
Unit Specification

USP188 – Nutrition for exercise, fitness, health and wellbeing

Unit reference number: D/617/2596

Level: 3

Guided Learning (GL) hours: 42

Overview

This unit is about the principles of nutrition and their application to exercise, physical activity, health and wellbeing.

Learners will develop knowledge of the principles and key guidelines of nutrition and healthy eating, and the relationship between these and exercise, physical activity and health. Learners will also develop the knowledge and skills to collect and analyse information from clients and use this to assess nutritional intake and apply nutritional strategies within scope of practice.

Learning outcomes

On completion of this unit, learners will:

LO1 Know key principles of nutrition and healthy eating

LO2 Know the roles of the main nutrients and the importance of hydration

LO3 Know the relationship between of nutrition, exercise, physical activity and health

LO4 Know how to assess nutritional intake and apply nutritional strategies

LO5 Be able to assess nutritional intake and apply nutritional strategies within scope of practice

Unit content

LO1 Know key principles of nutrition and healthy eating

Structure and function of the digestive system

Taught content

- Mouth – mechanical digestion begins (mastication, food chewed and moistened) chemical digestion begins (salivary amylase breaks down starch into simple sugars)
- Oesophagus – mucus-lined smooth muscle tube, peristalsis pushes food towards the stomach. No additional chemical digestion
- Stomach – Chemical digestion of proteins (Hydrochloric acid kills bacteria and enables enzymes e.g. pepsin to perform their actions. Pepsin breaks protein down into smaller amino acid chains. Peptides and lipase break down short chain triglycerides into fatty acids and monoglycerides). Mechanical digestion (Food churned and mixed with liquid until broken down into chyme)
- Small intestine (duodenum, jejunum and the ileum) – breaks down nutrients into usable components. Chemical digestion (gall bladder releases bile made by liver to emulsify lipids (fats) and pancreas secretes pancreatic juice containing lipase and other enzymes to complete macronutrient breakdown). Mechanical digestion (via peristalsis and segmentation in ileum). Absorption of nutrients into hepatic blood stream and lymph by capillaries and lacteals
- Pancreas – secretes pancreatic juice containing enzymes that assist breakdown of carbohydrates, protein and fat in small intestine. Role of pancreatic enzymes – trypsin, amylase, lipase
- Liver – secretion of bile to emulsify fat and assist breakdown and absorption of fats
- Gall bladder – located under the liver, stores and releases bile into small intestine via bile duct
- Large intestine – final stage of digestive process. Partial breakdown of cellulose (soluble fibre), reabsorption of the water from undigested food, undigested food fibre forms faeces and passes to the rectum
- Rectum – expels faeces
- Kidneys – help to keep blood composition constant. Filter blood to remove excess water and waste products, which are secreted as urine
- Appendix – no known function in digestion. Vestigial part of colon with an immune system function

Key nutritional terms and common terminology used in nutrition

Taught content

- Diet – an individual’s food intake and eating habits and behaviours
- Healthy eating – following a healthy diet and eating a balanced intake of all nutrients in the appropriate quantities following evidence-based guidelines consistent with the national food guide (Eat Well Guide)
- Unhealthy eating – following an unhealthy diet and eating an imbalanced intake of the recommended nutrients, inappropriate quantities of specific nutrients (too little or too much), unstructured or disordered patterns of eating
- Nutrition – the branch of science that deals with nutrients and nutrition
- Balanced diet – a diet that contains adequate amounts of all the necessary nutrients
- Glycaemic index (GI) – a ranking given to carbohydrate foods based on their effect on blood sugar and glucose levels
 - Low – 55 or less
 - Medium – 56–69
 - High – 70 or more
- Glycaemic Load (GL) – a method used to compare the speed and amount of glucose released from different carbohydrate foods, calculated by: $GL = (GI \times \text{the amount of carbohydrate in grams}) \div 100$
 - Low – 10
 - Medium – 11–19
 - High – 20 or more
- Calorie – the unit of measurement used to express the amount of energy in food and expended by the body
- UK dietary reference values (DRV) – new guidelines (replace RDA and RDI), developed to promote the concept of health and not just avoidance of disease. Guidelines provided for energy and all nutrients
- Recommended daily allowance (RDA) – the average quantity of a nutrient that should be provided if the needs of all members of a specific population must be met
- Recommended daily intake (RDI) – the amount sufficient, or more than sufficient for the nutritional needs of nearly all healthy people in the UK

National food guide and general healthy eating advice

Taught content

- Model
 - Public Health England’s Eatwell guide
- Nutritional principles and features
 - Food types
 - Balanced intake of macronutrients and micronutrients
 - Food proportions
 - Food choices
 - Portion sizes

