Fitness Nutrition for
Special Dietary Needs

CORRESPONDENCE EDUCATION PROGRAM # 2013-109

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Learning Objectives:
Fitness Nutrition for Special Dietary Needs

After reading Fitness Nutrition for Special Dietary Needs, the participant will be able to:

1. Understand how hypertrophy can be achieved safely
2. Understand how to target various muscles based on their location and attachments
3. Understand and implement workout sets, intervals, rest, and recovery based on one’s goals
4. Understand the principles of Focused Contraction Training (FCT)
5. Learn and understand how to increase mass by utilizing the body’s natural resources.
6. Implement a mass generator program and safely perform the exercises involved.
7. Understand the basic nutrients, their roles, and how the body utilizes them as fuel.
8. Facilitate the body fat blitz nutrition and workout program
9. Understand and implement appropriately the 12 steps to intensify
10. Understand the pros and cons of supplementation
11. Properly implement the Hybrid Hard Body program
12. Safely and effectively teach/perform exercises properly
13. Understand and implement injury prevention techniques
Course Examination:
Fitness Nutrition for Special Dietary Needs

Choose the best answer. Mark all answers on the answer sheet.

1. The two categories that the Dietary Reference Intake tables use for children are:
   A. Ages 1-8 and ages 9 and older
   B. Ages 1-3 and ages 4-8
   C. Ages 6-11 and ages 9-13
   D. Ages 9-13 and 14 -18

2. On the average, at what age do males experience their rapid growth spurt?
   A. 12 – 15 years of age
   B. 10 – 13 years of age
   C. 9 – 14 years of age
   D. 9 – 15 years of age

3. When children are experiencing their rapid growth, this is known as:
   A. Catabolism
   B. Metabolism
   C. Anabolism
   D. Homeostasis

4. While proper hydration is important for everyone, why is it more so in children?
   A. Because children are not as capable of tolerating heat as adults
   B. Because children play more outside than adults
   C. Because adults have a larger surface area
   D. Because adults are better able to retain fluids than children

5. Spoon shaped nails may indicate a nutrient deficiency in:
   A. Zinc
   B. Protein
   C. Vitamin K
   D. Iron

6. What percentage of total energy intake should a young athlete consume in carbohydrates?
   A. 75%
   B. 60%
   C. 50%
   D. 40%

7. A 30 kg child who is 12 years old should consume how many grams of protein per day?
   A. 28.5 g
   B. 12 g
   C. 34.5 g
   D. 22 g
8. Fats that should compromise more of the 25% recommended for children are:
   A. Trans fats
   B. Saturated
   C. Unsaturated
   D. Hydrogenated fats

9. Which statement below is not true?
   A. Only true deficiencies in iron warrant supplementation
   B. Iron intake should be checked among young girls beginning menses
   C. Non-heme iron is derived from non-animal protein
   D. Boys do not become iron deficient

10. Which statement is not true concerning children and snacking?
    A. Eating nutrient dense foods for snacks is best
    B. Snacking should be limited in children since it leads to weight gain
    C. Snacking makes up 1/3 of children's total caloric intake
    D. Because children have smaller stomachs, healthy snacking is beneficial

11. Why is it not recommended to measure body composition on children?
    A. Because children are not at risk for obese related diseases and measuring their body fat will only embarrass them.
    B. Because it's unusual for a child to be obese
    C. Because skin calipers are only designed for adults
    D. Because the proportion of body water and bone density are very different in children

12. The female athlete triad is:
    A. Composed of disordered eating, dysmenorrhea, and osteoporosis
    B. Composed of disordered eating, amenorrhea, and osteoarthritis
    C. Composed of disordered eating, amenorrhea, and osteoporosis
    D. Composed of disordered eating, menses, and osteoporosis

13. What are the three minerals that make up the group of electrolytes?
    A. Calcium, potassium, sodium
    B. Chloride, potassium, sodium
    C. Calcium, potassium, magnesium
    D. Glucose, potassium, sodium

14. Which of the following is not a sign or symptom of protein-energy malnutrition?
    A. Swelling in the face
    B. Cracks around the mouth
    C. Brittle nails
    D. Wiry hair

15. What is considered appropriate physical activity guidelines for children or adolescents?
    A. An accumulation of 60 minutes on all or most days of the week
    B. An accumulation of 30 - 45 minutes 3-5 days per week
    C. 20 – 30 minutes, 3-5 days per week
    D. 20 – 30 minutes, 6 – 7 days per week

