

Exercise Science Review #3

1. Be able to define what macronutrients are and know examples for each
2. Know the function of protein, carbohydrate and fat, a food example for each and the number of calories they provide for each gram
3. What is the difference between simple and complex carbohydrates as far as examples and time in which sugar is released to the cells
4. Know the difference between HDL's and LDL's and another name for each and why they are good or bad for you with respect to cardiovascular health.
5. Know what the energy equation is and how it relates to weight management
6. Define the Metabolic Rate and the Basal Metabolic rate
7. What are the 5 factors that affect your Metabolic Rate
8. Be able to calculate your RMR using the Harris-Benedict equation
9. Be able to read a food label
10. What kind of tool is the BMI and what it estimates
11. If your BMI is high what 6 diseases are you risking?
12. Be able to use the BMI table and calculate a client's BMI
13. List 5 reasons why are Ergogenic aids used by athletes
14. What are 3 types of Ergogenic aids
15. Be able to differentiate between the three types of PED's (Ergogenics) and also give an example of one for each of the three types that includes how it improves performance and the negative effects it may have on your body
16. What are 3 ways that athletics can be enhanced by ergonomics?
17. Be able to list and define all the components of the F.I.T.T. Principle
18. Know how to calculate your Max heart rate and also training rate, for example 70%
19. Know resistance training guidelines for toning and building muscle
20. Be able to define the 6 training methods and 6 training techniques.
21. Know 4 Components of fitness and how we tested them in our class
22. What are the 4 components of a general program design and what each component should include?
23. Define Linear and rotational motion and how each are generated.
24. Name the three types of levers.
25. Be able to draw each type of lever locating and showing the direction of force, fulcrum and load and indicate which lever is referred to as the teeter-totter, the wheelbarrow and the shovel.
26. Be able to give a real body example of each lever indicating what the fulcrum is, and what muscle is generating the force.
27. Be able to list and define the 7 principles of biomechanics and know how what category the NCCP grouped the principle in along with how each principle gives you insight into movement dynamics
28. Define conservation angular momentum
29. If angular momentum holds true using the formula $L = m \cdot v \cdot r$ why and how can we affect a diver spinning, figure skater spinning and person walking a high wire.
30. What are three areas in sport and fitness that biomechanical principles are applied
31. Be able to calculate center of mass of a free body diagram