Healthy eating and cancer



About this booklet

This booklet is about healthy eating and cancer. It is for people living with or after cancer who want to know more about a healthy diet.

Many people want to make positive changes when they have been diagnosed with cancer. Taking steps towards living a healthier lifestyle is often a part of these changes.

This booklet explains why diet is important. It has tips on how to eat well and keep to a healthy weight. It also looks at some commonly asked questions about diet and cancer.

We have other booklets and audiobooks about diet and cancer (page 72):

- Eating problems and cancer
- The building-up diet.

We also have information about managing weight changes on our website. Visit macmillan.org.uk/changes-in-weight

Check with your healthcare team that this is the right booklet for you, and whether you need more information.

How to use this booklet

This booklet is split into sections to help you find what you need. You do not have to read it from start to finish. You can use the contents list on page 3 to help you. It is fine to skip parts of the booklet. You can always come back to them when you feel ready.

On pages 78 to 83, there are details of other organisations that can help.

On pages 44 to 47, there is a food and activity planner. You can use this to help you plan what you are going to eat and what activity you plan to do.

There is also space to write down questions and notes for your doctor or nurse on page 84.

If you find this booklet helpful, you could pass it on to your family and friends. They may also want information to help them support you.

Quotes

In this booklet, we have included quotes from people who have wanted to know more about healthy eating. These are from people who have chosen to share their story with us. To share your experience, visit macmillan.org.uk/shareyourstory

For more information

If you have more questions or would like to talk to someone. call the Macmillan Support Line free on **0808 808 00 00**, 7 days a week, 8am to 8pm, or visit macmillan.org.uk

If you would prefer to speak to us in another language, interpreters are available. Please tell us, in English, the language you want to use.

If you are deaf or hard of hearing, call us using Relay UK on 18001 0808 808 00 00, or use the Relay UK app.

We have some information in different languages and formats, including audio, easy read, Braille, large print, interactive PDFs and translations. To order these, visit macmillan.org.uk/otherformats or call **0808 808 00 00**.

Contents

Diet and cancer	5
Know your food types	14
Food labels	36
Alcohol	38
Keeping to a healthy weight	40
Using a food and activity planner	43
Healthy eating tips	48
Food safety when your immunity is low	54
Common questions about diet and cancer	59
About our information	72
Other ways we can help you	74
Other useful organisations	78

"By eating the most nutritious food I could, and by discovering the healing and strengthening effects of yoga, I slowly started to recharge my batteries. Changing my lifestyle helped me regain control over my life, which in return gave me so much hope. ,,

Dani, diagnosed with breast cancer

Diet and cancer

Our diet, how active we are, and our weight can affect our risk of cancer.

The World Cancer Research Fund (WCRF) has funded a lot of research into what can affect our risk of cancer and what people can do to reduce their risk - page 79. Research is still happening into which types of food may affect the risk of cancer. For more information, visit wcrf.org

Scientists still do not completely understand the link between diet and the risk of developing cancer. Some foods may increase our risk of cancer, but others may protect us. For example, research suggests that eating more fibre may reduce the risk of certain cancers. Eating a lot of red and processed meat may increase the risk of bowel cancer.

Research also shows that being overweight increases the risk of getting some types of cancer. Our weight depends on what we eat and how much physical activity we do.

Other things can also affect our weight, such as:

- medical conditions
- our genetic makeup
- our environment
- our mental wellbeing.

A healthy, balanced diet and regular exercise can help us keep to a healthy weight. This can help reduce the risk of some cancers and is also good for our general health.

There is also evidence that drinking alcohol can increase the risk of getting some cancers. If you want to drink alcohol, follow the NHS guidelines (pages 38 to 39).

Benefits of a healthy, balanced diet

Having a healthy, balanced diet is one of the best choices you can make for your overall health. This includes thinking about what you drink and how much you drink.

A balanced diet gives you all the nutrients you need to keep your body working well. Many people find that following a healthy, balanced diet helps them feel that they are doing something positive for their wellbeing.

Eating well and keeping to a healthy weight will help you:

- feel stronger
- increase your energy levels
- keep your immune system healthy
- improve your wellbeing.

It can also help reduce the risk of new cancers and other diseases. such as heart disease, diabetes and stroke.

After cancer treatment, some people have a higher risk of other health problems, including:

- diabetes we have more information in our booklet Diabetes and cancer treatment
- heart disease we have more information in our booklet Heart health and cancer treatment
- osteoporosis (bone thinning) we have more information in our booklet Bone health and cancer treatment.

