

# iUSP169 – Applying the principles of nutrition to a physical activity programme

URN – M/617/5664

**Guided Learning Hours: 40**

Learning outcome	Assessment criteria	Taught content to include
LO1 Understand the principles of nutrition	1.1. Describe the structure and function of the digestive system	<ul style="list-style-type: none"> <li>• Alimentary canal <ul style="list-style-type: none"> <li>- Salivary glands</li> <li>- Tongue</li> <li>- Teeth</li> <li>- Epiglottis</li> <li>- Oesophagus</li> <li>- Stomach</li> <li>- Small intestine (Jejunum, ileum, duodenum)</li> <li>- Appendix</li> <li>- Large intestine</li> <li>- Rectum</li> <li>- Anus</li> </ul> </li> <li>• Accessory organs <ul style="list-style-type: none"> <li>- Liver</li> <li>- Gall bladder</li> <li>- Pancreas</li> </ul> </li> <li>• The function of and where in the digestive system you would find the following: <ul style="list-style-type: none"> <li>- Enzymes</li> <li>- Proteins</li> <li>- Peptones</li> <li>- Polypeptides</li> <li>- Amino acids</li> <li>- Carbohydrates</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Disaccharides</li> <li>- Monosaccharides</li> <li>- Fats</li> <li>- Fatty acids</li> <li>• The process by which food stuffs are broken down by the alimentary canal during the digestive process: <ul style="list-style-type: none"> <li>- Action of rennin, hydrochloric acid and pepsin in the stomach</li> <li>- Action of pancreatic juice, i.e.: <ul style="list-style-type: none"> <li>▪ Trypsin</li> <li>▪ Lipase</li> <li>▪ Amylase on peptones, fats and polysaccharides</li> </ul> </li> </ul> </li> <li>• Action of bile on fat to include the action of intestinal juice – maltase, sucrase, lactase on disaccharides</li> <li>• Process of absorption of nutrients by the villi and lacteals contained in the small intestine</li> <li>• Diseases and disorders of the digestive system to include: <ul style="list-style-type: none"> <li>- Appendicitis</li> <li>- Cirrhosis of the liver</li> <li>- Jaundice</li> <li>- Heartburn</li> <li>- Irritable bowel syndrome (IBS)</li> <li>- Ulcer</li> <li>- Hernia</li> <li>- Stress</li> <li>- Anorexia nervosa</li> <li>- Bulimia nervosa</li> <li>- Gall stones</li> <li>- Diarrhoea</li> <li>- Constipation</li> <li>- Candida</li> <li>- Diverticulitis</li> <li>- Crohn's disease</li> <li>- Coeliac disease</li> <li>- Ulcerative colitis</li> </ul> </li> <li>• 'Common ailments' relating to nutritional imbalance to include: <ul style="list-style-type: none"> <li>- Common cold</li> <li>- Influenza</li> <li>- Cystitis</li> <li>- Water retention</li> </ul> </li> </ul>
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		<ul style="list-style-type: none"> <li>- Arthritis</li> <li>- PMT</li> <li>- Sinusitis</li> <li>- Migraine</li> <li>- Asthma</li> <li>- Stress</li> <li>- Eczema</li> <li>- Psoriasis</li> <li>- Cellulite</li> <li>- Acne</li> </ul>
	<p>1.2. Explain the meaning of key nutritional terms including:</p> <ul style="list-style-type: none"> <li>- Diet</li> <li>- Healthy eating</li> <li>- Nutrition</li> <li>- Balanced diet</li> </ul>	<ul style="list-style-type: none"> <li>• Foods that make up a balanced diet</li> <li>• Appropriate nutrient intake</li> <li>• Best sources of nutrition</li> <li>• Best methods of preparation/storage/cooking of foods</li> <li>• Benefits of using fresh foods</li> <li>• Breakfast</li> <li>• Lunch breaks</li> <li>• Evening meal</li> <li>• Healthy snacks</li> <li>• Importance of eating a little and often and the effects on metabolism</li> </ul>
	<p>1.3. Describe the function and metabolism of:</p> <ul style="list-style-type: none"> <li>- Macronutrients</li> <li>- Micronutrients</li> </ul>	<ul style="list-style-type: none"> <li>• Macronutrients to include: <ul style="list-style-type: none"> <li>- Constitutes the majority of an individual's diet</li> <li>- Carbohydrates</li> <li>- Fats</li> <li>- Proteins</li> <li>- Macrominerals</li> <li>- Water</li> </ul> </li> <li>• Micronutrients to include: <ul style="list-style-type: none"> <li>- Foods that the body only requires in small amounts</li> <li>- Vitamins</li> <li>- Trace elements</li> </ul> </li> </ul>
	<p>1.4. Explain the main food groups and the nutrients they contribute to the diet</p>	<ul style="list-style-type: none"> <li>• Carbohydrates to include: <ul style="list-style-type: none"> <li>- Monosaccharides</li> <li>- Disaccharides</li> <li>- Starch</li> <li>- Non-starch polysaccharides</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Sources of carbohydrates</li> <li>- Simple and complex carbohydrates and their nutritional value</li> <li>- Metabolism of carbohydrates</li> <li>- Medical conditions resulting from excessive intake of simple sugars</li> <li>- Recommended daily allowance</li> <li>• Fats to include: <ul style="list-style-type: none"> <li>- Function of fat in the diet</li> <li>- Properties of fat</li> <li>- Differences between: <ul style="list-style-type: none"> <li>▪ Saturated</li> <li>▪ Monounsaturated</li> <li>▪ Polyunsaturated</li> <li>▪ Essential fatty acids: omega 3 &amp; 6</li> <li>▪ Trans fatty acids</li> </ul> </li> <li>- Metabolism of fats</li> <li>- Identify sources of fat</li> <li>- Recommended daily allowance</li> </ul> </li> <li>• Protein to include: <ul style="list-style-type: none"> <li>- Function of protein and amino acids</li> <li>- Differentiation between essential and non-essential amino acids</li> <li>- Recognition of the importance of the quality of a protein</li> <li>- Metabolism</li> <li>- Differences between complete and incomplete proteins/high and low biological values of protein</li> <li>- Methods of combining foods to obtain complete proteins</li> <li>- Effects of protein deficiency</li> <li>- Awareness of the debate concerning over-consumption of animal protein and subsequent mineral loss</li> <li>- Recommended daily allowance</li> </ul> </li> <li>• The role of cholesterol in the diet to include: <ul style="list-style-type: none"> <li>- Define: <ul style="list-style-type: none"> <li>▪ Cholesterol</li> <li>▪ High density lipo protein (HDL)</li> <li>▪ Low density lipo protein (LDL)</li> </ul> </li> <li>- Functions and sources of cholesterol</li> <li>- Awareness of lifestyle and factors which affect cholesterol</li> <li>- Dietary measures to reduce cholesterol</li> </ul> </li> </ul>