- General healthy eating guidelines
 - Base all meals around starchy foods e.g. wholegrains
 - Eat a minimum of five portions of fruit and vegetables a day
 - Reduce saturated fat and sugar e.g. fewer cakes and biscuits, less processed food
 - Eat at least two portions of fish per week (one of which should be oily)
 - Eat less salt
 - Maintain a healthy weight
 - Be active
 - Drink plenty of water
 - Eat breakfast
- Food groups of the Eat Well Guide and nutrients they provide
 - Grains (primary source of starchy carbohydrate) – bread, pasta, potatoes, cereal and rice
 - Fruit and vegetables (mostly carbohydrate some are sources of healthy fats) – provide fibre, vitamins and minerals
 - Dairy (sources of protein and fat) – milk, cheese and yoghurt
 - Meat and non-meat protein sources (primary protein source for most people also a source of fat) – fish, nuts, dry beans and eggs
 - Oils and spreads (fat source) – vegetable oils, butter, lard, coconut oil, palm oil
 - Miscellaneous foods that sit outside of the main plate (high in fats and added sugars) – sweets, cakes, biscuits, pastries, chocolate, ice cream etc.
 - Water (source of some minerals)
- Eatwell guide recommended servings and portion sizes per day
 - Serving sizes are not equivalent to portions, recommended serving sizes are in some cases much smaller than a typical portion consumed e.g. 1 slice of bread is a serving but a portion is normally 2 slices in a sandwich, 3oz of meat is a serving but a portion is typically 6oz or more
 - Grains – six to eleven servings each day depending on need, choose wholegrain or higher fibre versions with low sugar, fat and sodium content
 - Fruit and vegetables – eat at least five portions of a variety of vegetables and fruit each day
 - Dairy – two to three servings each day, choose lower fat and lower sugar options
 - Meat and protein – two to three servings each day, eat more beans and pulses, eat two sources of sustainably sourced fish each week, one of which should be oily, eat less red and processed meat
 - Oils and fat spreads – choose unsaturated oils and eat in very small amounts
- Correct proportions of total energy intake from each nutrient
 - Carbohydrate – 50%-60% total energy intake (includes starch and sugar from all sources including vegetables and fruit)
 - Fat – 20%-35% total energy intake
 - Saturated fat – less than 10% total energy intake
 - Protein – 10-15% total energy intake (more specific guidelines for requirements during participation in different types of exercise available from credible research)

organisations e.g. British Association of Sports and Exercise Scientists, Australian Institute of Sport)

- Fibre – more than 18gm of fibre/starch polysaccharides
- Dietary needs vary according to age, gender, activity levels, health, body size and genetics

Food labelling and healthy food preparation

Taught content

- Food labelling
 - Legal requirements for most packaged foods
 - Name of food
 - Weight of the food
 - Any special storage considerations
 - A 'best before' date
 - A 'use before' date
 - The name and address of the manufacturer
 - The place of origin
 - Non-legal requirements – not a legal requirement to have nutritional information on a product unless a specific claim has been made e.g. low fat
 - Additional information that is usually included
 - Macronutrient amounts in grams
 - Nutritional information provided per 100 grams/per portion of food
 - Total energy value (KJ, kcal)
 - Micronutrient % RDA
 - Ingredients – e.g. saturated fats, sugars, sodium, salt, fibre
 - Food standards agency guidelines
 - Unsubstantiated marketing claims of suppliers
 - Advertising has to conform to strict legal guidelines
 - Definitions of low sugar, low fat, light, less than 5% fat, 95% fat free, reduced fat, lite
- Healthy food preparation
 - Baking
 - Grilling
 - Boiling
 - Steaming
 - Healthy cooking oils
 - Adding salt
- Significance
 - Healthy levels of fat and salt intake
 - Preserving nutrients in the preparation process

LO2 Know the roles of the main nutrients and the importance of hydration

Dietary sources and functions of the key macronutrients and micronutrients

Taught content

- Macronutrients – carbohydrates, fats, proteins
- Micronutrients – vitamins and minerals
- Carbohydrates
 - Simple carbohydrates (monosaccharides, disaccharides)
 - Complex carbohydrates (polysaccharides, soluble and insoluble fibre)
 - Functions
 - Energy
 - Digestion (fibre)
 - Nervous system function
 - Storage
 - Glucose transported in the blood as blood sugar
 - Glycogen in liver and muscles
 - Sources
 - Simple carbohydrates – sugar, sweets, chocolate, fruit
 - Complex carbohydrates – beans, bread, pasta, potatoes, rice, vegetables
- Fats
 - Lipids
 - Saturated
 - Unsaturated
 - Cholesterol
 - Fatty acids
 - Trans fats
 - Omega 3
 - Omega 6
 - Functions in diet
 - Provide essential fatty acids
 - Breakdown for energy production
 - Transport fat-soluble vitamins
 - Functions in body
 - Essential fatty acids form components of cell and hormone structures
 - Insulation
 - Protection of vital organs
 - Energy storage for release when needed
 - Storage
 - Glycerol and fatty acids
 - Adipose tissue – subcutaneous and visceral

