



COMPONENT 3: HEALTH AND WELLBEING

AO2: Interpret health indicators.



This revision pack contains the health indicators and how to interpret them (AO2) and exam questions relating to this assessment objective.

Essential content in this revision pack

B: Interpreting health indicators

Learners will interpret indicators that can be used to measure physiological health, interpreting data using published guidance.

Physiological indicators

- Physiological indicators that are used to measure health:
- pulse (resting and recovery rate after exercise)
- blood pressure
- peak flow
- body mass index (BMI).
- Using published guidance to interpret data relating to these physiological indicators.
- The potential significance of abnormal readings: risks to physical health.

Lifestyle indicators

Learners will interpret lifestyle data in relation to risks posed to physical health.

Interpretation of lifestyle data, specifically risks to physical health associated with:

- smoking
- alcohol consumption
- inactive lifestyles.

Exam Questions related to this content.

Health indicators

Health practitioners use many types of **physiological** indicators (these are simply certain aspects of a person's health) to assess health and wellbeing. Some of these indicators are measurable by using equipment, others are more difficult to assess.

Health monitoring and illness prevention

Identifying these indicators is usually done through health monitoring. This process requires regular check ups to make sure everything is ok. This form of monitoring helps detect any problems that may arise. This enables these problems to be solved quickly and effectively and gives the best chance of sorting the problems out. This enables:

- The problem to be monitored during its treatment
- Accurate support is given to person for all aspects of the problem.

An example of an issue easily detected by health monitoring is raised cholesterol. This can be reduced easily by eating a correct diet. Lowering cholesterol could also reduce the risk of heart disease and stroke. Without monitoring, this would have gone undetected.

Illness prevention services aim to prevent illness in people. Some examples of these services would be:

- The National Healthy Schools Programme - encourages children and young people to be informed on their health and overall life choices. They provide healthy school dinners, opportunities for exercise and an emotional well-being boosting environment.
- Health Screening - examples would be: dental check-ups, eye check-ups and breast screening. These are to check the condition and performance of certain areas to make sure they are working properly.
- Vaccinations - help the body fight infectious disease. Examples would be the flu and tetanus.

Measurements of health

These include: measurable indicators, observed indicators and lifestyle.

Measurable indicators

Measurable indicators are able to be measured using purpose built pieces of equipment. An example of this would be a thermometer to measure body temperature.

Further examples include:

- Waist to hip ratio (waist measurement divided by hip measurement)
- Height/weight
- Blood pressure
- Peak flow

- Resting pulse and recovery pulse (before and after exercise)
- Blood glucose
- Cholesterol levels
- Liver function

Positive and negative aspects of lifestyle

These are harder to measure compared to the ones previously mentioned. Despite this, they are still useful indicators of health. The main way this information is assessed is usually done by questionnaire or at an appointment with a health practitioner.

Negative examples include:

- Genetic inheritance- disorders and conditions,
- Existing chronic conditions,
- Substance abuse,
- Social isolation,
- Stress,
- Reluctance to seek help or access services,
- Poor housing
- Environmental pollution
- poverty/unemployment
- Unprotected sex.

Positive examples include:

- Regular exercise
- Personal hygiene
- Supportive relationships
- Adequate financial resources
- Stimulating work
- Use of health monitoring- screening and vaccination
- Use of services- dentist/optician
- Risk management (to prevent accidents)
- Education
- Balanced diet
- Enough sleep

Observed indicators

Health practitioners gain information by observing their patient. An example is whether a patient is pale or flushed, sweating, breathless, limping behaving oddly, twitching, has a swelling lump or rash etc.

Resting pulse rate and recovery after exercise

A useful measure of health is to compare your resting pulse rate with the rate after exercise and see how long it takes to return to its normal resting rate.

Cardiovascular system is the system that moves the blood, nutrients and gases around our bodies. It is made up of the heart, blood and blood vessels. Arteries are blood vessels that carry blood away from the heart.

Your pulse rate is the measure of how fast your heart is beating. Every time your heart beats, it pumps blood into your cardiovascular system. These beats cause a pulse/shock wave that travels along the walls of your arteries.

To measure our pulse rate

- Put the tips of two fingers on the radial pulse (just below the base of your thumb) in your wrist
- Count how many beats there are in a certain time
- Use the number to work out your pulse rate in beats per minute (bpm)

Say for example you measure 12 beats in 10 seconds, multiple the 12 by 6 to get the number of beats in 60 seconds. The answer is 72, which means you have a resting pulse rate of 72 bpm. You must use the tips of your pointer and middle fingers to take your pulse rate, because they are the most sensitive. Remember the thumb has a pulse of its own, so do not use it to take your pulse.

Resting pulse rate

Resting pulse rate for an adult is about 60-100 bpm. The average for an athlete is lower, about 40-60 bpm. In other words, the fitter you are the lower your resting pulse rate is. This is because the heart gets bigger and stronger with exercise, so it becomes more efficient at pumping blood around the body. It can pump more blood around the body with each beat, which means it needs fewer bpm to pump the blood around. Babies and children have faster pulse rates. A new baby's pulse rate can be 70-190 bpm.

The best way to measure your resting pulse rate is to:

- Sit quietly for about 5 minutes, so you are calm.
- Take at least three readings
- Work out the average by adding the readings together and divide by three.