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		<ul style="list-style-type: none"> <li>- Suitable and unsuitable foods in a diet for a client with high cholesterol levels</li> <li>- Relationship between dietary levels of cholesterol and cholesterol levels in the blood</li> <li>- Implications of high cholesterol for heart disease</li> <li>• The role of fibre in the diet to include: <ul style="list-style-type: none"> <li>- Soluble and insoluble fibre</li> <li>- The effect of fibre on the digestive system</li> </ul> </li> <li>• The role of vitamins in the diet to include: <ul style="list-style-type: none"> <li>- Define vitamin/oil soluble vitamins/water soluble vitamins</li> <li>- Metabolism of vitamins</li> <li>- Details of function, sources, deficiencies, over intake (and dangers arising from it) for the following vitamins: <ul style="list-style-type: none"> <li>▪ A</li> <li>▪ B1</li> <li>▪ B2</li> <li>▪ B3</li> <li>▪ B6</li> <li>▪ B12</li> <li>▪ C</li> <li>▪ D</li> <li>▪ E</li> <li>▪ Folic acid</li> <li>▪ K</li> </ul> </li> </ul> </li> <li>• The role of minerals in the diet to include: <ul style="list-style-type: none"> <li>- Define mineral/macromineral/microelement</li> <li>- Metabolism of minerals</li> <li>- Details of: <ul style="list-style-type: none"> <li>▪ Sources</li> <li>▪ Functions</li> <li>▪ Signs of deficiencies</li> <li>▪ Signs of excesses</li> </ul> </li> </ul> </li> <li>• Dangers arising from deficiency of the following minerals: <ul style="list-style-type: none"> <li>- Macrominerals <ul style="list-style-type: none"> <li>▪ Calcium</li> <li>▪ Magnesium</li> <li>▪ Phosphorus</li> <li>▪ Sodium</li> <li>▪ Potassium</li> </ul> </li> </ul> </li> </ul>
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		<ul style="list-style-type: none"> <li>- Microminerals <ul style="list-style-type: none"> <li>▪ Iron</li> <li>▪ Chromium</li> <li>▪ Zinc</li> <li>▪ Copper</li> <li>▪ Selenium</li> <li>▪ Sulphur</li> <li>▪ Manganese</li> <li>▪ Iodine</li> </ul> </li> <li>• The role of water in the diet to include: <ul style="list-style-type: none"> <li>- Hydration</li> <li>- Forms 95% of plasma</li> <li>- Bathes the tissues</li> </ul> </li> <li>• The effects of dehydration to include: <ul style="list-style-type: none"> <li>- Thirst</li> <li>- Headaches</li> <li>- Toxicity and the strain placed on other organs e.g. skin and liver</li> </ul> </li> <li>• The antioxidants and probiotics in the diet to include: <ul style="list-style-type: none"> <li>- Sources and effects</li> </ul> </li> </ul>
	1.5. Identify the calorific value of nutrients	<ul style="list-style-type: none"> <li>• Definition of a calorie</li> <li>• Definition of a kilojoule</li> </ul>
	1.6. Explain the common terminology used in nutrition including: <ul style="list-style-type: none"> <li>- UK dietary reference values (DRV)</li> <li>- Recommended daily allowance (RDA)</li> <li>- Recommended daily intake (RDI)</li> <li>- Glycaemic index</li> </ul>	<ul style="list-style-type: none"> <li>• UK dietary reference values (DRV)</li> <li>• Recommended daily allowance (RDA)</li> <li>• Recommended daily intake (RDI)</li> <li>• Glycaemic index</li> </ul>
	1.7. Interpret food labelling information	<ul style="list-style-type: none"> <li>• The Food Labelling Regulations (1996) to include: <ul style="list-style-type: none"> <li>- Name of food</li> <li>- List of ingredients</li> <li>- Amount of ingredients named or associated with food</li> <li>- Durability indicator</li> <li>- Storage conditions</li> <li>- Manufacturer</li> <li>- Place of origin</li> <li>- Manufacturing process</li> <li>- Instructions for use</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Special notification of intolerances</li> <li>- Nutritional signposting</li> <li>- Traffic light labelling</li> <li>- E numbers</li> <li>- Label advice</li> <li>- Pictures</li> <li>- Descriptions</li> </ul>
	1.8. Explain the significance of healthy food preparation	<ul style="list-style-type: none"> <li>• Best methods of preparation/storage/cooking of foods</li> <li>• Best sources of foods</li> <li>• Benefits of using fresh foods</li> <li>• Benefits of using organic foods</li> <li>• Nutritional values in foods</li> <li>• Effects of chemicals and pesticides</li> <li>• Importance of checking nutritional information on labels particularly to identify               <ul style="list-style-type: none"> <li>- Additives</li> <li>- Flavourings</li> <li>- Colourings</li> </ul> </li> <li>• Methods employed by shopkeepers to prolong the life of food</li> <li>• Nutritional losses incurred in storage</li> <li>• Show awareness of current debates on:               <ul style="list-style-type: none"> <li>- Genetic engineering and other methods of food adulteration</li> <li>- Possible medical conditions arising from use of plastics and other food containers and utensils</li> <li>- Red meat in the diet and its effects on cancer</li> <li>- Eggs in the diet e.g. relationship between the number of eggs eaten/consumed each week and the subsequent effect on cholesterol levels</li> <li>- Dairy products and alternatives</li> <li>- Daily intake of milk or use of other sources of calcium in order to prevent osteoporosis</li> <li>- Tap water/bottled water</li> <li>- Water filters</li> <li>- Organic foods</li> <li>- Super foods</li> <li>- Detoxifying</li> <li>- Probiotics</li> </ul> </li> </ul>

