

## Healthy eating

Healthy eating may help to prevent certain long-term (chronic) diseases such as heart disease, stroke and diabetes. It may also help to reduce your risk of developing some cancers and help you to maintain a healthy weight. This leaflet explains the principles of a healthy diet. It is general advice for most people. The advice may be different for certain groups of people, including pregnant women, people with certain health problems or those with special dietary requirements.

### What are the benefits of healthy eating?

Healthy eating may help to prevent certain serious diseases such as [heart disease](#), [stroke](#) and [type 2 diabetes](#). It may also help to reduce your risk of developing some cancers. If you become sick, eating a healthy diet may help you to recover more quickly. Also, [a main way of preventing obesity and overweight is to eat a healthy diet](#). If you are overweight or obese, [eating a healthy diet can help you lose weight](#).

As well as healthy eating, regular physical exercise is also very important for health and to avoid or reduce obesity. [See also the separate leaflet called Exercise and Physical Activity](#).

### Food groups

Your body needs energy to work normally and keep you alive. You obtain this energy from nutrients in the food that you eat – mostly, carbohydrates, fats and proteins. Minerals and vitamins are other nutrients that are also important in your diet to help your body stay healthy.

It is important to find the right balance between these different nutrients to achieve maximum health benefits (see below). A balanced diet generally contains food from each of the following food groups:

- Fruit and vegetables.

- Milk and dairy foods.
- Protein foods. These include meat, fish, eggs and other non-dairy sources of protein (including nuts, tofu, beans, pulses, etc).
- Starchy foods such as bread, rice, potatoes, pasta, etc.

Fatty and sugary foods are the fifth food group that you eat. However, only a small amount of what you eat should be made up from fatty and sugary foods.

In addition to the above, having plenty of [fibre](#) and water in your diet is also important for your health.

## What makes up a healthy diet?

In the past, the advice was to base your meals on starchy carbohydrates such as potatoes/pasta/rice/bread, and some agencies still suggest this, but this advice is changing as more is discovered about the effects of some carbohydrates, particularly processed ones, on our blood sugar, insulin levels, and weight. The focus now is more towards eating fresh whole foods, including some wholegrain/wholefood carbohydrates, plenty of vegetables, fruit (especially if in season), protein from oily fish, some meat, some dairy and nuts and seeds. This is often referred to as a Mediterranean diet.

It used to be advised that a low fat diet was best, but for most people there is a role for some healthy fats in the diet, eg, from olive oil, oily fish, avocado and some dairy. Healthy fats in small quantities can help you to feel full after a meal and reduce snacking. However other types of fats should be avoided where possible eg, trans fats (trans-unsaturated fatty acids), as these are bad for heart health. Too much animal fat may also be unhealthy. You should limit the amount of foods and drinks that are high in sugar.

It is best to avoid ultra processed foods (UPF) where possible. These are foods that have been heavily processed and had chemicals added eg, as preservatives or emulsifiers. A general rule is to check the packet and if there are a lot of ingredients and you wouldn't find them in the average kitchen cupboard, it is likely to be ultra processed.

The dietary guidance to reduce your risk of heart disease is as follows:

- Cut down on foods and drinks high in saturated fats and trans fats. Replace saturated and trans fats with unsaturated fats found in oils from plants and fish. Current government recommendations are to eat no more than 20g (women) or 30g (men) of saturated fat daily.
- Eat two portions of fruit and at least three portions of vegetables per day. Another more recent suggestion is to aim to eat 30 different plants over the week. This includes nuts, seeds, herbs and spices.
- Eat at least two portions of fish (preferably oily fish) per week.
- Consider regularly eating whole grains and nuts.
- Keep the amount of salt in your diet to less than 6 g per day.
- Limit alcohol intake to less than 14 units per week for men and less than 14 units per week for women. [See also the separate leaflet called Alcohol and Sensible Drinking.](#)
- Avoid or reduce the following in your diet:
  - Processed meats or commercially produced foods (including 'ready meals') which tend to be high in salt and trans fatty acids.
  - Refined carbohydrates, such as white bread and processed cereals.
  - Sugar-sweetened drinks.
  - High-calorie but nutritionally poor snacks, such as sweets, cakes and crisps.

Below, the principles of a healthy diet are explained. It is general advice for most people. If you have a specific health problem, or specific dietary requirements, this advice may not apply to you. If in doubt, you should check with your doctor. There are also some changes that pregnant women need to make to their diet.

