

**Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

## **Feel the Heartbeat: A 6th Grade Quest into Exercise Science**

Students analyze how their internal systems collaborate and adapt to physical challenges during this middle school formative assessment.

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**1. Which of the following is considered an 'acute response' rather than a 'chronic adaptation' to physical activity?**

- A. A lower resting heart rate after months of training
- B. An immediate increase in sweat production during a game
- C. Denser bone structures from years of weight-bearing exercise
- D. Increased lung capacity over a full school year

**2. When you engage in a high-intensity activity like a 50-meter dash, your body primarily uses the \_\_\_\_\_ energy system for a quick burst of power.**

- A. Aerobic
- B. Phosphagen (ATP-CP)
- C. Digestive
- D. Circulatory

**3. True or False: Hypertrophy refers to the decrease in muscle fiber size due to a lack of regular physical activity.**

- A. True
- B. False

**4. During a long-distance hike, why does your breathing rate stay elevated for the entire duration?**

- A. To remove carbon dioxide and deliver oxygen for aerobic metabolism
- B. To stop the heart from beating too quickly
- C. To increase the temperature of the internal organs
- D. To signal the muscles to stop working

**5. The process where the body repairs \_\_\_\_\_ in muscle fibers after a workout is what eventually leads to increased strength.**

- A. Broken bones
- B. Micro-tears
- C. Nerve endings
- D. Skin cells

**6. True or False: Hemoglobin is the protein in red blood cells responsible for carrying oxygen to your working muscles during exercise.**

- A. True
- B. False

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**7. If an athlete has a very low resting heart rate (bradycardia), it is often a sign of:**

- A. A lack of physical fitness
- B. A poorly functioning respiratory system
- C. An efficient heart that pumps more blood per beat
- D. A need for more sugar in the diet

**8. The 'Cool-Down' phase of a workout helps prevent \_\_\_\_\_ by keeping blood circulating instead of allowing it to stay in the limbs.**

- A. Blood pooling
- B. Dehydration
- C. Muscle growth
- D. Bone density

**9. True or False: The Anaerobic Glycolytic system requires a high amount of oxygen to produce energy for long-distance swimming.**

- A. True
- B. False

**10. Which body system is responsible for sending the signals that tell your skeletal muscles to contract during a soccer match?**

- A. Digestive System
- B. Integumentary System
- C. Nervous System
- D. Endocrine System