	<p>1.9. Explain the relationship between nutrition, physical activity, body composition and health including:</p> <ul style="list-style-type: none"> <li>- Links to disease/disease risk factors</li> <li>- Cholesterol</li> <li>- Types of fat in the diet</li> </ul>	<ul style="list-style-type: none"> <li>• Links to disease/disease risk factors e.g.: <ul style="list-style-type: none"> <li>- Heart disease</li> <li>- Cancer</li> <li>- High blood pressure</li> </ul> </li> <li>• Cholesterol <ul style="list-style-type: none"> <li>- HDL's</li> <li>- LDL's</li> </ul> </li> <li>• Types of fat in the diet <ul style="list-style-type: none"> <li>- Saturated</li> <li>- Monounsaturated</li> <li>- Polyunsaturated</li> <li>- Trans fatty acids</li> </ul> </li> </ul>
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LO2 Understand key guidelines in relation to nutrition	2.1. Describe the range of professionals and professional bodies involved in the area of nutrition	<ul style="list-style-type: none"> <li>• Current legislative bodies/professional nutritional organisations</li> </ul>
	2.2. Explain key healthy eating advice that underpins a healthy diet	<ul style="list-style-type: none"> <li>• To include portions per day of: <ul style="list-style-type: none"> <li>- Fruit and vegetables</li> <li>- Grain and potatoes</li> <li>- Calcium-rich foods</li> <li>- Protein-rich foods</li> <li>- Healthy fats</li> </ul> </li> </ul>
	2.3. Describe the nutritional principles and key features of the national food model/guide	<ul style="list-style-type: none"> <li>• Nutritional principles and key features of national food model/guide</li> </ul>
	2.4. Define portion sizes in the context of the national food model/guide	<ul style="list-style-type: none"> <li>• Definition of portion sizes</li> <li>• Guidelines for healthy eating</li> </ul>
	2.5. Explain how to access reliable sources of nutritional information	<ul style="list-style-type: none"> <li>• Specialist magazines/books</li> <li>• Specialist health food shops</li> <li>• Internet</li> <li>• Sports dieticians</li> <li>• Nutritionists</li> </ul>
	2.6. Explain how to interpret available information	<ul style="list-style-type: none"> <li>• Research</li> <li>• Evaluation</li> </ul>
	2.7. Distinguish between evidence-based knowledge versus the unsubstantiated marketing claims of suppliers	<ul style="list-style-type: none"> <li>• Evidence-based knowledge e.g. factual evidence</li> <li>• Unsubstantiated marketing claims of suppliers e.g. advertising</li> </ul>



