

Test Review #2 2015 – Nervous System, Energy System, Cardio-Respiratory System

1. Know proper treatment of soft tissue injuries.
2. Know the sign and symptoms of soft tissue injuries
3. Be able to produce the chart of the major components of the Nervous system
4. What are the 6 main parts of the CNS
5. How many pairs of cranial nerves and spinal nerves on the PNS
6. Know the autonomic system which includes differentiating between the sympathetic and parasympathetic system
7. What is the somatic nervous system and be able to differentiate between afferent and efferent nerves
8. What is the reflex arc and the 5 components it is comprised of
9. Know what the Golgi tendon and muscle spindle are and the chart that differentiates the two with respect to location, position, respond to and sensory neurons
10. Know what the stretch reflex is and why the knee jerk reaction works
11. Know the 2 polysynaptic reflexes - withdrawal (Mouse trap) and cross extensor reflex (tack)
12. What are Energy Nutrients
13. What is ATP, where is it produced and what are the two main ways it can be resynthesized
14. Approximate Energy Sources for Different Types of Sport Activities
15. Know the formula for The Release of Energy from ATP
15. What are the two energy systems and know 2 differences between the two systems
16. What are the three metabolic pathways and the formulas for each, as well as the duration in which they last with examples of sport for each
17. Which is the fast pathway to resynthesize ATP,
18. Know how creatine impacts a work-out with respect to our energy system and how it will effect performance
19. know the chart "A Comparison of the Three Metabolic Pathways in the Human Body"
20. Know the energy pathway chart with respect to Primary energy source, fuel, duration and sport events
18. Know the energy sources for different sports
19. How many calories do the three nutrients yield
20. Know the difference between fast twitch (2 types) and slow twitch fibers and relative sports that would perform well with each
21. Know the color, fiber diameter, contraction speed, force production, energy source, myoglobin content, myosin ATPase (Know chart Characteristics of Muscle Fibre Types)
22. Know the Approximate Distribution of Muscle Fibre Types for Different Sports
23. know the 4 function of cardiovascular system and the 3 components of the CV system
24. Know the pathway of the blood through the heart from vena cava to aorta (know diagram)
25. Know the significance of pulmonary veins and pulmonary artery
26. Know the composition of blood and the functions of RBC's and WBC's
27. Be able to define cardiac cycle, blood pressure, systolic BP, diastolic BP, heart rate, stroke volume, cardiac output, frank-Starling law, cardiac cycle
28. What causes the LUB-DUB noise in the heart
29. What is the SA node and AV node
30. know the diagram of The Heart's Electrical Conduction System
31. Know the ECG diagram and what each wave represents and why there is a wave seemingly missing
32. The Cardiovascular Effects of Training with respect to Q, SV and HR
33. Know coronary circulation, what myocardial infarction is and atherosclerosis is
34. Know causes of coronary heart disease (5)
35. What is the 3 main functions of respiratory system
36. Know the difference between external, internal and cellular respiration
37. Know diagram of The Conductive and Respiratory Zones
38. know the mechanism of breathing (The combination of inspiration and expiration together is known as "ventilation.")
39. What is diffusion
40. know the lactate threshold diagram and how exercise effects it
41. know the Oxygen Deficit and EPOC diagram and how exercise effects it
42. Know what asthma and COPD is and how you treat each
43. know why training at altitude is advantageous and why is like blood doping