- Sources
 - Saturated – animal/dairy products, meat, fish, eggs, dairy products
 - Unsaturated – fish oils, nuts, seeds, fruit (olives, avocado), plant oils, grains, beans and pulses
 - Hydrogenated/trans fats – processed food products, e.g. confectionery, cakes, biscuits, bread, boxed cereals
- Proteins
 - Complete – contain all essential amino acids in adequate quantities for body needs
 - Incomplete – do not contain all essential amino acids in adequate quantities to meet body needs
 - Functions
 - Structural – cell components
 - Muscle growth and repair
 - Functional
 - Enzymes
 - Antibodies
 - Energy
 - Storage
 - Amino acid pool
 - Muscle and other cell structures
 - Sources
 - Animal (complete) – animal/dairy products, meat, fish, eggs, dairy products
 - Plant (incomplete) – grains, seeds, beans and pulses, leafy vegetables
- Vitamins
 - Water soluble (C and B group)
 - Fat soluble (A, D, E and K)
 - Sources – All natural food sources provide some vitamins, specific foods are good sources of certain vitamins or types of vitamin, for example
 - Vegetables and fruit for vitamin C and beta carotene (vitamin A precursor)
 - Milk and dairy products for fat soluble vitamins
 - Fish, eggs, meat for fat soluble vitamins, particularly A and D and B12
 - Nuts and seeds for fat soluble vitamins, particularly E
 - Whole grain starches for B vitamins except B12
 - Yeast extract for many B vitamins including good source of B12 for vegetarians
 - Functions include all body processes, for example
 - Energy metabolism
 - Protein synthesis
 - Glycogen synthesis
 - Blood clotting
 - Red blood cell formation

- Aid growth
 - Maintenance of teeth and bones
 - Aid vision
- Minerals
 - Macro (e.g. calcium, phosphorus, magnesium, sodium, potassium, sulphur)
 - Trace (e.g. copper, iron, zinc, selenium, manganese, iodine, cobalt, fluoride)
 - Sources – All natural food sources provide some minerals, specific foods are good sources of certain minerals, for example
 - Calcium – dairy, fish with bones, soy, dark green vegetables
 - Chromium – meat, grains, vegetable oils
 - Iodine – plants grown in iodine rich soil, seafood
 - Iron – red meat, fish, poultry, eggs, legumes, dried fruit
 - Magnesium – nuts, legumes, whole grains, dark leafy greens, seafood, cocoa
 - Phosphorous – all meat and fish
 - Potassium – fruit, vegetables, meat, grains, dairy
 - Selenium – seafood, offal, meat, grains, vegetables grown in selenium rich soil
 - Sodium – salt, soy sauce, processed foods
 - Meat and dairy, wheat, some vegetables
 - Functions, include all body processes, for example
 - Bone growth and remodelling
 - Tooth growth and health
 - Energy production
 - Enzyme function
 - Nerve and muscle function
 - Water balance
 - Blood clotting
 - Oxygen transport in red blood cells
- The energy (calorific) content of nutrients
 - Definitions of calorie and kilocalorie (kcal)
 - Carbohydrate contains 4 kcal per gram
 - Protein contains 4 kcal per gram
 - Fat contains 9 kcal per gram
 - Alcohol contains 7 kcal per gram (not a nutrient but a source of energy metabolised by the body)

Functions of water in the body and the importance of adequate hydration for health and performance

Taught content

- Functions
 - Maintain hydration
 - Maintain homeostasis (stable internal environment)
 - Maintain body processes and functions
 - Physical and mental performance
 - Heat regulation
 - Maintain blood plasma volume
 - Immune system function through movement of lymph
 - Absorption of nutrients across gut membrane
 - Exchange of gases across alveolar membranes
 - Lubrication of tissues and joints to reduce friction and enable smooth movement
 - Removal of waste products from the body
- Types of fluid/drinks
 - Water
 - Sports drinks – hypotonic, hypertonic, isotonic
 - Clear fluids (herbal teas and other flavoured fluids with no sugar content)
 - Caffeinated (coffee, tea, energy drinks)
 - Sugar containing (squash, soda, fruit juices, energy drinks)
 - Fat and sugar containing (cappuccino, latte, flat white, hot chocolate)
 - Alcoholic (beer, wine, spirits)
- Factors affecting fluid intake needs
 - Hydration and rehydration strategies (before, during, after training and competition)
 - Timing of intake
 - Activity levels
 - Environmental temperature
 - Individual differences in physiology
- Definition and classifications of hydration (hypo-hydration, hyper-hydration, super-hydration, dehydration); signs and symptoms
- Effects on performance – physical performance (aerobic endurance, strength, power, speed); mental performance (concentration, decision making, reaction time); perceived effort; fatigue; risk of injury

