

Max's Magnificent Movement Quiz: The Science of Warming Up

Learning objective: To understand the physiological importance of warming up, including increasing heart rate, blood flow, and muscle temperature to prevent injury.

Help Max the monkey prepare for his jungle gym session! Answer these 10 questions to prove you understand why warming up is the most important part of any exercise.

Answer Key: 1. A, 2. True, 3. False, 4. C, 5. Heart rate, 6. True, 7. D, 8. True, 9. Temperature, 10. B.
Rationale: Warming up prepares the body by increasing blood flow, which delivers oxygen to working muscles and improves joint mobility, significantly reducing the risk of strains and sprains.

Word bank: Pulse · Flexibility · Injury · Oxygen · Stretching · Temperature · Dynamic · Performance · Cardiovascular · Preparation

1. 1. Why does Max increase his heart rate before climbing? A) To prepare muscles for movement*, B) To get tired quickly, C) To look silly, D) To sleep better. (1 mark)

2. 2. True or False: Warming up helps to prevent injuries during physical activity. (1 mark)

3. 3. True or False: You should always start your PE lesson with intense sprinting before doing any gentle movements. (1 mark)

4. 4. Which of these is a 'dynamic' warm-up activity? A) Sitting still, B) Holding a stretch for 5 minutes, C) Jogging and star jumps*, D) Reading a book. (1 mark)

5. 5. What is the common term for how fast your heart beats, which should rise during a warm-up? (1 mark)

6. 6. True or False: A good warm-up helps send more oxygen-rich blood to your muscles. (1 mark)

7. 7. What happens to your body temperature during a proper warm-up? A) It drops, B) It stays the same, C) It fluctuates randomly, D) It rises steadily*. (1 mark)

8. 8. True or False: Warming up can actually improve your overall sports performance. (1 mark)

9. 9. Fill in the blank: Warming up helps increase the _____ of your muscles, making them more pliable and less likely to tear. (1 mark)

10. 10. How long should a typical school warm-up last? A) 10 seconds, B) 5 to 10 minutes*, C) 2 hours, D) It does not matter. (1 mark)

Draw: Draw a picture of Max the monkey performing three different dynamic warm-up movements, such as arm circles, side-stepping, or high knees.



Extension challenge: Greater Depth Challenges: 1. Explain why 'static' stretching (holding a pose) is often done at the end of a session rather than the beginning. 2. Compare and contrast a warm-up for a swimmer versus a warm-up for a long-distance runner; how might they differ? 3. Justify the importance of warming up using the concept of 'blood flow'. 4. What might happen to a professional athlete's performance if they completely skipped their warm-up? 5. Design your own 5-minute warm-up routine for a football match. 6. If a warm-up costs £0.50 in 'energy' (effort), why is that a good investment for a £10.00 'performance' return?