3 Health, illness and disease

This chapter provides information and guidance to help you prepare for the portfolio assessment of **Unit 3: Health, illness and disease**.

Concepts of health and ill health

The terms 'health' and 'ill health' do not mean the same to everybody. This section is designed to develop an understanding of what people mean when they talk about health and ill health.

When people become ill they usually develop **symptoms**. A symptom is something that is noticeable to the affected person (e.g. itching or pain). It might be noticeable to other people too (e.g. a rash or a lump).

Soon after developing symptoms, people begin to think of themselves as ill and decide to take some action. This might be to buy some medication or to visit their GP. The GP might then confirm that the person is ill and diagnose the disease.

However, there are sometimes situations in which this pattern is not followed. For example, people might think of themselves as ill but a GP or a hospital consultant might be unable to detect any disorder. Sometimes, people might have a disease but not notice any symptoms, or might notice symptoms but not think of themselves as ill. For example, a person might catch a cold, but ignore it and carry on as normal.

It might surprise you that there are several different opinions about what is meant by being healthy and also a range of views about what is meant by being ill. These differences are illustrated by the examples below.

Claire says, 'My GP tells me that I'm healthy. She says that all signs of my infection have gone. But I know she's wrong, because I don't feel right in myself. I've lost all my confidence.'

In this example, Claire and her GP disagree about whether she is ill or healthy. The disagreement is really about what each person means by the terms 'health' and 'illness'.

During a routine health check, a practice nurse discovers that Younis has high blood pressure. Younis is surprised. He does not feel ill and he does not think that he needs any treatment. The practice nurse thinks that there is something wrong with Younis's circulatory system. In this example, the practitioner and the patient again disagree because they are using different concepts of what being ill means.


Chris Priest and Mark Clarke/SPL

Younis does not feel ill, but the practice nurse knows something is wrong with his circulatory system

Concepts of health

You need to understand the differences between holistic, positive and negative concepts of health.

A holistic concept of health

A **holistic concept** of health is the belief that being healthy means being without any physical disorders or diseases and being emotionally comfortable. For example, a person who feels anxious or who has low self-esteem would, according to this concept, not be well. People with this view are likely to label themselves as ill when they experience a wide range of unpleasant feelings, not just physical discomfort or pain. They are likely to interpret minor discomforts, such as tiredness, as symptoms of illness.

A positive concept of health

A positive concept of health is the belief that being healthy is a state achieved only by continuous effort. People with this belief take active steps to maintain their health – for example, through their choice of food, by taking exercise and other activities they believe will keep them well. Such people are likely to feel responsible for their own health. They will take credit for the continued absence of disease and blame themselves if they develop symptoms. According to this view, people who do not take action to maintain their own health (for example, by 'healthy eating') cannot be healthy – even if, at any one time, there is nothing wrong with them.


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A person with a positive concept of health believes that being healthy means taking active steps to stay well

A negative concept of health

A **negative concept** of health is the view that being healthy is the absence of illness – for example, not having any symptoms of disease, pain or distress. People with this view are likely to believe that good health is normal and to take it for

granted that they are well. They assume they do not need to take any special actions to keep healthy. They are unlikely to think of themselves as ill when they have minor discomfort caused by colds or headaches, or when they feel tired or depressed.

Try it out

A researcher asked a sample of people, 'Is your health good, average or poor?' When a respondent gave the answer 'good', the researcher asked, 'When you say your health is good, what do you mean?'

Read the following replies from different people and decide which concept of health best fits each answer. The three concepts of health you should use are:

- a holistic concept
- a positive concept
- a negative concept

Answer A: 'I mean that there's nothing wrong with me, as far as I know.'

Answer B: 'I mean that I look after myself, stay fit and that sort of thing.'

Answer C: 'I mean that I feel well balanced. My body and my mind are working well together.'

When you have decided on your answers, check them against those given at the end of this chapter (see p. 101).

Now try to decide which concept of health is closest to the way you think about your health.

Did you know

When thinking about your own health, you might have realised that you use more than one of the three concepts of health, or perhaps you use all three. Do not be surprised by this. The fact that there are different concepts of health does not mean that your attitude to health necessarily belongs to just one of them. You will probably find that you apply one concept in some situations and others on different occasions.

