

Unit 28: Diet and Nutrition

Learning hours: 60

NQF level 3: BTEC National

Description of unit

This specialist unit introduces learners to aspects of healthy eating and dietary related illnesses. Learners will investigate the factors and trends in available foods and how these can be used to promote a healthy lifestyle. They will develop and demonstrate knowledge and skills in the adaptation, preparation and cooking of dishes that illustrate healthy eating and those that can be used for specific dietary illnesses. Learners will also evaluate the dishes they have prepared in order to judge the contribution they can make to a balanced diet.

This specialist unit relates to the Catering and Hospitality NVQs at levels 2 and 3 that involve food preparation and cooking.

This unit presents opportunities to demonstrate key skills in communication, information technology, improving own learning and performance, and working with others.

This is an internally assessed unit.

Summary of learning outcomes

To achieve this unit a learner must:

- 1 Examine a range of **factors and trends** used to promote a healthy lifestyle
- 2 Investigate aspects of **diet and nutrition** that contribute to healthy lifestyles and prevent dietary related illnesses and disorders
- 3 **Adapt, prepare and cook** dishes that contribute to healthy lifestyles and prevent dietary related illnesses and disorders in a safe and hygienic manner
- 4 Apply **evaluation techniques and criteria** to a range of adapted recipes and dishes.

Content

1 Factors and trends

Healthy lifestyle: balanced diet, exercise, stress management, body mass index (BMI), recommended nutrient intake (RNI), Health Development Agency guidelines, energy balance and levels, mental alertness, general health and lifestyle, trends

Factors: commodities eg fresh, part-prepared, pre-prepared, low fat, low sugar, low salt, high fibre, reduced calorie and healthy options ranges, quality and acceptability of manufactured products, food labelling, preparation and cooking methods and processes

Trends: healthy eating, special dietary requirements, lifestyle, balanced diet; changes in customer demand, recipe development, social trends eg body image, organic foods

Dietary related illnesses and disorders: eg obesity, heart disease, anorexia nervosa, bulimia nervosa, osteoporosis, diabetes, anaemia, allergy intolerance

2 Diet and nutrition

Diet: types eg balanced, reducing, high fibre, low fat, vegetarian, medical, allergy; planning diets, contribution to healthy lifestyle and dietary related illnesses

Nutrition: requirements eg macro and micro nutrients, fibre content; Reference Nutrient Intakes, ACE vitamins, free radicals, government guidelines, nutritional content of diet, diet associated illnesses

3 Adapt, prepare and cook

Adaptation: recipe development eg commodities, quantities and methods, reducing salt content, reducing saturated fats; purpose of change eg maximising nutritional content, increasing fibre, reducing fat, reducing sugar

Preparation: eg time planning, selecting and using appropriate equipment, commodities and methods, food safety

Cooking: methods, processes, timing, quality, selecting and using appropriate equipment

Safety and hygiene: key legislation eg food safety, cross contamination, monitoring and control points; maintaining quality, use of resources, appearance and acceptability, codes of practice

4 Evaluation techniques and criteria

Techniques: collecting information, sources of information eg published material, internet, customers, colleagues, dietitians, other specialists; qualitative and quantitative feedback, dish analysis, making reasoned judgements based on available information

Criteria: reasons for change, suitability to meet requirements, nutritional value, quality of dishes, contribution to healthy lifestyle, response to trends

