- a. Maintains blood glucose
 - b. Increases cortisol production
 - c. Maintains branched chain amino acid levels
 - d. Reduces the usage of muscle glycogen
- 46. Athletes should plan on consuming _____ to _____ calories from carbohydrate immediately following exercise.**
- a. 50, 100
 - b. 100, 150
 - c. 200, 400
 - d. 400, 500
- 47. High intensity exercise increases cellular respiration which causes a _____ -fold increase in oxygen demand for working muscles.**
- a. 10
 - b. 15
 - c. 20
 - d. 25
- 48. What type of climate conditions may cause an athlete to experience exercise induced asthma (EIA)?**
- a. Cold, dry air
 - b. Cold, wet air
 - c. Warm, dry air
 - d. Warm, wet air
- 49. _____ is the iron containing, oxygen carrying protein in red blood cells.**
- a. Myoglobin
 - b. Hemoglobin
 - c. Transferrin
 - d. Ferritin
- 50. When athletes increase the intensity of their training, they may experience a condition referred to as _____.**
- a. Sports anemia
 - b. Dilutional pseudo-anemia
 - c. Both a and b
 - d. None of the above

- 51. Antioxidant vitamins and minerals, which inhibit the production of reactive oxygen species (ROS or free radicals) include all of the following except:**
- a. Vitamin C
 - b. Selenium
 - c. Vitamin D
 - d. Beta-carotene
- 52. _____ is the most common nutrient deficiency.**
- a. Iron
 - b. Vitamin C
 - c. Protein
 - d. Calcium
- 53. Which of the following vitamins does NOT have an impact on appetite?**
- a. Vitamin B1
 - b. Vitamin B2
 - c. Vitamin B6
 - d. Vitamin D
- 54. Which of the following symptoms can be caused by overtraining?**
- a. Sleepless nights
 - b. Frequent illness
 - c. Appetite loss
 - d. All of the above
- 55. Crohn's disease affects the ileum, which is the site of _____ absorption, and this lack of absorption ultimately leads to megaloblastic, hypochromic anemia.**
- a. Vitamin B1
 - b. Vitamin B2
 - c. Vitamin B12
 - d. Vitamin B6
- 56. Which of the following drugs destroy intestinal microflora?**
- a. Antipsychotics
 - b. Antibiotics
 - c. Antidepressants
 - d. Antacids

- 57. Increased urinary losses of magnesium results in all of the symptoms listed below except:**
- a. GI bleeding
 - b. Muscle cramps
 - c. Weakness
 - d. Cardiac arrhythmias
- 58. Vitamins related to aerobic metabolism, the Krebs cycle, include which of the following?**
- a. Vitamin B2
 - b. Vitamin B6
 - c. Niacin
 - d. All of the above
- 59. Traveling to competition and the resulting circadian rhythm desynchronization can result in which of the following?**
- a. Increased energy
 - b. Increased appetite
 - c. Disturbed sleep
 - d. Improved performance
- 60. Good general tips for athletes eating on the road include which of the following?**
- a. Bring your own snacks
 - b. Avoid hidden fats
 - c. Order "a la carte"
 - d. All of the above
- 61. Which of the following is NOT a valid recommendation to help minimize the effect of jet lag on a large phase shift?**
- a. Arrive at destination 1 day early
 - b. Follow a low protein diet
 - c. Maintain regular sleeping and eating habits
 - d. Participate in social activities and exercise
- 62. If an athlete is traveling across 2 time zones to get to an event, how many days should be allowed for acclimatization?**
- a. 1
 - b. 2
 - c. 3
 - d. 4

- 63. Athletes training at higher altitudes can expect a _____ respiration and _____ heart rate.**
- a. Faster, faster
 - b. Slower, slower
 - c. Faster, slower
 - d. No change in respiration or heart rate
- 64. Successful production of red blood cells requires an intake of _____ milligrams of iron per day.**
- a. 10
 - b. 15
 - c. 18
 - d. 20
- 65. Cold stress and shivering increases muscle glycogen utilization, thus increasing the need for adequate _____ consumption.**
- a. Carbohydrate
 - b. Protein
 - c. Fat
 - d. Water
- 66. All of the following factors increase the risk of developing altitude sickness except:**
- a. Fast rate of ascent
 - b. Long stay at altitude
 - c. High level of exertion
 - d. High carbohydrate, low protein, low fat diet
- 67. High altitude cerebral edema (HACE), caused by capillary leakage in the brain, includes which of the following symptoms?**
- a. Gait ataxia
 - b. Confusion
 - c. Psychiatric changes of varying degrees
 - d. All of the above
- 68. High altitude pulmonary edema (HAPE) is not well understood, but it rarely occurs below _____ feet.**
- a. 2000
 - b. 4000
 - c. 6000
 - d. 8000

69. Which of the following statements regarding the energy and nutrient needs of athletes exercising at high altitudes is NOT true?

