1. The "proof" is a measure of the alcohol content in the beverage and is
   A. double the percentage.
   B. half the percentage.
   C. equal to the percentage.
   D. None of the answers are correct.

2. Alcohol, when consumed in small amounts (one to two drinks),
   A. greatly deteriorates physiological processes associated with maximal aerobic exercise.
   B. has been shown to impair exercise performance on the following day.
   C. may exert a paradoxical stimulation effect.
   D. adversely affects accuracy in competition, such as pistol shooting and archery.

3. Which one of the following allegations regarding alcohol is NOT accurate?
   A. There is no evidence that alcohol can substitute for other fat sources in the body
   B. Alcohol may reduce gluconeogenesis by the liver and glucose uptake by the legs during the latter
      stages of exercise
   C. Alcohol ingestion may decrease urine production by decreasing release of the anti-diuretic hormone
   D. Research does not support the use of alcohol in sports involving perceptual-motor activities

4. When one considers Fetal Alcohol Syndrome and Fetal Alcohol Effects, research indicates all but which
   of the following?
   A. Women who drink should abstain during the pregnancy
   B. One to three beers or glasses of wine per day may help reduce emotional stress and will not affect the
      developing fetus
   C. FAE children are easily distracted and have poor attention spans
   D. No "safe" amount of alcohol during pregnancy has been determined

5. Recent epidemiological research has shown that
   A. light to moderate consumption of alcohol is associated with increased mortality.
   B. alcohol reduces the risk of heart disease by raising the levels of LDL cholesterol.
   C. pigments in red wine contain polyphenols and other phytochemicals that may help increase coronary
      heart disease.
   D. moderate alcohol should not be construed as "healthy alcohol use" and abstinence is generally
      recommended by health authorities for some individuals.

6. Which of the following contains the most alcohol per standard serving size?
   A. Beer
   B. Wine
   C. Hard liquor
   D. They all contain approximately the same amount per typical serving

7. Which of the following is NOT a function of caffeine?
   A. Caffeine functions as a stimulant of the central nervous system and stimulates heart function and blood
      circulation.
   B. In conjunction with epinephrine, caffeine decreases the rate of muscle and liver glycogen breakdown.
   C. Caffeine increases alertness and a feeling of well-being.
   D. None of the answers are correct.
8. Regarding the effect of caffeine on exercise performance, a review of the available research suggests
   A. caffeine may raise serum FFA levels at rest just before exercise and increase the use of fat as an energy
      source during exercise.
   B. the perception of effort during exercise is heightened and thereby improves performance.
   C. caffeine ingestion increases epinephrine levels during exercise and may exert a stimulating
      psychological effect.
   D. abstaining from caffeine for 2-4 days prior to competition heightens the effect of caffeine when taken.

9. Research supports that __________ appears to be an effective ergogenic aid.
   A. ginseng
   B. ciwujia
   C. Eleutherococcus senticosus
   D. caffeine

10. Which of the following generalizations is acceptable when considering the impact of caffeine as a
    significant health risk?
    A. There are no known cardiovascular problems associated with caffeine ingestion
    B. Massive doses of caffeine may be fatal, while lesser amounts confer some possible health benefits
    C. A moderate level of caffeine consumption would be about 600-800 milligrams per day
    D. There is a proven link between caffeine and cancer

11. Health problems associated with use of ephedra include all of the following EXCEPT
    A. cardiac arrest and sudden death.
    B. prolonged extreme elation.
    C. psychosis and hallucinations.
    D. suicidal ideation.

12. Of the following, which one is NOT a reported result of using sodium bicarbonate?
    A. Sodium bicarbonate supplementation does appear to enhance performance in exercise tasks dependent
      upon the lactic acid energy system
    B. Sodium bicarbonate supplementation has produced improvement in some aerobic endurance exercise
      tasks
    C. The usual experimental protocol is to ingest a dosage of sodium bicarbonate immediately prior to the
      exercise task to get maximum benefits
    D. Doses of sodium bicarbonate that are higher than recommended may cause gastrointestinal distress

13. The standard dosage of sodium bicarbonate, based on kilogram body weight, is
    A. 3,000 milligrams
    B. 100 milligrams
    C. 10 milligrams
    D. 300 milligrams

14. Surveys indicate that approximately __________ of boys and __________ of girls have used anabolic/
    androgenic steroids.
    A. 0-1% and 4-5%
    B. 2-3% and 3-4%
    C. 3-4% and 2-3%
    D. 4-6% and 1-2%

15. Which of the following medical problems related to anabolic/androgenic steroids have NOT been
    documented in recent research reviews?
    A. Increased aggression, hostility and tendency to commit violent crimes
    B. Decreased strength of tendons, contributing to the potential for rupture
    C. Increased bone growth in children and adolescents
    D. Potentially irreversible appearance in females of secondary male sex characteristics
16. Supplements such as DHEA and Androstenedione are termed _________ because they are precursors for testosterone and are thus theorized to increase muscle mass and decrease body fat.
   A. prohormones
   B. cohormones
   C. semihormones
   D. None of the answers are correct.