Assessment guidance

This unit is internally assessed

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

Grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that the learner is able to:	To achieve a distinction grade the evidence must show that the learner is able to:
<ul style="list-style-type: none"> • explain the factors and trends that can promote a healthy lifestyle • describe the nutritional content of a given diet and produce an effective dietary plan for either a healthy lifestyle or a specified dietary related illness • demonstrate safe and hygienic working practices when working with others • adapt recipes and demonstrate appropriate skills to prepare and cook dishes using adapted recipes, with appropriate tutor support • evaluate clearly and coherently the range of dishes prepared and cooked and make valid recommendations for improvements. 	<ul style="list-style-type: none"> • show an independent approach to a major part of their work, demonstrating confident and effective technical skills • demonstrate an in-depth knowledge of healthy eating and diet related illness, identifying and justifying the use of a range of resources • evaluate adapted dishes in detail, using agreed criteria and relevant data. 	<ul style="list-style-type: none"> • show a high level of confidence and independence in their work, demonstrating exceptionally confident and accurate technical skills • critically evaluate adapted dishes, using accurate analysis of reliable and sufficient data, drawing well reasoned conclusions and making relevant recommendations for improvements.

Essential information for teachers

Delivery strategies

This unit is a mixture of practical and investigative work. Learners must have the opportunity to explore a range of healthy eating options as well as developing knowledge and skills. Learners should also be introduced to dietary related illnesses and investigate possible solutions to specific dietary needs.

Teachers should start by defining the terms *nutrition*, *nutrient* and *diet* and introducing learners to the five nutrients essential to health: fats, carbohydrates, proteins, minerals and vitamins. They should also introduce the functions of fibre and water as essential dietary components. Teachers can support learners' investigations by giving them direction eg with websites, by arranging visiting speakers and/or visits to specialist organisations such as hospitals or residential homes, and encouraging them to read specialist publications. The food groups system of dietary analysis should be explained and learners made aware of recommended nutrient intakes. Learners should then identify and analyse the main nutrient(s) in a range of different foods and how they can contribute to sensible healthy eating and appropriate menus to promote healthy eating.

Learners should be encouraged to investigate the links between diet and illness by experimenting with recipe adaptation, for example changing ingredients, changing cooking methods or changing quantities. They can compare the results to control recipes and explore the likely outcome of these changes.

Learners should be introduced to investigating manufactured foods and to the different ways of collecting and analysing dietary information, such as that provided on food labelling. Learners should also explore the purpose of additives in manufactured foods.

Learners must have the opportunity to explore *healthy eating* through the adaptation, preparation and cooking of a range of dishes to meet specific dietary requirements. Dishes should be produced to a standard that would be acceptable to paying customers, although learners may need considerable support in the initial stages of delivery. Learners must demonstrate safe and hygienic working practices.

The evaluation of dishes, when they have been prepared and cooked, is an important element and learners will initially need guidance on how best this can be achieved. Guidance must also be given, where appropriate, regarding acceptable taste, appearance, quality and relevance of choice. Later in the unit, learners should take a greater control of the evaluation of dishes, whilst still involving the tutor as an informed observer.

The primary purpose of learners' investigations is to generate subject knowledge and it is important to recognise that development of investigative skills are secondary. This unit would normally be delivered during the latter part of the programme, when learners' investigative skills should already be well developed.

It is strongly recommended that learners complete *Unit 6: European Cuisine* before tackling this unit.

Assessment strategies

To achieve this unit learners will be expected to provide the following evidence:

- an explanation of the factors and trends that promote a healthy lifestyle
- a summary of their analysis of nutrition and diet, with special reference to a dietary related illness/disorder or a healthy lifestyle
- results of their findings relating to adaptation of recipes eg choice and reasons
- observations of their practical skills and achievements during the preparation and cooking of dishes, demonstrating safe and hygienic practices
- records of their evaluation of a range of dishes using adapted recipes.

This is an internally assessed unit. It balances research and theory to allow the application of knowledge gained to a series of linked learning activities. Evidence is likely to be produced at outcome level although opportunities exist for covering more than one outcome in an assignment. Evidence for this unit can be drawn from written assignments to demonstrate knowledge and understanding of the learning outcomes. Evidence of outcomes may also be in the form of research documentation, formal reports, oral and practical presentations, observed discussions or a series of practical exercises.

Learners should also show their understanding of dietary and nutritional requirements of groups of individuals. Tutor observation of learners' skills in preparing and cooking a range of suitable dishes and evaluation of dishes through either group discussion or formal reports should also be included.