LO3 Understand nationally recommended practice in relation to providing nutritional advice	3.1. Explain professional role boundaries with regard to offering nutritional advice to clients	<ul style="list-style-type: none"> <li>Understand when referral to GP/other healthcare professional/sports dietician is necessary</li> </ul>
	3.2. Explain the importance of communicating health risks associated with weight loss fads and popular diets to clients	<ul style="list-style-type: none"> <li>The side effects associated with fad/popular diets</li> <li>Communicate with the client why they want to go on a fad/popular diet and not a nutritional programme</li> <li>Explain the short and long term effects of these types of diets</li> </ul>
	3.3. Evaluate the potential health and performance implications of severe energy restriction, weight loss and weight gain	<ul style="list-style-type: none"> <li>Severe energy restriction to include: <ul style="list-style-type: none"> <li>Define hypoglycaemia</li> <li>Identify the physical action when insulin is triggered</li> <li>Recognise the symptoms and causes</li> <li>Identify strategies for coping with hypoglycaemia and exercise</li> </ul> </li> <li>To understand the glycaemic index: <ul style="list-style-type: none"> <li>Description of the glycaemic index</li> <li>Low, medium and high foods</li> <li>Identify foods able to maintain blood sugar levels</li> <li>Identify foods bad for blood sugar levels</li> </ul> </li> <li>Severe weight loss to include: <ul style="list-style-type: none"> <li>Define anorexia nervosa</li> <li>Define bulimia nervosa</li> <li>Symptoms, physiological and psychological causes of the 2 conditions with particular bias towards sporting activity</li> <li>Describe the effect of lack of nutrition on the body, particularly vitamins and minerals and the performance of sport</li> </ul> </li> <li>Severe weight gain to include: <ul style="list-style-type: none"> <li>Define obesity</li> <li>Contributing causes of obesity</li> <li>Define basal metabolic rate, factors affecting metabolism, vitamins and minerals needed for an efficient metabolism</li> <li>Adverse effects of obesity i.e. medical conditions in which obesity is implicated</li> <li>Potential health and performance implications</li> <li>Describe healthy dietary strategies for increasing and reducing energy input</li> </ul> </li> <li>Diabetes to include: <ul style="list-style-type: none"> <li>Define diabetes</li> <li>Describe the differences between type 1 and type 2 diabetes</li> <li>Describe the symptoms and causes of the 2 types of diabetes</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Describe suitable or unsuitable foods and dietary methods for dealing with diabetes</li> <li>- Describe the importance of control and management of diet for a diabetic</li> <li>- Describe the importance of weight loss to reduce insulin resistance</li> <li>- Describe the importance of regular and even food intake at consistent levels</li> </ul>
	3.4. Identify clients at risk of nutritional deficiencies	<ul style="list-style-type: none"> <li>• Those people on special diets including:               <ul style="list-style-type: none"> <li>- Gluten/wheat free</li> <li>- Dairy intolerance</li> <li>- Nut intolerance</li> <li>- Kosher</li> <li>- Halal</li> <li>- How to maintain a balanced diet and continuing the exercise regime without the intake of the above foods</li> <li>- Vegetarian</li> <li>- Vegan</li> <li>- Lacto vegetarian</li> <li>- Pregnancy</li> <li>- Lactating women</li> </ul> </li> </ul>
	3.5. Explain how cultural and religious dietary practices can influence nutritional advice	<ul style="list-style-type: none"> <li>• An awareness of the client's religious, moral and social beliefs, cultural background and location when making general dietary recommendations</li> </ul>
	3.6. Describe safety, effectiveness and contraindications relating to protein and vitamin supplementation	<ul style="list-style-type: none"> <li>• The use, safety, effectiveness and any contra-indications to their use to include:               <ul style="list-style-type: none"> <li>- Protein powders</li> <li>- Protein drinks</li> <li>- Protein bars</li> <li>- Amino acids</li> <li>- Vitamins</li> <li>- Isotonic drinks</li> <li>- Hypotonic drinks</li> <li>- Hypertonic drinks</li> <li>- Energy bars</li> </ul> </li> <li>• The use, safety, effectiveness and any contra-indications to the use of other supplements to include:               <ul style="list-style-type: none"> <li>- Minerals</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Creatine</li> <li>- Caffeine</li> <li>- Bicarbonate</li> <li>- Ginseng</li> <li>- Glycerol</li> <li>- Digestive aids</li> <li>- Dietary aids</li> </ul>
	3.7. Explain why detailed or complex dietary analysis that incorporates major dietary change should always be referred to a Registered Dietician	<ul style="list-style-type: none"> <li>• Explain benefits and obstacles of nutritional programme</li> <li>• Understand when referral to GP/other healthcare professional/sports dietician is necessary</li> </ul>
LO4 Understand the relationship between nutrition and physical activity	4.1. Define the role of carbohydrate, fat and protein as fuels for aerobic and anaerobic energy production	<ul style="list-style-type: none"> <li>• Carbohydrate consumption for a person involved in physical exercise to include: <ul style="list-style-type: none"> <li>- As an energy source</li> <li>- Carbohydrate loading</li> <li>- Glycogen re-synthesis</li> <li>- Which carbohydrates to eat and when during exercise</li> </ul> </li> <li>• Fats for a person involved in physical exercise to include: <ul style="list-style-type: none"> <li>- The ability of the body to burn fat throughout a range of intensities of exercise</li> </ul> </li> <li>• Importance of protein consumption for a person involved in physical exercise to include: <ul style="list-style-type: none"> <li>- Over consumption and concerns with carbohydrates</li> <li>- The effects on muscle of a high protein diet</li> </ul> </li> <li>• Understand the role for carbohydrate, fat and protein to include: <ul style="list-style-type: none"> <li>- As fuels for aerobic and anaerobic exercise</li> </ul> </li> </ul>
	4.2. Explain the components of energy expenditure and the energy balance equation	<ul style="list-style-type: none"> <li>• Daily energy expenditure to include: <ul style="list-style-type: none"> <li>- Diet induced thermogenesis</li> <li>- Energy cost of physical activity</li> <li>- Basal metabolic rate (BMR)</li> </ul> </li> <li>• Energy balance to include: <ul style="list-style-type: none"> <li>- Neutral energy balance</li> <li>- Positive energy balance</li> <li>- Negative energy balance</li> <li>- Appetite</li> </ul> </li> </ul>
	4.3. Explain how to calculate and estimate basal metabolic rate (BMR)	<ul style="list-style-type: none"> <li>• BMR formula for women: <ul style="list-style-type: none"> <li>- English formula</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>▪ <math>BMR = 655 + (9.6 \times \text{weight in pounds}) + (4.7 \times \text{height in inches}) - (4.7 \times \text{age in years})</math></li> <li>- Metric formula <ul style="list-style-type: none"> <li>▪ <math>BMR = 655 + (9.6 \times \text{weight in kilos}) + (1.8 \times \text{height in cm}) - (4.7 \times \text{age in years})</math></li> </ul> </li> <li>• BMR formula for men: <ul style="list-style-type: none"> <li>- English formula <ul style="list-style-type: none"> <li>▪ <math>BMR = 66 + (6.23 \times \text{weight in pounds}) + (12.7 \times \text{height in inches}) - (6.8 \times \text{age in years})</math></li> </ul> </li> <li>- Metric formula <ul style="list-style-type: none"> <li>▪ <math>BMR = 66 + (13.7 \times \text{weight in kilos}) + (5 \times \text{height in cm}) - (6.8 \times \text{age in years})</math></li> </ul> </li> </ul> </li> </ul>
	4.4. Explain how to estimate energy requirements based on physical activity levels and other relevant factors	<ul style="list-style-type: none"> <li>• Metabolism adjusts to changes in diet: <ul style="list-style-type: none"> <li>- If calories are increased</li> <li>- If calories are decreased</li> <li>- Hormonal or metabolic changes allow the body to adapt</li> </ul> </li> </ul>
	4.5. Identify energy expenditure for different physical activities	<ul style="list-style-type: none"> <li>• Aerobic exercise</li> <li>• Anaerobic exercise</li> <li>• Endurance</li> </ul>
	4.6. Evaluate the nutritional requirements and hydration needs of clients engaged in physical activity	<ul style="list-style-type: none"> <li>• For a person engaged in physical activity to include: <ul style="list-style-type: none"> <li>- Nutritional requirements</li> <li>- Hydration requirements</li> </ul> </li> </ul>

