



Accredited

**OCR LEVEL 2
CAMBRIDGE TECHNICAL
CERTIFICATE/DIPLOMA IN
HEALTH AND
SOCIAL CARE**

THE IMPACT OF DIET ON HEALTH

M/600/6888

LEVEL 2 UNIT 11

GUIDED LEARNING HOURS: 60

UNIT CREDIT VALUE: 10



THE IMPACT OF DIET ON HEALTH

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LEVEL 2 UNIT 11

AIM OF THE UNIT

'*We are what we eat*', it is said. But what do we eat? What should we eat? Why? Do our dietary needs remain the same across our lifespan? What happens if we don't eat the right food? The aim of this unit is to enable learners to determine the answers to these questions. They will also have the opportunity to investigate a range of factors, from religious requirements to income, that can influence peoples' diets. We are bombarded on a regular basis by reports in the media that obesity levels are rising along with increasing cases of diabetes, heart and liver disease. Learners can research some of these conditions and understand the links between these disorders and a poor diet. Learners will also discover that we can become ill from not eating enough food or from missing out certain nutrients in our diet – including fat!

In 2007 there were an estimated 850,000 cases of food poisoning in the UK, over 19,500 hospitalisations and over 500 deaths. In 1996 in Scotland in one outbreak alone 17 people died and in 2011 in Germany 48 people died during a localised incident of food poisoning. As most outbreaks are due to contamination through poor storage and preparation of food this unit also aims to introduce learners to safe food practices and the legislation that is designed to protect us. They will investigate how food contamination can occur and the consequences this can have, not just to the individuals affected, but to the individuals and establishments that are found to be responsible for causing the outbreaks.

PURPOSE OF THE UNIT

Many learners considering studying this unit will be contemplating a career in the health and social care sector. Whatever pathway they may choose they are quite likely to care for individuals, many of them vulnerable, and address their needs. Two of these needs are providing them with food and keeping them safe. This unit will prepare learners to be able to provide for these needs. Learners may at some time be directly or indirectly involved in providing individuals with their meals. Thus this unit allows learners to understand the importance of eating a balanced diet in order to maintain

good health. They will have the opportunity to learn about what constitutes a balanced diet and they will gain knowledge of the nutrients we need and for what purpose. Learners will also discover that people who use health and social care settings have differing dietary needs depending

upon their age, religion, state of health, occupation, lifestyle choices and activity levels. This unit will prepare learners to adapt meals or menus to meet the differing dietary needs of individuals.

Learners will investigate what happens if individuals eat more of certain nutrients than the body actually requires and also what happens if the body receives inadequate amounts of some nutrients. As a result of eating more than is required, some individuals will develop medical conditions that are ultimately life threatening. Others will be affected by adverse reactions to certain foods or be unable to process particular nutrients. Learners will have the opportunity to discover how the diets of such individuals have to be adapted in order for them to live as normal a life as possible. They will be able to consider and plan strategies to address these diverse needs of individuals.

Most health and social care settings involve the storage, preparation or serving of food and it is important that learners understand the legislation and codes of practice which govern the handling and storage of food. Learners will have the chance to develop an understanding of the safe practices that should be employed when storing, preparing and handling food. They will explore the various causes of food spoilage and contamination and the steps that should be taken to avoid them. They will also investigate the consequences to those individuals or establishments that fail to observe the basics of food hygiene. Thus this unit prepares learners to not only understand the various dietary needs of those in their care but also the measures that need to be taken to ensure they are not adversely affected by the food given to them. This knowledge and understanding will aid progression into appropriate employment or on to level 3 study.

ASSESSMENT AND GRADING CRITERIA

Learning Outcome (LO)		Pass	Merit	Distinction
The learner will:		The learner can:		
		The assessment criteria are the pass requirements for this unit.	To achieve a merit the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
1	Know dietary needs of individuals at different life stages	P1 identify the components of a balanced diet	M1 describe factors which can influence the diet of individuals	
		P2 identify different dietary needs at each life stage		
2	Understand effects of unbalanced diets on the health of individuals	P3 explain two medical conditions related to unbalanced diets		D1 explain the ways in which strategies could be used to minimise the effects of unbalanced diets
3	Know specific dietary needs of service users	P4 identify two service users with specific dietary needs	M2 state how service users with specific dietary needs could have these needs met	
4	Understand principles of food safety and hygiene	P5 outline relevant legislation relating to preparing, cooking and serving food		
		P6 explain safe practices necessary in preparing, cooking and serving food in a health or social care setting	M3 explain the effects of different types of food contamination in a health or social care setting	D2 assess consequences of unsafe food safety and hygiene practices in a health or social care setting

TEACHING CONTENT

The unit content describes what has to be taught to ensure that learners are able to access the highest grade.

