Name: _____ **Date:** _____

Think You Know Your Body? Prove Your Exercise Physiology Mastery!

Challenge your understanding of bioenergetic pathways and acute cardiovascular shifts to see if you truly grasp the mechanics of physical performance.

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1. Which of the following occurs as a result of an acute bout of aerobic exercise to meet the increased demand for oxygen delivery to peripheral tissues?

A. Decrease in stroke volume
B. Hemoconcentration (reduced plasma volume)
C. Dilation of vessels in the digestive tract
D. Decrease in systolic blood pressure

2. The primary metabolic pathway utilized during a maximal effort lasting approximately 30 to 90 seconds (such as a 400-meter dash) is _____.

A. The Oxidative System
B. Beta-Oxidation
C. Fast Glycolysis
D. The Phosphagen System

3. True or False: Hypertrophy refers to an increase in the total number of muscle fibers within a specific muscle group.

A. True
B. False

4. What chronic adaptation to the respiratory system is commonly seen in elite endurance athletes compared to sedentary individuals?

A. Increased maximum voluntary ventilation
B. Significant increase in lung total capacity
C. Decrease in tidal volume during exercise
D. Increased alveolar surface area

5. The Frank-Starling Mechanism explains how an increase in _____ leads to a more forceful cardiac contraction and increased stroke volume.

A. Vagal tone
B. End-diastolic volume (EDV)
C. Total peripheral resistance
D. Heart rate

6. True or False: EPOC (Excess Post-exercise Oxygen Consumption) is the phenomenon where oxygen uptake remains elevated above resting levels for a period after exercise has stopped.

A. True

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B. False

7. Which muscle fiber type is characterized by high mitochondrial density, high resistance to fatigue, and low glycolytic capacity?

A. Type IIx
B. Type IIa
C. Type I
D. Type IIb

8. In exercise physiology, the 'Overload Principle' suggests that for training adaptations to occur, the body must be _____.

A. Rested for at least 48 hours
B. Exercised at 100% HR Max
C. Stressed beyond its normal limits
D. Supplemented with protein

9. True or False: During high-intensity exercise, the Respiratory Exchange Ratio (RER) typically decreases as the body shifts from burning carbohydrates to burning fats.

A. True
B. False

10. Delayed Onset Muscle Soreness (DOMS) is most strongly associated with which type of muscle action?

A. Concentric
B. Isometric
C. Isokinetic
D. Eccentric