You can order our booklets for free. Visit **orders.macmillan.org.uk** or call **0808 808 00 00**.

Your cancer team will tell you if you are at higher risk of other health problems. If you are, it is important to follow a healthy diet to help prevent them.

If you gain or lose a lot of weight during or after cancer treatment, you may need to be referred to a dietitian. They can offer advice on what may help.

We have more information about health problems and side effects of cancer treatment on our website. Visit macmillan.org.uk/sideeffects

During chemo sessions, I kept a chemo rucksack. I had healthy snacks like crudités, dips, nuts and fruit. I also drank lots and lots of water during chemo, which helps to flush out toxins.

Priti, diagnosed with ovarian cancer

What is a healthy, balanced diet?

Food has nutrients that our bodies need to work well. The main groups of nutrients are:

- carbohydrates (pages 16 to 17)
- proteins (pages 20 to 26)
- vitamins and minerals (page 34)
- fats (pages 29 to 32)
- fibre (page 19)
- fluids (page 35).

A healthy, balanced diet contains a variety of foods in the right amounts. This will give you enough energy, protein, vitamins and minerals to stay healthy and keep your body working well.



A healthy, balanced diet for each day includes the following:

- You should eat at least 5 portions of fruit and vegetables. These should make up more than a third (over 33%) of the food you eat each day.
- You should aim to have plenty of carbohydrate-rich foods, such as bread, rice, pasta, noodles, couscous and potatoes. These should also make up over a third (over 33%) of what you eat each day.

The remainder of your daily diet should include the following:

- You should have some protein-rich foods, such as lean meat, poultry, fish, eggs, nuts, beans and lentils, tofu or soya products. The amount of protein you eat should be a smaller portion than the fruit, vegetables and carbohydrates you eat. You should have 2 to 3 servings of protein each day.
- You should have some milk and dairy foods, such as cheese and yoghurt, or dairy alternatives. The amount of dairy you have should be a smaller portion than the protein. You should aim to have 2 to 3 portions per day.
- You should aim to have a very small amount of oils and spreads.
- You should try to drink plenty of fluid. Aim to drink 6 to 8 glasses a day. This is about 2 litres (3½ pints).

We have more information about portion sizes on pages 14 to 35.

Foods to limit

Limit foods that are high in fat and sugar. This is because they often do not have any additional vitamins or minerals. High-fat or sugary foods give you a large amount of energy, but they can cause weight gain.

Try to drink water or unsweetened squashes that contain no added sugar. You can also drink tea and coffee without sugar.

Try to reduce the amount of processed and red meat you eat. This includes sausages, bacon, cured meats and reformed meat products. Limit red meat to 1 or 2 portions per week.

You should also avoid foods that have a lot of salt.

You do not need to get the balance right with every meal. But try to include all of the food groups over a day, or even a week.

It makes you look at life very closely after having cancer. I weigh everything I'm eating. I try to take in as many vitamins from food and eat as healthily as possible.

Pete, diagnosed with testicular cancer

This chart shows the amount of each food group you should try to eat for a healthy, balanced diet.

Food groups



The NHS also has an Eat Well Guide and useful tools to help you move more, eat well and be healthier (pages 80 to 81). You can download them as free apps using your mobile phone or tablet. Or visit nhs.uk/live-well/eat-well

Eating healthily on a budget

People may worry that eating healthily can cost a lot of money. But healthy eating does not need to be expensive. You can still eat well on a small budget.

Tips for eating healthily on a budget

- Choose good-value protein sources such as frozen chicken thighs, budget cuts of meat, tinned fish, baked beans, tinned beans, lentils, chickpeas, and Quorn® or soya products.
- Plan your meals and make a list before you go shopping. This will help you buy only what you need.
- Do not go shopping when you are hungry. This will help you be less likely to buy extra snacks.
- Try value brands. These are often as good as more expensive brands.
- Make sure special offers really offer you good value. Compare the price per gram, which is usually listed on the shelf label.
- Remember that loose fruit and vegetables may be cheaper than packaged items.
- Choose seasonal fruit and vegetables, as these are often less expensive.
- Only buy foods you can store safely. If something is on offer and you can store it or freeze it safely, stock up on that item.
- If you can, shop towards the end of the day when fresh items may be reduced.

The British Dietetic Association (page 78) has recipes and more information to help you cook and eat healthily while saving money. Visit bda.uk.com/resource/food-facts-eat-well-spend-less.html

The NHS also has useful tips on how to eat well for less (pages 80 to 81).