17. Which of the following is NOT an accurate statement about DHEA or Androstenedione?
   A. Studies showed no significant effects of DHEA supplementation on serum testosterone levels, lean body mass or muscular strength in middle-aged or young men involved in resistance training.
   B. Androstenedione intake had no significant increase on serum testosterone concentration in young women.
   C. Use of Androstenedione is associated with increased health risks such as impaired lipid metabolism, decreased HDL cholesterol, testicular shrinkage and infertility.
   D. High serum DHEA levels have been associated with several health risks, including cancer.

18. Which of the following best describes the action of ginseng in the body?
   A. There is research suggesting ginseng use improves physical performance in humans.
   B. It is most effective in assisting with sleep and gastrointestinal disorders.
   C. It acts as an immune depressant and may influence the development of cancers.
   D. It is believed to influence neural and hormonal activity in the body.

19. Research regarding athletes using herbals as effective ergogenic aids
   A. has been relatively easy to do, since herbs are regulated as dietary supplements in the United States and are required to be standardized.
   B. is limited because much of what we know about the efficacy of herbal supplements is based on anecdotal data and poorly controlled studies.
   C. generally reports significant ergogenic effects with limited potential health risks.
   D. is extensive and provides conclusive evidence of their positive effects on performance.

20. Which of the following statements about the use of hormones or drugs to gain body weight is true?
   A. Testosterone is effective in increasing muscle mass, but not strength.
   B. Anabolic/androgenic steroids may increase muscle mass and strength, but have been associated with medical problems, from the relatively minor acne to coronary heart disease.
   C. HGH has been shown to be effective in increasing muscle size and strength.
   D. The long-term health effects of anabolic steroid use are well known and documented.

21. Which of the following has been shown to have a possible ergogenic effect on muscle size and strength?
   A. Human growth hormone
   B. Anabolic/androgenic steroids
   C. Ornithine
   D. Chromium
   E. Ginseng

22. About how many milligrams of caffeine are in a 6-ounce cup of perked coffee?
   A. 25-30
   B. 100-125
   C. 300-400
   D. 500-600
   E. 1,000

23. Which of the following is not a physiological effect of caffeine?
   A. decreases the metabolic rate
   B. stimulates the central nervous system
   C. increases the secretion of epinephrine
   D. increases heart rate and force of contraction
   E. increase the release of calcium ions in the muscle cell
24. Research generally supports the theory that caffeine may enhance performance in long distance endurance events. Which of the following is the LEAST likely hypothesis?
   A. it may exert a psychological stimulating effect
   B. it stimulates the release of epinephrine from the adrenal gland
   C. it decreases the use of both free fatty acids and muscle glycogen
   D. it may decrease the perception of effort during exercise
   E. it may exert a direct effect on the muscles to increase muscle contractile force

25. For an average size male adult (150 pounds), the consumption of four (4) drinks within a very short period of time would elevate the blood alcohol concentration (BAC) to about what level.
   A. 0.01
   B. 0.02
   C. 0.05
   D. 0.10
   E. 0.15

26. Increasing research suggests that moderate alcohol consumption, or "low risk" drinking, may reduce the risk of CHD and all-cause mortality. All of the following, except which, are hypothesized to contribute to this reduced risk?
   A. a relaxation effect and reduced anxiety
   B. decreased platelet aggregability (decreased possibility of blood clots)
   C. increased blood flow to the brain
   D. a direct toxic effect to kill cancer cells
   E. an increase in HDL-cholesterol

27. As a potential ergogenic aid, sodium bicarbonate would be most likely suited to which type of athlete?
   A. marathon runner
   B. gymnastic event such as the high bar
   C. 100 meter dash
   D. 400 meter run
   E. archery