LO3 Know the relationship between of nutrition, exercise, physical activity and health

Role of nutrients for aerobic and anaerobic energy production and performance

Taught content

- The role of nutrients for aerobic and anaerobic energy production
 - Carbohydrate – anaerobic glycolysis, aerobic energy production during higher exercise intensity)
 - Fats – aerobic energy production during lower exercise intensity
 - Protein – used for aerobic energy production during energy depletion
 - Relative contributions of energy substrates during different activities and exercise intensities
- Guidelines for tailoring nutrition to optimise performance in endurance events
 - Pre-event nutrition, e.g. carbohydrate loading, fat loading
 - During event nutrition
 - Post-event nutrition
- Guidelines for hypertrophy and muscle gain and the advantages, disadvantages and accuracy of different information sources

Energy balance and weight management

Taught content

- The two components of the energy balance equation
 - Energy intake – food and drink, the type and amount of food eaten, type and amount of drinks consumed that contain energy i.e. all macronutrients and alcohol
 - Energy expenditure – relative expenditure of energy, basal/resting metabolic rate (BMR/RMR), movement (physical activity and exercise), thermic effect of food
- Energy balance equation
 - Energy in and out balanced = maintain weight
 - Energy in exceeds energy out = weight gain (fat and muscle)
 - Energy out exceeds energy in = weight loss (fat and muscle)
- Other considerations – influence of individual differences on energy expenditure e.g. genetics, hormone balance, dietary habits, energy needs for different activities, fitness levels, movement efficiency
- How to estimate basal metabolic rate
 - Calculating estimates using equations – Harris-Benedict, indirect calorimetry, BIA devices
- How to estimate energy requirements
 - Based on physical activity levels – sedentary, moderately active, very active lifestyles
 - Physical activity log
 - Physical activity reference tables
 - Other relevant factors – occupation, lifestyle, physical activity
- The energy expenditure for different physical activities
 - Energy expenditure – use of metabolic equivalents (METs) and kilocalories per hour (Kcal/h)
 - Physical activities – running, walking, swimming, cycling, gardening, housework

How to evaluate nutritional requirements and hydration needs

Taught content

- Evaluation of needs – goals, body composition, physical activity levels, exercise levels, sports participation, occupation, and lifestyle
- Requirements – before, during and after activity
- Clients at risk of nutritional deficiencies
 - Overweight/obese clients
 - Underweight clients
 - Clients with disordered eating patterns or eating disorders
 - Older clients
 - Clients on fad or popular diets
 - Clients on restricted diets: vegetarian or vegan diets, on gluten free diets
 - Pregnancy
 - Medical conditions, e.g. coeliac disease, irritable bowel syndrome, diabetes
- The effects of cultural and religious dietary practices
 - Cultures and religions – e.g. Muslim, Jewish, Buddhist, Hindu, Christian
 - Influence on nutritional advice – forbidden or sacred foods (e.g. Hindu – cow), periods of dietary fasting or restriction

Relationship between nutrition, physical activity, body composition and health

Taught content

- Effects of excessive alcohol intake
- Effects of diet on blood cholesterol/lipoproteins
 - Effect of intake and physical activity on LDL:HDL ratio, effect of intake on body composition
- Types of fat in diet and effects of intake on cardiovascular health
- Health risks associated with poor nutrition and unhealthy eating
 - Chronic diseases associated with poor nutrition e.g. obesity, type 2 diabetes, heart disease, stroke, osteoporosis, cancer, atherosclerosis, hypertension, arthritis, mental health problems (depression, anxiety)
 - Acute conditions associated with nutritional deficiencies e.g. anaemia, dehydration, hypoglycaemia

Use of protein and vitamin supplementation

Taught content

- Scope of practice – not to recommend or advise on supplements, personal choice of client, refer to GP, registered dietitian or registered nutritionist if nutritional deficiency is suspected
- Safety – approved, intake within recommended guidelines
- Effectiveness – for supplementing restricted diets, for supporting intense training programmes
- Contra-indications – abnormalities in liver and kidney function, digestive system problems