You might also be wondering whether there is any advantage or disadvantage in holding one or other of these views.

Holistic concept

One result of having the holistic concept is that it tends to make people sensitive about their health. This can be an advantage because it can help them to notice symptoms more quickly than other people. They notice when something does not feel right and pay more attention to their bodies.

However, this can also be a disadvantage. Over-sensitivity can lead people to believe that they are ill when they are not. It can lead to unnecessary worry and result in people wasting their GPs' time. It can also result in people not leading a lifestyle that is good for their health, such as going to work, taking strenuous exercise and going on holiday.

Positive concept

One result of having a positive concept of health is that people tend to take plenty of exercise, avoid smoking and excessive intake of alcohol, and eat a balanced diet. This is likely to be advantageous to them. Another advantage is that if such people become ill, they are likely to adopt attitudes and behaviour that contribute to getting better. There is some evidence that the chances of surviving cancer are influenced by the attitude of the patient. People who believe they can recover and avoid feeling defeated by their illness tend to do better than those who believe that they are doomed to die. People with a positive concept tend to be active rather than passive in relation to their own health.

One disadvantage of this concept is that, by taking responsibility for their own health, people might blame themselves for their illnesses and feel guilty when they become ill.

Negative concept
One result of having a negative concept of health is that people are unlikely to spend much time thinking about their health. One advantage of this is that it can save a lot of unnecessary worry. For example, a person with this concept is likely to ignore the symptoms of minor illnesses that usually get better without any treatment.

A disadvantage is that such people are less likely than others to take health advice seriously. For example, they might have a fatalistic attitude that allows them to continue smoking. This attitude is expressed in statements such as 'We've all got to die sometime. I could be killed tomorrow crossing the road'. This is an irrational attitude, because the more risks people take with their health, the more likely they are to die prematurely. The lung-cancer sufferer who has had both legs amputated because of circulatory problems linked to smoking is very likely to die prematurely from the condition and very unlikely to be killed crossing the road.

Another disadvantage of the negative concept of health is that, once they become ill, people are more likely to see themselves as victims and to respond passively, making it less likely that they will recover from a serious illness.

Acquisition of concepts of health
Concepts of health are acquired socially and culturally, as are other attitudes. This means that our views of health tend to be influenced by the people around us. Children of parents with a negative concept of health will tend to adopt the same concept themselves. People with friends who regularly go to a gym are more likely to have a positive concept of health. Students who study health and social care are likely to develop a sophisticated view of health, including all three concepts.

Concepts of ill health

Among the different views or concepts of ill health are 'ill health as illness' (a subjective sensation), 'ill health as disease' (a set of symptoms) and 'ill health as a disorder' (a malfunction of a body tissue, organ or system).

Ill health as the subjective sensation of illness

A subjective sensation of illness means feeling ill. People might feel ill when they have some disease symptoms; they might also feel ill when no symptoms are present. By this definition, ill health exists when people decide that they feel ill or describe themselves as being ill. People who are very anxious about, or sensitive towards, their health are likely to think of themselves as ill even when symptoms are very mild or absent. Other people refuse to think of themselves as ill even when there are obvious signs that something is wrong.

Ill health as having observable symptoms of disease

Disease refers to a diagnosable problem, which might be physiological (a physical disorder) or psychiatric (a mental disorder). This view of ill health is objective, i.e. ill health is something for which there is likely to be publicly available evidence — for example, two people with medical knowledge agreeing that a patient has a disease.

Ill health as a disorder

The term '**disorder**' refers to some malfunction of a body tissue, organ or system. This concept is based on the idea that body systems can go wrong. This definition is the one that the writer of a medical textbook is likely to have in mind.

Try it out

A researcher asked a sample of people the question, 'What does "ill health" mean to you?' Read the following replies from different people and decide which concept of ill health best fits each answer. The three concepts of ill health you should use are:

- ill health as a subjective sensation of illness
- ill health as disease symptoms
- ill health as disorder or malfunction

Answer A: 'It means having things like heart disease or something blocking your intestines.'

Answer B: 'All sorts of things. You know, sickness and diarrhoea, unbearable pain, lumps growing on your skin.'

Answer C: 'It's when you don't feel well.'

When you have decided on your answers, check them against those given at the end of this chapter (see p. 101).

