

Health and Fitness: The Engine of the Body

Learning objective: To understand the physiological effects of physical activity on the human body and identify the components of a healthy, balanced lifestyle.

Read each question carefully and apply your knowledge of human biology and fitness. Use the word bank to help you frame your answers. Ensure your explanations are clear and use scientific terminology.

Word bank: cardiovascular · respiration · stamina · nutrients · muscular endurance · metabolism · flexibility · recovery

1. Max is training for a cross-country run. Explain why his heart rate and breathing rate increase significantly during his training sessions. (2 marks)

2. Nova wants to improve her flexibility for gymnastics. Compare and contrast the benefits of dynamic stretching versus static stretching before and after a workout. (3 marks)

3. Pip suggests that a balanced diet is just as important as physical exercise. Justify this statement by explaining how food intake supports muscle repair and energy levels. (3 marks)

4. What might happen to an athlete's performance if they consistently ignore the need for rest and recovery days? Explain your reasoning. (2 marks)

5. Zara is designing a new fitness plan. Identify two different types of exercise and explain how each contributes to 'cardiovascular health'. (4 marks)

Draw: Draw a diagram of the human body in motion, labelling three areas where muscles are working hard and one area where the cardiovascular system is supporting that movement.



Extension challenge: Design a 'Fitness and Wellbeing Log' for a fictional character. Include a section for physical activity, a section for healthy nutrition (including a shopping list costing under £10), and a section for mental wellbeing activities. Write a short paragraph justifying why your plan creates a holistic approach to health.