You can also measure your pulse rate on a smartphone, fitness watch or using an app.

Recovery after exercise

Your pulse rate increases after exercise then it returns to normal. But this can happen at different times

- A professional dancer can get their breath back and speak almost as soon as a dance has finished because their pulse rate quickly returns to normal.
- Their celebrity partner is often out of breath because they are not so fit and it takes their pulse rate longer to return to normal.

Measuring your pulse rate before and after exercise and seeing how many minutes it takes to return to normal is a good way of measuring how fit you are. The shorter your recovery time, the more fit you are.

The predicted maximum pulse rate is 220 minus your age. A healthy pulse rate during or just after exercise is 60 to 80 percent of this. Here's an example for a 30-year-old:

Predicted pulse rate = $220 - 30 = 190$
60% of 190 = $60/100 \text{ times } 190 = 114$
80% of 190 = $80/100 \text{ times } 190 = 152$.

Blood pressure

Blood pressure is the pressure exerted by your blood against the walls of arteries. It is measured in millimetres of mercury (mmHg) as two numbers shown one over the other.

- The top number is your systolic pressure, which is the maximum pressure in the arteries as the heart pumps blood around the body.
- The bottom number is your diastolic pressure; this is the minimum pressure as the heart relaxes between beats.

Normal healthy blood pressure is between 90/60 mmHg and 120/80 mmHg.

High blood pressure

If you have blood pressure between 120/80 mmHg and 140/90 mmHg, you are in danger of developing high blood pressure. High blood pressure is called "hypertension". It is 140/90 mmHg or above.

Hypertension is a risk to health and needs to be reduced as quickly as possible, this can be done by any of these things:

- Removing the source of stress causing it
- Treating the condition causing it
- Treating the blood pressure with medication.

Hypertension does not usually have any noticeable symptoms, but if left untreated, it puts extra strain on the blood vessels and organs. Which can cause:

Heart disease, attacks and failure	Blindness
Kidney disease	Vascular dementia
Strokes	

The risk of having high blood pressure is increased by all the points below. Blood pressure can be lowered by making a lifestyle changes or through taking medication such as beta-blockers.

High blood pressure can be caused by these things:

Being overweight	Smoking
Having a relative with high blood pressure	Eating too much salt
Not getting enough exercise or sleep	Drinking too much caffeine
Being of African or Caribbean descent	Not eating enough fruit and vegetables.
Being aged 65 or over	

Low blood pressure

Low blood pressure is called hypotension and is 90/60 mmHg or below. Some people have naturally low blood pressure and this can lead to a longer lifespan. Low blood pressure does not normally need treating unless it is causing symptoms. However, reduced blood pressure can restrict the volume of blood flow to your brain, so it can lead to dizziness (perhaps if standing up quickly), fainting or falls. Low blood pressure can also be the side effect of some medication or, more seriously, a sign of a more life-limiting problem such as Parkinson's disease. You can reduce the symptoms of low blood pressure by drinking lots of fluids, eating smaller meals more often, wearing support stockings and standing up slowly.