Know your food types

Not many of us check the energy (calorie) content of everything we eat. But knowing more about the different types of food can help you make healthier choices. It can also help you manage your weight.

Fruit and vegetables

Fruit and vegetables are a good source of vitamins, minerals and fibre. They are also usually low in fat. Most of us do not eat enough fruit and vegetables. You need to aim to eat at least 5 portions a day. A portion of fresh, frozen or canned fruit or vegetables is 80 grams.

Each of the following counts as 1 portion:

- 1 medium fruit, such as an apple, orange or banana
- 1 slice of melon or a large slice of pineapple
- 2 small fruits, such as kiwis, satsumas or plums
- 2 handfuls of berries, such as strawberries, blackberries or blueberries
- 1 small can of tinned pineapple
- 150ml glass of fruit juice or smoothie limit these to 1 portion a day because they are sugary and can damage teeth
- 30g dried fruit
- 1 whole medium vegetable, such as a courgette or a small pepper
- 3 heaped tablespoons of vegetables such as diced carrots, shredded cabbage or peas
- 1 cereal-sized bowl of mixed salad
- 7 cherry tomatoes or 1 medium tomato
- 2 broccoli florets

- 2 heaped tablespoons of cooked spinach
- 4 heaped tablespoons of kale, spring greens or green beans
- 3 heaped tablespoons of beans or pulses.

Different types and colours of fruit and vegetables contain different nutrients. Try to eat a wide variety (or a rainbow) of fruit and vegetables of different colours.

Potatoes and sweet potatoes are not part of the fruit and vegetables group. They do not count towards your 5 a day.

Eating the recommended amount of fruit and vegetables may lower the risk of heart disease. It may also reduce the risk of some types of cancer, such as cancers of the mouth, throat and lung.

Fruit and vegetables should make up about a third (33%) of the food you eat every day.

Tips for eating more fruit and vegetables

- Have a mixed salad as a starter or as a side dish with your main meal.
- Reduce portions of carbohydrates to a quarter (25%) of your plate, and increase servings of vegetables and salad to half (50%) of your plate.
- If you need a snack between meals, choose fresh fruit or vegetables.
- Frozen vegetables and tinned fruit in juice (not syrup) are just as healthy as fresh ones. They can also be cheaper and stored for longer.
- Use vegetables in dishes such as soups, stews and pasta.
- Unless you are trying to gain weight, try to avoid adding butter, rich sauces or dressings to your vegetables and salads. Adding them will increase the calories you eat.

Carbohydrates (starchy foods)

Carbohydrates are an important part of a healthy diet. They are a good source of energy and contain nutrients including fibre, calcium, iron and B vitamins

Starchy food should make up just over a third (33%) of what you eat each day. Starchy foods include:

- bread
- breakfast cereals
- potatoes, sweet potatoes, yams and cassava
- rice
- pasta
- COUSCOUS
- noodles.

Carbohydrates are broken down in the body into glucose. Glucose is a type of sugar that gives us energy. Energy is measured in calories. We all need a certain number of calories each day for energy, even if we are not being very active. For example, you need energy to breathe even when you are sitting down.

The amount of energy you need varies each day. It depends on how quickly your body uses the energy, and on how active you are. An adult man needs about 2,500 calories a day. An adult woman needs about 2,000 calories a day. If you eat and drink more calories than you use, you can gain weight. If you have fewer calories than you need, you use up your body's energy stores and lose weight.

As we get older, our bodies need fewer calories. Eating smaller portions can help prevent weight gain.

Tips for eating healthy carbohydrates

- Try to choose wholegrain or wholemeal bread, rice and pasta. These usually contain more fibre and make you feel fuller for longer. This can help if you are trying to lose weight.
- Leave potato skins on where possible. They contain fibre and vitamins.
- Try not to add butter, cheese or creamy sauces. They increase the number of calories you eat.
- Boiled or baked potatoes are healthier than deep-fried chips.
- Choose low-fat oven chips or thick-cut chips rather than skinny fries.

I've changed my diet considerably. I've stopped having virtually all red meat. I am eating mostly white meat and fish, and a lot of green vegetables.

Martin, diagnosed with advanced prostate cancer



Fibre

The main role of fibre is to keep the digestive system and bowel healthy, and prevent constipation. We have more information about constipation on our website. Visit macmillan.org.uk/constipation

Fibre is also called roughage. Fibre is the part of cereals, fruit and vegetables that passes through your gut (small intestine) but is not digested.

