

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.

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