- a. Athletes should focus on consuming sufficient carbohydrate foods
- b. Athletes exercising in high altitude environments frequently gain weight from consuming too many calories
- c. Athletes should make sure their iron status is excellent before exercising at high altitudes
- d. Athletes should consider consuming a multivitamin or multimineral supplement to reduce oxidative stress

70. The female athlete triad relates to eating disorder, menstrual dysfunction and _____.

- a. Borderline personality
- b. Mood swings
- c. Low bone density
- d. Weight loss

71. Menstrual dysfunction is associated with _____, which may be offset by _____.

- a. Reduction in endurance, increasing caloric intake
- b. Reduction in energy, iron supplementation
- c. Reduction in bone mass, increasing caloric intake
- d. Reduction in muscle gain, protein supplementation

72. The protein recommendation for athletes is between _____ and _____ grams per kilogram per day.

- a. .8, 1.0
- b. 1.0, 1.2
- c. 1.2, 1.8
- d. 2.0, 2.5

73. Factors causing primary and secondary amenorrhea include which of the following?

- a. Excess physical activity
- b. Inadequate energy intake
- c. Adequacy of nutrient intake
- d. All of the above

- 74. Age related changes in _____ have an impact on resting energy expenditure, recovery time, bone mass, nutrient absorption, and heat tolerance.**
- a. Body composition
 - b. Body weight
 - c. Blood pressure
 - d. None of the above
- 75. Energy expenditure decreases approximately _____ calories per year for men and _____ calories per year for women after age 20.**
- a. 20, 15
 - b. 10, 7
 - c. 15, 10
 - d. 25, 20
- 76. Amenorrhea is defined as the absence of a menstrual period for _____ months, or the absence of the menstrual cycle for _____ cycles.**
- a. 2, 4
 - b. 1, 2
 - c. 6, 3
 - d. 8, 4
- 77. Body mass index (BMI) is not likely to be useful for categorizing weight for athletes because it _____ the weight-to-height ratio.**
- a. Lengthens
 - b. Increases
 - c. Shortens
 - d. Decreases
- 78. For athletes, a high ratio of _____ to _____ is typically synonymous with a high strength-to-weight ratio, which is associated with athletic success.**
- a. Fat-free mass to muscle
 - b. Fat mass to lean muscle
 - c. Fat-free mass to fat mass
 - d. None of the above

- 79. The most common methods for assessing body composition include all of the following except:**
- a. Body mass index calculations
 - b. Hydrostatic weighing
 - c. Skin fold measurements
 - d. Bioelectrical impedance analysis
- 80. The potentials for error in hydrostatic weighing are related to residual volume and _____.**
- a. Fat-free mass
 - b. Muscle mass
 - c. Land weight
 - d. Hydration status
- 81. Since most skin fold equations are meant for the general population, the results for athletes tend to be _____.**
- a. Unrealistically high
 - b. Fairly accurate
 - c. Unrealistically low
 - d. None of the above
- 82. Dual-energy X-ray absorptiometry (DEXA), considered the most accurate method of determining body composition, provides all of the following measurements except:**
- a. Bone density
 - b. Body fat percentage
 - c. Distribution of abdominal fat
 - d. Lean body mass
- 83. The amount of radiation energy used with DEXA is so small that you would need _____ scans before being exposed to the same amount of radiation received from one standard chest X-ray.**
- a. 800
 - b. 600
 - c. 400
 - d. 200
- 84. Ectomorph body types have a predisposition towards _____ with less _____.**
- a. Muscular build, body fat
 - b. Slender build, body fat
 - c. Stocky build, body fat
 - d. None of the above