LO4 Know how to assess nutritional intake and apply nutritional strategies

Professional role boundaries in relation to providing nutritional guidance

Taught content

- Own scope of practice and role boundaries
 - Provide information using published guidance from credible sources that is nationally available to the public
 - Provide general healthy eating advice to healthy adults
 - Using evidence-based information that is available from recognised sources, e.g. FSA, DoH, British Dietetic Association (BDA)
 - Not providing information based on personal opinion or experience
 - Not providing information that constitutes nutrition therapy or treatment of a nutrient deficiency
 - Not providing information to clients with medical conditions that require individual dietary advice that differs from national healthy eating guidelines
 - Not providing advice or recommendations for dietary supplements
- Credible sources for information
 - Code of Ethics, REPs Code of Conduct, CIMSPA, British Dietetic Association, Association For Nutrition
 - Professionals – dietitian, nutritionist, GP
 - Professional bodies – British Dietetic Association, Association for Nutrition, Public Health England, BASES
 - Evidence based text books
 - Evidence based journals
 - Evidence based websites
 - Public Health England
 - Government Department of Health (DoH) ‘five a day’ fruit and vegetable recommendation
- When to refer clients to GP or healthcare professional
 - Health care professionals – registered dietitian, registered nutritionist
 - Reasons for referral
 - Chronic health conditions (e.g. severe obesity, diabetes, allergies, coeliac, heart disease)
 - Malnutrition including vitamin and mineral deficiencies
 - Underweight
 - Eating disorders
 - Requests for specific meal plans or advice on dietary supplements
- The importance of communicating the health risks of common diets and unhealthy eating
 - Reduce risk of diet-related health problems
 - Raise awareness of the dangers of unsubstantiated diets
 - Promote safe and effective dietary practice for weight management and physical activity

- Health and performance implications
 - Severe energy restriction (e.g. exhaustion, skin problems, confusion, loss of muscle mass, reduced muscular fitness, reduced aerobic capacity)
 - Weight loss (e.g. fatigue, reduced concentration, weakened immune system, reduced muscular fitness)
 - Weight gain (e.g. obesity, diabetes, hypertension, CHD, increased risk of musculoskeletal injury, reduced aerobic capacity, reduced range of motion and mobility, reduced self-esteem, negative body image)
- The legal and ethical considerations when collecting nutritional information
 - Consideration to – Law of Tort (Delict in Scotland), CIMSPA professional standards, REPs Code of Conduct, Data Protection legislation, confidentiality, informed consent
 - Importance of confidentiality – adherence to the law, follow professional codes of conduct, maintain client’s trust and respect
 - Purpose of informed consent
- Content – aims, benefits, risks, responsibilities of client and instructor, record of questions and answers, date and signatures of client and instructor

Consult with and develop effective working relationships with clients

Taught content

- How to prepare the consultation area
 - Private and no distractions
 - Clean and tidy
 - Comfortable setting
 - Remove any obstacles and barriers
 - All paperwork and resources ready
- How to use communication skills and structure the nutritional consultation
 - Begin consultation and initiate conversation
 - Greet client
 - Introduce self (role and boundaries)
 - Encourage client to speak openly (using open-ended questions), use follow-up questions (probing) where appropriate
 - Maintain conversation and rapport and reflect empathy
 - Using active listening
 - Affirming statements
 - Reflective statements
 - Appropriate non-verbal communications, e.g. body position, posture, gestures, facial expressions
 - Summaries to help progress the conversation
 - Facilitate goal-setting

- Determine client readiness to set goals in relation to a specific lifestyle behaviour, e.g. use of questionnaires and rating scales, assess balance of change and sustain talk, confidence scales
 - Explain the process of goal setting, action planning and reviews
 - Assist the client with SMART goal setting (process and outcome)
 - Help clients to identify any personal barriers to making lifestyle changes and their personal suggestions and strategies for managing these barriers
- Close the consultation
 - Discuss the benefits of making changes and reviewing progress against agreed targets
 - Provide affirmations, encouragement to the client
 - Negotiate action plan
 - Ensure the client is satisfied with the agreed action plan
 - Discuss communication and support strategies between sessions, including social support available to the client
 - Book next meeting/appointment
- Respect for equality and diversity of clients
 - Specific needs, apparently healthy adults, young people, antenatal and postnatal clients, disabled clients, protected and other characteristics (age, gender, race, nationality, ethnic or national origin, religious or political beliefs, disability, marital status, social background, family circumstance, sexual orientation, gender reassignment, spent criminal convictions)
- Importance
 - Build rapport, value individual and diversity, mutual respect, confidence and trust, fair treatment, determine and meet client needs, establish rapport, present self and organisation positively, gain new clients (word of mouth), promote adherence, enable client to achieve goals and reach potential
- Communication skills
 - Active listening, non-judgemental, empathy, use of open questions (as appropriate), affirming and reflective statements, accessible language, positive feedback, accurate written records, awareness of non-verbal language (body language, posture, facial expressions and voice intonation)
- Professional conduct
 - Professional boundaries, scope of practice, appropriate dress/appearance, positive attitude, show respect, equal opportunities, inclusion, punctuality