16. All of the following are natural physiological changes that occur with aging EXCEPT:
    A. Less stomach acid is produced
    B. A decreased thirst sensation
    C. Less vitamin D is produced by the skin
    D. Anabolic metabolism exceeds catabolic metabolism
17. How much protein should your 74 year old male who weighs 197 lbs eat per day?
   A. 197 g
   B. 74 g
   C. 89 g
   D. 134 g

18. Why did the Tufts Food Guide Pyramid decrease the amount of servings of carbohydrates from 6-11 as recommended by the general MyPyramid to just 6 for older adults?
   A. Because of the increased risk of heart disease
   B. Because older adults need more protein and less carbohydrates
   C. Because of decrease glucose tolerance
   D. Because older adults tend to not like carbohydrates as they age

19. How much cholesterol should be in an older adult’s diet per day?
   A. < 300 mg
   B. 1 tsp
   C. 65 g
   D. 2400 mg

20. Which statements is false concerning fiber for older adults?
   A. Soluble fiber can lower cholesterol levels
   B. It helps to stabilize glucose levels
   C. Soluble fiber is more important than insoluble fiber in the diet
   D. It increases the rate of nutrient absorption in the small intestines

21. How much of an older adults total fat intake should be made up of monounsaturated fat?
   A. 10%
   B. 13%
   C. 25%
   D. 30%

22. All of the following are excellent sources of Omega-3 fatty acids EXCEPT:
   A. Fatty fish
   B. Canola oil
   C. Animal products
   D. Walnuts

23. Calcium channel blockers should not be combined with which foods?
   A. Alcohol
   B. Caffeine
   C. Dark green leafy vegetables
   D. Grapefruit

24. What percentage of the older adult population has low intake of Vitamin D?
   A. 10%
   B. 15%
   C. 30%
   D. 60%

25. How much outdoor sunlight minimum should an older adult get each day in order to provide enough vitamin D?
   A. 15 minutes
   B. 5 minutes
   C. 30 minutes
   D. 1 hour
26. Why is calcium citrate recommended as a calcium supplement for older adults?
   A. Because it taste better and the tablets are not as large as the other supplements
   B. Because if provides more calcium than other supplements
   C. Because it does not require stomach acid for absorption
   D. Because it absorbs slower into the system

27. Deficiencies of vitamin B12 can lead to:
   A. Megaloblastic anemia
   B. Avascular anemia
   C. Low system levels of homocysteine
   D. Dementia

28. At what age does cardiovascular function begin to decrease 5-15% per decade?
   A. 25
   B. 35
   C. 45
   D. 55

29. At what age does the number of alveoli and lung capillaries begin to decrease?
   A. 20
   B. 30
   C. 40
   D. 50

30. Which of the following describes American College of Sports Medicine’s recommendations for older adults when strength training?
   A. 8-10 exercises, 6-8 reps, 3 days per week
   B. 10-15 exercises, 8-10 reps, 2 days per week
   C. 8-10 exercises, 10 – 15 reps, 2 days per week
   D. 8-10 exercises, 15-20 reps, 3 days per week

31. Which statement is not recommended by American College of Sports Medicine concerning older adults and exercise?
   A. They should get a physician supervised stress test before exercising
   B. They should exhale on the lifting and inhale on the lowering of weights
   C. They should stretch on a regular basis
   D. They should warm up for about 5-10 minutes before exercise

32. Which statement is true concerning menopause?
   A. Menopause begins when the body stops producing progesterone and estrogen which then causes the production of follicle stimulating hormone to decrease.
   B. Peri-menopause starts about 5 years after the onset of menopause and signifies the decrease of menopausal symptoms
   C. Women who smoke are often start menopause later in life than the average non-smoking female
   D. Women who started their menstrual cycles at an older than average age typically start menopause at an older than average age.

33. The two most common diseases that are associated with menopause are osteoporosis and:
   A. Osteoarthritis
   B. Cardiovascular disease
   C. Type I diabetes
   D. Dementia
34. Phytoestrogens have been recommended to clinically treat all of the following EXCEPT:
   A. Cancer prevention
   B. Elevated cholesterol
   C. Osteoporosis
   D. Menopausal symptoms

35. Which statement is correct concerning isoflavones?
   A. Safe levels of isoflavones have not been set yet
   B. Amounts of 100 mg or more per day is considered safe
   C. Studies have shown great reductions in hot flashes in women who increase their intake of isoflavones
   D. Soy protein is much better than isoflavones in controlling hot flashes

36. Which of the following provides the most amount of calcium absorption while having the least amount of lead in it making it the better choice for calcium supplementation?
   A. Carbonate (500 mg)
   B. Oyster Shell (500 mg)
   C. Citrate (500 mg)
   D. Milk (8 oz)