- 85. Because of the change in metabolism as people age, an extra _____ calories consumed per day could lead to a _____ pound weight gain in one year.**
- a. 25, 1
 - b. 50, 3
 - c. 50, 5
 - d. 25, 7
- 86. Which of the following is the recommended frequency for assessing an athlete's body composition?**
- a. 12 times per year
 - b. 4 – 6 times per year
 - c. 2 – 4 times per year
 - d. Annually
- 87. According to the traditional view of eating disorders, a combination of all of the following factors create a basis for their development except:**
- a. Psychological
 - b. Genetic
 - c. Social
 - d. Religious
- 88. Which of the following are considered warning signs of eating disorders?**
- a. Preoccupation with food
 - b. Preoccupation with weight
 - c. Use of laxatives
 - d. All of the above
- 89. Which of the following is not considered criteria for anorexia athletica?**
- a. Loss of desire to exercise
 - b. Binge eating
 - c. Disturbance in body image
 - d. Use of purging methods
- 90. Which of the following is a symptom of Bulimia Nervosa?**
- a. Teeth and gum corrosion
 - b. Edema
 - c. Excessive bathroom visits
 - d. All of the above

- 91. Type I muscle fibers are associated more with which of the following activities?**
- a. Endurance sports
 - b. Weightlifting
 - c. Shot Put
 - d. Sprinting
- 92. Muscles rely on _____ and _____ for anaerobic activities.**
- a. Protein, calories
 - b. Phosphocreatine, glycogen
 - c. Amino acids, water
 - d. Glycogen, caffeine
- 93. Energy supplied by the breakdown of phosphocreatine (PCr) does not last longer than _____ seconds.**
- a. 5
 - b. 10
 - c. 15
 - d. 20
- 94. Glycolysis has half the power to create energy as the PCr system, but has _____ times the capacity.**
- a. 3
 - b. 4
 - c. 5
 - d. 6
- 95. Poor hydration is associated with higher core temperatures that can reduce _____.**
- a. Body temperature
 - b. Muscle size
 - c. Coordination
 - d. All of the above
- 96. Fluids that are best for replacing carbohydrate stores and maintaining hydration status contain _____ percent carbohydrate solution.**
- a. 2 – 3
 - b. 4 – 5
 - c. 6 – 7
 - d. 7 – 8

- 97. With adequate calories, a protein intake of _____ grams/kilograms will support the synthesis of creatine and growing muscle mass.**
- a. .8 – 1.2
 - b. 1.2 – 1.7
 - c. 1.7 – 2.0
 - d. 2.0 – 2.5
- 98. Which baseball position has the highest energy and fluid requirements?**
- a. Catcher
 - b. Pitcher
 - c. Outfielder
 - d. Infielder
- 99. A bodybuilder's second phase of training is aimed at reducing _____.**
- a. Water weight
 - b. Subcutaneous fat
 - c. Muscle mass
 - d. None of the above
- 100. The ideal composition of a bodybuilder's diet should be _____ from carbohydrates, _____ from fat, and _____ from protein.**
- a. 60 to 75 percent, 10 to 15 percent, 20 to 25 percent
 - b. 30 to 40 percent, 20 to 25 percent, 35 to 50 percent
 - c. 55 to 60 percent, 15 to 20 percent, 25 to 30 percent
 - d. 40 to 50 percent, 10 to 15 percent, 35 to 50 percent
- 101. Which of the following does NOT play a role in a person's body fat percentage?**
- a. Genetic make-up
 - b. Dietary habits
 - c. Height and bone structure
 - d. Exercise habits
- 102. Small, frequent meals is a strategy used to suppress the production of body fat because _____.**
- a. People are more satisfied
 - b. It lowers the insulin response to food
 - c. People don't overeat
 - d. All of the above

- 103. Instead of the typical diet cycling that body builders do to gain muscle mass, the logical approach is to consume an additional _____ of complex carbohydrate combined with specific muscle building activities.**
- a. 100 – 200 calories
 - b. 200 – 400 calories
 - c. 300 – 500 calories
 - d. 500 – 700 calories
- 104. In order for linemen to achieve a high level of muscle mass, their diet should include 300 to 500 calories more than their energy requirements with a diet that consists of _____ from fat intake and _____ from protein intake.**
- a. 30 to 40 percent of total calories, 60 to 70 percent of total calories
 - b. 25 to 30 percent of total calories, 60 to 75 percent of total calories
 - c. Less than 5 percent of total calories, less than 10 percent of total calories
 - d. Less than 25 percent of total calories, 12 to 15 percent of total calories
- 105. Inadequate _____ is associated with anemia, a risk factor in the development of amenorrhea.**
- a. Iron
 - b. Calcium
 - c. Calories
 - d. Protein
- 106. Which of the following is NOT a possible cause of delay or cessation of menses?**
- a. Low body fat
 - b. Poor iron status
 - c. Poor sleep habits
 - d. Low energy intake
- 107. Hockey players' performance is directly related to muscle glycogen metabolism, requiring their food intake to be _____ percent carbohydrate.**
- a. 50 – 55
 - b. 60 – 65
 - c. 65 – 70
 - d. 70 – 75

