

Examples

Exam Foundation of Kinesiology

Cases 1.

The kinesiologist is working with a bariatric client who has been overweight since childhood and is on medication to control high blood pressure. The client's goal is to lose 23 kg and normalize blood pressure.

The next THREE (3) questions refer to this case.

1. What is the initial recommended goal for caloric expenditure through physical activity per day for a sedentary adult.
 - a. 300 kcal
 - b. 1,000 kcal
 - c. 500 kcal
 - d. 150 kcal

2. Why is the formula $(\text{METs} \times 3.5 \times \text{body weight in kg})/200$ preferred to an accelerometer for predicting caloric expenditure?
 - a. It personalizes estimate of caloric expenditure.
 - b. Emphasis is placed on intensity of exercise, not on caloric output.
 - c. Body weight is a factor when using an accelerometer.
 - d. Accelerometer underestimates caloric output for walking

3. What frequency of exercise should the kinesiologist prescribe to the client to aid in accomplishing the client's long-term goals?
 - a. 3 days per week for 30 minutes a day
 - b. 4 days per week, 2 times per day for 75 minutes
 - c. 5 days per week for 20 minutes per day
 - d. 7 days per week for 30 minutes per day

Cases 2

Mrs. Marie, 37 years old, has been referred to the kinesiologist, within the family healthcare team by her family physician. Her weight is 70 kg, height 140 cm and waist circumference 90 cm. She is another of two children and recently divorced. Mrs. Marie works long hours in the real estate business from April-September and has no time for herself. When not working, she has to take her children to their sport and leisure activities. Mrs. Marie knows that exercise is important for her but struggles to do it on her own.

The next FOUR (4) questions refer to this case.

4. What should the kinesiologist do first?
 - a. Calculate her BMI.
 - b. Set goals for weight loss.

- c. Develop rapport.
 - d. Suggest a strength-building program.
5. What is Mrs. Marie's main barrier to engaging in physical activity?
- a. Lack of knowledge
 - b. Lack of time
 - c. Lack of motivation
 - d. Lack of discipline
6. What is Mrs. Marie's BMI?
- a. 24
 - b. 36
 - c. 28
 - d. 50
7. What is her BMI classification?
- a. Normal
 - b. Obesity
 - c. Overweight
 - d. Extreme obesity
8. The kinesiologist is starting a training program with low-altitude athletes at a high altitude. What effects does high-altitude exposure have on the heart during exercise of similar intensity as exercise at sea level.
- increased cardiac output, decreased myocardial oxygen requirements
- a. Decreased cardiac output, increased myocardial oxygen requirements
 - b. Decreased cardiac output, decreased myocardial oxygen requirements
 - c. Increased cardiac output, increased myocardial oxygen requirements
 - d. Increased cardiac output, increased myocardial oxygen requirements
9. What type of performance outcome should the kinesiologist expect from a client when introducing a more complex exercise.
- a. Improved confidence
 - b. Decrease in speed
 - c. Increase in accuracy
 - d. Decrease in time
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11. The factors that affect balance are, EXCEPT
- a. Weight point
 - b. Style line
 - c. Movement

- d. Pedestal width
12. In sprinting, which is to lean forward about 20 degrees, the goal is not only to reduce wind resistance but also to
- Maintain body balance
 - The heel rests first
 - So that the tip of the foot lands first
 - In order to increase the thrust
13. What is the appropriate order for the three phases of the healing process?
- Endurance, proliferation, flexibility
 - Flexibility, inflammation, remodelling
 - Inflammation, proliferation, remodelling
 - Proliferation, strength, remodelling
14. What type of performance outcome should the kinesiologist expect from a client when introducing a more complex exercise?
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15. The kinesiologist is employed with a youth competitive figure skating team for development of an off-ice training program. John, a skater, informs the kinesiologist that his pairs partner, Susie, has not been eating much lately, and he is concerned about her decreased energy for practice and the upcoming competition. What step should the kinesiologist take?
- Have Susie complete a food diary to monitor food intake until competition.
 - Refer Susie to a physician, dietitian and psychologist.
 - Discuss the issue with the coach, Susie and John.
 - Change Susie's training program to be less demanding.
16. During a training session, an athlete reports an unexplained weight loss of 3.6 kg over the previous 2 weeks, with no change in training level or caloric intake. What should the kinesiologist do?
- Increase the athlete's caloric intake and reassess in 2 weeks.
 - Have the athlete track caloric intake for an additional 2 weeks.
 - Refer the athlete to a registered dietitian.
 - Refer the athlete to a physician
17. If a person bends his arm (flexion), then the mechanism of action that occurs is?
- Synergistic the biceps contracts, the triceps relaxes
 - Synergistic the triceps contracts, the biceps relaxes
 - Antagonist the biceps contracts, the triceps relaxes
 - Synergistic the biceps and triceps contract

18. Which of the following is used to control heart rate and to treat hypertension?
- Calcium channel blockers
 2. Beta blockers
 3. Antiarrhythmics
 4. Anticoagulants
19. Which energy system is primarily responsible for energy production in an individual running for 30 minutes?
- ATP-CP
 - Non-oxidative
 - Oxidative
 - Lactate
20. Which of the following is a micronutrient that plays a key role in energy production?
- Carbohydrates
 - Vitamin B2
 - Vitamin K
 - Fat