Many studies show that foods high in fibre may reduce the risk of bowel cancer. Most people do not eat enough foods that are high in fibre. Some carbohydrates can be a good source of fibre. Increasing the amount of fibre in your diet can help you feel full more guickly and for longer. This means you are less likely to eat more than you need.

Tips for including fibre in your diet

Try to eat:

- wholemeal, seeded or granary breads, and wholemeal chapatis and pittas
- wholegrain cereals and pasta these may say high fibre on the package
- brown rice
- yams and potatoes with their skins on
- peas, beans, lentils, grains, oats and seeds
- fruit and vegetables with the skins on if they are skins that can be eaten and if you can eat them as part of your diet.

The fibre in foods such as oats, beans and lentils may also help reduce the amount of cholesterol in the blood.

Protein

Your body needs protein to build and repair muscles and other body tissues. When we are ill, injured or stressed, we need extra protein and energy to repair any damage.

Protein-rich foods can also be a good source of vitamins and minerals. Try to increase the amount of protein you have from plant-based sources.

There is protein in:

- poultry, such as chicken and turkey
- fish
- red meat
- dairy products, such as milk and yoghurts
- eggs
- pulses, such as peas, beans and lentils
- soya, tofu and mycoprotein (Quorn®)
- quinoa
- nuts and seeds.

Meat

Several studies suggest that eating lots of red or processed meat can increase the risk of bowel cancer. Red meat is beef, pork, lamb and veal.

Processed meats include:

- sausages
- bacon
- salami
- tinned meats
- packet meats, such as sandwich ham.

People who eat 2 or more portions of red or processed meat a day have the greatest risk. People who eat less than 2 portions a week seem to have the lowest risk. No link has been found between eating poultry and developing cancer. Poultry includes chicken, turkey and duck.

Eating meat that is cooked at high temperatures, such as fried or barbecued meat, may also increase the risk of developing some cancers.

Tips for eating less red or processed meat

- Cut down on processed meat, especially sausages, burgers, pies and sausage rolls, which are high in saturated fat.
- Try to reduce your meat portions and have more plant-based sources of protein instead.
- A portion of meat should be about the size of a pack of playing cards.
- Choose leaner cuts of meat that have less fat, such as those labelled 'lean' or 'extra lean'. You can also check the labels to find out which cuts have the least fat.
- Try to eat more fish, skinned chicken or turkey, beans and lentils instead. These are lower fat alternatives.
- Grill or roast your meat instead of frying it to reduce the number of calories.

Fish

Fish is a good source of protein, vitamins and minerals. It is often low in saturated fat. Aim to have at least 2 portions of fish a week. Try to have:

- 1 portion of white fish, such as haddock, cod or plaice
- 1 portion of oily fish, such as sardines, salmon or mackerel.

Shellfish, such as prawns and mussels, are low in fat. They are also a source of minerals such as selenium and zinc.

Tips for eating fish

- Try to grill, steam, poach or bake fish. This is healthier than frying it.
- Tinned fish are low in saturated fat for example, tuna, sardines and pilchards. Avoid tinned fish in oil or brine.
- Frozen fish can be cheaper than fresh fish.
- Avoid high-fat, processed meals with fish in them, or fish in batter.

Eggs

Eggs are a good source of protein and can be included in a healthy, balanced diet. They contain dietary cholesterol. But this does not increase the cholesterol levels in your blood. Try to poach, boil or dry-fry eggs, rather than using oil or butter.

Plant-based sources of protein

Plant-based sources of protein are often healthier than meat or dairy. They also contain fibre, vitamins and minerals. And they can contain fewer calories than meat and dairy foods.

Pulses and nuts

Pulses such as beans, lentils and nuts are a good source of protein. Pulses can be used in lots of meals, such as stews or soups.

Nuts can be used in both sweet and savoury dishes and are high in energy. They contain good amounts of protein and some healthier, unsaturated fats.

If you are trying to lose weight, you should limit your portion sizes of nuts. This is because they are high in fat and contain a lot of calories.



Other plant-based protein

Soya is a good source of protein and is available in different products. These include soya mince, soya burgers and sausages, soya milk and tofu.

Mycoprotein (Quorn®) can also replace mince, burgers and sausages as a source of protein.

There have been some concerns about soya and its effect on breast cancer. There is currently no evidence to suggest that a moderate amount of soya in your diet is harmful.

Recommendations say it is safe to have whole soya foods. These are unprocessed soya foods, such as:

- miso
- tempeh
- tofu
- soya beans (edamame)
- soya nuts
- sova milk.