28. Which of the following statements regarding the use of anabolic/androgenic steroids (AAS) is FALSE?
   A. AAS are a class of drugs designed to mimic the effects of testosterone, but maximizing the anabolic effects and minimizing the androgenic effects
   B. There are some approved medical applications of AAS,
   C. Athletes as young as middle school students (age 9-13) have been reported to use AAS as a means to enhance sport performance
   D. Although research indicates that AAS will increase muscle size, no studies have found improvement in muscle strength
   E. Use of AAS over prolonged periods has been associated with numerous health risks, including increased risk of cardiovascular disease

29. Which of the following statements regarding the use of prohormone dietary supplements, such as androstenedione and DHEA, is FALSE?
   A. Although previously marketed as dietary supplements, these prohormones have been classified as controlled drugs, similar to AAS
   B. DHEA and androstenedione may be converted to testosterone following ingestion
   C. Almost all studies show that DHEA and androstenedione increase muscle mass, muscular strength, and muscular power
   D. Although these prohormones have been marketed as dietary supplements and presumed to be safe, they may actually pose some health risks, such as lowering of HDL-cholesterol (the good cholesterol)
   E. Use of anabolic prohormones has been prohibited by most athletic governing organizations, such as the World Anti-Doping Agency (WADA)
30. Which of the following dietary supplements has the most research supporting its potential to help increase muscle mass and weight gain during a resistance-training program?
   A. Creatine
   B. Ginseng
   C. Ribose
   D. Carnitine
   E. Glucosamine/chondroitin

31. Which of the following dietary supplements marketed to strength-trained individuals are precursors, or prohormones, for testosterone?
   A. creatine and conjugated linoleic acid
   B. gamma oryzanol and ginseng
   C. HMB and tribulus terrestris
   D. carnitine and chromium
   E. androstenedione and DHEA

32. Caffeine may be classified as a
   A. food ingredient
   B. dietary supplement
   C. drug
   D. stimulant
   E. all of the above

33. A typical 6-ounce cup of coffee contains about how much caffeine?
   A. 10-20 mg
   B. 40-60 mg
   C. 80-135 mg
   D. 280-300 mg
   E. 400-500 mg

34. Based on current research findings, the most likely factor underlying the ergogenic effect of caffeine during exercise is its
   A. effect to stimulate the nervous system
   B. effect to increase fatty acid oxidation
   C. effect to increase red blood cells and hemoglobin
   D. effect to spare use of muscle glycogen
   E. effect to prevent dehydration

35. Although research indicates caffeine may be an effective ergogenic aid for a variety of exercise endeavors, research is least supportive of its ergogenic effect on which of the following?
   A. aerobic endurance exercise
   B. high-intensity intermittent exercise
   C. muscular strength
   D. a and c
   E. b and c

36. Although caffeine is generally regarded to be a relatively safe drug when consumed in moderate amounts, research suggests one of the following may be a health risk associated with caffeine intake via coffee or tea.
   A. Increased risk of cognitive decline
   B. Increased risk of high blood pressure
   C. Increased risk of asthma
   D. Increased risk of coronary heart disease
   E. Increased risk of diabetes
37. According to substantial research, which of the following herbal sport supplements has been shown to be very effective as a means to enhance aerobic endurance exercise performance?
   A. Ginseng
   B. Rpicatechin-3-gallate (EGCG)
   C. Rhodiola rosea
   D. Yohimbe
   E. None of the above

38. Being successful in sports is dependent on much more than just genetic endowment.
   True  False

39. Ethyl alcohol is normally classified as a psychoactive drug or nutrient.
   True  False

40. Alcohol has been effective as a means to improve performance due to its utilization as an energy source during exercise.
   True  False

41. Alcohol has a causal relationship with over 60 medical conditions and it is a major public health concern.
   True  False

42. Laboratory research has shown that alcohol ingestion can damage DNA at levels as low as 1-2 drinks.
   True  False

43. The most immediate effects of alcohol are on the brain, thus, the damage to the central nervous system is the only significant health hazard.
   True  False

44. Consumption of 2 drinks per day for men and 1 drink per day for women is unlikely to increase health risks.
   True  False

45. A 6-ounce cup of perk coffee contains an average range of 200-300 milligrams of caffeine.
   True  False

46. Caffeine supplementation may be an effective ergogenic for a variety of exercise tests.
   True  False

47. In some early research, caffeine ingestion prior to exercise has been shown to exert a glycogen-sparing effect.
   True  False