All evidence produced must be carefully assessed and validated in order to ensure compliance with the requirements of the stated outcomes.

Links

This specialist unit has links with the following units:

- *Unit 2: Health, Safety and Security*
- *Unit 11: Kitchen Organisation and Food Safety*

It can also be delivered jointly with the following units:

- *Unit 6: European Cuisine*
- *Unit 12: Vegetarian Cuisine*
- *Unit 19: Indian Cuisine*
- *Unit 20: Chinese Cuisine*
- *Unit 21: Thai Cuisine.*

Depending on the delivery approach and the evidence generated by learners, this unit may contribute to a range of units in the following NVQs:

- *Catering and Hospitality (Food and Preparation and Cooking) NVQ level 2.*

Tutors may wish to adapt the delivery of this unit to support the knowledge and understanding aspects of related NVQs.

The wider curriculum

Delivery of this unit can contribute to learners' understanding of moral and ethical, and social and cultural issues in the following manner:

- *moral/ethical*: discussions can focus on the use of genetically modified foods, the benefits they offer and the risks they pose, as well as eating disorders, their impact on individuals and society and how they are best treated
- *social/cultural*: learners can discuss diet and dietary related illnesses and how these link to a growing awareness of diet related problems, such as obesity and anorexia.

Delivery of this unit can also raise learners' awareness of environmental issues, health and safety considerations and European developments consistent with relevant international agreements in the following manner:

- *environmental*: discussions can be developed on issues such as organic and genetically modified foods
- *health and safety*: this will extend discussion of some areas generated by Unit 2: Health, Safety and Security
- *European developments*: study in this unit can lead to discussions of issues relating to European eating trends.

Resources

Sufficient library and other resources such as the internet should be available to support learners. The Health Development Agency (www.hda-online.org.uk) produces a range of material. Dietary analysis software would be beneficial.

ICT is not a major feature of this unit but will enable learners to research healthy lifestyles and analyse the results of their investigations.

Photographic evidence may support learners' portfolio development.

Support materials

Textbooks

Tutors should be aware that textbooks are frequently updated and that they should use the latest editions where available. Examples include:

- Bender A and Bender D – *Food Tables and Labelling* (Oxford University Press, 1999) ISBN 0198328141
- HMSO – *Catering for Health* (The Stationery Office Books, 2002) ISBN 0112430678
- HMSO – *Manual of Nutrition* (The Stationery Office Books, 1995) ISBN 0112429912
- Kinton R, Ceserani V and Foskett D – *The Theory of Catering* – 9th edition (Hodder & Stoughton, 1999) ISBN 0340725125
- Readers Digest – *Eat Well, Stay Well* (Readers Digest Association, 1999) ISBN 0762101245
- Readers Digest – *Low fat, No Fat Cookbook* (Readers Digest Association, 1998) ISBN 0276423933

Videos

Examples of video materials include:

- broadcasts of commercial programmes relating to diet and nutrition
- *Body Shapes* (Classroom Videos – website www.classroomvideo.com)
- *The Exercise and Nutrition Connection* (Viewtech Educational Media – website www.viewtech.co.uk).

A number of useful videos and other materials are available from:

British Nutrition Foundation
High Holborn House
52-54 High Holborn
London WC1V 6RQ

Tel: 020 7404 6504

Fax: 020 7404 6747

Website: www.nutrition.org.uk

Magazines, journals and other publications

- *Health Development Today* (on-line publication) – to receive an **email alert** when the latest issue of *Health Development Today* is published on the website, send an email to hdtoday@hda-online.org.uk and write 'HDT alert' in the title
- *Caterer and Hotelkeeper* (Reed Business Information)
- *BBC Good Food Magazine* (BBC Publications).