Choose soya milks with a lower sugar content by checking the nutrition information on food labels (pages 36 to 37). Check that soya drinks are fortified with calcium.

1 serving of soya is equal to:

- 1 large glass of soya milk
- 50g of tofu
- 100g of soya mince
- 28g of soya nuts or edamame beans.

If you have questions about soya, talk to your doctor, dietitian or specialist nurse.

Milk and other dairy products

Milk and dairy products are also good sources of protein. vitamins and calcium.

It can be good to include whole milk and dairy products in a building-up diet if you need to gain weight. We have more information in our booklet and audiobook **The building-up diet**. To maintain a healthy weight or lose weight, try semi-skimmed or skimmed cow's milk, soya milk and fat-free yoghurt.

Cheese is high in saturated fat, especially hard cheeses like parmesan and cheddar. Eating too much can increase your cholesterol and risk of heart disease. Try to choose low-fat cheeses such as cottage or ricotta, and eat other cheeses less often. A portion of cheese is about the size of a matchbox.

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Dairy-free alternatives

Dairy-free milk alternatives include food products and 'milk' made from non-dairy products. It may also be called plant-based.

Dairy-free alternatives include:

- sova
- rice
- oats
- almonds
- hazelnuts
- coconuts.

If you have plant-based milk, check that it has added calcium and vitamins. Organic milk alternatives may not have any calcium and vitamins added. They also do not contain any protein, except for soya milk.

Vegan cheese is often made from soya, but may be made from nuts and seeds and include oils such as coconut oil. There are a lot of different vegan cheeses available. It is important to check the packet to find out what they are made of.

Sugar

Sugar gives us energy. Eating a lot of sugary foods, or foods with added sugar, can make you more likely to gain weight and develop other health problems. There are different types of sugar.

Natural sugars

Some foods and drinks have natural sugars in them. These include fruit, vegetables and milk. Foods that contain natural sugars usually also contain vitamins and minerals.

The body also gets natural sugars when carbohydrate-rich foods are broken down into glucose as part of the digestion process. Carbohydrate-rich foods include bread, potatoes, rice, and pasta (pages 16 to 17).

It is better to get energy from natural sugar from fruit, milk and carbohydrates than from foods with added sugar. When these sugars are broken down to glucose, they are released more slowly than processed sugar. This helps to keep your energy levels more balanced.

Added (processed) sugar

Added or processed sugar is sugar that is added to processed foods and drinks. This includes white or brown sugar that you add to foods at home. These are sometimes called free sugars. Some free sugars are also found naturally in honey, syrups, and some fruit juices. Fizzy drinks and alcohol often contain a lot of added sugar.

Try to avoid food and drinks with added sugar. Processed sugars are not usually recommended if you want to maintain a healthy weight.

If you find it hard to reduce your sugar intake, a sweetener might help in the short term. But this will not reduce your craving for sugar, so it is not a long-term solution.

Tips for eating less sugar

- When you are shopping, check food labels for the sugar content (pages 36 to 37). Choose foods that are low in sugar. These have 5g or less of total sugar per 100g.
- Choose tinned fruit in juice rather than syrup.
- Try a low-fat spread, a sliced banana or a low-fat cream cheese on toast instead of jam or marmalade.
- Try using less sugar in your recipes, or use a sweetener.
- Drink water, milk or reduced-sugar drinks instead of sugary and fizzy drinks.
- Dilute fruit juice with sparkling water to make a fizzy drink.
- If you drink alcohol, try to drink less, as alcoholic drinks contain a lot of sugar.
- If you add sugar to food or drinks, reduce the amount you add each day. This helps you get used to the change until you can stop altogether.
- Choose a piece of fruit or dried fruit as a snack instead of chocolate or biscuits
- Choose wholegrain breakfast cereals rather than those that are sugar-coated or high in sugar.

Fats

Having some fat in our diet helps us to absorb vitamins A, D, E and K. Foods that are high in fat are also high in energy (calories). Eating a lot of fat, or the wrong type of fat, can make you more likely to gain weight and develop other health problems.

There are 2 types of fat - saturated and unsaturated. It is important to try to eat less fat, and to choose foods that contain unsaturated instead of saturated fats. Unsaturated fats are still high-energy (high-calorie) foods.

Even foods labelled as low fat can still be high in calories. But if you are trying to gain weight, you may need foods with a higher fat content in your diet. We have more information and tips to help you gain weight in our booklet and audiobook The building-up diet (page 72).