48. Caffeine withdrawal has a significant effect on performance.
   True  False

49. Athletes will not incur detrimental fluid-electrolyte imbalances if they consume caffeinated beverages in moderation and eat a typical diet.
   True  False

50. Caffeine has been banned by the International Olympic Committee in the past but has now been removed from the list of stimulants prohibited for use by athletes.
   True  False

51. Avoiding drinking milk or eating calcium-rich foods is highly recommended if you drink caffeinated beverages.
   True  False

52. Classified as an addictive drug, caffeine dependence is considered a serious form of drug abuse by the Diagnostic and Statistical Manual of Mental Disorders.
   True  False
53. The actual content of ephedrine may vary from that stated on the label because product inconsistency is common.  
   True   False

54. Ephedra has joined the list of substances banned by the International Olympic Committee and the World Anti-Doping Agency for use during competition and training.  
   True   False

55. The main reason to use sodium bicarbonate is to help buffer the lactic acid produced when the lactic acid energy system is utilized.  
   True   False

56. Human growth hormone has been associated with many adverse side effects, with long-term health risks very well known.  
   True   False

57. Testosterone has been shown to increase strength even without resistance training.  
   True   False

58. Several years after discontinuing usage, strength athletes who used anabolic/androgenic steroids are back to relatively normal risk for heart attack.  
   True   False

59. Anabolic/androgenic steroids are classified as experimental substances so unlawful purchase and/or distribution is subject to minor penalties.  
   True   False

60. The type and amount of ginsenosides present are strictly regulated among the different forms of ginseng.  
   True   False

61. Individuals who desire to experiment with long-term ginseng supplementation should consult with their physicians because ginseng may exacerbate various health problems.  
   True   False

62. Studies conducted with commercial herbal-based sports supplements generally report no significant ergogenic effects.  
   True   False

63. Numerous research studies with the dietary supplements DHEA and androstenedione (andro) have shown these products are effective as a means to increase serum testosterone levels and stimulate gains in muscle mass, strength and power.  
   True   False

64. Available laboratory research with human growth hormone supports the theory that supplementation will increase muscle mass, strength and power in young adult male athletes.  
   True   False

65. Most studies indicate human growth hormone has been shown to have an ergogenic effect on muscle size, strength and power in both young and older men.  
   True   False

66. In addition to the health risks associated with anabolic steroids, chemical analysis has revealed some potentially hazardous constituents in these "homemade" drugs.  
   True   False

67. The World Health Organization, in its recent Global Status Report on Alcohol and Health, reported that the harmful use of alcohol results in the death of 2.5 million people annually.  
   True   False
68. Recent estimates indicate 30 percent all automobile-crash fatalities are alcohol related.  
   True   False

69. Recent research suggests that there is a causal relationship between alcohol and arrhythmias, as well as sudden cardiac death.  
   True   False

70. Research suggests that alcohol activates the dopamine system, an important part of the brain reward system, and the positive psychological effects may reinforce the desire to continue to consume alcohol and lead to addiction.  
   True   False

71. Recent position stands by both the International Society of Sports Nutrition and the American College of Sports Medicine conclude that caffeine supplementation may help enhance aerobic endurance performance.  
   True   False

72. Numerous research studies and reviews conclude that caffeine intake prior to exercise in hot environmental conditions will increase body heat production, impair sweat production, and impair endurance exercise performance  
   True   False

73. Use of caffeine supplementation in attempts to enhance sport performance is prohibited by the World Anti-Doping Agency.  
   True   False

74. The caffeine content in energy drinks may vary tremendously, with some containing about 500 milligrams per serving.  
   True   False

75. Research findings regarding adverse health effects during pregnancy are equivocal, and thus moderation of or abstinence from caffeine consumption during pregnancy may be a prudent behavior.  
   True   False

76. Some sports scientists contend that optimizing nutritional strategies for athletes is a key to preventing use and abuse of anabolic/androgenic drugs in sport.  
   True   False
13 Key

1. The "proof" is a measure of the alcohol content in the beverage and is
   A. double the percentage.
   B. half the percentage.
   C. equal to the percentage.
   D. None of the answers are correct.

2. Alcohol, when consumed in small amounts (one to two drinks),
   A. greatly deteriorates physiological processes associated with maximal aerobic exercise.
   B. has been shown to impair exercise performance on the following day.
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   D. adversely affects accuracy in competition, such as pistol shooting and archery.