How concepts of ill health overlap

Students can have difficulty in telling the difference between the three concepts of ill health. This is partly because they sometimes overlap. For example, 'ill health as a subjective sensation' can overlap with 'ill health as having symptoms of disease'. This is because some of the symptoms of ill health (e.g. pain and tiredness) are themselves subjective sensations.

This overlap is most noticeable with mental disorders. Unlike physical illnesses, mental disorders often have no symptoms that are detectable through observation, blood tests, scans and so on. For example, a person suffering from depression is likely to have no observable symptoms apart from complaining of overwhelming feelings of misery and helplessness. In this case, 'ill health as a subjective sensation' is the same as 'ill health as disease symptoms'.

In other situations it is easier to tell the difference. For example, a person with a skin rash (observable disease symptom) might not think of himself or herself as ill (subjective sensation), particularly if the rash is not accompanied by pain.

The concept of 'ill health as disease symptoms' can also overlap with 'ill health as a disorder or malfunction'. This is usually the case when the symptoms correspond very closely to the malfunction. For example, a person with a lung disorder such as pneumonia will experience difficulty in breathing.

However, in other situations these two concepts of ill health can be distinct. For example, a person could experience symptoms, such as sneezing and a runny nose, that are not caused by malfunction of any body tissue, organ or system. Rather, those symptoms are the result of effective functioning of the immune system to overcome a cold virus. In this case, 'ill health as disease symptoms' is distinct from 'ill health as disorder or malfunction'.

A contrasting example is that a person can have a serious malfunction of body tissue (such as a tumour growing on the spleen) but not feel ill or report

any symptoms. Tumours in some parts of the body, including the abdomen and brain, can grow for many months before they are noticed. This is because there are few sense organs in these parts of the body. Symptoms are unlikely to be felt until the tumour is pressing on surrounding tissue that has more sense organs.

Another situation in which 'ill health as symptoms of disease' and 'ill health as malfunction' do not overlap is when the symptoms could be the result of a range of malfunctions. For example, a person feels constantly tired and out of breath. A blood test reveals that the person is anaemic (has too few red blood cells). The symptoms of tiredness, shortness of breath and anaemia do not arise from any one particular disorder or malfunction. The anaemia could be caused in several ways – for example, by a disorder of the bone marrow, by internal bleeding or by a dietary deficiency. Only by further tests and investigations could a specific disorder or malfunction be detected.

However, in most people who are seriously ill, these three aspects of ill health occur together. People will think of themselves as ill, they will notice symptoms (e.g. partial paralysis) and they will have an organ malfunction (e.g. a stroke or bleed into the brain).

Table 3.1 gives several examples in which two or more of these views of ill health sometimes overlap and sometimes do not.

Table 3.1
Concepts of ill health

Patient's name	Illness as a subjective sensation	Disease as symptoms	Disorder as malfunctions of tissue, organ or system	Conclusion
Bob	Yes — Bob thinks he is ill	No — there are no obvious signs or symptoms	No — there is nothing physically wrong	Illness as a subjective sensation; no overlap with the other concepts
Shabeena	No — Shabeena does not think she is ill	Yes — she has a runny nose and keeps on sneezing	No — no system is malfunctioning	Disease as symptoms; no overlap with other concepts
Simon	No — Simon does not think he is ill	No — he has no symptoms	Yes — he has a brain tumour that has not yet been detected	Disorder as a malfunction of brain tissue; no overlap with other concepts
Polly	Yes — Polly thinks she is ill	Yes — she has noticed a lump in her breast	Yes — she has breast cancer	All three concepts of ill health occur
Finbarr	No — Finbarr does not think he is ill; he just feels thirsty and tired	Yes — he often feels tired and thirsty, and often needs to urinate	Yes — he has a malfunction of the pancreas, causing diabetes	Disease as symptoms and disorder as malfunction overlap

Try it out

Example 1

Claire says, 'My GP tells me that I'm healthy. She says that all signs of my infection have gone. But I know she's wrong, because I don't feel right in myself. I've lost all my confidence.'

(a) Which concept of health is Claire using?
(b) Which concept of ill health is implied by what she says?
(c) Which concept of health is the GP using?
(d) Which concept of ill health is the GP using?

