

Mastering the Warm-Up: Preparing for Peak Performance

Learning objective: To understand the physiological importance of a warm-up and how to design a progressive sequence to prepare the body for physical activity.

Read each question carefully and apply your knowledge of anatomy and sports science. Use the word bank to support your explanations. Ensure your answers are clear and justify your reasoning.

Word bank: Pulse raiser · Dynamic stretches · Circulation · Flexibility · Oxygen · Musculoskeletal · Injury prevention · Mobility

1. Max is preparing for a sprint race. Explain why simply standing still before sprinting is detrimental to his muscles and performance. (2 marks)

2. Compare and contrast a pulse raiser (e.g., jogging) with dynamic stretches (e.g., leg swings). What specific benefit does each provide to the body? (3 marks)

3. Nova notes that a good warm-up increases the temperature of the muscles. Justify why warmer muscles are less likely to suffer from strains or tears. (2 marks)

4. If a student skips the warm-up and goes straight into high-intensity activity, what might happen to their heart rate and breath regulation? Explain the physiological impact. (3 marks)

5. Design a 5-minute warm-up sequence for a football match. List the activities in the correct order and explain your reasoning for this sequence. (4 marks)

6. Evaluate the importance of 'sport-specific' warm-ups. Why would a tennis player's warm-up differ from a swimmer's warm-up? (3 marks)

Draw: Draw a labelled diagram of a 'dynamic stretch' that you would include in a warm-up. Clearly label which muscle group is being mobilised.



Extension challenge: Research the term 'Homeostasis'. Write a paragraph explaining how a warm-up acts as a bridge for the body to transition from a resting state to a state of high physical demand, and what happens if this transition is forced too quickly.