LO5 Understand how to collect information relating to nutrition	5.1. Explain why it is important to obtain client's informed consent before collecting nutritional information	<ul style="list-style-type: none"> <li>• Importance of obtaining consent from the client</li> <li>• Importance of gaining consent from a person who is acting in the best interests of the client (when the client is unable or not of an age to make the decision for themselves)</li> <li>• Current debate surrounding the issue of consent and the ways in which it may differ between various fitness professionals</li> <li>• The meaning of informed client consent and the guidance given by the fitness professional body, particularly where there is a need for written consent</li> <li>• Methods of obtaining consent and how to confirm that the client has been given sufficient information on which to base their own judgment</li> <li>• Ensure that agreements are in the client's best interests</li> </ul>
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		<ul style="list-style-type: none"> <li>• Ensure that client or appointed companion signs the consultation form to consent to general information and the proposed programme</li> </ul>
	5.2. Describe the information that needs to be collected to offer nutritional advice to clients	<ul style="list-style-type: none"> <li>• Informed consent from the client before the start of the collection of data</li> <li>• Good communication skills (asking open and closed questions)</li> <li>• Confidentiality</li> <li>• Client lifestyle</li> <li>• Client profile</li> <li>• Client activity history</li> <li>• Client's personal goals e.g.: <ul style="list-style-type: none"> <li>- Healthy eating</li> <li>- Weight loss</li> <li>- Weight gain</li> <li>- Improved sporting performance</li> </ul> </li> <li>• Dietary history and preferences</li> <li>• Any food intolerances</li> <li>• Use of supplements</li> <li>• Importance of planning a diet bearing in mind the client's religious, moral and social beliefs</li> <li>• Determining the nature and extent of the client's needs</li> <li>• Agreement to the course of action for short-term, medium-term and long-term</li> <li>• Ascertain the client's consent to the nutritional programme</li> <li>• Detail any possible side effects to the nutritional programme</li> <li>• Detail how the nutritional programme will be evaluated and the review process</li> <li>• Where applicable clarify with the client information which may be available to others, e.g. relevant health care workers</li> <li>• Obtain the client's signature</li> <li>• Detail strategies to prevent drop-out</li> <li>• Detail benefits and obstacles of nutritional programme</li> <li>• Understand when referral to GP/other health care professional/sports dietician is necessary</li> <li>• Long-term commitments</li> <li>• Understand national guidelines regarding the interpretation of collected data</li> </ul>