3. Which one of the following allegations regarding alcohol is NOT accurate?
   A. There is no evidence that alcohol can substitute for other fat sources in the body
   B. Alcohol may reduce gluconeogenesis by the liver and glucose uptake by the legs during the latter stages of exercise
   C. Alcohol ingestion may decrease urine production by decreasing release of the anti-diuretic hormone
   D. Research does not support the use of alcohol in sports involving perceptual-motor activities

4. When one considers Fetal Alcohol Syndrome and Fetal Alcohol Effects, research indicates all but which of the following?
   A. Women who drink should abstain during the pregnancy
   B. One to three beers or glasses of wine per day may help reduce emotional stress and will not affect the developing fetus
   C. FAE children are easily distracted and have poor attention spans
   D. No "safe" amount of alcohol during pregnancy has been determined
5. Recent epidemiological research has shown that
A. light to moderate consumption of alcohol is associated with increased mortality.
B. alcohol reduces the risk of heart disease by raising the levels of LDL cholesterol.
C. pigments in red wine contain polyphenols and other phytochemicals that may help increase coronary heart disease.
**D.** moderate alcohol should not be construed as "healthy alcohol use" and abstinence is generally recommended by health authorities for some individuals.

6. Which of the following contains the most alcohol per standard serving size?
A. Beer
B. Wine
C. Hard liquor
**D.** They all contain approximately the same amount per typical serving

7. Which of the following is NOT a function of caffeine?
A. Caffeine functions as a stimulant of the central nervous system and stimulates heart function and blood circulation.
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C. Caffeine increases alertness and a feeling of well-being.
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A. caffeine may raise serum FFA levels at rest just before exercise and increase the use of fat as an energy source during exercise.
B. the perception of effort during exercise is heightened and thereby improves performance.
C. caffeine ingestion increases epinephrine levels during exercise and may exert a stimulating psychological effect.
D. abstaining from caffeine for 2-4 days prior to competition heightens the effect of caffeine when taken.

9. Research supports that __________ appears to be an effective ergogenic aid.
A. ginseng
B. ciwujia
C. Eleutherococcus senticosus
**D.** caffeine
10. Which of the following generalizations is acceptable when considering the impact of caffeine as a significant health risk?
   A. There are no known cardiovascular problems associated with caffeine ingestion
   B. Massive doses of caffeine may be fatal, while lesser amounts confer some possible health benefits
   C. A moderate level of caffeine consumption would be about 600-800 milligrams per day
   D. There is a proven link between caffeine and cancer

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-04
Question Type: Multiple Choice
Topic: Nutrition and Disease
Williams - Chapter 13 #10

11. Health problems associated with use of ephedra include all of the following EXCEPT
   A. cardiac arrest and sudden death.
   B. prolonged extreme elation.
   C. psychosis and hallucinations.
   D. suicidal ideation.

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-05
Question Type: Multiple Choice
Topic: Nutrition and Disease
Williams - Chapter 13 #11

12. Of the following, which one is NOT a reported result of using sodium bicarbonate?
   A. Sodium bicarbonate supplementation does appear to enhance performance in exercise tasks
      dependent upon the lactic acid system
   B. Sodium bicarbonate supplementation has produced improvement in some aerobic endurance exercise tasks
   C. The usual experimental protocol is to ingest a dosage of sodium bicarbonate immediately prior to the exercise task to get maximum benefits
   D. Doses of sodium bicarbonate that are higher than recommended may cause gastrointestinal distress

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-06
Question Type: Multiple Choice
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #13

13. The standard dosage of sodium bicarbonate, based on kilogram body weight, is
   A. 3,000 milligrams
   B. 100 milligrams
   C. 10 milligrams
   D. 300 milligrams

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-06
Question Type: Multiple Choice
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #12

14. Surveys indicate that approximately ________ of boys and ________ of girls have used anabolic/androgenic steroids.
   A. 0-1% and 4-5%
   B. 2-3% and 3-4%
   C. 3-4% and 2-3%
   D. 4-6% and 1-2%

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-07
Question Type: Multiple Choice
Topic: Life Cycle
Williams - Chapter 13 #14
15. Which of the following medical problems related to anabolic/androgenic steroids have NOT been documented in recent research reviews?
A. Increased aggression, hostility and tendency to commit violent crimes
B. Decreased strength of tendons, contributing to the potential for rupture
C. Increased bone growth in children and adolescents
D. Potentially irreversible appearance in females of secondary male sex characteristics

16. Supplements such as DHEA and Androstenedione are termed ______ because they are precursors for testosterone and are thus theorized to increase muscle mass and decrease body fat.
A. prohormones
B. cohormones
C. semihormones
D. None of the answers are correct.