[See the separate leaflet called Planning to Become Pregnant for more details.](#)

## **Carbohydrates**

Much of the energy (calories) in what we eat comes from carbohydrate. These are divided into two carbohydrate types:

- Complex carbohydrates – generally starchy foods such as bread, pasta, rice and potatoes.
- Simple carbohydrates – the sweet sugary foods.

There is a lot being written about how much of our food should be made up of carbohydrates but most of the guidelines recommend about one third. This should be mostly starchy carbohydrates, preferably higher-fibre options such as wholemeal bread, wholegrain cereals and brown rice. Sugar/simple carbohydrates should not be eaten regularly. Bread, pasta and white rice also should not be eaten in large quantities. Whole grains such as oats, whole wheat, bulgur wheat, buckwheat, whole rye, bulgur wheat, barley, quinoa and brown rice contain much more fibre and usually cause less rise in blood sugar and are more filling than pasta and bread. Starchy vegetables such as potatoes can be eaten in small – medium quantities.

### **Glycaemic index**

The glycaemic index of a food is the rate at which the food raises blood sugar levels after it has been eaten. If a food has a low glycaemic index, it is processed by the body in a way which means it is less likely to lead to problems such as diabetes and obesity. You can find out more about the role of food on your blood sugar from our leaflet on [Type 2 Diabetes Diet](#).

Higher-fibre carbohydrates, such as whole grains, tend to have a lower glycaemic index than more refined starches such as white bread, snack foods and sugary drinks. This means they are a healthier option for this reason as well as for the fibre they contain.

### **Eat plenty of fruit and vegetables**

New research suggests that eating two portions of fruit and at least five portions of vegetables daily reduces the risks of many illnesses, such as stroke, heart disease and some cancers. Ideally there should be more vegetables than fruit in your diet. In addition to these benefits, fruit and vegetables:

- Contain lots of fibre which helps to keep your bowels healthy. Problems such as [constipation](#) and [diverticular disease](#) are less likely to develop.
- Contain plenty of vitamins and minerals, which are needed to keep you healthy.

- Are naturally low in fat.
- Help to make you feel full after a meal but are low in calories.

An average portion of vegetables may be about a handful, or about 80g. Alternatively, one portion of fruit or vegetables is roughly equivalent to one of the following:

- One large fruit such as an apple, pear, banana, orange, or a large slice of melon or pineapple.
- Two smaller fruits such as plums, kiwis, satsumas, clementines, etc.
- One cup (or a handful) of small fruits such as grapes, strawberries, raspberries, cherries, etc.
- Two large tablespoons of fruit salad, stewed or canned fruit in natural juices.
- One tablespoon of dried fruit.
- About three heaped tablespoons of any vegetable.
- One dessert bowl of salad.

Some tips on how to increase fruit and vegetables in your diet include:

- Try some different types that you have not tried before. The variety of tastes and textures may be surprising. Frozen, canned and dried varieties all count.
- Try adding chopped bananas, apples, or other fruits to breakfast cereals.
- Aim to include at least two different vegetables with most main meals. Do not over-boil vegetables. Steaming, stir-frying, or lightly boiling are best to retain the nutrients.
- Try to have fruit with a meal..
- Try new recipes which include fruit. For example, some curries or stews include fruit such as dried apricots. Have fruit-based puddings. Fruit with yoghurt is a common favourite.
- Consider cherry tomatoes, carrot sticks, dried apricots, or other fruits as part of packed lunches.

- Fruit is great for snacks. Encourage children to snack with fruit rather than with sweets.

## **Eat plenty of fibre**

High fibre foods include:

- Wholegrain breakfast cereals, wholewheat pasta, brown rice, wholegrain bread and oats, barley and rye.
- Fruits such as berries, pears, melon and oranges.
- Vegetables such as broccoli, carrots, sweetcorn and potatoes (with skin).
- Peas, beans, chickpeas and lentils.
- Nuts and seeds.

There are two types of dietary fibre:

- Soluble fibre, which is found in oats, peas, beans and many fruits and vegetables, dissolves in water to form a gel-like material. It increases feelings of fullness and can lower blood [cholesterol](#) and [glucose](#) levels.
- Insoluble fibre is mostly found in whole grains, and also in fruit and vegetable skins. It is not digested by the body but forms bulk in the gut, which helps to keep the bowels moving normally.

Starchy foods and fruit and vegetables contain the most fibre. So the tips above on starchy foods and fruit and vegetables will also increase fibre. Choosing wholemeal rice and pasta, and wholemeal bread can significantly increase your fibre intake. Pulses like lentils and beans are also full of fibre.