	5.3. Explain the legal and ethical implications of collecting nutritional information	<ul style="list-style-type: none"> <li>• Professionalism</li> <li>• Do not discuss the personal details of a client with other fitness personnel</li> <li>• Do not discuss the personal details of a client with another client</li> <li>• Understand the legal/ethical implications of collecting data e.g. Data Protection Act</li> <li>• Ensure the client realises that the only reason information would be disclosed would be to ascertain permission to proceed with exercise from a GP or other medically trained practitioner</li> </ul>
	5.4. Describe different formats for recording nutritional information	<ul style="list-style-type: none"> <li>• Explaining the rationale, method and benefits of the Nutritional Questionnaire</li> <li>• Ensuring that the correct information is taken from the client</li> <li>• Ensuring that the client gives sufficient detail regarding their health and background and realises the importance of gaining GP's permission in the relevant circumstances</li> <li>• Ensuring that the client signs the Nutritional Questionnaire</li> </ul>
	5.5. Explain why confidentiality is important when collecting nutritional information	<ul style="list-style-type: none"> <li>• Do not discuss the personal details of a client with other fitness personnel</li> <li>• Do not discuss the personal details of a client with another client</li> <li>• Data Protection Act/GDPR</li> <li>• Ensure the client realises that the only reason information would be disclosed would be to ascertain permission to proceed with the diet from a GP or other medically trained practitioner</li> <li>• Ensuring that the client feels able to confide in the trainer where necessary</li> <li>• Ensuring that the client feels secure in the knowledge that any discussion is confidential</li> </ul>
	5.6. Describe issues that may be sensitive when collecting nutritional information	<ul style="list-style-type: none"> <li>• Personal history</li> <li>• Medical history</li> <li>• Eating habits</li> <li>• Psychological problems</li> <li>• Ascertaining the client's consent to the general information and proposed self-care programme</li> <li>• Importance of planning a nutritional programme bearing in mind the client's religious, moral and social beliefs</li> </ul>

		<ul style="list-style-type: none"> <li>• Where the client is not in a position themselves, ascertaining the appointed companion's agreement to the general information and proposed programme</li> <li>• Agreeing general information, proposed self-care objectives and recommended procedures</li> <li>• Obtaining the client's signature (or that of the appointed companion)</li> </ul>
	5.7. Explain different methods that can be used to measure body composition and health risk in relation to weight	<ul style="list-style-type: none"> <li>• Callipers</li> <li>• Body Mass Index (BMI)</li> <li>• Waist to hip ratio</li> <li>• Waist circumference (WC)</li> <li>• Ponderal index</li> <li>• Bioelectric impedance analysis (BIA)</li> <li>• Hydrostatic weighing</li> </ul>

LO6 Understand how to use nutritional information	6.1. Describe basic dietary assessment methods	<ul style="list-style-type: none"> <li>• Food diary</li> <li>• Dietary history and preferences</li> <li>• Food habits including likes and dislikes</li> <li>• Supplements taken</li> </ul>
	6.2. Explain how to analyse and interpret collected information so that client's needs and nutritional goals can be identified with reference to the National food model/guide recommendations	<ul style="list-style-type: none"> <li>• Effect of outside factors on dietary requirements to include: <ul style="list-style-type: none"> <li>- Age</li> <li>- Body size</li> <li>- Gender</li> <li>- Occupation</li> <li>- Pregnancy</li> <li>- Menopause</li> <li>- Elderly and sedentary adults</li> <li>- Race</li> <li>- Religion</li> </ul> </li> <li>• Analysis and interpretation of collected information to include: <ul style="list-style-type: none"> <li>- Explain strategies to prevent drop-out</li> <li>- Explain benefits and obstacles of nutritional programme</li> <li>- Healthy eating</li> <li>- Weight gain</li> <li>- Weight loss</li> <li>- Improved sporting performance</li> <li>- Determining the nature and extent of the client's needs</li> </ul> </li> </ul>

		<ul style="list-style-type: none"> <li>- Agreement to the course of action for short-term, medium-term and long-term</li> <li>- Ascertain the client's consent to the programme</li> <li>- Explain any possible side effects to the programme</li> <li>- Explain how the programme will be evaluated and the review process</li> <li>- Obtain the client's signature</li> <li>- Encourage and motivate clients for long-term commitments</li> <li>- Understand national guidelines regarding the interpretation of collected data</li> </ul>
	6.3. Describe how to interpret information gained from methods used to assess body composition and health risk in relation to weight	<ul style="list-style-type: none"> <li>• Body composition assessment</li> <li>• Muscular build-people weigh heavy</li> <li>• Individuals with little muscle</li> <li>• Body fat distribution – waist/hip ratio, waist circumference</li> <li>• Low body fat</li> <li>• Body Mass Index (BMI)</li> </ul>
	6.4. Explain how to sensitively divulge collected information and 'results' to clients	<ul style="list-style-type: none"> <li>• Agreement to the course of action for short-term, medium-term and long-term</li> <li>• Ascertain the client's consent to the programme</li> <li>• Explain any possible side effects to the programme</li> <li>• Explain how the programme will be evaluated and the review process</li> </ul>
	6.5. Explain how to recognise the signs and symptoms of disordered eating and healthy eating patterns	<ul style="list-style-type: none"> <li>• Characteristics and psychological signs of anorexia nervosa</li> <li>• Characteristics and psychological signs of bulimia nervosa</li> <li>• Characteristics and signs of malnutrition</li> <li>• Obesity</li> <li>• Hypoglycaemia</li> <li>• Hyperglycaemia</li> <li>• Diabetes</li> <li>• Characteristics and psychological signs of healthy eating</li> </ul>
	6.6. Describe the key features of the industry guidance note on 'managing users with suspected eating disorders'	<ul style="list-style-type: none"> <li>• Familiarity with the guidance note on 'managing users with suspected eating disorders'</li> </ul>
	6.7. Explain the circumstances in which a client should be recommended to visit their GP about the possibility of referral to a Registered Dietician	<ul style="list-style-type: none"> <li>• If suspected of having an eating disorder</li> <li>• Malnutrition</li> <li>• Obesity</li> </ul>