Saturated fats

Saturated fat can raise cholesterol levels in the blood and increase the risk of heart disease. Foods high in saturated fat include:

- cheese, especially hard cheeses such as cheddar or parmesan
- butter, ghee and lard
- palm oil and coconut oil
- meat products, such as burgers and sausages
- biscuits, pastries and cakes
- some savoury snacks, such as cheese crackers and crisps
- milk chocolate.

It is easy to eat too much saturated fat without realising. The current advice is that:

- men should eat no more than 30g of saturated fat a day
- women should eat no more than 20g of saturated fat a day.

You can use the nutrition labels on foods as a guide (pages 36 to 37). High-fat foods contain more than 20g of fat per 100g. Low-fat foods contain less than 3g of fat per 100g.

Unsaturated fats

Unsaturated fats are a healthier option. Choosing unsaturated fat instead of saturated fat may help to reduce the risk of high cholesterol levels in the blood. There are 2 types of unsaturated fats - monounsaturated fats and polyunsaturated fats.

Monounsaturated fats are found in:

- olive oil and spreads
- rapeseed oil and spreads
- avocados
- some nuts, such as almonds, Brazil nuts and peanuts.

Polyunsaturated fats include omega-3 and omega-6 fats. Omega-3 fats are found in oily fish, whether it is tinned or fresh, such as:

- kippers
- mackerel
- salmon
- trout
- sardines.

A healthy, balanced diet should include 2 portions of fish a week. This should include 1 portion of oily fish. Eating 1 to 2 portions of fish a week helps reduce the risk of developing heart disease. But too much oily fish may not be good for you. This is because it can contain low levels of pollutants that can build up in the body.

The NHS has more information about how much white or oily fish you should eat (pages 80 to 81). Visit **nhs.uk/live-well/eat-well**

Omega-6 fats are found in some nuts and in vegetable oils, such as rapeseed, corn, safflower, soybean and sunflower oils. Most of us get enough omega-6 in our diet.

Tips for eating less fat

- When you are shopping, check the food labels for unsaturated and saturated fat (pages 36 to 37). Choose lower-fat options.
- Eat less red meat, or choose lean cuts of meat and trim off the fat.
- Eat skinless fish and chicken, rather than red meat.
- Eat less fried food. Bake, grill, steam or poach food instead.
- Choose lower-fat dairy products when you can.
- Add vegetables and beans to stews and curries, and use less meat. Or replace meat with beans and pulses.
- Try more vegetarian recipes.
- Avoid fatty takeaway foods, or reduce the number you eat. This includes burgers, curries and kebabs.
- Avoid snacks that are high in fat, such as pastries, crisps and biscuits.

Salt

Too much salt in your diet can lead to high blood pressure. This can cause heart disease and strokes. A diet that is high in salt can also increase the risk of developing stomach cancer.

Try to have no more than 6g of salt (1 teaspoon) a day. This includes the salt you add to your food, and the salt already in food.

Foods containing high levels of salt include:

- many cured or processed foods such as sausages, cured ham or bacon
- tinned foods
- ready meals
- cheese
- · soy sauce.

You can find out how much salt is in processed food by checking the label (pages 36 to 37). If there is more than 1.5g of salt per 100g, the food is high in salt. Low-salt foods contain 0.3g or less of salt per 100g.

Low-salt alternatives are not recommended as these can be high in potassium. Try to gradually reduce your salt intake instead.

Tips for eating less salt

- When you are buying bread, cereal and ready meals, choose the ones
 with the least amount of salt. Frozen ready meals usually have less salt
 than chilled ones.
- Choose tinned vegetables and tuna in spring water, rather than salted water or brine.
- Try not to add salt to your food. Taste food before deciding whether you need to add salt.
- Instead of adding salt to pasta dishes, vegetables and meat, add mustard, herbs, spices or black pepper.
- Marinate meat and fish before cooking to give them more flavour.
- Swap high-salt snacks, such as crisps, for a healthier option, such as fruit or a yoghurt.

Vitamins and minerals

The body needs minerals to help keep our nerves, bones and teeth healthy. Vitamins are essential to keep our bodies working. Different vitamins have different functions. These include:

- vitamin C, which keeps our skin and bones healthy
- vitamin K, which helps wounds to heal.

We need only very small amounts of vitamins and minerals. If you are eating a healthy, balanced diet with plenty of fruit and vegetables. you are probably getting enough vitamins.

But if you cannot eat well for a long time, you may need vitamin and mineral supplements. Your doctor, dietitian or pharmacist can give you more advice about these. High-dose vitamin and mineral supplements are not recommended during cancer treatment. This is because they might affect how your treatment works.