Methods of collecting information to assess nutritional intake

Taught content

- The purpose of dietary analysis and assessing nutritional intake
 - Basis for recommendations based on recognised nutrition guidelines
 - Awareness raising process for client
 - Reasons for referral to registered dietitian
 - Potential health impacts
 - Outside professional role boundaries
 - Recognised standard of specialist expertise
 - Complex or major dietary changes required
- Methods of collecting nutritional information from clients
 - Interview and consultation methods – formal, informal
 - Food diary or log (written, spreadsheet, app)
 - 24 hour recall
 - Food frequency questionnaires and/or use of audio record, video record
 - Body composition assessments
- The types of information to gather from clients
 - Personal details – name, age, gender, address, contact details, preferred method of contact, emergency contact
 - Medical history and current health status – current or previous medical conditions/injuries that may affect participation, medications that may affect participation
 - Diet history
 - Food and fluid timings and types
 - Food and fluid portion sizes/amounts
 - Method of cooking or preparation
 - Hunger rating before eating and fullness/satisfaction after eating
 - Food preferences
 - Supplement use
 - Reasons for eating: hunger, emotion, boredom
 - Nutritional knowledge
 - Attitudes and motivation
 - Stage of readiness to make dietary changes
 - Body composition measurements
 - Body mass index (BMI)
 - Basal metabolic rate (BMR)
 - Hip/waist ratio
 - Waist circumference
 - Fat and muscle %

- Methods used to measure body composition
 - Skin-fold callipers
 - Bio-electrical impedance
 - MRI scanning
 - Hydrostatic weighing
- Classification of health risk in relation to weight
 - Underweight
 - Overweight
 - Obese
 - Severely obese
- Purpose of appraisal and reappraisal of body composition
 - Monitor and review progress and achievement
 - Monitor health status
 - Set new nutritional goals
 - Review energy requirements
 - Provide motivation
- Relevant lifestyle factors
 - Smoking
 - Alcohol intake
 - Physical activity levels
 - Time spent in sedentary behaviour (home and/or work/school)
 - Physical activity history – past and current levels of activity, past and current exercise experience and type of activity/exercise programme undertaken
 - Physical activity preferences – likes and dislikes
- Reasons for seeking advice on eating behaviour – improved health, weight management, assist with fitness goals
- Barriers to making changes
 - Intrinsic – self-esteem, confidence, fear, lack of motivation
 - Extrinsic – family, work, time, finances

How to analyse and use information

Taught content

- Review of dietary assessment tool and methods
 - Food diary (food and fluid timings, food and fluid types, food and fluid portion sizes/amounts compared to guidelines)
 - Method of cooking or preparation
 - Hunger rating and fullness/satisfaction after eating
- How to analyse and interpret collected information
 - Calculation of estimated energy intake and estimated energy expenditure

- Comparison of nutrient intakes to recommended amounts
- Comparison of dietary behaviour to national guidelines and recommendations
- How to set nutritional goals with clients
 - Principles of goal setting
 - Short, medium and long term
 - SMART (specific, measurable, achievable, realistic, timely)
 - Goals – healthy eating, weight management, improved fitness/performance
 - Barriers to making changes and goal achievement – time, cost, lack of knowledge, lifestyle, occupation, attitudes and beliefs of family and peers, culture and religion
 - Translating nutritional goals – translate technical terminology into recognised terminology e.g. timings of food intake, quantities and portion sizes, appropriate food choices, balance on the plate, servings of fruit and vegetables
- When to involve others in nutritional goal setting
 - Clients with needs outside of role boundaries
 - Who to involve
 - Dietician
 - Nutritionist
 - GP
 - Family
 - Friends
 - When others should be involved
 - Health risks
 - Medical conditions
 - Eating disorders
 - Additional motivation and support required

How to manage sensitive issues and information

Taught content

- Sensitive issues
 - Weight
 - Body composition
 - Taking anthropometrical measurements
 - Dietary habits (e.g. over eating, yo-yo dieting)
 - Eating disorders
 - Medical conditions
 - Alcohol intake
- Managing sensitive issues and assessment results
 - Confidentiality
 - Positive regard