CD-Roms

- *Catering, Health and Safety, Food Safety* (Croner Publications)

Websites

Websites that support the development of this unit include those of hospitality industry associations and employers. The following may be useful:

- www.bbc.co.uk/health/nutrition BBC Healthy Living web pages
- www.defra.gov.uk/foodrin/fdindx.htm Department for the Environment, Food and Rural Affairs – food and drink pages
- www.foodforum.org.uk/resources/videos.shtml *FoodForum*, an independent food education service supporting an understanding in the use and enjoyment of food
- www.hda-online.org.uk Health Development Agency, supporting evidence based working for better health
- www.hiagateway.org.uk Health Impact Assessment Gateway
- www.nutrition.org.uk British Nutrition Foundation
- omni.ac.uk searchable catalogue of internet sites covering health and medicine
- www.ukhealthguide.co.uk UK Health Guide website containing further list of list of diet and nutrition sites
- www.wiredforhealth.gov.uk health information for teachers including healthy eating.

Key skills

Highlighted here are the key skills that have already been identified in the *Description of unit* and *Links* sections. Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of level 3 key skill evidence are given here. Staff should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> examining a range of factors and trends used to promote a healthy lifestyle investigating aspects of diet and nutrition that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>C3.1a Contribute to a group discussion about a complex subject.</p> <p>C3.1b Make a presentation about a complex subject, using at least one image to illustrate complex points.</p> <p>C3.2 Read and synthesise information from two extended documents about a complex subject. One of these documents should include at least one image.</p> <p>C3.3 Write two different types of documents about complex subjects.</p> <p>One piece of writing should be an extended document and include at least one image.</p>
Information technology level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> investigating aspects of diet and nutrition that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>IT3.1 Plan and use different sources to search for and select information required for two different purposes.</p> <p>IT3.2 Explore, develop and exchange information and derive new information to meet two different purposes.</p> <p>IT3.3 Present information from different sources for two different purposes and audiences. Include at least one example of text, one example of images and one example of numbers.</p>

Application of number level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> investigating aspects of diet and nutrition that contribute to healthy lifestyle and prevent dietary related illnesses and disorders adapting dishes that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>N3.1 Plan and interpret information from two different types of sources including a large data set.</p> <p>N3.2 Carry out multi-stage calculations to do with:</p> <ul style="list-style-type: none"> a amounts and sizes b scales and proportion(s) d rearranging and using formulae <p>You should work with a large data set on at least one occasion.</p> <p>N3.3 Interpret results of your calculations, present your findings and justify your methods. You must include at least one graph, one chart and one diagram.</p>
Improving own learning and performance level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> investigating aspects of diet and nutrition that contribute to healthy lifestyle and prevent dietary related illnesses and disorders adapting dishes that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>LP3.1 Agree targets and plan how these will be met over an extended period of time using support from appropriate people.</p> <p>LP3.2 Take responsibility for your learning by using your plan and seeking feedback and support from relevant sources, to help meet targets. Improve your performance by:</p> <ul style="list-style-type: none"> a studying a complex subject b learning through a complex practical activity c further study or practical activity that involves independent learning. <p>LP3.3 Review progress on two occasions and establish evidence of achievements, including how you have used learning from other tasks to meet new demands.</p>

Problem solving level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> adapting dishes that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>PS3.1 Explore a complex problem, come up with three options for solving it and justify the option selected for taking forward.</p> <p>PS3.2 Plan and implement at least one option for solving the problem, review progress and revise your approach as necessary.</p> <p>PS3.3 Apply agreed methods to check if the problem has been solved, describe the results and review your approach to problem solving.</p>
Working with others level 3	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> investigating aspects of diet and nutrition that contribute to healthy lifestyle and prevent dietary related illnesses and disorders adapting dishes that contribute to healthy lifestyle and prevent dietary related illnesses and disorders. 	<p>WO3.1 Plan complex work with others, agreeing objectives, responsibilities and working arrangements.</p> <p>WO3.2 Seek to establish and maintain co-operative working relationships over an extended period of time, agreeing changes to achieve agreed objectives.</p> <p>WO3.3 Review work with others and agree ways of improving collaborative work in the future.</p>