17. Which of the following is NOT an accurate statement about DHEA or Androstenedione?
A. Studies showed no significant effects of DHEA supplementation on serum testosterone levels, lean body mass or muscular strength in middle-aged or young men involved in resistance training
B. Androstenedione intake had no significant increase on serum testosterone concentration in young women
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D. High serum DHEA levels have been associated with several health risks, including cancer

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A. There is research suggesting ginseng use improves physical performance in humans
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B. is limited because much of what we know about the efficacy of herbal supplements is based on anecdotal data and poorly controlled studies.
C. generally reports significant ergogenic effects with limited potential health risks.
D. is extensive and provides conclusive evidence of their positive effects on performance.
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A. Testosterone is effective in increasing muscle mass, but not strength
B. Anabolic/androgenic steroids may increase muscle mass and strength, but have been associated with medical problems, from the relatively minor acne to coronary heart disease
C. HGH has been shown to be effective in increasing muscle size and strength
D. The long-term health effects of anabolic steroid use are well known and documented

21. Which of the following has been shown to have a possible ergogenic effect on muscle size and strength?
A. Human growth hormone
B. Anabolic/androgenic steroids
C. Ornithine
D. Chromium
E. Ginseng

22. About how many milligrams of caffeine are in a 6-ounce cup of perkced coffee?
A. 25-30
B. 100-125
C. 300-400
D. 500-600
E. 1,000

23. Which of the following is not a physiological effect of caffeine?
A. decreases the metabolic rate
B. stimulates the central nervous system
C. increases the secretion of epinephrine
D. increases heart rate and force of contraction
E. increase the release of calcium ions in the muscle cell

24. Research generally supports the theory that caffeine may enhance performance in long distance endurance events. Which of the following is the LEAST likely hypothesis?
A. it may exert a psychological stimulating effect
B. it stimulates the release of epinephrine from the adrenal gland
C. it decreases the use of both free fatty acids and muscle glycogen
D. it may decrease the perception of effort during exercise
E. it may exert a direct effect on the muscles to increase muscle contractile force
25. For an average size male adult (150 pounds), the consumption of four (4) drinks within a very short period of time would elevate the blood alcohol concentration (BAC) to about what level.
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   E. 0.15

26. Increasing research suggests that moderate alcohol consumption, or "low risk" drinking, may reduce the risk of CHD and all-cause mortality. All of the following, except which, are hypothesized to contribute to this reduced risk?
   A. a relaxation effect and reduced anxiety
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   C. increased blood flow to the brain
   D. a direct toxic effect to kill cancer cells
   E. an increase in HDL-cholesterol

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   B. gymnastic event such as the high bar
   C. 100 meter dash
   D. 400 meter run
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28. Which of the following statements regarding the use of anabolic/androgenic steroids (AAS) is FALSE?
   A. AAS are a class of drugs designed to mimic the effects of testosterone, but maximizing the anabolic effects and minimizing the androgenic effects
   B. There are some approved medical applications of AAS,
   C. Athletes as young as middle school students (age 9-13) have been reported to use AAS as a means to enhance sport performance
   D. Although research indicates that AAS will increase muscle size, no studies have found improvement in muscle strength
   E. Use of AAS over prolonged periods has been associated with numerous health risks, including increased risk of cardiovascular disease
29. Which of the following statements regarding the use of prohormone dietary supplements, such as androstenedione and DHEA, is FALSE?  
A. Although previously marketed as dietary supplements, these prohormones have been classified as controlled drugs, similar to AAS  
B. DHEA and androstenedione may be converted to testosterone following ingestion  
C. Almost all studies show that DHEA and androstenedione increase muscle mass, muscular strength, and muscular power  
D. Although these prohormones have been marketed as dietary supplements and presumed to be safe, they may actually pose some health risks, such as lowering of HDL-cholesterol (the good cholesterol)  
E. Use of anabolic prohormones has been prohibited by most athletic governing organizations, such as the World Anti-Doping Agency (WADA)  

Bloom's Level: 1. Remember  
Gradable: automatic  
Learning Objective: 13-07  
Question Type: Multiple Choice  
Topic: Sports and Exercise Nutrition  
Williams - Chapter 13 #29

30. Which of the following dietary supplements has the most research supporting its potential to help increase muscle mass and weight gain during a resistance-training program?  
A. Creatine  
B. Ginseng  
C. Ribose  
D. Carnitine  
E. Glucosamine/chondroitin  