37. Which statement is correct?
   A. Too much protein can increase bone loss
   B. Tea and chocolate are wonderful foods that help increase bone density
   C. Drinking 1 carbonated beverage a day is not harmful to bone density
   D. While smoking increases the risk of other diseases, it has not been shown to increase the risk of osteoporosis

38. All of the following are nutritional ways to decrease the development of CVD in postmenopausal women EXCEPT:
   A. Increase garlic intake
   B. Increase soy protein
   C. Increase iron intake
   D. Increase omega-3 fatty acids

39. Which of the following does not have a DRI established yet?
   A. Magnesium
   B. Omega 3 fatty acids
   C. Selenium
   D. Energy

40. What is the risk of death after a hip fracture?
   A. 60-70%
   B. 40-57%
   C. 32-47%
   D. 12-20%

41. For the benefit of weight loss, how long should one exercise per week?
   A. 20 minutes 3-5 times per week
   B. 200 minutes
   C. 100 minutes
   D. 30 minutes 3 days per week
42. Which statement is correct concerning stretching?
   A. Stretching before exercise is more important than after exercise
   B. Stretching should be done for 20 minutes before exercise and 10 minutes after exercise
   C. Stretching after exercise is more important than before exercise
   D. Balance is not affected by one’s flexibility

43. Which of the following is not a normal change that takes place during pregnancy?
   A. Plasma volume increases by about 40%
   B. Blood pressure increases during the first two trimesters
   C. Cardiac output increases
   D. Edema may increase

44. How much should a woman increase her calories during pregnancy?
   A. Eating for two is a good rule of thumb
   B. 350 kcals per day more during the 2nd and 3rd trimester
   C. 150 kcals per day more during the 2nd and 3rd trimester
   D. 350 kcals per day more during the 1st trimester

45. Two nutrients of importance that are often increased during pregnancy are:
   A. Iron and folic acid
   B. Iron and calcium
   C. Calcium and folic acid
   D. Folic acid and zinc

46. Anencephaly is:
   A. Where the spinal cord of the baby does not fully close
   B. Where the baby has a build up of cerebral spinal fluid in the head
   C. Where the baby’s brain is either underdeveloped or not developed at all
   D. Where the baby’s brain has a lack of blood flow

47. Appropriate weight gain during pregnancy is about:
   A. 18 lbs
   B. 35 lbs
   C. 50 lbs
   D. 60 lbs

48. What is preeclampsia?
   A. A non-life threatening condition where the mother has increased protein in her urine thus causing an increase in her blood pressure
   B. A life threatening condition where the placenta has separated from the mother’s uterine wall and decreasing nourishment to the baby
   C. A non-life threatening condition where the mother’s blood sugar has dipped too low causing light headedness and dizziness
   D. A life-threatening condition for both mother and baby when the mother’s blood pressure rises and there is an increase in protein in the urine.

49. According to ACOG (American College of Obstetrics and Gynecology), which of the exercises below is considered safe for pregnant women?
   A. Outdoor bike riding
   B. Horseback riding
   C. Yoga
   D. Step aerobics
50. Which of the following is an absolute contraindication for exercise during pregnancy?
   A. Past history of preterm labor
   B. Cardiac disease
   C. Pulmonary disease
   D. Chronic hypertension

51. What food listed below is generally not eaten by a Pesco-vegetarian?
   A. Grains
   B. Dairy
   C. Eggs
   D. Poultry

52. Which type of vegetarian is too strict to provide all the nutrients a body needs?
   A. Lacto-vegetarian
   B. Vegan
   C. Ovo-vegetarian
   D. Macrobiotic

53. Which nutrient do vegans need to supplement because it is only derived from animal foods?
   A. B6
   B. B12
   C. Calcium
   D. Vitamin K

54. A chemical compound found in foods that may help decrease or prevent chronic diseases is called:
   A. Chemoprevention
   B. Functional Food
   C. Nutraceutical
   D. Phytochemical

55. A complete protein is:
   A. A protein that must be supplemented in a vegan diet
   B. Is found in plant foods
   C. Is found in egg whites
   D. Is a challenge for vegans to get in their diet

56. How much protein per day should your 136 lb female vegan eat?
   A. 62 g
   B. 49 g
   C. 75 g
   D. 87 g

57. Which statement is correct in discussing zinc in vegetarian diets?
   A. Zinc is only found in meat products, therefore many vegetarians are lacking in zinc
   B. Zinc is not naturally found in many foods
   C. Vegans need to eat zinc fortified foods
   D. Zinc is found in many seeds such as pumpkin seeds

