

OCR Sports Science Knowledge Organiser

Sports Nutrition (R045)

Learning Outcome 1: Know about the nutrients needed for a healthy, balanced diet

Characteristics of a balanced diet.

Meets the nutritional requirements of an individual
Includes foods from all of the food groups (e.g. meat and dairy, fruit and vegetables, fats and sugars)

Contains a variety of foods.

Suits the needs/tastes of the individual (e.g. accounting for allergies/intolerance to some ingredients).

The role of nutrients in a healthy, balanced diet.

Carbohydrates (e.g. quick supply of energy)

Fats (e.g. slower supply of energy, transport some vitamins around the body)

Proteins (e.g. repair muscle damage)

Fibre (e.g. helps maintain healthy bowels)

Water (e.g. keeps the body hydrated)

Vitamins and minerals (e.g. help strengthen bones, maintain a healthy immune system)

Food sources of nutrients.

Carbohydrates (e.g. pasta, potatoes)

Fats (e.g. dairy products, fish)

Proteins (e.g. meat, pulses)

Fibre (e.g. cereals, wholemeal bread)

Vitamins and minerals (e.g. fresh fruit and vegetables).

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

Sports
nutrition



Healthy Eating & Sports Nutrition



OCR Sports Science Knowledge Organiser

Learning Outcome 2: Understand the importance of nutrition in sport

The importance of nutrition before, during and after exercise.

Before (e.g. hydrate, provide energy source, quick energy boost)

During (e.g. stay hydrated, replenish carbohydrates if lengthy exercise)

After (e.g. rehydrate straight away, eat a meal containing carbohydrates and protein within 2 hours to aid recovery)



The reasons for the varying dietary requirements of different activity types.

Endurance/aerobic activities (e.g. marathon running, cross country skiing)

Carbohydrate loading, hydration
Energy needed for long periods

High levels of hydration needed to sustain activity over long periods

Short, intense/anaerobic activities (e.g. 400m swim, a game of basketball)

Carbohydrates (not carbo-loading), low fat
Energy for short, sharp bursts of activity, aid recovery)
speed

Strength based activities (e.g. weightlifting)

- high in protein, 5-7 meals every day
- build muscle mass, limit excess body fat

The use of dietary supplements

Definition of dietary supplements (products that provide nutrients that are either missing or being consumed in insufficient quantities)

Types of dietary supplements used in sport (e.g. protein powders, multi-vitamins, herbs, creatine)

Why they are used in sport (e.g. speed up recovery, increased energy, speed up the burn off of the fat)

Issues associated with the use of supplements (e.g. confusion over which are/are not allowed in sport, links to potential health risks/injuries).



OCR Sports Science Knowledge Organiser

Learning Outcome 3: Know about the effects of a poor diet on sports performance and participation

The definition of malnutrition

(e.g. a condition which results from an unbalanced diet in which some nutrients are lacking, missing, taken in excess or taken in the wrong proportion)

The effects of overeating on sports performance and participation

- if you are overweight your fitness will deteriorate (e.g. your flexibility, agility and stamina will decrease)
- you lose confidence and become anxious about participating
- you can develop a range of illnesses (e.g. high blood pressure, arthritis) which prevent you from participating in certain activities
- eating large amounts immediately before participating in a sports activity can make you feeling sick during participation

The effects of under eating on sports performance and participation

- you will have less energy (e.g. not taking in enough carbohydrates) and tire quickly
- your muscles and bones weaken, increasing the risk of injury
- your concentration becomes impaired
- you may develop an eating disorder (e.g. anorexia) and train too hard leading to injury and/or illness
- you may develop an illness which prevents you from participating (e.g. kidney infections)

The effects of dehydration on sports performance

- you can overheat leading to heat stroke
- your concentration becomes impaired
- you will tire more quickly
- you become ill during participation (e.g. vomiting).



OCR Sports Studies Knowledge Organiser

Learning Outcome 4: Be able to develop diet plans for performers

How to design a diet plan

- gather details about the performer that the diet plan is for (e.g. age, gender, any allergies or religious beliefs, food budget, cooking skill, the type of activity they perform in)
- clarify the aims of the diet plan (e.g. to lose weight, to increase length of time for which they can train prior to taking part in an event)
- set realistic goals which can be measured (e.g. to lose 2 pounds per week)
- the time of the year (e.g. is the performer training for an event, is it off season, what fruit and vegetables are available at that time of year)
- duration of the diet plan (e.g. suitable length to achieve goals)
- suitability of diet plan (e.g. diet meets the needs of the performer, proportions of the various nutrients are appropriate)
- organisation of diet plan (e.g. meals scheduled for set intervals, timing of a meal fits around other activities)

How to evaluate the effectiveness of the diet plan,

- recording the outcomes objectively (e.g. measuring weight, diaries/journals of plan put into action)
- recording the outcomes subjectively (e.g. interviewing performer - is training feeling easier?, Are you more tired after training?, Are you bored with eating the same things?)
- improvement (e.g. increase the number of meals but reduce the portion size).