Bloom's Level: 1. Remember  
Gradable: automatic  
Learning Objective: 13-10  
Question Type: Multiple Choice  
Topic: Sports and Exercise Nutrition  
Williams - Chapter 13 #30

31. Which of the following dietary supplements marketed to strength-trained individuals are precursors, or prohormones, for testosterone?  
A. creatine and conjugated linoleic acid  
B. gamma oryzanol and ginseng  
C. HMB and tribulus terrestris  
D. carnitine and chromium  
E. androstenedione and DHEA  

Bloom's Level: 1. Remember  
Gradable: automatic  
Learning Objective: 13-07  
Question Type: Multiple Choice  
Topic: Sports and Exercise Nutrition  
Williams - Chapter 13 #31

32. Caffeine may be classified as a  
A. food ingredient  
B. dietary supplement  
C. drug  
D. stimulant  
E. all of the above  

Bloom's Level: 1. Remember  
Gradable: automatic  
Learning Objective: 13-03  
Question Type: Multiple Choice  
Topic: Sports and Exercise Nutrition  
Williams - Chapter 13 #32
33. A typical 6-ounce cup of coffee contains about how much caffeine?
A. 10-20 mg
B. 40-60 mg
C. 80-135 mg
D. 280-300 mg
E. 400-500 mg

Bloom's Level: 1. Remember
Grades: automatic
Learning Objective: 13-03
Question Type: Multiple Choice
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #33

34. Based on current research findings, the most likely factor underlying the ergogenic effect of caffeine during exercise is its
A. effect to stimulate the nervous system
B. effect to increase fatty acid oxidation
C. effect to increase red blood cells and hemoglobin
D. effect to spare use of muscle glycogen
E. effect to prevent dehydration

Bloom's Level: 1. Remember
Grades: automatic
Learning Objective: 13-03
Question Type: Multiple Choice
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #34

35. Although research indicates caffeine may be an effective ergogenic aid for a variety of exercise endeavors, research is least supportive of its ergogenic effect on which of the following?
A. aerobic endurance exercise
B. high-intensity intermittent exercise
C. muscular strength
D. a and c
E. b and c

Bloom's Level: 1. Remember
Grades: automatic
Learning Objective: 13-03
Question Type: Multiple Choice
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #35

36. Although caffeine is generally regarded to be a relatively safe drug when consumed in moderate amounts, research suggests one of the following may be a health risk associated with caffeine intake via coffee or tea.
A. Increased risk of cognitive decline
B. Increased risk of high blood pressure
C. Increased risk of asthma
D. Increased risk of coronary heart disease
E. Increased risk of diabetes

Bloom's Level: 1. Remember
Grades: automatic
Learning Objective: 13-04
Question Type: Multiple Choice
Topic: Nutrition and Disease
Williams - Chapter 13 #36
37. According to substantial research, which of the following herbal sport supplements has been shown to be very effective as a means to enhance aerobic endurance exercise performance?
   A. Ginseng
   B. Epigallocatechin-3-gallate (EGCG)
   C. Rhodiola rosea
   D. Yohimbine
   **E. None of the above**

38. Being successful in sports is dependent on much more than just genetic endowment.
   **TRUE**

39. Ethyl alcohol is normally classified as a psychoactive drug or nutrient.
   **TRUE**

40. Alcohol has been effective as a means to improve performance due to its utilization as an energy source during exercise.
   **FALSE**

41. Alcohol has a causal relationship with over 60 medical conditions and it is a major public health concern.
   **TRUE**

42. Laboratory research has shown that alcohol ingestion can damage DNA at levels as low as 1-2 drinks.
   **TRUE**

43. The most immediate effects of alcohol are on the brain, thus, the damage to the central nervous system is the only significant health hazard.
   **FALSE**
44. Consumption of 2 drinks per day for men and 1 drink per day for women is unlikely to increase health risks.  **TRUE**

45. A 6-ounce cup of perked coffee contains an average range of 200-300 milligrams of caffeine.  **FALSE**

46. Caffeine supplementation may be an effective ergogenic for a variety of exercise tests.  **TRUE**

47. In some early research, caffeine ingestion prior to exercise has been shown to exert a glycogen-sparing effect.  **TRUE**

48. Caffeine withdrawal has a significant effect on performance.  **FALSE**

49. Athletes will not incur detrimental fluid-electrolyte imbalances if they consume caffeinated beverages in moderation and eat a typical diet.  **TRUE**