Anything which follows an i.e. details what must be taught as part of that area of content.

Anything which follows an e.g. is illustrative, it should be noted that where e.g. is used, learners must know and be able to apply relevant examples to their work though these do not need to be the same ones specified in the unit content.

1 Know dietary needs of individuals at different life stages

- *Concept of balanced diet:* (e.g. intake; energy balance; dietary reference values; food pyramids and Eatwell plate showing relative proportions of five food groups: meat, fish and alternatives; milk and dairy food; fruit and vegetables; foods containing fat/sugar; bread, other cereals and potatoes)
- *Components of a balanced diet:* (e.g. carbohydrates, proteins, fats and oils, vitamins, minerals, fibre, water)
- *Carbohydrates:* simple (sugars), complex (starch and non-starch polysaccharides), fibre
- *Proteins:* animal and plant sources, essential amino acids
- *Fats and oils:* animal fats, vegetable oils, fish oils; saturated, unsaturated and polyunsaturated
- *Vitamins:* A; B (complex); C; D; E and K
- *Minerals:* calcium; iron; sodium
- *Life stages:* infancy (0-3 years); childhood (4-10 years); adolescence (11-18 years); adulthood (19-65 years) including pregnancy and breast feeding; late adulthood (65+ years)
- *Diet variation during life stage development:* babies; children and adolescents; adults, older adults
- *Babies:* breast/bottle feeding, weaning
- *Children and adolescents:* to support growth and higher energy needs; weight management
- *Adults:* activity levels (e.g. variations according to occupation, lifestyle; decrease in energy needs; weight management; pregnancy and breastfeeding)
- *Late adulthood:* reduced metabolism, health issues (current/prevention), cost, ability to shop
- *Factors influencing the diet of individuals:* (e.g. examples religion/culture, social class, personal preferences eg. vegetarianism, veganism, peer pressure, the media, geographic location, availability of food and financial resources).

2 Understand effects of unbalanced diets on the health of individuals

- *Medical conditions related to unbalanced diets:* (e.g. malnutrition; over-nutrition e.g. obesity, coronary heart disease, type 2 diabetes; under-nutrition e.g. marasmus; kwashiorkor; specific nutrient deficiencies e.g. anaemia,

rickets, osteoporosis; tooth decay, night blindness, beriberi and scurvy)

- *Strategies to minimise effects:* (eg. weight loss diets, low fat diets, reduced salt diets, exercise plans, weight loss pills, gastric band operations, food supplements, high energy diets, high protein foods, vitamin and mineral supplements, counselling, hypnotherapy).

3 Know specific dietary needs of service users

- *Conditions with specific dietary requirements:* (e.g. coronary heart disease, obesity, type 2 diabetes, lactose intolerance, gluten/wheat intolerance, food allergies, genetic disorders e.g. phenylketonuria, cystic fibrosis)
- *Religion/culture:* (e.g. Religion; Hindus, Jews, Muslims, Buddhists. Culture; Vegetarianism, Veganism)
- *Dietary plan:* breakfast; midday meal; evening meal; snacks; beverages
- *Considered shopping:* (eg. gluten free foods, low salt, fat free/low fat, halal and kosher foods, meat free products, lactose free products, food free from animal products, vitamin enriched foods, vitamin and mineral supplements, fresh/in season foods).

4 Understand principles of food safety and hygiene

- *Safe practices of food preparation, cooking and service:* pest control; hygiene control; temperature control
- *Effects of unsafe practices:* types of food contamination (e.g. chemical, physical, biological; bacterial food poisoning e.g. Clostridium perfringens, Staphylococcus aureus, Campylobacter, Bacillus cereus, Salmonella; E coli; sources of food poisoning bacteria; symptoms and effects of food poisoning)
- *Consequences of unsafe practices:* fines, closure, prison sentence, poor reputation, loss of earnings
- *Legislation, regulations and codes of practice:* relevant sections from e.g. Food Safety Act 1990, Food Safety (General Food Hygiene) Regulations 1995, Food Safety (Temperature Control) Regulations 1995, Hazard, Analysis Critical Control Point (HACCP), Food Hygiene Regulations (2006).