		<ul style="list-style-type: none"> <li>• Diabetes</li> <li>• Hypoglycaemia</li> <li>• Hyperglycaemia</li> </ul>
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LO7 Understand the principles of nutritional goal setting with clients	7.1. Explain how to apply the principles of goal setting when offering nutritional advice	<ul style="list-style-type: none"> <li>• Try not to deviate from the set diet plan</li> <li>• Evaluation</li> <li>• SMART: <ul style="list-style-type: none"> <li>- Specific</li> <li>- Measurable</li> <li>- Attainable</li> <li>- Realistic and relevant</li> <li>- Timely</li> </ul> </li> </ul>
	7.2. Explain how to translate nutritional goals into basic healthy eating advice that reflects current National guidelines	<ul style="list-style-type: none"> <li>• Fuel = calorie intake = energy = calorie output</li> <li>• Sports specific nutrition</li> </ul>
	7.3. Explain when people other than the client should be involved in nutritional goal setting	<ul style="list-style-type: none"> <li>• Where the client is not in a position themselves, ascertaining the appointed companion's agreement to the general information and proposed programme</li> </ul>
	7.4. Define which other people could be involved in nutritional goal setting	<ul style="list-style-type: none"> <li>• GP</li> <li>• Sports dieticians</li> <li>• Nutritionists</li> <li>• Sports coaches</li> </ul>
	7.5. Identify the barriers which may prevent clients achieving their nutritional goals	<ul style="list-style-type: none"> <li>• Loss of motivation</li> <li>• Illness</li> <li>• Injury</li> <li>• Work related</li> <li>• Family circumstances</li> <li>• Client's negativity</li> <li>• Stress</li> </ul>
	7.6. Explain how to apply basic motivational strategies to encourage healthy eating and prevent non-compliance or relapse	<ul style="list-style-type: none"> <li>• Structure realistic expectations</li> <li>• Client's preferences, needs, habits and history</li> <li>• Provide a programme to suit the client(s) particular objectives</li> <li>• Set appropriate goals</li> <li>• Provide alternate foods</li> <li>• Identify short term benefits</li> <li>• Promote the positive rewards, decrease negative rewards</li> </ul>

		<ul style="list-style-type: none"> <li>• Provide regular feedback</li> <li>• Train client(s) in self-management strategies to continue their nutritional programme wherever they are</li> <li>• Prepare the client(s) for inevitable lapses</li> <li>• Prepare the client(s) for changes in Nutritional Advisors</li> <li>• Utilise as many types of social support as possible</li> <li>• Seek out opportunities to promote an overall healthy lifestyle</li> <li>• Empower client(s) to take ownership of their goals and programme</li> <li>• Map the road to long-term goals by providing check points</li> <li>• Be understanding and ready to adapt to the client(s) needs</li> </ul>
	7.7. Explain the need for re-appraisal of client's body composition and other relevant health parameters at agreed stages of the programme	<ul style="list-style-type: none"> <li>• Measuring at regular intervals</li> <li>• Ensure body composition is correct for the specific sport</li> <li>• Target setting</li> <li>• Target setting for specific sports</li> <li>• Daily/weekly/monthly nutritional programme</li> </ul>
LO8 Be able to collect and analyse nutritional information	8.1. Collect information needed to provide clients with appropriate healthy eating advice	<ul style="list-style-type: none"> <li>• Ascertain client's current eating habits</li> <li>• Outline the benefits of recommended general information for self-care</li> <li>• Determining the nature and extent of the client's needs in respect of presenting conditions</li> <li>• Weight</li> <li>• Height</li> <li>• Measure</li> <li>• Callipers</li> <li>• Body Mass Index (BMI)</li> <li>• Waist circumference (WC)</li> <li>• Waist to hip ratio</li> <li>• Ponderal index</li> <li>• Bioelectric impedance analysis (BIA)</li> <li>• Hydrostatic weighing</li> </ul>
	8.2. Record information about clients and their nutritional goals in an approved format	<ul style="list-style-type: none"> <li>• Nutritional questionnaire</li> <li>• Nutritional chart</li> </ul>