50. Caffeine has been banned by the International Olympic Committee in the past but has now been removed from the list of stimulants prohibited for use by athletes.  **TRUE**
51. Avoiding drinking milk or eating calcium-rich foods is highly recommended if you drink caffeinated beverages.
**FALSE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-04
Question Type: True/False
Topic: Healthy Diet Guidelines
Williams - Chapter 13 #51

52. Classified as an addictive drug, caffeine dependence is considered a serious form of drug abuse by the Diagnostic and Statistical Manual of Mental Disorders.
**FALSE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-04
Question Type: True/False
Topic: Nutrition and Disease
Williams - Chapter 13 #52

53. The actual content of ephedrine may vary from that stated on the label because product inconsistency is common.
**TRUE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-05
Question Type: True/False
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #53

54. Ephedra has joined the list of substances banned by the International Olympic Committee and the World Anti-Doping Agency for use during competition and training.
**FALSE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-05
Question Type: True/False
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #53

55. The main reason to use sodium bicarbonate is to help buffer the lactic acid produced when the lactic acid energy system is utilized.
**TRUE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-06
Question Type: True/False
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #56

56. Human growth hormone has been associated with many adverse side effects, with long-term health risks very well known.
**FALSE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-07
Question Type: True/False
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #57

57. Testosterone has been shown to increase strength even without resistance training.
**TRUE**

Bloom's Level: 1. Remember
Gradable: automatic
Learning Objective: 13-07
Question Type: True/False
Topic: Sports and Exercise Nutrition
Williams - Chapter 13 #57
58. Several years after discontinuing usage, strength athletes who used anabolic/androgenic steroids are back to relatively normal risk for heart attack.  
**FALSE**

59. Anabolic/androgenic steroids are classified as experimental substances so unlawful purchase and/or distribution is subject to minor penalties.  
**FALSE**

60. The type and amount of ginsenosides present are strictly regulated among the different forms of ginseng.  
**FALSE**

61. Individuals who desire to experiment with long-term ginseng supplementation should consult with their physicians because ginseng may exacerbate various health problems.  
**TRUE**

62. Studies conducted with commercial herbal-based sports supplements generally report no significant ergogenic effects.  
**TRUE**

63. Numerous research studies with the dietary supplements DHEA and androstenedione (andro) have shown these products are effective as a means to increase serum testosterone levels and stimulate gains in muscle mass, strength and power.  
**FALSE**

64. Available laboratory research with human growth hormone supports the theory that supplementation will increase muscle mass, strength and power in young adult male athletes.  
**FALSE**
65. Most studies indicate human growth hormone has been shown to have an ergogenic effect on muscle size, strength and power in both young and older men. **FALSE**

66. In addition to the health risks associated with anabolic steroids, chemical analysis has revealed some potentially hazardous constituents in these "homemade" drugs. **FALSE**

67. The World Health Organization, in its recent Global Status Report on Alcohol and Health, reported that the harmful use of alcohol results in the death of 2.5 million people annually. **TRUE**

68. Recent estimates indicate 30 percent all automobile-crash fatalities are alcohol related. **TRUE**

69. Recent research suggests that there is a causal relationship between alcohol and arrhythmias, as well as sudden cardiac death. **TRUE**

70. Research suggests that alcohol activates the dopamine system, an important part of the brain reward system, and the positive psychological effects may reinforce the desire to continue to consume alcohol and lead to addiction. **TRUE**

71. Recent position stands by both the International Society of Sports Nutrition and the American College of Sports Medicine conclude that caffeine supplementation may help enhance aerobic endurance performance. **TRUE**
72. Numerous research studies and reviews conclude that caffeine intake prior to exercise in hot environmental conditions will increase body heat production, impair sweat production, and impair endurance exercise performance  
**FALSE**

73. Use of caffeine supplementation in attempts to enhance sport performance is prohibited by the World Anti-Doping Agency.  
**FALSE**

74. The caffeine content in energy drinks may vary tremendously, with some containing about 500 milligrams per serving.  
**TRUE**

75. Research findings regarding adverse health effects during pregnancy are equivocal, and thus moderation of or abstinence from caffeine consumption during pregnancy may be a prudent behavior.  
**TRUE**

76. Some sports scientists contend that optimizing nutritional strategies for athletes is a key to preventing use and abuse of anabolic/androgenic drugs in sport.  
**TRUE**
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