DELIVERY GUIDANCE

LO1 A great way to start this unit is to watch a TV programme such as *'You are what you eat'* or *'Supersize v's Superskinny'* and discuss with the class the reasons why such programmes are made. Alternatively the www.bhf.org.uk/schools website provides a wealth of resources to assist the delivery of concepts of a balanced diet. Learners could research key words such as intake, energy balance and dietary reference values as well as component nutrients and produce definition cards which could then be used to reinforce learning through the use of a matching game (definitions to key words). In groups learners could produce a display on the components of a balanced diet or each group could be given a different nutrient to research and present to the class. Visual learners may enjoy matching food products to nutrient groups and this could be facilitated by the collection of food packaging/photographs rather than the real thing. If possible practical sessions which allowed learners to create dishes, rich in a particular nutrient may also appeal. Posters and leaflets obtained from health promotion units featuring the Eatwell plate and food pyramids will also be useful tools for consolidation of understanding. When considering how dietary needs alter as individuals grow older, a wall display could be created based on the 'Take That' album cover (Progress), showing the stages of human development. Learners could identify key nutrients required through the life stages and give reasons why each nutrient is important at that stage. There are some good websites such as www.livestrong.com which explain factors which can influence the diet of individuals and once students have researched these, case studies could be used to allow learners to apply their knowledge and understanding to a given scenario. Learners could write up their own profile and consider the factors in their life which influence their diet.

Learners could plan a day's meal for themselves and look at how the meals suggested meet their dietary needs. If the appropriate software was available the learners could analyse their diets to see what nutrients they were taking in excess of and what, if any, they were lacking. Most programmes will also display energy balance as well. Individual and group research coupled with displays and slide presentation feedback sessions could be used by learners as they investigate the various factors that influence diet. Surveys could be carried out across friends, family and neighbours on some of the factors identified in the contents section. In a society where most of us descend on the nearest out of town supermarket to do our weekly shopping it would be useful if the learners considered those who either do not have a large supermarket or who for logistical reasons cannot access one. Is online shopping and home delivery a viable alternative? Especially for those on low incomes or who do not have a credit rating.

LO2 If possible guest speakers such as a dietician or a nutritionist could be invited in to talk about the effects of unbalanced diets on the health of individuals. Learners could be encouraged to work in pairs and produce a leaflet on a given medical condition related to unbalanced diets. Learners can use textbooks and websites to research a medical condition. The NHS website is particularly useful with case studies within the A-Z health section. YouTube videos also allow learners to see the effects of unbalanced diets and can be used in tutor led discussion. The same sources and approach can be taken when researching appropriate strategies to minimise the effects of the identified conditions. Learners need to realise that unbalanced diets are not all about obesity and the illnesses/conditions associated with it. Individuals may be under eating either out of choice or as a result of a health condition. Learners need to be aware of strategies and interventions that are also appropriate for these individuals. Similarly individuals may be lacking in certain nutrients either as a result of their dietary choice or again because of underlying health issues.

LO3 The delivery of this learning outcome links to the previous learning outcome in that some conditions that have been identified as being the result of an unbalanced diet will then require individuals to follow adapted diets in order to manage these conditions. For example, if a learner had produced a leaflet on coronary heart disease, looking at the dietary causes and effects, then for LO3 they could consider the specific dietary needs (what they can and cannot eat) of someone with coronary heart disease. There are many DVD's, newspaper articles and information websites such as www.bbc.co.uk that explain specific dietary needs and consider the impact on menu planning. Again practical sessions which focus on adapted recipes designed for those with specific dietary need, for example diabetes or heart disease, can be an enjoyable way of delivering aspects of this

Learners could produce dietary plans for two service users for a minimum of two days that would include all meals, snacks and beverages.

Other individuals may have conditions that are not related to an unbalanced diet, for example, coeliac disease and lactose intolerance. The learners could again produce diet plans but would also need to emphasise the importance of careful or considered shopping that is needed to avoid the nutrients or food types that are causing the condition. If considering coeliac disease then the learners need to appreciate the difficulty in avoiding flour due to its use as a thickening agent in many common foods. Considered shopping would also be important to those with conditions caused by unbalanced diet, for example low salt and fat products for those with heart conditions.