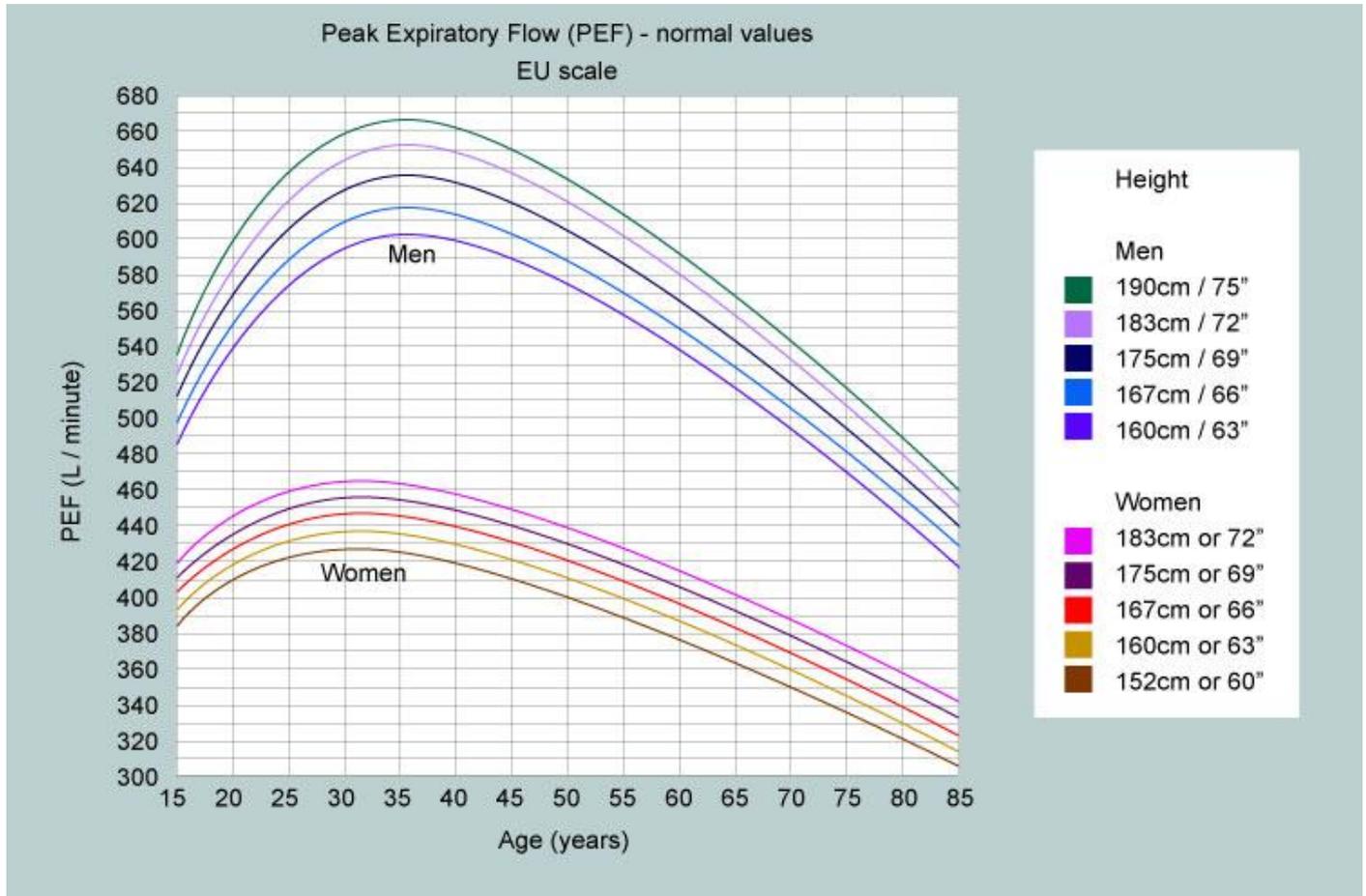
Measurement of blood pressure

Blood pressure can be measured manually using a sphygmomanometer - made up of a stethoscope, arm cuff, pump and dial. You roll up your sleeve and hold out your arm, which should be supported on something at the same level as your heart. The cuff is wrapped around the arm and pumped up to restrict the blood flow there. This can feel uncomfortable, but just for a few seconds, until the pressure is released. The health practitioner uses a stethoscope to detect vibrations in your arteries as the blood flow returns to your arm. This is measured at two points.

These days, blood is also measured digitally using a blood pressure monitor, which automatically puts the blood pressure reading onto a digital display. You can have your blood pressure measured at your GP surgery or health centre, at some pharmacies, and in some work places.

Peak flow chart

Peak flow is a measurement of how quickly you can blow air out your lungs. It is an important health indicator (as people with breathing difficulties may already know).



Peak flow

Peak flow charts are the maximum rate, or expiratory rate, in litres per minute (L/min), at which air is expelled from the lungs when you breathe out as hard as possible. Your peak flow reading shows if your airways are narrowed. It is measured using a handheld device called a peak flow meter.



This is a peak flow meter, which measures air pushed out from the lungs.

You draw in a deep breath and seal your lips tightly around the disposable mouthpiece, then blow out as hard and as fast as you can. This causes a pointer to move along a scale, so you can read your peak flow at the point it has stopped. You can do this three times a day.

The most common reason for taking and recording a peak flow readings is to monitor a person's asthma, caused by narrowed airways, to make sure;

- It's not getting any worse
- It's being kept under control by prescribed medication

If you measure your peak flow before and after exposure to something like animal fur. Or before and after a stressful event, drop in reading can show these things are a trigger for your symptoms. Peak flow can be used to diagnose and monitor other lung problems such as:

- Bronchitis (a chest infection)
- Emphysema (damage to the lungs causing breathlessness)
- Cystic fibrosis (a genetic disorder that can affect the lungs)
- Lung cancer

The readings are compared with a chart of expected scores based on age and gender.

Body Mass Index

BMI is a measure of the amount of fat on your body in relation to your height to tell you if your weight is healthy.

Why measure body fat?

We all carry some body fat. But someone who has too much (they are overweight) is at risk of:

- Cardiovascular disease
- High blood pressure
- Diabetes
- Arthritis
- Stroke.

Having low amounts of body fat (being very underweight) can indicate problems such as:

- An undiagnosed illness
- An eating disorder (such as anorexia nervosa or bulimia nervosa).

Calculating BMI

BMI is worked out using a formula, which divides an adults weight in kilograms by their height in meters squared. It can also be worked out using an online BMI calculator, where you add your weight and height and the calculation is done for you. The information about your height and weight (and sometimes age and gender) can be used directly to determine which BMI range you fit in. you can do this using a graph or a table. BMI falls into different categories for example:

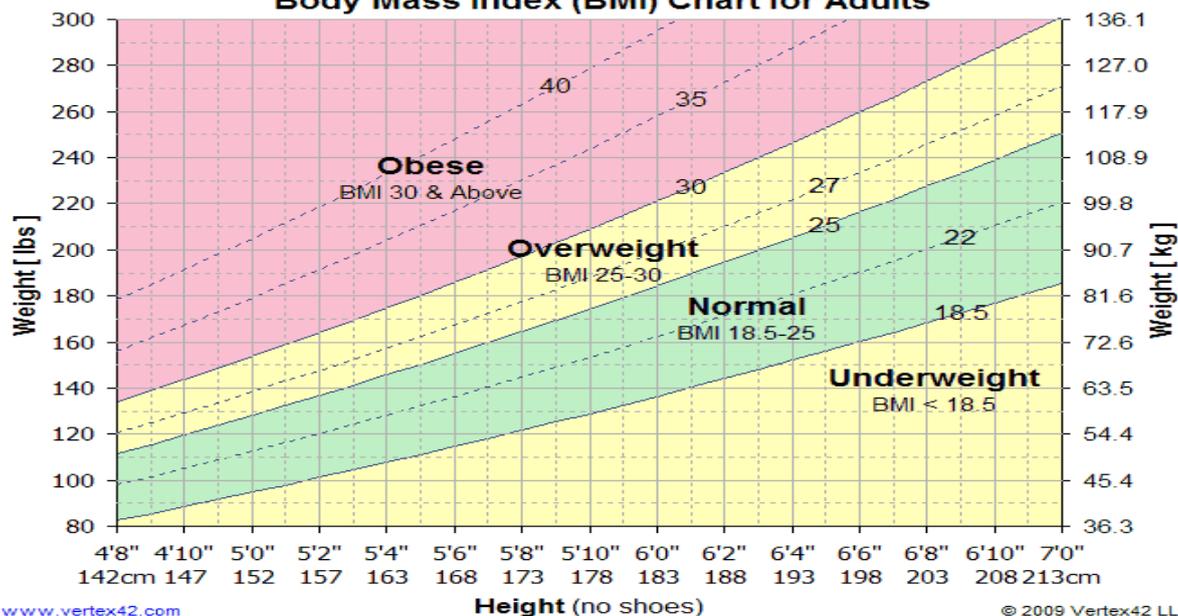
- Underweight
- Normal
- Overweight
- Obese.

Roughly speaking, a range of 18.5 to 25 is about right for most adults. BMI is calculated differently for children aged 2 to 18. This allows for their BMI to be shown in relation to that of other children of the same sex and age.

BMI only takes into account body shape to give a healthy weight for a certain height. Healthcare practitioners will take other factors into account.

BMI	Meaning
Less than 18.5	Underweight
Between 18.5 and 24.9	Healthy weight
Between 25 and 29.9	Overweight
Between 30 and 34.9	Obese
Between 35 and 39.9	Severely obese
Between 40 or above	Morbidly obese

Body Mass Index (BMI) Chart for Adults



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Using published guidelines to interpret health indicators

How do we know what health test results actually mean? What do we compare our results with to find out whether we are 'normal' or not? Published guidelines can help.

Published guidelines and baseline assessments

You will have been told that 'normal' (an average healthy range- depending sometimes on the age and gender) is - for example, a normal peak flow measurement or a normal BMI range. These normal measurements, or published guidelines, are called baseline measurements. By comparing a person's health indicators against these baselines we can say whether or not there is a problem.

Even though a person may not be ill, a measurement can give a warning that they may need to improve their lifestyle in some way to carry on being healthy. for example, high blood pressure can lead to cardiovascular disease and stroke, but a person with high blood pressure can improve their lifestyle (and therefore reduce their chances of ill health) through:

- Losing weight
- Reducing stress, alcohol or salt in their diet
- Giving up smoking

Limitations to published guidelines

Health indicators are vital in diagnosing risks to health but they should never be used in isolation (on their own). For example, BMI is a good way to assess a person's weight in relation to their height. but, BMI cannot tell the difference between excess fat, muscle or bone or whatever you are a man or woman. This means that:

- A very muscular person may fall into the overweight or obese category, even though their body fat is low
- Older adults may fall into the healthy weight category even though they are carrying excess fat around their middle, because they lose muscle as they age.
- Women, who generally have more total body fat than men, are measured against the same BMI ranges as men.
- Women, who generally have more total body fat than men, are measured against the same BMI ranges as men.

Doctors do not use BMI normal ranges when treating people with eating disorders. They also need to consider factors such as age and sexual maturity when taking BMI measurements for children and young people.

Additional calculations may be needed in order to gain a more accurate overall picture than just one measurement in isolation. For example, a person's waist-to-hip ratio and fat composition can give more information when assessing risks such as cardiovascular disease.

Presenting assessments

It is very important that all measurements are:

- Accurate and precise
- Collected together and presented clearly

These approaches can help to avoid errors

It is also important that evidence is validated (checked against something else). For example, if you are having trouble breathing, your peak flow reading should be taken three times and the highest reading noted. Your medical notes should then record:

- That you are having trouble breathing (observation)
- your actual peak flow measurements, which validates (supports) the observation.

Reasoned judgements

Any data collected must be reviewed, taking every piece of information into account. A high total cholesterol level looked at in its own might suggest to your GP that something is wrong. However, if other factors are considered, GP may feel there is less cardiovascular risk than they first thought. Other factors may include:

- A high percentage of food cholesterol
- A history of high levels of cholesterol in the family with no ill effects.

Risks to physical health of abnormal readings

The word 'abnormal' can sound worrying. Abnormal test readings might mean a risk to health. In fact, abnormal readings may indicate **potential significance**. Let us look at blood pressure.

An 'abnormal' case study: blood pressure

Having an abnormally high blood pressure reading means you have very high blood pressure.