Eating higher-fibre foods can make you feel full for longer, which can help if you are trying to watch your weight.

Have plenty to drink when you eat a high-fibre diet (at least 6-8 cups of fluid a day).

[See the separate leaflet called Fibre and Fibre Supplements for more details.](#)

## **Milk and dairy foods**

Milk and other dairy foods such as cheese and yoghurt are important in your diet, as they provide calcium which is needed for healthy teeth and bones. They are also a source of protein and can provide other vitamins and minerals important for your health

To make sure that you have enough calcium in your diet, you need three servings a day from this food group. One serving is:

- 200 ml of milk.
- A small (150 g) pot of yogurt.
- A 30 g serving of cheese (about the size of a small matchbox).

Natural or unflavoured yoghurt/milk is preferable to flavoured, as it will contain less sugar and not be ultra-processed.

Non-dairy sources of calcium include leafy green vegetables, tinned fish (particularly if the bones are included), dried figs, almonds, oranges, sesame seeds, seaweed and some types of beans.

Non-dairy calcium needs to be eaten with a source of vitamin D, as the body needs this to help it absorb the calcium. Vitamin D can be found in eggs, fish and mushrooms but is mostly made in the skin by contact with sunshine.

Some foods are fortified with calcium, such as breakfast cereals, some soya drinks and tofu. These may already have added vitamin D.

## **Protein**

Other protein-containing foods include meat, fish, eggs and plant sources of protein. Plant sources of protein include nuts, seeds, tofu, beans such as red kidney beans and canned beans, and pulses such as lentils and chickpeas.

You need a certain amount of protein to keep healthy. Protein is important for energy and for growth and repair in your body. Some of these high-protein foods can also be a source of iron and vitamins, including B vitamins and vitamin D. However, most people eat more protein than is necessary. Beware, some meats are also high in saturated fat.

Some protein helps you stay full after a meal.

Choose poultry such as chicken, or lean meat. One portion of beans or pulses such as chickpeas or lentils is three heaped tablespoons. Eggs can be boiled or poached rather than fried.

There is some evidence that eating oily fish helps to protect against heart disease. Oily fish include herring, sardines, mackerel, salmon, fresh tuna (not tinned), kippers, pilchards, trout, whitebait, anchovies and swordfish. It is thought that omega-3 fatty acids in the fish oil help to reduce 'furring of the arteries' (the build-up of atheroma) which causes [angina](#) and heart attacks. Aim to eat at least two portions of fish per week, one of which should be oily.

### **Protein combining**

Vegetarian sources of protein do not provide the correct balance of amino acids (the building blocks of proteins) for the body to use unless combined with each other. So people who are not eating a lot of fish, meat or eggs need to make sure that their meals contain two of the following:

- Dairy products.
- Grains.
- Legumes (for example, beans, lentils).

Examples of protein-balanced meals are:

- Baked beans on toast.
- Dhal and rice or chapatti.
- Baked potato with baked beans and cheese

### **Red meat and processed meat**

Red meat refers mainly to beef, veal, pork and lamb. Processed meat refers to meat that has been processed to improve the flavour or to help preserve the meat. Examples of processed meat include ham and sausages, as well as canned meat and meat-based ready meals and sauces.

There is evidence that eating red and processed meat increases the risk of [bowel cancer](#).



Eating red and processed meat has also been shown to increase the risk of stroke, heart disease and type 2 diabetes. The health risks from eating processed meat increase with increasing amounts of processed meat that you eat.

On the other hand, restricting the intake of meat can increase the risk of [iron-deficiency anaemia](#). For this reason, the UK Government's Scientific Advisory Committee on Nutrition (SACN) recommend that your intake of red and processed meat should be no more than 70 g/day.

## **Fat**

For a long time, obesity and many other health problems have been blamed on the amount of fat that we eat. This makes sense because fat contains about twice as many calories as carbohydrate or protein per gram. However, more recent research suggests the picture is more complex than that. It suggests that carbohydrate plays a larger role in weight gain than we previously thought.

Also, the advice about which types of fats are better to eat has been under discussion.

It probably is still a good idea to eat less fat if you are trying to lose weight.