When you're in hospital, you have to drink a lot of water. I know that drinking water is very good for the body. I have replaced fizzy drinks with water, and keep a constant supply of chilled water in the fridge. That helps as well. $_{II}$

Mary, diagnosed with ovarian cancer

Fluids

Your body needs fluid to work properly. You should aim to drink at least about 2 litres (3½ pints) of fluids each day. You will need to drink more if you are:

- more active than normal
- somewhere hot (either indoors or outdoors)
- losing extra fluid, such as through sweat or diarrhoea.

Plain water is the best fluid to keep your body hydrated. It contains no calories and no sugars. If you do not like the taste, you could add a slice of lemon or lime, or some mint leaves. Some flavoured water drinks contain a lot of sugar and calories, so check the label first.

Milk is a good source of calcium, which is good for bone health. It also contains other vitamins and minerals. It is healthier to drink semi-skimmed or skimmed milk as these contain less fat and calories than whole milk.

Fruit and vegetable juices and smoothies contain a variety of nutrients, but they also contain sugar and calories. Aim to have no more than 1 small glass a day.

Juice drinks, squashes and fizzy drinks can be high in sugar and calories. They contain very few nutrients, so you should avoid drinking them where possible.

You can include tea and coffee when you are adding up how much you drink each day. But try to have other fluids that do not contain caffeine as well.

Sometimes when you think you are hungry, you may actually be thirsty. Before having a snack, try having a drink and waiting for 10 minutes. This can help you eat less.

Food labels

The law says that almost all food packaging over 10cm² must include information about the nutritional value of the food inside. This can help you make healthier choices when buying food.

The labels give information about what the food contains, including:

- fats
- salt
- sugars
- · calories.

The labels may also give information about sodium and fibre.

Any ingredient that can commonly cause an allergic reaction is written in bold. If you have a less common food allergy this may not be in bold, so you need to read the label carefully.

Many food manufacturers and supermarkets use a food traffic light system on their labels. The system tells you the amount of fats, saturated fats, sugars and salt in 100g (3½oz) of the product.

It is called a traffic light system because it uses the same colours as a traffic light:

- Red means the level is high.
- Amber means the level is medium.
- Green means the level is low.

You should eat more foods with amber and green labels and fewer with red labels.

If a product does not have traffic light labelling, you can use the food labelling diagram to check by comparing it with the list of ingredients.

Food labelling diagram

	Sugars	Fats	Saturates	Salt
High (per 100g)	Over 22.5g	Over 17.5g	Over 5g	Over 1.5g
Medium (per 100g)	Over 5g to 22.5g	Over 3g to 17.5g	Over 1.5g to 5g	Over 0.3g to 1.5g
Low (per 100g)	5g or under	3g or under	1.5g or under	0.3g or under

Alcohol

Alcohol is linked to a higher risk of some cancers, including cancers of the:

- mouth, pharynx and larynx
- breast
- bowel
- oesophagus
- liver.

We have more information about these cancer types on our website. Visit macmillan.org.uk/cancer-types

To reduce your risk of developing cancer, the World Cancer Research Fund suggests it is best not to drink alcohol at all.

Alcohol is high in calories and can cause weight gain. If you drink, do not drink more than the recommended NHS drinking guidelines. This will keep you as healthy as possible and can also prevent weight gain.

NHS guidelines suggest that you should:

- not regularly drink more than 14 units of alcohol in a week
- spread the alcohol units you drink in a week over 3 or more days
- try to have several alcohol-free days every week.

1 unit of alcohol is:

- half a pint of ordinary strength beer, lager or cider (4% alcohol by volume)
- 1 single measure (25ml) of spirits.

1 small glass (125ml) of 12% volume wine contains 1.5 units. If the wine is more alcoholic, it will have more units.

Drinkaware has more information about alcohol and drinking guidelines, as well as ways to keep track of your alcohol intake (page 80). Visit **drinkaware.org.uk**

Number of calories and units of alcohol in a drink

Drink	Calories	Units of alcohol	
Pint of lager	180 to 250	2.3 to 3.0	
Standard glass of white wine (175ml)	125 to 160	2.1 to 2.3	
Single vodka (25ml)	115	1	

Tips for having fewer calories when drinking alcohol

- Have a shandy instead of a beer this is beer mixed with low-calorie (diet) lemonade.
- Add low-calorie or calorie-free mixers to spirits or white wine, such as soda water.
- Have a low-calorie, non-alcoholic drink between each alcoholic drink.
- Have a glass of water with each alcoholic drink, or between alcoholic drinks. This also helps prevent you becoming dehydrated.
- Try alcohol-free beer, wine or cider. These can often be low in calories too.
- Drink slowly and take small sips.