When considering religious/ cultural influences on dietary needs, learners may be able to draw upon work placement experience. Alternatively learners may investigate this topic through individual research and group work and present their findings on a poster or as a presentation.

LO4 An understanding of key legislation and codes of practice regarding food preparation and handling is fundamental to safe practice in settings. If possible, allowing learners to complete a food safety awareness /basic food hygiene course as part of this unit would be beneficial and this would certainly cover key legislation. Alternatively, key features of each piece of legislation in the unit content could be taught through a presentation or as a result of individual research on specific pieces of legislation followed by feedback to the whole group possibly using slides. To see how legislation is followed in practice, a visit could be organised to the centre's kitchen, so that learners can experience and see safe food storage, preparation and cooking practices. If possible learners could ask to be shown around their work placement kitchens, to see first hand how health and social care settings follow food safety and hygiene guidelines. A visit from an Environmental Health Officer (EHO) could be organised and class questions planned previous to the visit. The EHO would be able to provide information on the effects and consequences of unsafe practices and real life stories of situations they have experienced. They will also be best placed to explain how suspected establishments are investigated and the sanctions taken. Alternatively newspaper articles could provide examples of the effects and consequences of unsafe practices and could be used to stimulate class debate and discussion. The learners need to cover a number of different causes of contamination including examples of specific pathogens. The learners could again cover this through individual research followed by whole group feedback and presentations. They will need to specifically identify the effects on affected individuals that will range from sickness and diarrhoea to kidney failure and death. The learners need to appreciate that babies and older people are particularly vulnerable and that death is often due to dehydration.

ASSESSMENT GUIDANCE

P1 Learners could produce a display or poster which identifies the components of a balanced diet. The poster could include diagrams/pictures of foods which contain a high proportion of a certain nutrient and written evidence which focuses on the function of the nutrient in the body. P2 could be addressed through a wall display which looks at different life stages and the variations in dietary need according to age. Alternatively individual learners could produce a presentation which identifies different dietary needs at each life stage. All life stages listed in the unit content should be included. Any poster or display used must be the learner's own individual work and tutors may wish to produce witness sheets to that effect for moderation purposes. M1 develops knowledge gained in P1 and P2 and requires learners to describe factors which can influence the diet of individuals. This can either be approached generically, with learners producing a written account, with examples for each factor listed in the unit content or a case study could be written, which incorporates many factors and learners are asked to identify these and comment on their influence.

P3 Learners could be asked to produce two leaflets, one for each medical condition they are researching. The focus of each leaflet could be to inform adolescents of the possible effects of eating an unbalanced diet. Each leaflet would include a description of the condition and the possible effects on an individual's physical, intellectual, emotional and social health, both in the short and long term. Pictures could be used to illustrate the point being made and these must be referenced. In order to meet the requirements of D1 the learners could again produce leaflets but this time directed at those individuals affected by the medical conditions addressing a number of the strategies identified in the contents section. They would not be expected to cover all but merely explain some that are appropriate.

P4 could be linked to P3 if practical and numbers in the class allow. For one of the medical conditions researched for P3, learners must provide evidence of how the condition affects dietary needs and the types of foods the individual can/cannot eat. It is feasible to complete P4 as an individual task and for learners to be asked to research any of the conditions listed in the unit content. M2 requires learners to complete an essay or piece of extended writing or again produce an advice leaflet with suggestions as to how these dietary needs could be met. This could take the form of dietary plans or suggested menus for at least two days or suggestions as to what, or what not, to buy. If dietary intolerances or allergies

are being dealt with then alternative food sources could be identified. It is not a requirement of the unit but if learners had the opportunity to make one or some of any meals they suggest and take photographic evidence of them then it may aid the written evidence of both D1 and M2.

P5 requires learners to outline relevant legislation relating to preparing, cooking and serving of food. If learners complete an additional food safety awareness course which incorporates legislation then a signed certificate verifying a pass would be sufficient to meet the requirements of P5. However for those learners unable to participate in such a course, a chart could be produced to be displayed on a kitchen wall within a setting, which outlines relevant legislation relating to preparing, cooking and serving of food. Again this chart would need to be individual to the learner and possibly witnessed to that effect by the tutor. Practical demonstration of HACCP could even be applied to the learner's own home if a suitable 'commercial' establishment is not available.

