

Unit 7: Causes of Disease and Maintaining Health

Unit reference number: M/600/5966

QCF level: 1

Credit value: 4

Guided learning hours: 40

Unit aim

This unit aims to give learners an understanding of the most significant factors affecting health and an awareness of the causes of particular diseases.

Unit introduction

The unit explores questions about health and disease in a way that helps learners relate topics to themselves. Learners will investigate a range of factors affecting health and learn to recognise symptoms of disease. Learners will gain an awareness of common diseases and their causes. They will also examine a range of particular diseases which are prevalent in the developed and the developing worlds and are of particular topical interest.

Understanding health and disease is important, not only in everyday life, but also in vocational settings. The awareness gained in this unit creates a platform for further study in all areas of science and paves the way towards careers in a wide variety of business and industrial settings. Without core knowledge of human health and disease, doctors could not diagnose and treat illnesses, pharmacists could not prescribe medications, and forensic scientists would be unable to investigate crimes successfully. In addition, business organisations in the private, public and voluntary sectors would fail to gain the most from their workforces.

On completion of this unit, learners will be able to recognise symptom profiles of common diseases, including some that are life threatening. They will also be able to identify factors contributing to ill health such as family history, diet, substance abuse and lifestyle choices. Learners will be able to make informed choices about their own lifestyles and gain a better understanding of public health campaigns presented in the media. Finally, they will develop a greater awareness of global health concerns such as communicable diseases in the developing world.

Essential resources

Learners can find relevant information in scientific journals, magazines, websites and newspapers.

Learners should have access to a range of biological/health science resources, similar to those used for GCSE Science.

Access to a range of information resources including the internet to complete investigative assignments and case studies will be essential.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learners present for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit learners should:

| Learning outcomes | | Assessment criteria | Unit amplification |
|-------------------|--|--|---|
| 1 | Know what is meant by the terms 'health' and 'disease' | 1.1 describe what is meant by health | <i>Health</i> : definitions of health, e.g. negative, positive, holistic; subjective nature of health related to physical, mental, psychological, emotional and social needs |
| | | 1.2 identify different types of disease | <i>Disease</i> : communicable, e.g. caused by bacteria, viruses, fungi, protozoa; non-communicable, e.g. degenerative, deficiency, inherited, caused by lifestyle or the environment |
| 2 | Know factors that can affect the health of individuals | 2.1 describe different factors that can affect the health of individuals | <i>Factors affecting health</i> : biological, e.g. inherited, congenital; environmental, e.g. air/water quality, arising from pollution and contamination; occupational, e.g. exposure to toxins, repetitive strain injury; parasitic, e.g. scabies, roundworms <i>Personal actions and choices</i> : lifestyle, e.g. smoking, alcohol, drugs, inadequate exercise, inappropriate or unbalanced diet |
| 3 | Know the causes of disease | 3.1 identify causes of different communicable diseases | <i>Infectious</i> : bacteria, e.g. salmonella, tuberculosis; viruses, e.g. common cold, influenza, HIV/AIDs; fungi, e.g. athlete's foot, ringworm; protozoa, e.g. malaria, sleeping sickness <i>Parasitic</i> : types, e.g. scabies, roundworms |

| Learning outcomes | Assessment criteria | Unit amplification |
|-------------------|--|---|
| | 3.2 identify causes of non-communicable diseases | <p><i>Non-infectious</i>: lifestyle choices, e.g. smoking, substance misuse, fitness levels, diet; genetic, e.g. predisposition to certain diseases, inherited diseases; environmental factors, e.g. air/water pollution; occupational, e.g. noise, asbestos; geographical, e.g. rural/urban environment; socio-economic, e.g. access to appropriate nutrition, peer influences</p> |
| | 3.3 describe ways to limit the spread of disease | <p><i>Spread of disease</i>: methods to reduce spread, e.g. personal hygiene, quarantine, developing immunity</p> |

Information for tutors

Delivery

This unit could be introduced by asking learners to work in small groups and discuss the meaning of the words 'health' and 'disease'. They could be encouraged to begin with what is familiar to them, and then build on this with, for example, the use of case studies or images to help them consider a range of different individual circumstances and needs. Learners could be encouraged to produce their own definitions of 'health' and then compare them as a group, followed by a comparison with, for example, the World Health Organization's definition. A survey of different definitions of health could also be carried out in the centre.

This can then lead to a consideration of the meaning of 'disease' with the use of relevant topical diseases to illustrate this. Small group presentations and class discussions could be used to aid understanding of the different types of disease. This understanding can then be extended, in the last section of the unit, by learners choosing which diseases they wish to study in more detail.

Historical examples such as the Industrial Revolution in England could be explored to help illustrate the topic. In some localities this could be achieved using museum visits, in others by showing video clips. Other activities that could be used to add relevance to this unit include, a visit to a residential care home or a day centre. Learners could talk to older people about their experiences and ideas, broadening their own knowledge and insight. Such a visit would also give learners an insight into a social care environment, and the opportunity to practise using interpersonal skills in a workplace. Learners would need to be carefully prepared before such a visit, possibly with a suggested list of appropriate questions to ask.

Factors that affect the health of individuals could be introduced through a case study approach. One possible vehicle could be to organise learners into small groups, ask them to idea storm the different factors and then produce a case study for the other groups to consider. This would introduce a range of factors, especially if each group was asked to focus on one or two particular factors, so that each had a different focus to its discussion.

Popular soap operas, television dramas and current news items could also be used, alongside class discussion, to consider factors affecting health. This could be used to introduce the topic in an interesting and impersonal way, although sensitivity will still be needed in the consideration of the various factors.

Learners can carry out a number of activities including using the internet to find out about different types of disease and what causes them, and factors that influence the health of individuals in different environments.

Assessment

The centre will devise and mark the assessment for this unit.

Learners must meet all assessment criteria to pass the unit.

For assessment criterion 1.1, learners should use at least two examples to describe what is meant by the term 'health'. It is not sufficient for learners to copy definitions from a dictionary or internet website; research information must be applied. For assessment criterion 1.2, learners are required to identify examples of communicable and non-communicable diseases.

For assessment criterion 2.1, learners could design a poster or leaflet showing factors that may affect health. These may include positive and negative factors. Alternatively, learners could present information to the group following an investigation into different factors. Case studies could also be used to allow learners to demonstrate their knowledge of health factors and lifestyle choices.

Learning outcome 3 focuses on the causes of disease and how to limit the spread of disease. Learners could provide a short description of how the spread of disease may be limited. Alternatively, they could carry out an investigation into ways in which diseases such as foot-and-mouth, and smallpox have been controlled. Articles from journals or internet sites may be a valuable source of information for this.

Suggested resources

Books

The Concise Human Body Book: An Illustrated Guide to Its Structure, Function and Disorders (Dorling Kindersley, 2009) ISBN 9781405340410

Goodfellow D, Hocking S and Musa I - *BTEC First Principles of Applied Science Student Book* (Pearson Education, 2012) ISBN 9781446902790

Wright D – *Human Physiology and Health* (Heinemann, 2000)
ISBN 9780435633042

Websites

| | |
|---|--|
| Best Health | www.besthealth.bmj.com |
| British Heart Foundation | www.bhf.org.uk |
| Department of Health | www.dh.gov.uk |
| Food Standards Agency | www.food.gov.uk |
| Genetic Alliance UK | www.gig.org.uk |
| National Institute for Health and Clinical Excellence | www.nice.org.uk |