58. The FITT principle is:
   A. A guideline for vegetarians to consume folate and iron
   B. Frequency, intensity, time, type for exercise recommendations
   C. A method to calculate exercise heart rate
   D. Physical activity recommendations for athletes
59. Obesity has been linked to all of the following diseases EXCEPT:
   A. Hypertension
   B. Cardiovascular disease
   C. Type I diabetes
   D. Gallbladder disease

60. What BMI classification would a male who is 5 feet, 11 inches and weighs 205 lbs.?
   A. Obese class II
   B. Normal range
   C. Obese class I
   D. Overweight

61. Which method of measuring obesity does not take into consideration the difference between lean mass and fat mass?
   A. BMI
   B. BIA
   C. DEXA
   D. Skinfold caliper

62. Which method is considered the “Gold Standard” when it comes to assessing body composition?
   A. Bod Pod
   B. BMI
   C. Underwater weighing
   D. Skinfold caliper

63. What percentage of adults is considered obese in the United States?
   A. 85%
   B. 75%
   C. 65%
   D. 55%

64. A person who carries his weight in the abdominal area is considered what body type?
   A. Gynoid
   B. Android
   C. Pear shaped
   D. Ectomorph

65. Which energy expenditure component is considered more accurate?
   A. BMR
   B. DIT
   C. RMR
   D. NEAT

66. What percentage of total energy expenditure does dietary induced thermogenesis make up?
   A. 60-75%
   B. 20-40%
   C. 5-15%
   D. 40-60%

67. Your client would like to lose 12 lbs. She burns 200 kcals per day exercising 4 days per week and cuts her caloric intake by 150 kcals per day, how long will it take her to safely lose this weight?
   A. 8 weeks
   B. 12 weeks
   C. 20 weeks
   D. 24 weeks
68. Which common dietary supplement is used because it is believed to decrease the amount of fat absorbed in the digestive system?
   A. Caffeine
   B. Chromium
   C. Carnitine
   D. Chitosan

69. What specific ingredient in Green Tea is supposed to help with weight loss?
   A. Linoleic Acid
   B. EGCG
   C. HCA
   D. Coleus forskohlii

70. Which statement is incorrect?
   A. Spot toning is possible
   B. Spot reduction is possible
   C. It is not possible to change your body type
   D. Strength training can indirectly help you to lose weight

71. Which statement is correct about diabetes?
   A. About 5-10% of the diabetic population has Type I
   B. Type II diabetes is also known as Juvenile Diabetes
   C. Type I diabetes is also referred to as non-insulin-dependent diabetes mellitus
   D. Type I diabetes is preventable

72. All of the following are characteristics of Type I diabetes EXCEPT:
   A. Underweight
   B. Frequent thirst
   C. Sour smelling breath
   D. Normal weight

73. Which statement is false concerning Type II diabetes?
   A. Obesity is a common cause of Type II diabetes
   B. Tingling or numbness in the hands or feet may be a symptom
   C. Diet and exercise can control Type II diabetes
   D. Insulin is the medication of choice for treatment

74. Which statement is correct concerning gestational diabetes?
   A. Gestational diabetes in women can cause their baby to lose too much weight and increase the risk of a premature delivery
   B. Women who develop gestational diabetes are at a greater risk of developing Type II diabetes later
   C. Gestational diabetes is often treated with insulin
   D. Women who develop gestational diabetes are at a greater risk of developing Type I diabetes later

75. Metabolic syndrome is defined as having several conditions together. Which one of the following is not considered one of those conditions?
   A. Fasting blood glucose above 110 mg per dl
   B. HDL above 40 mg per dl
   C. Triglyceride levels above 150 mg per dl
   D. Blood pressure above 130/85 mm Hg
76. PCOS is characterized by all of the following except:
   A. Obesity
   B. Male patterned baldness in women
   C. Large bone and muscles in men
   D. Possible insulin resistance or impaired glucose intolerance

77. How much carbohydrate should your male diabetic client eat per day who weighs 236 lbs and exercises about 30 minutes per day most days of the week?
   A. 850 g
   B. 900 g
   C. 1000 g
   D. 1050 g

78. Which food would be best consumed 30-60 minutes before a diabetic workouts to prevent hypoglycemia?
   A. Jelly beans
   B. Oatmeal
   C. Grapes
   D. Orange

79. Which of the following is a contraindication to exercise for a diabetic?
   A. A blood glucose level above 150 mg per dl
   B. Ketones present in the urine
   C. Hyperglycemia
   D. Controlled diabetes

80. Which statement is correct when discussing exercise programs to a Type I diabetic?
   A. Blood glucose is not adversely affected by exercise
   B. If less insulin is needed due to your exercise program, the client can go ahead and change it himself.
   C. Blood glucose may decrease during exercise, but increase post-exercise
   D. Since obesity is an issue with Type I diabetics, exercise should be designed for weight loss with multiple bouts throughout the day.

