# NCSF Exam Study Guide with complete solution

Sugar - What is the only fuel source that can be used during anaerobic metabolism?

Carbohydrates, lipids (fats) - \_\_\_\_ serve as the primary fuel for exercise, while are primarily used during rest and low-intensity physical activity.

Aerobic metabolism can occur using what fuel sources? - Carbohydrates, fats, protein and various associated substrates

What is the primary fuel source during 1) a vertical jump, 2) a 3RM deadlift, and 3) a 10second sprint? - 1) stored ATP, 2-3) stored creatine phosphate

What are the primary storage sites for glycogen within the body? - Skeletal muscle (~400g) and the liver (~95g)

How much rest is needed to fully recover from an exercise that significantly drains creatine phosphate stores within a muscle? - 2-5 minutes

As a client increases their VO2max, he or she will have a lower \_\_\_\_\_\_ during any sub-maximal exercise intensity; this is mainly attributed to an increase in \_\_\_\_\_. Heart rate, stroke volume

Cardiac output is a product of: - Stroke volume x heart rate

Cellular metabolism using oxygen and various substrates for fuel occurs in the: - Mitochondria

What muscle fiber type has the lowest capacity to produce force? - Type I (slow-twitch oxidative)

Slow oxidative muscle fibers have the smallest relative \_\_\_\_\_ and are primarily fueled via \_\_\_\_\_ metabolism. - Diameter, aerobic

Following high-intensity exercise, a client may continue to burn additional calories for a number of hours due to a phenomenon known as: - Excess post-exercise oxygen consumption (EPOC)

What mineral is released from the sarcoplasmic reticulum to initiate the cascade of events leading to a muscular contraction? - Calcium

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