



Health



Healthy Diets

To keep healthy, it is vital to eat a balanced diet.

This means eating the right amount from different food groups. Too much may cause obesity (overweight) and too little may cause malnutrition (severely underweight).

Being malnourished or obese can lead to health issues.

Nutrient	The reason why our body needs the nutrient.	Found in
Carbohydrates	They provide energy throughout the day	Bread
Lipids (Fats)	Quick release of energy	Butter
Proteins	They allow for the growth and repair of cells and muscles	Chicken
Vitamins & Minerals	Needed for vital processes in your body. E.g. building bones, skin, or improving eyesight	Fruit and Veg

Health Problems

If you don't look after your diet, it can lead to a variety of long term health problems. For example:

- **Obesity** – caused by consuming too many calories per day. This can lead to heart disease or type 2 diabetes
- **Malnutrition** – caused by a lack of variety in your diet or consuming too few calories per day. This can lead to a lack of concentration, less growth and even depression.

You can also get diseases from **vitamin deficiencies**. For example:

- A lack of iron causes anaemia which leads to tiredness and shortness of breath
- A lack of vitamin A can cause tiredness
- A lack of vitamin C causes a disease called scurvy where you get bleeding gums, bulging eyes and dry skin

Energy in food

The energy in food is measured in a unit called calories.

Every day your body will use a certain amount of calories. This depends on your body size, how active you are or whether you are male or female.

For example the average adult male will burn 2500 calories per day whereas the average adult female will burn 2000 calories per day.

If you consume too many calories per day on average you may begin to put on weight.

The energy from food is released by respiration and is used for:

- Growth & repairing cells
- Movement
- Keeping warm



Smoking or Vaping

Nicotine is an addictive substance found in cigarettes and vapes. It causes you to want more.

The long term risks of smoking include: lung cancer and heart disease.



Drugs

A drug is a substance that has an effect on the body. They can be:

- **Medicine** – taken to help you with a disease
- **Recreational** – taken by people because they like the effects.

Some recreational drugs are legal, like caffeine and alcohol. Some are illegal like cannabis and heroin.

Measuring the Energy in Food

Food contains a chemical store of energy. All food contains a different amount of chemical energy. When you eat food the chemical energy is transferred to you.

How to measure chemical energy:

Certain food samples can be burnt easily. So, the chemical energy turns to thermal energy. The longer the food sample burns, the more chemical energy it has.

In our experiment, we heated different crisps under water. Then we measured the temperature change of the water.

Independent Variable:

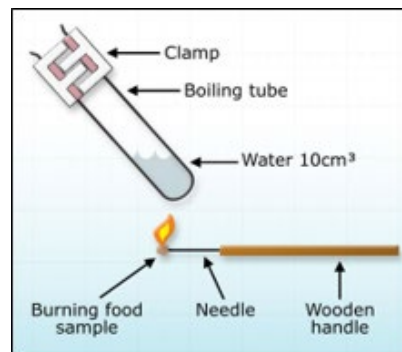
- Type of crisp

Dependent Variable:

- Temperature change

Control Variable

- Same mass of crisp





CORE Questions



The following are core questions for this topic. Cover the answer section with a sheet of paper and try and quiz yourself. Only try learning 5 at a time, once you know them move on.

1	State the main nutrient groups	Proteins, carbohydrates, lipids (fats), vitamins and minerals
2	What meant by the term "balanced diet"?	The right amount from different food groups
3	Why does the body need proteins?	They allow for the growth and repair of cells and muscles
4	Why does the body need carbohydrates?	They provide energy throughout the day
5	Why does the body need lipids (fats)?	Quick release of energy
6	Why does the body need Vitamins and minerals?	Needed for vital processes in your body. E.g. building bones, skin, or improving eyesight
7	What causes obesity?	consuming too many calories per day.
8	What causes malnutrition?	a lack of variety in your diet or consuming too few calories per day
9	What problems are associated with obesity?	heart disease or type 2 diabetes
10	What problems are associated with malnutrition?	a lack of concentration, less growth and even depression
11	What store of energy is contained in foods?	Chemical
12	How many calories does the average male burn every day?	2500
13	How many calories does the average female burn every day?	2000
14	What happens if you consume too many calories each day?	Gain weight
15	What is the energy used for?	Growth & repairing cells, Movement, Keeping warm
16	State the substance from this description "addictive substance found in cigarettes and vapes".	Nicotine
17	What meant by the term "drug"?	a substance that has an effect on the body
18	What type of energy is stored in food?	Chemical
19	How can you tell which food have higher chemical energy stores?	The food will burn for longer
20	What energy store is the chemical energy transferred into?	Thermal energy