Tips to reduce fat in your diet include the following:

- Whenever possible, do not fry food. It is better to grill, bake, poach, barbecue or boil food. If you do fry, use unsaturated oil. Drain the oil off the food before eating.
- Choose lean cuts of meat and cut off any excess fat.
- Avoid adding unnecessary fat to food. For example, measure out small portions of oil for cooking, etc.
- Watch out for hidden fats that are in pastries, chocolate, cakes and biscuits.

[See the leaflet called Low-fat diet sheet for more details.](#)

## **Trans fats**

Trans fats (or trans fatty acids) are unsaturated fatty acids. Trans fats increase the risk of heart disease. They increase LDL cholesterol and decrease HDL cholesterol.

[See also the separate leaflet called High Cholesterol for further information.](#)

Trans fatty acids occur naturally in small amounts in a wide range of foods, such as milk, beef and lamb. However, most of the trans fatty acids in the diet are produced during the processing of vegetable oils. Trans fats are therefore found in hard margarines and in some baking products (for example, biscuits, pastries and cakes), fried foods and other processed foods.

Foods that are labelled as containing partially hydrogenated oils or fats contain trans fatty acids. When buying fat-containing foods, it is much healthier to buy ones labelled with a high content of mono-unsaturates or polyunsaturates.

Research has shown that trans fatty acids produced during the processing (hardening) of vegetable oils are much more harmful to health than natural trans fatty acids (for example, in milk, beef and lamb). You can reduce your intake of trans fats by avoiding or reducing the amount of fried foods, high-fat snacks and high-fat baked foods you eat.

In the UK the intake of trans fats is much lower than it was 20–30 years ago. However, as part of a healthy diet, you should aim to keep both the amount of saturated fats and trans fats to a minimum.

A 2019 review by the SACN (The Scientific Advisory Committee on Nutrition) determined that reducing your intake of saturated fats lowers your risk of developing coronary heart disease, although there was no evidence that it reduces the rate of dying from these conditions. Trans fats were associated with an increased risk of heart disease and stroke. The review recommended that the intake of both saturated fats and trans fats should be kept to a minimum.

## **Tips for healthy eating**

### **Eat lots of vegetables**

Vegetables provide energy, fibre, vitamins and minerals and are filling. Frozen are as good as fresh.

### **Avoid sugary foods and drinks**

Sugary foods and drinks are high in calories and too much may cause weight gain. It isn't just the amount of sugar that may be bad. Even eating small amounts of sugary foods (sweets, etc) too often is bad for teeth. Tips include:

- Try not to add sugar to tea, coffee and breakfast cereals. Your taste for sweetness often changes with time. Use artificial sweeteners only if necessary.
- Reduce sugar in any kind of recipe. Use fruit as an alternative to add sweetness to recipes.
- Give children water or milk as their main drink.
- If you eat chocolate or sweets, try to keep the quantity down.

We do not yet know the long term effects of artificial sweeteners so they are best avoided, but they may help people to lose weight if they find avoiding sweet foods and drinks difficult.

### **Don't eat too much salt**

Too much salt increases your risk of developing high blood pressure. Guidelines recommend that we should have no more than 6 g of salt per day. Most people in the UK currently have more than this. If you are used to a lot of salt, try gradually to reduce the amount that you have. Your taste for salt will eventually change. Tips on how to reduce salt include:

- Use herbs and spices rather than salt to flavour food.
- Limit the amount of salt used in cooking and do not add salt to food at the table.
- Choose foods labelled 'no added salt'.
- As much as possible, avoid processed foods, salt-rich sauces, takeaways and packet soups which are often high in salt.

### **Don't forget portion sizes**

You may be eating very healthy foods but you still need to keep an eye on your portion sizes because if they are too large, you will still gain weight. Deliberately try to take smaller portions when you have a meal.

Do not feel that you have to empty your plate. Perhaps change the plates that you have in your cupboard (which may be large) to more medium-sized plates. In this way you will naturally serve up smaller portions. Fill up on fruit and vegetables. Ask for a smaller portion when eating out or ordering a takeaway.

### **Think about what you are drinking**

Many drinks, including alcoholic and many non-alcoholic drinks, contain calories. Think about what you are drinking.

- **Choose healthier non-alcoholic drinks.** Some tips: water contains no calories and can be both refreshing and healthy. Add a slice of lemon or lime to your water. Keep a jug in the fridge so that it stays cool. Try sparkling water.