This could lead to:

- A range of diseases including heart disease, kidney disease, strokes and blindness
- Death, because for every increase of 20 mmHg systolic above the normal of 120 mmHg the risk of cardiovascular death doubles for example: if your blood pressure is 140/90 mmHg, systolic measurement of 140 mmHg is 20 mmHg higher than the norm of 120 mmHg, which means your risk of death from a heart condition doubles. If your blood pressure is 160/90 mmHg, the systolic measurement of 160 mmHg doubles again the risk of death.
- Even greater risk of health problems such as coronary heart disease if you have other conditions too - for example, diabetes and high cholesterol. Having diabetes may mean the nerves in your heart and blood vessels are damaged, so you may not feel the pain caused by a heart attack as much as someone without diabetes. This makes a heart attack harder to diagnose and therefore, slower to be treated.

Abnormal readings: blood pressure

It is very important that blood pressure readings are accurate, so that the right course of action can be taken to reduce it as quickly as possible. Having an abnormally high reading from one test does not always mean you have high blood pressure. Blood pressure can vary during the day depending on what you are doing (for example, exercising) and what is happening around you (for example, situations that may cause stress).

You might also get tense and anxious when you visit your GP or are in hospital, so your blood pressure increases. Your blood pressure may be as much as 30 mmHg higher when it is taken by a health practitioner in a medical setting than when it is taken at home. This is called 'white coat syndrome', because doctors traditionally wear white coats. In this case you will probably be asked to take part in ambulatory blood pressure monitoring (ABPM). This means you will:

- Either take and record reading of your own blood pressure at regular intervals with a home blood pressure monitor
- Or wear a 24 hour monitor that automatically checks and records your blood pressure regularly throughout the day and night.

This will establish whether your blood pressure is consistently high.

Around 3.5 million people in the UK are diagnosed with diabetes. But there are many people who do not know they have diabetes because it has not been diagnosed and they may also have high blood pressure.



Acting on abnormal readings

Imagine someone has constantly abnormal blood pressure readings. This will need to be acted on as quickly as possible to avoid further health problems. For example, if that person's blood pressure is:

- Consistently higher than the threshold figure of 140/90 mmHg, but their risks of other problems are low, they will be advised to make some lifestyle changes
- Consistently higher than 140/90 mmHg and their risk of other problems is high, they will be offered medication to lower it.
- Consistently over 160/100 mmHg, they will be offered medication to lower it.

Interpreting lifestyle data

Did you know that we can measure our own lifestyle choices against officially prepared data? This can include information about safe limits of smoking, drinking alcohol and taking exercise.

Lifestyle data

If you look for it, you can find a huge range of lifestyle data.

- The office for national statistics (ONS) produces official statistics for the UK. It conducts regular surveys on lifestyle topics such as smoking, drinking, obesity and diet.
- NHS Digital collects data from across the health and social care system. This data can be used by, for example, researchers patients and healthcare professionals.

It can take a long time for statistics to become available to the public - perhaps up to 2 years. This is because it needs to be:

- Collected (through surveys)
- Collected (combined)
- Analysed
- Written into a report

So information you are reading now, today, might have been collected two years ago.

An example of lifestyle data

In 2014, a survey was published giving lifestyle data between 1993 and 2012. It said:

- The number of adults with a normal BMI decreased in that time from 49.5 percent to 40.6 percent of women and from 41 percent to 32.1 percent of men.
- In 2012, 26 per cent of women and 19 percent of men were classed as inactive, while 67 percent of men and 55 percent of women met the new recommendations for aerobic activity.
- The number of adults who were obese rose from 16.4 percent to 25.1 percent of women and from 13.2 percent to 24.4 percent of men.
- During 2012-13, there were 10,957 inpatient admissions to NHS hospitals with a primary diagnosis of obesity among people of all ages. That is nine times higher than the same period 10 years earlier.

The survey was repeated the following year but with different areas of focus. Only one statistic was measured in the same way: the number of adults who were obese. It showed a decrease in obese women (23.8 percent) and an increase in obese men (26 percent).

This kind of data can be used to develop realistic health and wellbeing improvement plans to tackle obesity. It might be used (for example, by the NHS) in areas of the country that have a high proportion of illness caused by obesity. In order to draw up a plan for a group of obese individuals (regionally or nationally) it will be necessary to:

- Assess the present health status of that population of looking at lifestyle data
- Set targets for the health practitioners aimed at improving the situation
- Provide support to help meet those targets - for example, trained staff, better buildings, facilities such as larger beds and scanners that will accommodate obese people, and information.
- Identify any difficulties that may arise and provide alternative strategies to meet targets to help overcome those difficulties.
- Monitor and review progress made towards meeting targets and, if necessary, set new targets as time passes.

Interpreting lifestyle data on smoking

Smoking is a lifestyle choice. But it comes with many risks to physical health. As you might imagine, there is much lifestyle data associated with smoking.

Who produces lifestyle data on smoking

The ONS (which you read about in the previous lesson) collect data relating to smoking. It publishes both statistics and reports giving key findings.

ASH (Action on Smoking and Health), a public health charity, works towards eliminating the harm caused by smoking tobacco. It uses data about smoking to;

- Influence policy (guidelines)
- Inform, educate and raise awareness about the risk of smoking
- Campaign for tighter controls on the tobacco industry.