	8.3. Analyse collected information including nutritional needs and preferences in relation to the client's current status and nutritional goals	<ul style="list-style-type: none"> <li>• Documenting general information, the proposed self-care programme and outcomes</li> <li>• Providing general information to assist the client to maintain well-being through healthy eating and a well-balanced diet</li> <li>• Healthy eating</li> <li>• Weight gain</li> <li>• Weight loss</li> <li>• Improved flexibility/sporting performance</li> </ul>
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LO9 Be able to apply principles of nutrition to a physical activity programme	9.1. Access and make use of credible sources of educational information and advice in establishing nutritional goals with clients	<ul style="list-style-type: none"> <li>• Leaflets on nutrition</li> <li>• Internet</li> <li>• Magazines</li> <li>• Books</li> <li>• Healthy eating</li> <li>• Fluid/water intake</li> <li>• The role of supplements</li> <li>• Exercise</li> <li>• Posture</li> <li>• Work</li> <li>• Sleep patterns</li> <li>• Smoking habits</li> <li>• Hobbies</li> <li>• Interests</li> <li>• Rest</li> <li>• Relaxation techniques</li> <li>• Time management</li> <li>• Stress levels</li> <li>• General care and lifestyle advice and the beneficial effects</li> </ul>
	9.2. Design and agree nutritional goals that are compatible with the analysis, accepted good practice and national guidelines	<ul style="list-style-type: none"> <li>• Agreement to the course of action for short-term, mid-term and long-term</li> <li>• Effectiveness of the general information</li> <li>• Importance of planning a nutritional programme bearing in mind the client's religious, moral and social beliefs</li> <li>• Explain any side effects to the programme</li> <li>• Explain how the programme will be evaluated and the review process</li> </ul>

		<ul style="list-style-type: none"> <li>• Where applicable clarify with the client information which may be available to others e.g. relevant health care workers</li> <li>• Explain strategies to prevent drop-out</li> <li>• Explain benefits and obstacles of nutritional programme</li> <li>• Understand when referral to GP/other healthcare professional/sports dietician is necessary</li> <li>• Note any comments made by the client and make appropriate changes</li> <li>• Encourage and motivate clients for long term commitments</li> <li>• Understand national guidelines regarding the interpretation of collected data</li> </ul>
	9.3. Ensure that the nutritional goals support and integrate with other programme components	<ul style="list-style-type: none"> <li>• Changes in fitness programme</li> <li>• Changes in health</li> <li>• Changes in weight</li> </ul>
	9.4. Agree review points with the clients	<ul style="list-style-type: none"> <li>• On-going feedback</li> <li>• Set review dates for evaluation</li> <li>• Motivation</li> <li>• Encourage rapport with the client</li> <li>• Note any comments made by the client and make appropriate changes</li> </ul>
	9.5. Review the clients understanding of how to follow the nutritional advice as part of their physical activity programme	<ul style="list-style-type: none"> <li>• On-going feedback</li> <li>• Note any comments made by the client and make appropriate changes</li> <li>• Go over the proposed nutritional programme ensuring the client understands what has to be achieved</li> <li>• Accept client learning curve</li> <li>• Agree with client goals/preferences/abilities for the new diet</li> </ul>
	9.6. Monitor, evaluate and review the client's progress towards their nutritional goals	<ul style="list-style-type: none"> <li>• On-going feedback</li> <li>• Changes in health or fitness</li> <li>• Analysis of mood of client</li> <li>• Evaluation of reasons of client's dropping-out rate</li> <li>• Motivational level</li> <li>• Did the diet meet the requirements of the client</li> <li>• Note any comments made by the client and make appropriate changes</li> <li>• Longer term requirements of the client</li> </ul>

		<ul style="list-style-type: none"> <li>• Encourage rapport with the client</li> <li>• Use of all principles and fundamentals</li> <li>• Evaluate individual progress/regress with reasons</li> <li>• Question own advice</li> <li>• How to deal with negative feedback to include: <ul style="list-style-type: none"> <li>- Allow the client to speak freely</li> <li>- Ascertain why the feedback is negative</li> <li>- Listen carefully</li> <li>- Do not interrupt</li> <li>- Do not argue</li> <li>- Try to make it a positive</li> <li>- Offer another/alternative nutritional advice</li> </ul> </li> </ul>
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Assessment	
Portfolio of evidence containing: <ul style="list-style-type: none"> <li>• 3 case studies</li> </ul>	<p>To include:</p> <ul style="list-style-type: none"> <li>• Consultation including medical history, general lifestyle and current diet</li> <li>• Client profile and lifestyle (to include any current issues)</li> <li>• Suitable diet plan taking into account the client's current lifestyle with rationale for the plan</li> <li>• Feedback to show evidence of the progression for each of the weeks 1, 2, 3 and 4 of the diet</li> <li>• Overall conclusion</li> <li>• Reflective practice</li> </ul> <p>Case studies must be evidences through the use of the signed and dated consultation form and results entered onto the case study assessment form.</p>

Guide to taught content
<p>The content contained within the unit specification is not prescriptive or exhaustive but is intended to provide helpful guidance to teachers and learners with the key areas that will be covered within the unit, and, relating to the kinds of evidence that should be provided for each assessment objective specific to the unit learning outcomes.</p>

**Document History**

Version	Issue Date	Changes	Role
v1	13/08/2019	First published	Qualifications and Regulation Co-ordinator
v2	27/09/2019	Corrected LO4	Qualifications and Regulation Co-ordinator
V3	25/02/2025	Number of case studies amended from 1 to 3	Development Administrator