- Congruence
- Clear boundaries
- Empathy
- Sensitivity
- Respect
- Calm and relaxed
- Emphasis on positive action
- Referral to another professional (if required), e.g. risk of harm to self
- Use of verbal and non-verbal communication skills
- Signs and symptoms of disordered eating
 - Obsession with body weight
 - Obsessive perceptions of being overweight
 - Eating a limited or restricted diet
 - Making excuses not to eat
 - Picking at food
 - Using the bathroom immediately after meals
 - Fluctuations in weight
 - Mood swings
 - Excessive or obsessive exercise behaviour
 - Physical and psychological symptoms of anorexia nervosa and bulimia (weight loss, bingeing/purging)
- How to manage clients with suspected eating disorders
 - Institute of Sport and Recreation Management guidance note – key features, recognition of signs and symptoms, appropriate action, operational implications and recommendations
 - Refer also to BEAT guidance <https://www.beateatingdisorders.org.uk>

Motivational strategies

Taught content

- Trans-theoretical model (Prochaska and Diclemente)
 - Stages of readiness to change – pre-contemplation, contemplation, preparation, action, maintenance, termination, lapse, relapse
 - Processes of change
 - Cognitive and behavioural strategies
 - Goal setting
 - Self-monitoring
 - Positive reinforcement
 - Contracting
 - Rewarding achievement
 - Information and education
 - Decision balance
 - Social support

How to maintain records

Taught content

- Accurately record ethically gathered information using an appropriate format
- Maintain client confidentiality and adhere to relevant legislation when maintaining and storing client records, e.g. Data Protection, GDPR

LO5 Be able to assess nutritional intake and apply nutritional strategies within scope of practice

Collecting and recording information to assess clients nutritional intake

Taught content

- Information to be collected and recorded
 - Personal goals
 - Lifestyle information
 - Medical history
 - Diet information
 - Food and fluid timings
 - Food and fluid types
 - Food and fluid portion sizes/amounts
 - Method of cooking or preparation
 - Mood after eating
 - Food preferences
 - Supplement use
 - Nutritional knowledge and awareness
 - Attitudes and motivation
 - Stage of readiness to make changes
 - Support systems
 - Barriers for making changes
- Methods for collecting information
 - Verbal discussion, interview and consultation
 - Food frequency questionnaires, food diary, 24 hour recall
- With consideration to
 - Preparation of consultation area and resources
 - Use of appropriate communication skills to welcome the client, build rapport and encourage them to speak openly
 - Welcome positively
 - Use of open questions
 - Active listening
 - Consideration to verbal and non-verbal communication (own and clients)
- Appropriate records
 - Use approved formats (written, spreadsheet, apps)
 - Use of appropriate tools – food diary, 24 hour recall, food frequency questionnaires
 - Adhere to data protection legislation
 - Confidentiality
 - Record all key nutritional information: SMART goals for healthy eating, weight management, improved fitness

Explaining how client information has been used to meet their nutritional needs and goals

Taught content

- Identification of nutritional needs and preferences, in relation to current status and nutritional goals
- Calculation of energy intake and energy expenditure
- Calculation of daily calorific intake
- Comparison of nutrient intakes to recommended amounts
- Comparison of dietary behaviour to national guidelines and recommendations
- Comparison of body composition to normative data tables
- Classification of health risk: underweight, healthy, overweight, obese, and severely obese

Accessing and making use of credible sources of educational information and advice

Taught content

- Clarification of own role boundaries with regard to providing nutritional advice:
 - National healthy eating guidelines only, e.g. eatwell guide
 - Specialist information to be signposted to a registered dietitian or registered National guidance

Analysing information and applying nutritional strategies

Taught content

- Analyse all information
 - Food diaries
 - Physical measurements
 - Nutritional needs and preferences, in relation to current status and nutritional goals
 - Calculation of energy intake and energy expenditure
 - Calculation of daily calorific intake
 - Comparison of nutrient intakes to recommended amounts
 - Comparison of dietary behaviour to national guidelines and recommendations
 - Comparison of body composition to normative data tables
 - Classification of health risk: underweight, healthy, overweight, obese and severely obese
- Design and agree nutritional goals that are compatible with the analysis
 - Short, medium and long term
 - SMART: Specific, Measurable, Achievable, Realistic, Timely
 - Goals: Healthy eating, weight management, improved fitness/performance
 - Agree using communication and negotiation skills to reach a mutual agreement
 - Ensure that the nutritional goals support and integrate with other programme components

- Types of exercise and activity
 - Schedule of exercise and activity
 - Health and fitness development
 - Lifestyle
- Summarise and record the key advice and guidance provided
 - All changes and recommendations made
 - The clients understanding of how to follow the nutritional advice as part of their physical activity programme