When you have decided on your answers, check them against those given at the end of this chapter (see p. 101).

Example 2

During a routine health check, a practice nurse discovers that Younis has high blood pressure. Younis is surprised. He does not feel ill and he does not think that he needs any treatment. The practice nurse thinks that there is something wrong with Younis's circulatory system.

(a) Which concept of ill health is Younis using?
(b) Which concept of ill health is the practice nurse using?

When you have decided on your answers, check them against those given at the end of this chapter (see p. 102).

Factors affecting health and well-being (lifestyle factors)

The specification requires a basic level of understanding of the following six factors:

- eating sensibly, in order to maintain a balanced diet
- taking regular exercise, in order to maintain physical and mental fitness
- monitoring weight, in order to avoid weight-related illness or premature death
- limiting alcohol consumption, in order to avoid alcohol-related disorders
- not smoking, in order to avoid tobacco-related diseases
- visiting the GP, to obtain medical advice and appropriately prompt treatment

For each factor, you need to understand the underlying principles and the reasons why the factor is important. You also need to understand how the different factors interrelate.

Note that these factors provide a useful list of precautions for maintaining health.

Eating sensibly

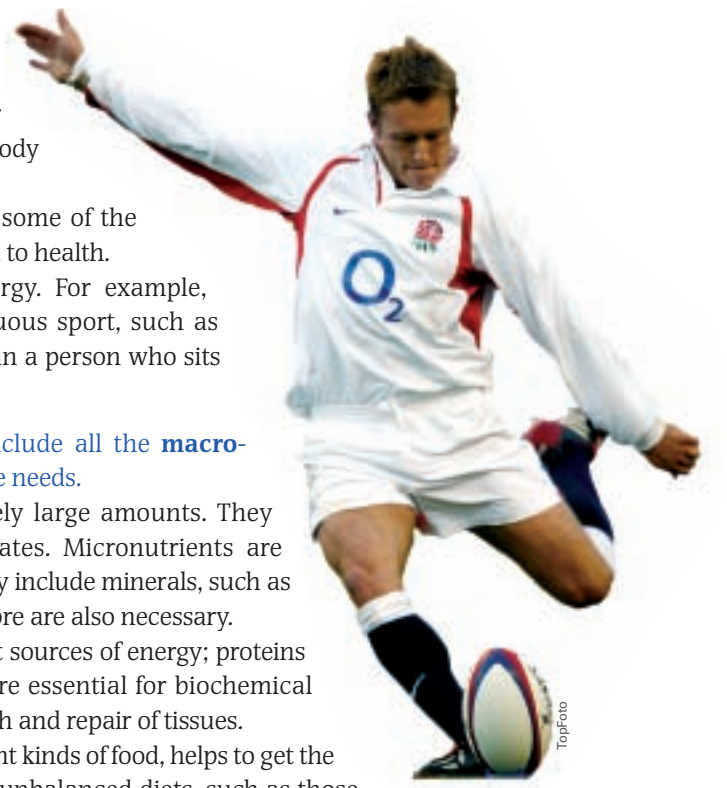
Principle 1: allowing for growth, **energy intake** should balance **energy output**. This is sometimes called the **energy equation**.

Daily activities, such as walking, talking and thinking, are powered by chemical energy obtained from food, which is released in body cells. Most foods contain chemical energy (fats and sugars contain the most, by weight).

People who eat too little use more energy than they take in. The result is that they convert body tissue, such as muscle, into energy. This is bad for health, unless they have a lot of spare body tissue in the form of fat.

People who eat too much will store some of the excess energy as fat. This is also harmful to health.

People differ in their need for energy. For example, a person who regularly plays a strenuous sport, such as rugby, will need much more energy than a person who sits around all day.



People who take part in strenuous sports will need much more energy than people who sit around all day

Principle 2: a person's diet should include all the **macronutrients** and **micronutrients** he or she needs.

Macronutrients are needed in relatively large amounts. They include fats, proteins and carbohydrates. Micronutrients are needed in relatively small amounts. They include minerals, such as iron, and vitamins. Water and dietary fibre are also necessary.

Fats and carbohydrates are important sources of energy; proteins help to build tissues. Micronutrients are essential for biochemical processes in the body, such as the growth and repair of tissues.