81. What percentage of the U.S population has been diagnosed or affected by an eating disorder?
   A. 1-4%
   B. 4-8%
   C. 5-15%
   D. 35%

82. What percentage of binge eaters are male?
   A. 10%
   B. 15%
   C. 25%
   D. 35%

83. Oligomenorrhea is:
   A. Lack of a menstrual cycle
   B. Infrequent menstrual cycles
   C. Painful menstrual cycles
   D. Distorted body image about the time of onset of the menstrual cycle
84. Lanugo is:
A. Brittle nails
B. Excess baby fine, downy hair that appears on an adult due to malnutrition
C. The inability to tolerate cold temperatures due to lack of body fat
D. The alternation between diarrhea and constipation in someone who has malnutrition

85. What percentage of women will suffer from bulimia nervosa in their lifetime?
A. 1-4%
B. 4-8%
C. 5-15%
D. 35%

86. An easier sign to look for that may indicate someone is suffering from bulimia nervosa is:
A. Wearing layers of clothing to hide weight loss
B. Significant weight loss
C. Erosion of tooth enamel and bad breath
D. Playing with food, but not eating it

87. What is the main difference between binge eating and bulimia nervosa?
A. Binge eaters often have worn of the enamel of their teeth
B. Binge eaters are at risk for esophageal cancers more so than bulimics
C. Binge eaters will try to hide their disorder by wearing layers of clothing
D. Binge eaters do not typically purge their food

88. Which of the following makes up the Female Athlete Triad?
A. Disordered eating, osteoarthritis, amenorrhea
B. Anorexia, osteoporosis, amenorrhea
C. Osteoporosis, amenorrhea, disordered eating
D. Bulimia, osteoporosis, amenorrhea

89. Of all of the warning sign of anorexia and bulimia, which one do they have in common?
A. Repeated trips to the bathroom especially after eating
B. Compulsive exercising
C. Dress in layers to hide weight changes
D. Steal food to hoard it

90. Which of the following is considered an extreme environment?
A. Running outside in Denver Colorado
B. Walking outside in the winter time in Ft. Lauderdale Florida
C. Running on a treadmill at the gym in the summertime in Atlanta
D. Cycling in Portland Maine in the mid-spring

91. Standing in a breeze on a hot summer day is considered what type of transfer?
A. Conduction
B. Convection
C. Radiation
D. Evaporation

92. You are observing the first day of marching band practice in August. After standing at attention for 10 minutes in order to be inspected, one of the band members faints. What might be the cause?
A. Heat exhaustion
B. Hyponatremia
C. Heat syncope
D. Heat stroke
93. What is the difference between acclimatization and acclimation?
A. Acclimation is achieved in a normal outdoor environment
B. Acclimatization is done in an artificial environment
C. In acclimation, the body tends to delay sweating
D. Acclimatization is achieved in the normal outdoor environment

94. At what temperature does the body begin to experience hypothermia?
A. 98.6 degrees or lower
B. 96.8 degrees or lower
C. 102 degrees or higher
D. 100 degrees or higher

95. All of the following are ways the body naturally responds to cold EXCEPT:
A. Shivering thermogenesis
B. Peripheral vasodilation
C. Peripheral vasoconstriction
D. Increase blood flow to the skin

96. Which of the following is not appropriate for exercising outdoors in cold weather?
A. Cotton T-shirt under a sweat shirt
B. Covering head and hands
C. Drinking plenty of fluids
D. Covering the neck

97. Which statement is correct concerning acclimatization to altitude?
A. It takes about 2 weeks to acclimatize to altitudes between 3000 and 4000 ft.
B. It takes about 2 weeks to acclimatize to altitudes above 5000 feet
C. It takes 4 weeks to deacclimatize after returning to sea level
D. One cannot acclimatize to altitude

98. Signs and symptoms of someone who has not acclimatized to high altitudes include all of the following EXCEPT:
A. Insomnia
B. Nausea
C. Bradycardia
D. Decreased appetite

99. Which statement is correct concerning hydration?
A. Overhydration can lead to hyponatremia
B. Dehydration can lead to hyponatremia
C. It takes a loss of 4% or more of fluid before the body is negatively impacted
D. Proper hydration is generally not a concern in cold weather

100. Which of the following environmental conditions does the body acclimatize the least even with proper training?
A. Heat and Humidity
B. Heat
C. Altitude
D. Cold