

OCR Sports Science Knowledge Organiser

Nutrition and Sports Performance (R183)

Topic Area 1: Nutrients needed for a healthy, balanced nutrition plan)

The characteristics of a balanced nutrition plan(1.1)

- Meeting the nutritional requirements of an individual
- Including foods from all of the food groups
 - Carbohydrates: Fats
 - Proteins
 - Fibre
 - Water
 - Vitamins and minerals
 - Containing a variety of foods
 - Suiting the needs/tastes of the individual

The role of nutrients in sport and their sources (1.2) - Carbohydrates and fats

Carbohydrates give a quick supply of energy – sugars and starchy carbohydrates

Simple carbohydrates – oranges, biscuits

- Complex carbohydrates - rice, potatoes

Fats – give a slower supply of energy and transport some vitamins around the body – include good fats and bad fats

Bad fats – vegetable oil, lard

- Good fats – nuts, salmon

The role of nutrients in sports and their sources (1.2)-Proteins, water, fibre ,vitamins and minerals

Proteins repair muscle damage

- Fibre helps digestion and prevents constipation
- Water keeps the body hydrated, regulate temperature, helps remove waste products
- Vitamins and minerals help strengthen bones, maintain a healthy immune system

What nutrients are (e.g. chemicals a living organism needs in order to live and grow)

Sports
nutrition



Healthy Eating & Sports Nutrition



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Topic Area 2: Applying differing dietary requirements to varying types of sporting)

2.1: The dietary requirements of endurance/aerobic activities

2.1.1: Before endurance/aerobic activity:

Hydration

Carbohydrate loading

2.1.2: During endurance/aerobic activity:

Maintain hydration

Maintain carbohydrate levels

2.1.3: After endurance/aerobic activity



2.2: The dietary requirements of short intense/anaerobic activities

2.2.1: Before short intense/anaerobic activities:

Use of carbohydrates (not carbohydrate loading)

Use of proteins

2.2.2: During short intense/anaerobic activities

2.2.3: After short intense/anaerobic activities:

Rehydrate immediately

Reload appropriate nutrients

2.3: The dietary requirements of strength based activities

2.3.1. Before strength based activities:

High in protein

Limit excess body fat

2.3.2. During strength based activities

2.3.3 After strength based activities:

Rehydrate immediately

Reload appropriate nutrients



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Topic Area 3:How to design and develop a balanced nutrition plan)

3.1: Gather details about a current nutrition plan and any issues that might impact the design of future nutrition plans

Gather details - age range, allergies, cultural beliefs, food budget, cooking skill, activity, find current unbalanced nutritional information

3.1.2: Adapt the nutrition plan to suit a chosen sporting activity

Add or remove relevant nutrients

Change timings

Portion sizes

Amount of meals

Relevant nutrients - proteins, carbohydrates, vitamins and minerals, fats, water. Change timings to suit training/games/ events. Portion sizes – reduce or increase for relevant activity. Amount of meals – eat more or less often

3.2: Key factors when considering the success / impact of a nutrition plan

3.2.1: Identify the nutritional changes that can be made :

To include:

Nutrients - added protein for muscle repair, reduced fat for weight loss or increased carbohydrates for energy

3.2: Suitability and organisation of a nutrition plan

3.2.2:

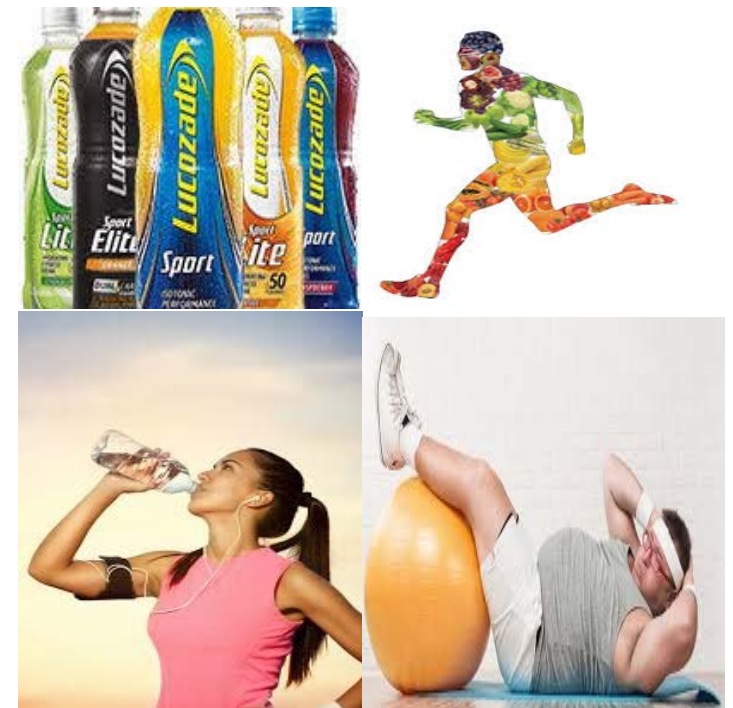
Plan - portion sizes, timings of meals, amount of meals, liquid intake.

3.2.3 Review the potential success/impact of a nutrition plan:

On performance/training

Performance/training – energy levels, components of fitness

Improvements, weight/loss gain.



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Topic 4: How nutritional behaviours can be managed to improve sports performance)

4.1: The effect of overeating on sports performance

4.1.1 The effects of overeating on sports performance:

Effect on components of fitness

How overeating can be manipulated for selected sports

Increased nutrients

Performance benefits

4.2.1 The effects of undereating on sports performance:

Reduced energy levels

Reduced concentration

Weight management

4.3.1 The effects of dehydration on sports performance:

Overheating

Reduced performance level

Reduced bloated feeling

Reduced water retention