- **Keep alcohol within the recommended limits.** [Drinking above the recommended limits can lead to serious problems.](#) For example, drinking heavily can damage the liver, brain, stomach, pancreas and heart. It can also cause high blood pressure. Also, alcohol contains a lot of calories and too much can cause weight gain:
    - One unit of alcohol is 10 ml (1 cl) by volume, or 8 g by weight, of pure alcohol. For example, one unit of alcohol is about equal to:
      - Half a pint of ordinary-strength beer, lager, or cider (3-4% alcohol by volume); **or**
      - A small pub measure (25 ml) of spirits (40% alcohol by volume); **or**
      - A standard pub measure (50 ml) of fortified wine such as sherry or port (20% alcohol by volume).
    - There are one and a half units of alcohol in:
      - A small glass (125 ml) of ordinary-strength wine (12% alcohol by volume); **or**
      - A standard pub measure (35 ml) of spirits (40% alcohol by volume).
    - **Men** should drink no more than 14 units of per week, spread evenly over several days and with at least two alcohol-free days a week.
    - **Women** should drink no more than 14 units of alcohol per week, spread evenly over several days and with at least two alcohol-free days a week.
    - **Pregnant women.** Advice from the Department of Health states that: ... "pregnant women or women trying to conceive should not drink alcohol at all".
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## The gut microbiome

This is a new area of research and discovery. Scientists are starting to discover that the microscopic organisms that live in our guts may be of much more importance to our health than previously known about. What we eat may affect the health of those organisms (known collectively as the microbiome) and this may affect many areas of our health, including our weight and possibly even conditions such as depression.

Tips for keeping your microbiome healthy include:

- Avoiding ultra-processed foods as much as possible.
- Eating fermented foods such as kefir, kimchi and blue cheese.
- Eating lots of different plants eg, aiming for 30 per week.
- Having a fasting period of 12 hours every 24hrs eg, from 7pm-7am.

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## Further reading

- [Glycaemic Index](https://diabetes.org.uk); diabetes.org.uk
- [Scientific Advisory Committee on Nutrition Iron and Health Report](https://gov.uk); GOV.UK, February 2011
- [De Stefani E, Boffetta P, Ronco AL, et al](https://doi.org/10.1038/bjc.2012.433); Processed meat consumption and risk of cancer: a multisite case-control study in Uruguay. *Br J Cancer*. 2012 Oct 23;107(9):1584-8. doi: 10.1038/bjc.2012.433. Epub 2012 Sep 25.
- [Healthy eating - fats explained](https://www.bhf.org.uk); British Heart Foundation
- [Davis CD](https://doi.org/10.1097/NT.0000000000000167); The Gut Microbiome and Its Role in Obesity. *Nutr Today*. 2016 Jul-Aug;51(4):167-174. doi: 10.1097/NT.0000000000000167.
- [The Eatwell Guide](https://www.gov.uk); Public Health England, 2018
- [Saturated fats and health](https://www.gov.uk); Scientific Advisory Committee on Nutrition, 2019
- [Mehta SS, Arroyave WD, Lunn RM, et al](https://doi.org/10.1158/1055-9965.EPI-19-0459); A Prospective Analysis of Red and Processed Meat Consumption and Risk of Colorectal Cancer in Women. *Cancer Epidemiol Biomarkers Prev*. 2020 Jan;29(1):141-150. doi: 10.1158/1055-9965.EPI-19-0459. Epub 2019 Oct 1.
- [Key T et al](https://doi.org/10.1136/bmj.m511); Diet, nutrition, and cancer risk: what do we know and what is the way forward? *BMJ* 2020; 368 doi: <https://doi.org/10.1136/bmj.m511> (Published 05 March 2020)
- [DeMartino P, Cockburn DW](https://doi.org/10.1016/j.copbio.2019.10.008); Resistant starch: impact on the gut microbiome and health. *Curr Opin Biotechnol*. 2020 Feb;61:66-71. doi: 10.1016/j.copbio.2019.10.008. Epub 2019 Nov 22.

- [Freire R](#); Scientific evidence of diets for weight loss: Different macronutrient composition, intermittent fasting, and popular diets. Nutrition. 2020 Jan;69:110549. doi: 10.1016/j.nut.2019.07.001. Epub 2019 Jul 4.
- [Cardiovascular disease: risk assessment and reduction, including lipid modification](#); NICE Clinical Guideline (July 2014 -last updated May 2023)  
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<p><b>Last updated by:</b> Dr Rachel Hudson, MRCGP 15/08/2023</p>	
<p><b>Peer reviewed by:</b> Dr Surangi Mendis 15/08/2023</p>	<p><b>Next review date:</b> 13/08/2028</p>

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