Eating a varied diet, with many different kinds of food, helps to get the right balance of these nutrients. Some unbalanced diets, such as those containing high levels of fat and carbohydrate, are harmful to health. This is partly because they contain more energy than necessary and partly because they lack important nutrients.

Taking regular exercise

Principle 1: the human body has been adapted by evolution for frequent and prolonged activity, so exercise is needed to keep it in good working order.

Until the last few thousand years, most humans obtained food by hunting and gathering. Typically, this involved a lot of walking and running, for which the human body is very well adapted. A reasonably fit adult can cover at least 20 miles in a day on foot and some can manage two or three times this distance. Because of this adaptation, some people suffer reduced health and well-being when they do not take exercise.

In most people, exercise helps to maintain physical fitness. Exercise helps to keep the body supple and strong, maintains stamina and helps to limit body weight. In contrast, a lack of exercise often leads to a gradual loss of muscular strength, speed and lung capacity.

Principle 2: exercise can also contribute to psychological well-being.

This is partly because it can give a sense of achievement (particularly in sport) and boost self-esteem and confidence and partly because it leads to the secretion of body chemicals called endorphins, which produce feelings of pleasure and contentment.

Today, regular exercise is important for people because the circumstances of life are different from those during most of human evolution. Very few jobs now require the use of physical strength, and people travel without exertion and many have far more leisure than ever before. Entertainment opportunities, such as television and electronic games, often result in people sitting still for hours at a time.

Exercise maintains physical fitness and helps people to feel good about themselves

Monitoring weight

Principle 1: weight changes often indicate changes in health and fitness.

An increase in weight may be a sign of disease. For example, fluid retention (oedema) in body tissues, which could result from heart failure, leads to a weight increase. However, more often weight gain is not a sign of illness, but indicates that a person is eating too much, taking too little exercise, or both. Gain in weight can indirectly lead to illnesses, such as heart disease, and can also reduce the likelihood of a person taking exercise because this becomes more difficult.

A decrease in weight can also be a sign of disease. For example, intestinal disorders can result in poor absorption of nutrients from the intestine into the bloodstream.

Principle 2: increases or decreases in weight are usually gradual and are likely to be unnoticed unless people check their weight regularly (e.g. once a month).

A judgement about whether weight is normal for height is made using height and weight charts and a body mass index table.

Limiting alcohol consumption

Principle 1: habitual heavy consumption of alcohol has harmful short-term and long-term effects on health.

The short-term effects include an increased risk of accidental injury. This can occur after drinking three or four units of alcohol. (A unit is half a pint of beer, a small glass of wine or a single shot of spirits.)

The long-term effects include alcohol dependence, damage to the stomach, liver and kidneys, coronary heart disease, hypertension, strokes and impairment of brain function. These long-term effects can take many years to become apparent, so some people convince themselves that their excessive drinking is not doing

them any harm. Unfortunately, when the effects do occur, they are usually irreversible.

The Department of Health recommends a maximum daily consumption of alcohol of up to three or four units for men and up to two or three units for women. In addition, it is recommended that people have alcohol-free days and avoid binge drinking.

Excessive consumption of alcohol seems to be increasing in the population. This is partly because of the huge increase in wealth, compared with 100 or even 50 years ago. It might also be caused by cultural beliefs, particularly among young people, that being very drunk is a desirable state. Young people tend to have more difficulty than older people in resisting the social pressure to get drunk.

Regular monitoring of weight can give warning of ill health

Principle 2: small amounts of alcohol are beneficial for health and well-being.

Alcohol has been a popular drug for thousands of years. In small quantities (one or two units per day) it produces feelings of contentment and is associated with reduced risk of stroke and coronary artery disease.

Not smoking tobacco

There is only one principle related to smoking, and that is that it should be avoided by people who wish to maintain good health.

Unlike alcohol consumption, smoking tobacco confers no health benefits. Smoking can produce pleasant sensations and people often use tobacco to manage their mood, for example to reduce anxiety. However, there are other equally effective ways of managing mood, such as taking exercise. In addition, smoking can suppress appetite, which is one reason why smokers are sometimes reluctant to give up — they think they will gain weight.