- 108. Since sprints rarely last longer than 10 seconds, they primarily use phosphocreatine and _____ as fuels.**
- a. Water
 - b. Glycogen
 - c. Protein
 - d. Iron
- 109. Supercompensation is used to force more _____ into the muscles and is not recommended for _____.**
- a. Protein, sprinters
 - b. Fat, long-distance runners
 - c. Carbohydrate, sprinters
 - d. Water, long-distance runners
- 110. Glycogen is stored with water in which ratio?**
- a. 1 to 3 grams
 - b. 1 to 4 grams
 - c. 2 to 1 grams
 - d. 4 to 1 grams
- 111. For early morning swimmers, it is recommended that they consume snacks or drink fluids containing 100 to 200 calories of _____ before practice.**
- a. Carbohydrate
 - b. Protein
 - c. Fat
 - d. None of the above
- 112. For swimming sprints lasting 2 minutes or longer, a recovery period of up to _____ minutes is required.**
- a. 2
 - b. 3
 - c. 3.5
 - d. 4
- 113. Swimmers need at least _____ calories of carbohydrate per kilogram of body weight.**
- a. 20
 - b. 25
 - c. 30
 - d. 35

- 114. Weight cutting is a technique used by wrestlers to _____.**
- a. Promote rapid weight reduction
 - b. Decrease body fat
 - c. Increase lean body mass
 - d. None of the above
- 115. Weight cycling associated with making weight can lead to which of the following?**
- a. Glycogen depletion
 - b. Lower muscle mass
 - c. Increase in body fat
 - d. All of the above
- 116. Signs of overtraining include which of the following?**
- a. Increase in appetite
 - b. Swelling of lymph nodes
 - c. High illness frequency
 - d. Both b and c
- 117. Which of the following is NOT a factor associated with the development of the overtraining syndrome?**
- a. Frequent competition
 - b. Healthy diet
 - c. Psychosocial stressors
 - d. Monotonous training with insufficient rest
- 118. Which of the following steps should female runners take to reduce the risk of osteoporosis?**
- a. 1500 milligrams of calcium per day
 - b. Do not consume too much protein
 - c. Avoid overtraining
 - d. All of the above
- 119. A critical factor in the performance of all endurance athletes is _____.**
- a. Hydration status
 - b. Iron status
 - c. Protein status
 - d. Total caloric intake

120. Which of the following is a common cause of low iron status in runners?

- a. Excess loss of blood in the GI tract
- b. Poor iron absorption
- c. Excess menstrual blood loss
- d. All of the above

121. In order for triathletes to keep up with their energy requirements, they need to consume _____ grams of carbohydrate per kilogram of body weight per hour.

- a. .8 – 1.0
- b. 1.0 – 1.2
- c. 1.0 – 1.5
- d. 2.0 – 2.5

122. Gatorade's mixture of sucrose and glucose are well tolerated, whereas the _____ in PowerAde has been shown to cause GI distress.

- a. Lactose
- b. Fructose
- c. Maltose
- d. Galactose

123. Basketball players need _____ grams per kilo of body weight of high glycemic carbohydrate beverages and foods immediately after exercise and every 2 hours after that.

- a. .5 – 1.0
- b. 1.0 – 1.5
- c. 2.0 – 2.5
- d. 2.5 – 3.0

124. During routine soccer training, players should consume _____ of carbohydrate per kilogram of body weight.

- a. 3 – 5 grams
- b. 5 – 7 grams
- c. 8 – 10 grams
- d. 10 – 12 grams

125. Food exchanges allow you to make food substitutions that have _____.

- a. Similar caloric and nutrient contents
- b. Similar taste qualities and caloric contents
- c. Identical preparation and cooking time
- d. Identical caloric and nutrient contents