ASH receives funding from British Heart Foundation and Cancer Research UK. It has also received project funding from the UK Government's Department of Health to support tobacco control.

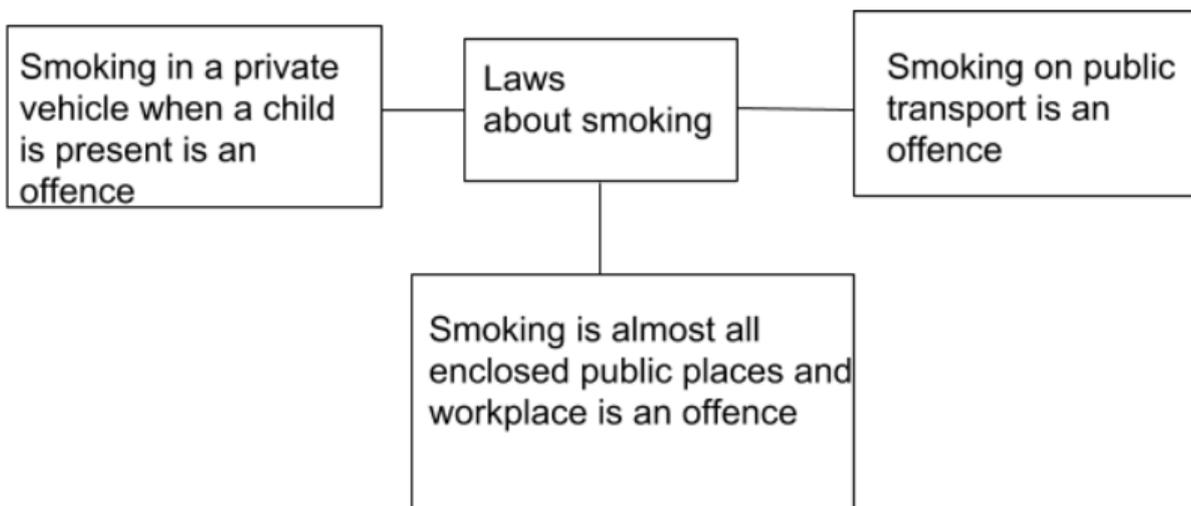
What health organisations like the NHS use smoking data for:

- To persuade people to stop smoking
- To plan care
- To provide information
- To offer support to help people quit

What the data achieves

The data on smoking provides the UK government with evidence it can act on by:

- Planning national health promotion campaigns to reduce smoking and its associated risk to physical health
- Passing laws about smoking (for instance, where you can and cannot smoke).



Date also delivers hard-hitting anti-smoking campaigns, led by Public Health England. These may be seen on TV, billboards and online. They use graphic images such as:

- Cancerous tumours growing from the end of a cigarette (2012)
- Blood polluted by smoking products flowing
- Fumes travelling through arteries and veins into the brain (2014)
- Smoke rotting the body from within (2015).