Smoking increases the risk of:

- heart and circulatory diseases
- respiratory diseases, including bronchitis, emphysema and lung cancer
- many other cancers

Towards the end of their lives, smokers sometimes have circulatory problems that are so severe that they develop gangrenous infections in their legs, which then have to be amputated. This helps to extend life because without the legs, the heart and lungs are better able to maintain an adequate oxygen supply to the tissues.

Breathing in smoke from other people (passive smoking) causes significant health risks, particularly to members of a smoker's family.

Smoking is harmful because of three components of tobacco smoke:

- nicotine, which tends to produce addiction
- carbon monoxide, which reduces the oxygen-carrying capacity of the blood and can contribute to hardening of the arteries
- tar, which irritates the respiratory system and causes cancer

The more serious ill-health effects of smoking can take many years to develop. This is partly because the lungs have a much greater capacity for gas exchange than is usually needed. Only when about half of the effective lung capacity has been lost do people become aware of shortness of breath. However, stopping smoking, even late in life, can help to prevent further damage.

Visiting the GP

Visiting a general practitioner is important to obtain prompt treatment and/or access to hospital services. It also allows people to be given health checks and useful advice. Practice nurses can carry out blood tests and check blood pressure. Regular visits (at least once every 5 years) are recommended for older people, even if they have no obvious symptoms.

How these factors interact

There are obvious links (interrelationships) between these factors:

- Monitoring weight provides useful information about whether or not food intake and exercise patterns are correct. Eating and exercise are interlinked. Exercise helps to use up food energy and avoid accumulating too much fat in the body. It can also help to suppress appetite. A rapid loss in weight should prompt a visit to a GP to find out the cause.
- Alcohol consumption is also linked with nutrition and weight. Alcohol contains a lot of chemical energy and excessive consumption can lead to weight gain. In addition, a significant proportion of the energy needs of an alcohol-dependent person might come from alcohol. Therefore, the person might not eat other foods that would contribute to a balanced diet. A person who is dependent on alcohol can obtain advice and treatment by visiting a GP.
- Smoking can affect appetite, so is also linked with nutrition and weight.

A combination of adverse lifestyle factors makes a much greater contribution to ill health than one factor alone

The combination of these factors makes a much greater contribution to health or ill health than any one factor alone. Therefore, people who hardly ever take any exercise, smoke, drink heavily, eat a diet high in fat and sugar and low in minerals and vitamins, do not monitor their weight and never bother to visit their GP are taking much greater risks with their health than people who take all but one of the precautions listed.

Individual, group and cultural differences

Individual differences

Individuals differ in how important they think these health factors are. Carrying out the questionnaire study that is part of the assessment for this unit might indicate some of these differences. For example, some people are significantly

overweight but quite unconcerned about it, whereas others, who are in the normal weight range, believe that they need to lose weight.

Group differences

There are also group differences. For example, two families might have different views about health and nutrition. In one family there might be a tradition of eating a wide range of foods, including plenty of fresh fruit and vegetables; in another family, there might be no tradition of thinking about nutrition.

Group differences also occur between males and females. For example, men and women might have different attitudes and behaviour towards drinking alcohol, taking exercise and monitoring weight. Men are also believed to be less willing than women to visit a GP for advice and health checks.

Cultural differences

Cultural differences might reflect beliefs. For example, an individual might be a vegetarian or have religious beliefs that make taking exercise less likely.

People might also be influenced by subcultures. For example, they might drink excessively or take up smoking because their friends or workmates do.

Questionnaire on concepts and health factors

One part of the assessment for this unit is to design and use a questionnaire. Chapter 2 contains detailed guidance on designing and using questionnaires and on processing and presenting the data collected.

Overall design of the questionnaire

The questionnaire is likely to contain two parts — one about the respondents' concepts of health and ill health and the other about their behaviour and attitudes in relation to the six factors affecting health and well-being that are identified in the specification. You have to decide whether to start the questionnaire with items about concepts of health or to start with items about the six factors affecting health and well-being.

Choosing the respondents

You will have to decide which group or groups to study.

- You could use the questionnaire to find out the attitudes and behaviours of one particular group of people, for example middle-aged men. Alternatively, you could use it to compare the attitudes and behaviours of two groups, for example young men with middle-aged men.
- Probably the simplest option is to use the questionnaire with people you happen to know, such as adult family members and friends of different ages. You do not