

Learning Resource

Exercise Physiology

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50 pages

INTRODUCTION

Concentrating on those aspects of physiology most obviously associated with exercise, these topics are covered in a series of tasks where information is provided and embedded questions reinforce the learning process. Answers are provided for instant feedback, but can be covered for purposes of self-testing of understanding.

EFFECTS OF EXERCISE

Task 1 Analysis of the effects of exercise

- a Through participation or through observation of a participant, make a list in the space provided below, of the changes that occur to the body during the exercise. NB you are **NOT** looking for long-term training effects, just the immediate effects of exercise.

i Increased heart rate

ii Increased breathing rate

iii Increased depth of breathing

iv Sweating

v Redening of skin

vi Localised fatigue

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- b For each of the changes that you have listed, complete the table to suggest why they have occurred.

Change	Reason
i Increased heart rate	Heart beats faster to pump more oxygenated blood to working muscles so that they can use more energy.
ii Increased breathing rate	Breathing faster takes in more air containing oxygen, so that more oxygen can be provided to working muscles, and more carbon dioxide removed.
iii Increased depth of breathing	Breathing deeper takes in more air containing oxygen so that more oxygen can be provided to working muscles, and more carbon dioxide removed.
iv Sweating	Energy use generates heat - excess heat is lost by sweating which cools the skin and therefore the body.
v Reddening of skin	Energy use generates heat, more blood enters skin blood vessels, therefore more heat can be lost by radiation.
vi Localised fatigue	Rapid energy use generates lactic acid through anaerobic systems, which leads to fatigue.