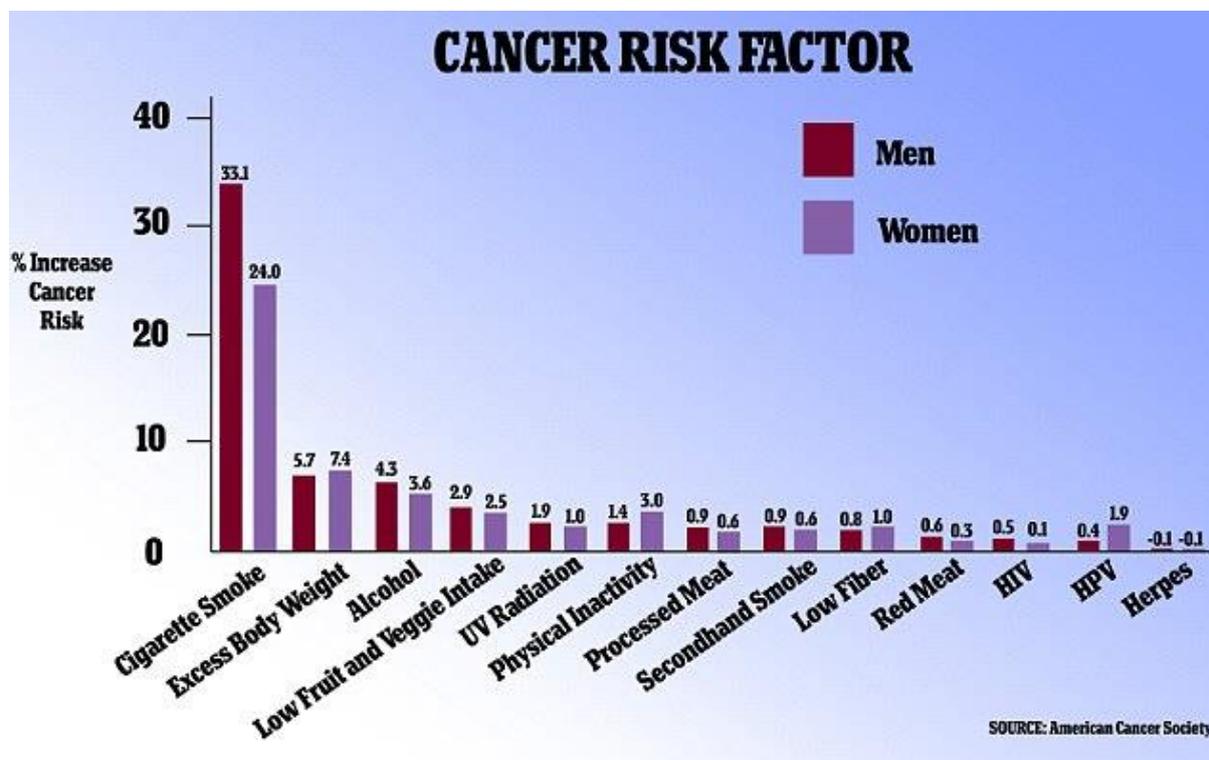
What the data shows

ASH identifies that:

- Smoking causes around 96,000 deaths in the UK annually
- Smokers under the age of 40 are 5 times more likely to have a heart attack than non-smokers
- Smoking causes around 80% of deaths from lung cancer, 80% of deaths from bronchitis and emphysema, and 14% of deaths are from heart disease
- More than 25% of all cancer deaths are caused by smoking (for example; lung, mouth, lip, throat, bladder, kidney, pancreas, stomach, liver and cervix)
- On average a smoker will die 10 years earlier than non-smoker
- Woman smoker have a greater risk of developing osteoporosis
- Smoking is a cause of impotence and can lead to sperm abnormalities
- Smokers are more likely to develop facial wrinkles earlier and have dental problems.

ASH also produces face sheets of smoking statistics and data about, for example, teenage smokers and second-hand smokers.

There is therefore, a wealth of material available on the risks to health and smoking. By providing this information in a suitable format that is attention-grabbing and easy to read, people are more likely to give up smoking.



Interpreting lifestyle data on alcohol

Drinking alcohol is a lifestyle choice. It may seem appealing and social, but it comes with risks to physical health. Lifestyle data about alcohol helps to inform us about those risks.

Who produces and uses lifestyle data on alcohol

The ONS collects information and publishes reports on various aspects of health risks due to alcohol.

The Drinkaware Trust (www.drinkaware.co.uk) is a UK alcohol; education charity. It was set up to help reduce alcohol-related risks to health by:

- Interpreting available data.
- Giving people the information they need to make better choices about their drinking - for example, sticking to safe limits and not binge drinking.

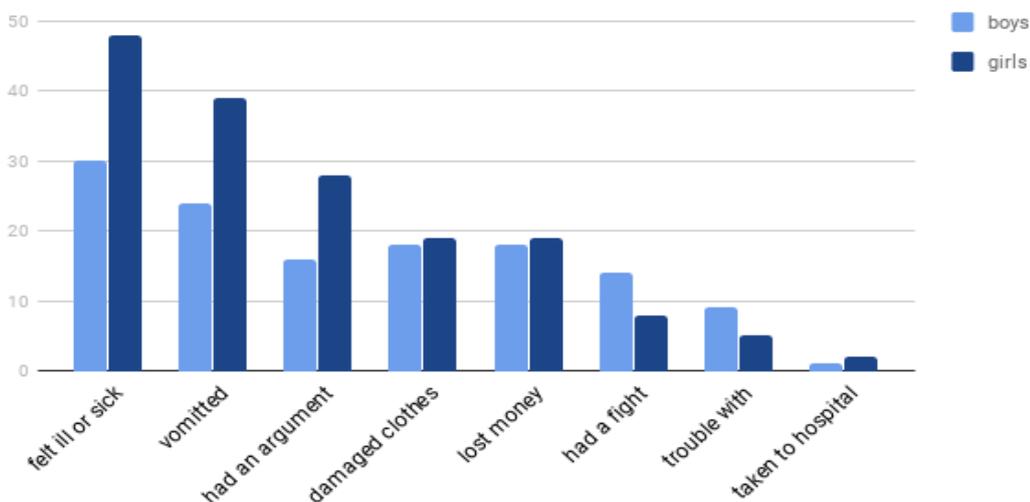
The Drinkaware Trust is funded mainly by donations from alcohol producers, retailers and supermarkets.

Alcohol Concern (www.alcoholconcern.org.uk) is a national charity. It works to help reduce the problems caused by alcohol by:

- Providing information, advice and support
- Aiming to move towards a society where alcohol does no harm.

Alcohol Concern is funded by donations from organisations such as Cancer Research UK. Its website shows a running total of the running total of the number of alcohol-related deaths in the UK. It also produces fact sheets giving data on risks to health, such as breast cancer from alcohol.

adverse consequences of drinking in the last four weeks, by gender



What the data shows

Here are some examples of what current lifestyle data on alcohol shows.

- It is strongly linked to at least seven types of cancer. For example, a lifetime of drinking too much alcohol can increase your risk of bowel cancer by 23%.
- Alcohol -related liver disease accounts for 37% of liver disease deaths.
- Two-thirds of cases of chronic pancreatitis are caused by heavy drinking, most commonly in men aged between 45 and 54. (Pancreatitis is an inflamed pancreas that has damaged cells).
- More than 25,000 people were admitted to hospital with acute pancreatitis in 2013 and 2014.
- Around 1,000 people died from acute pancreatitis every year.