P6 could be addressed by learners producing a training manual for a new member of kitchen staff in a health or social care setting. The training manual must explain all the information a trainee kitchen worker must know to ensure safe working practices are followed when preparing, cooking, storing and serving food. Appropriate reasons for any action taken must be given. M3 requires learners to produce an information sheet which explains the different types of food contamination e.g. chemical, physical and biological. The information sheet must also contain details on the different types of food poisoning bacteria including the sources of each food poisoning bacteria and the symptoms of each. D2 can be completed using information collected from guest speakers or it may be independently researched. Learners need to assess the consequences of unsafe practice in a health or social care setting. Newspaper or other media articles can support this section with real life examples of actions taken following outbreaks of food poisoning. This is likely to be a written piece of evidence, probably a report although it could be written as a media article or an information leaflet for the catering department of a relevant setting. If learners are on work placement they could base this piece of work on their setting as long as it was not written in a negative manner.

SUGGESTED ASSIGNMENTS

Criteria	Assignment title	Scenario	Assessment
P1, P2, M1	The dietary needs of individuals.	The learners are producing a presentation on diet to a local primary school.	Charts, posters, slide presentation or devised games that show the nutrients needed in a balanced diet, their purpose and how dietary needs vary over the human life span. An optional extra would be the inclusion of factors that influence the diets of individuals.
P3, D1	Medical consequences of unbalanced diets.	Learners produce information leaflets for adolescents warning them of the consequences of following an unbalanced diet.	Guidance/advice leaflets explaining medical conditions associated with an unbalanced diet.
P4, M2	Meeting the dietary needs of service users.	The learner provides advice on how to meet the specific dietary needs of identified service users. Daily meal plans or menus are devised and/or advice on avoiding certain foods and finding alternatives is given.	Plans or advice sheets.
P5, P6, M3, D2	The legislation of hygiene control associated with food preparation, cooking and serving. The reasons for safe practice when dealing with food.	Learners participate if possible in a certificated food hygiene course The learners produce a training manual for new kitchen staff.	Course certification or alternatively a chart for display in a food area. A written document that explains the safe practices that should be demonstrated when dealing with food. The manual should also include sections on types of contamination and their effects and the consequences of not heeding food safety requirements.

RESOURCES

Textbooks

Asbridge L, Lavers S, Moonie N and Scott J – *BTEC First Health and Social Care* (Heinemann, 2006) ISBN 9780435463328

Eden S – *Society, Health and Development Level 1 Foundation Diploma* (Pearson, 2008) ISBN 9780435500900

Haworth E and Ashton A – *Health and Social Care GCSE* (Pearson, 2009) ISBN 9781846903472

Haworth E, Allen B, Forshaw C, Nicol D, Volbracht A and Leach J – *Society, Health and Development Level 2 Higher Diploma* (Pearson, 2008) ISBN 9780435401030

Lavers S, Moonie N, Scott J – *BTEC First Health and Social Care* (Heinemann, 2006) ISBN 9780435463328

Learning and Skills Council – *Standards for Health and Safety*

Ridgewell J – *GCSE Food Technology for OCR* (Heinemann, 2001)

Wills J – *The Food Bible* (Quadrille Publishing Ltd, 2007) ISBN 978-1844004430

Journals

Daily newspapers

Food magazines

Websites

www.bohs.org

www.csci.org.uk

www.doh.gov.uk

www.foodstandards.gov

www.hse.gov.uk

www.foodtechnology.co.uk

www.bhf.org.uk/schools

www.livestrong.com

www.healthyweight4children.org.uk

DVDs

You Are What You Eat

Supersize v's Superskinny

MAPPING WITHIN THE QUALIFICATION TO THE OTHER UNITS

Unit 3: Individual Needs in Health and Social Care

Unit 4: Ensuring Safe Environments in Health and Social Care

Unit 7: Anatomy and Physiology for Health and Social Care

LINKS TO NOS

HSC21 Communicate with and complete records for individuals

c – Communicate with individuals

HSC22 Support the health and safety of yourself and individuals

b – Ensure your actions support health and safety in the place you work

HSC23 Develop your knowledge and practice

b – Use new and improved skills and knowledge in your work



CONTACT US

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