Explaining the importance of monitoring and reviewing the clients' progress towards their nutritional goals

Taught content

- Content of reviews
 - Review previous SMART goals
 - Review fitness re-assessments
 - Review past and revised food diary analysis
- Purpose of monitoring and reviewing
 - To evaluate client strengths and areas for improvement
 - To set new SMART goals
 - To address barriers
 - To review motivation and support strategies
- The importance of review points

Assessment requirements

1. Knowledge outcomes

Learning Outcome	Assessment Criteria	Assessment requirement
LO1 Know key principles of nutrition and healthy eating	1.1. Describe the structure and function of the digestive system	External theory examination
	1.2. Describe the key nutritional terms and common terminology used in nutrition	
	1.3. Describe the national food guide and general healthy eating advice	
	1.4. Explain food labelling and healthy food preparation	

Learning Outcome	Assessment Criteria	Assessment requirement
LO2 Know the roles of the main nutrients and the importance of hydration	2.1. Explain the dietary sources and functions of the key macronutrients and micronutrients	External theory examination
	2.2. Describe the functions of water in the body and the importance of adequate hydration for health and performance	

Learning Outcome	Assessment Criteria	Assessment requirement
LO3 Know the relationship between of nutrition, exercise, physical activity and health	3.1. Explain the role of nutrients for aerobic and anaerobic energy production and performance	External theory examination
	3.2. Explain energy balance and weight management	
	3.3. Describe how to evaluate nutritional requirements and hydration needs	
	3.4. Explain the relationship between nutrition, physical activity, body composition and health	
	3.5. Describe the use of protein and vitamin supplementation	

Learning Outcome	Assessment Criteria	Assessment requirement
LO4 Know how to assess nutritional intake and apply nutritional strategies	4.1. Describe the professional role boundaries in relation to providing nutritional guidance	External theory examination
	4.2. Describe how to consult with and develop effective working relationships with clients	
	4.3. Describe the methods of collecting information to assess nutritional intake	
	4.4. Describe how to analyse and use information	
	4.5. Describe how to manage sensitive issues and information	
	4.6. Describe motivational strategies	
	4.7. Describe how to maintain records	

Learning Outcome	Assessment Criteria	Assessment requirement
LO5 Be able to assess nutritional intake and apply nutritional strategies within scope of practice	5.1. Collect and record information to assess client's nutritional intake	Case study and report
	5.2. Explain how client information has been used to meet their nutritional needs and goals	
	5.3. Access and make use of credible sources of educational information and advice	
	5.4. Analyse information and apply nutritional strategies	
	5.5. Explain the importance of monitoring and reviewing the clients' progress towards their nutritional goals	

External theory examination

There must be evidence that the learners possess all the knowledge and understanding listed in the knowledge section of the unit specifications. Knowledge and understanding of this unit will be assessed through an external exam paper. This will consist of a multiple-choice question paper.

The external theory examination will test knowledge and understanding from across the theory content of LO1 – LO4. Learners should use the unit content section of this unit and listed assessment criteria to aid revision.

Case study and report

The content of LO5 will be assessed through a case study and report which will be marked by centre assessors.

Learners should carry out a client consultation to assess nutritional intake, analyse dietary habits and apply nutritional strategies and make recommendations within scope of practice.

The case study must take place in a real or realistic working environment on a real client. At a minimum the case study and report for this unit must cover:

- Use of appropriate assessment tools and methods to assess nutritional intake

- Analysis of all client information
- Identification of areas of improvement
- Identification of client readiness to make changes
- Use of appropriate strategies and credible information sources to educate the client within scope of practice
- Appropriate recommendations within scope of practice – SMART goals; use of credible information and motivational techniques

Recorded professional discussion can also be used as an assessment method attached to the case study and report and is particularly useful for gathering evidence for criteria related to evaluation and reflection. Professional discussions should be planned and recorded.

Resources

The special resources required for this unit are access to a real or realistic working environment which supports the application of the principles of nutrition to exercise, physical activity and health (within specific role boundaries).

Best practice should be encouraged by giving learners the opportunity to access current research and guidelines that inform exercise and nutritional science and healthy eating (e.g. NICE, ACSM, BASES, BHFNC, Department of Health, Food Standards Agency).

Document History

Version	Issue Date	Changes	Role
v1.0	28/09/2018	First published	Qualifications Manager
v2.0	19/10/2018	Amendment to the assessment criteria headings following technical review	Qualifications Administrator
v3.0	26/11/2018	Removal of assessment criteria verbs from learning outcomes	Qualification Administrator