- You are between two and five time more likely to have an accident or injure yourself if you drink five to seven units of alcohol in one sitting.
- Less than one third of the British public knows about the link between alcohol and breast cancer.
- Each drink per day increases the risk of breast cancer in women by between 7% and 13%.
- In 2011, 3,000 cases of breast cancer were directly caused by alcohol consumption.

This data can be used in health campaigns to show everyone the risks of drinking alcohol, how to lower their consumption and how to reach safe limits.

New safe limits

In January 2016, the UK government published new guidelines on drinking alcohol. The guidelines sat that:

- Any amount of alcohol can increase the risk of cancer.
- Men and women who drink regularly should consume no more than 14 units a week (the equivalent of six pints of beer or seven glasses of wine.)
- People should not binge-drink all 14 units in one go.

Interpreting lifestyle data on inactivity

Lifestyle data relating to inactivity lets you know exactly what is meant by inactivity and what you need to do in order to be active enough to make you healthy.

Data on regular physical activity

As you have already learned, activity decreases the risk of many conditions such as stroke, diabetes, cancer, obesity, arthritis and cardiovascular disease. Data says that regular physical activity can make a positive difference, as the diagram shows.

30-40 percent lower risk of developing type 2 diabetes	30 percent reduction of risk of early death	20 percent lower risk of breast cancer
20-35 percent lower risk of cardiovascular disease, coronary heart disease and stroke	<u>What data shows about regular physical activity:</u>	68 percent reduction in the risk of hip fracture
30 percent lower risk of colon cancer	Has positive benefits for mental health such as feeling happier, having a more positive self-esteem and reduced anxiety	Reduced risk of depression

Because of data such as this, guidelines were issued by the Chief Medical Officers (CMO) of England, Scotland, Wales and Northern Ireland in 2011 for recommended levels of physical activity for:

- Adults aged 19-64 years
- Adults aged 65 years and over
- Children and young people aged 5-18 years
- Children under the age of 5 who can walk.

The physical activity guidelines also suggested that everyone should aim to be active every day. For example, children and young people aged 5 to 18 years should do:

- Moderate to vigorous intensity activity for at least 60 minutes and up to several hours every day
- Vigorous intensity activities, including those that strengthen muscles and bones, at least three days a week
- Less sitting for extended periods.

These (and more) facts can be found on the GOV.UK website by searching for 'UK physical activity guidelines.'

Who produces and uses lifestyle data on inactivity

The ONS produces data in the UK on levels of activity and how these relate to various risks to physical health. Other organisations such as the British Heart Foundation and Public Health England use it to plan health promotion campaigns that encourage people to be more active.

The British Heart Foundation

The British Heart Foundation is a UK heart charity. It was founded in 1961 and is funded by:

- Donations from fundraisers
- Money from cardiovascular research projects that help fight heart disease.

The British Heart Foundation aims to prevent people dying prematurely from heart disease. It uses data to highlight the importance of physical activity for cardiovascular health. For example, its report Physical Activity Statistics 2015 includes data on:

- Physical activity levels
- Types of physical activity.

The data is broken down by UK country, gender, age and sedentary behaviour. Breaking it down this way means information can be used to target the groups that most need to become more active.

Public Health England

Public Health England was established to protect and improve the nation's health and wellbeing. It is sponsored by the UK Government's Department of Health. It uses data sources like the annual health survey for England to provide information on inactivity. This information helps policy makers and practitioners deal with the risks to health such as obesity.

The cost of inactivity

Data on inactivity and its consequences can be used to estimate how much physical risks to health could cost the NHS. This helps the UK Government to plan:

- How to cope financially
- Campaigns that reduce inactivity (and therefore reduce the financial strain on the NHS).

For example, data has helped to estimate that by 2050, the health risks created by being overweight could cost the UK almost 50 billion pounds.

Exam Questions

- 1: What should a 'normal' Resting Heart Rate (RHR) be?
- 2: What is Heart Rate measured in?
- 3: How do you work out your maximum Heart Rate?
- 4: What is an abnormal reading of Resting Heart Rate?
- 5: What are 3 main causes of a fast pulse rate?
- 6: What are 3 main future risks of a fast pulse rate?
- 7: What should a 'normal' blood pressure reading be?
- 8: What is blood pressure measured in?
- 9: What is high blood pressure called?
- 10: What is low blood pressure called?
- 11: What are the abnormal readings of blood pressure?
- 12: What are the 3 main causes of high blood pressure?
- 13: What are the 3 main future risks of high blood pressure?
- 14: What should a 'normal' peak flow reading be?
- 15: What is peak flow measured in?
- 16: What is an abnormal reading of peak flow?
- 17: What are the 3 main causes of a poor peak flow score?

18: What are the 3 main future risks of having a poor peak flow?

19: What should a 'normal' BMI reading be?

20: How do you measure BMI?

21: What are the abnormal readings of BMI?

22: What are the 3 main causes of a high BMI reading?

23: What are the 3 main future risks of a high BMI reading?

24: What is physiological data and list 4 examples of data?

25: What is lifestyle data and list 3 examples of data?

26: What are the future risks of smoking?

27: What are the future risks of drinking too much alcohol?

28: What are the future risks of an inactive lifestyle?