Keeping to a healthy weight

It is not healthy to be overweight or underweight.

Eating less food than your body needs can make you underweight. This can affect your health.

Eating more food that your body needs can make you overweight. Many people in the UK are heavier than the recommended weight for their height. Being overweight can lead to health problems such as:

- heart disease
- high blood pressure
- diabetes
- a higher risk of complications if you need surgery
- a higher risk of certain types of cancer including bowel, kidney, womb and gullet (oesophagus) cancer
- a higher risk of breast cancer, if you have been through menopause.

There are different reasons for gaining weight, including your diet and not doing enough physical activity. Some types of cancer treatment can also lead to weight gain - for example, hormonal therapy or steroids.

If you are overweight, having healthy eating habits and increasing your physical activity may help with weight loss and have health benefits. Losing 5% of your body weight can be one of the best ways to reduce your risk of cancer. Reducing your weight may also help reduce the risk of some cancers coming back.

Body mass index

Body mass index (BMI) uses the measurement of your height and weight to help find out if you are a healthy weight. A healthy body weight is also dependent on your:

- sex
- age
- ethnicity
- muscular build.

BMI scores are different for older people, some ethnic groups and people who are very muscular. For example, a BMI result cannot tell if someone is carrying too much fat or a lot of muscle.

The NHS has a BMI calculator (pages 80 to 81). Your GP or nurse can also work out your BMI for you.

If you want to lose weight

If you are concerned about your weight, ask your GP or a dietitian for advice and support. Dietitians can give you advice about healthier food choices that still make you feel full. Fruit and vegetables are better than high-fat or high-sugar snacks, such as biscuits and cake.

Losing weight is a process. It can take some time. It is important to eat a healthy, balanced diet to make sure you get all the nutrients you need to keep your body healthy. It is reasonable to aim to lose about 0.5kg to 1kg (1 to 2 pounds) a week.

It is not advisable to follow a very low-calorie or restricted diet to lose weight. This can lead to rapid weight loss, but when you start to eat more normally again, evidence shows that you may gain the weight back.

Weight loss injections

For some people, losing weight can be difficult. In some situations, doctors may prescribe weight loss injections. The decision to prescribe these weight loss drugs is based on factors like the person's BMI (page 41) and whether they have other weight-related health problems.

These drugs work by making people feel fuller for longer and reducing their appetite. These injections should be used alongside lifestyle changes such as a healthy diet and increased physical activity.

More research is needed to find out whether weight loss injections may affect cancer treatments. It is important to check with your cancer doctor before using these injections. Your cancer doctor or healthcare team can talk to you about the possible risks and side effects of using weight loss injections when you have cancer or are having cancer treatment.

We have more information about BMI and managing your weight on our website. Visit macmillan.org.uk/weight-gain

Tips for keeping to a healthy weight

- Choose healthy foods with lots of fruit and vegetables and less fat (pages 29 to 32) and sugar (pages 26 to 28). Check the food labels of packaged foods (pages 36 to 37).
- Eat only as much food as needed. This depends on how active you are.
- Eat only when you are hungry. If you eat for comfort when you are not very hungry, try to distract yourself with another activity.
- Try to be physically active. It can help if you find a form of exercise you enjoy. If you are not normally very active, ask your GP for advice. Start off any exercising gently and build up gradually. We have more information in our booklet **Physical activity and cancer** (page 72).

Using a food and activity planner

You could write down a plan for meals and physical activity for the week ahead. This can help you keep track of your goals each week. If you are finding it hard to keep to the plan, you could adjust your goals so you introduce any diet and exercises changes more slowly.

Tips for using the planner

- Photocopy or print the planner before you fill it in. This means you can use a new copy each week.
- Try to write down everything you plan to eat for a week. Make a note of when you do not keep to the plan. At the end of the week, you can check what you have done and use it to plan for the next week. You will also have a record to show your doctor or dietitian.
- Use our healthy meal suggestions when you are planning your meals (pages 51 to 53).
- Mark down each portion of fruit and vegetables you plan to eat and record what you have eaten.
- Use the activity section to plan and record physical activity.
- If you eat a lot in 1 sitting, make a note of where you were, who you were with and how you were feeling. This may help you work out any eating habits that are causing weight gain.

Food and activity planner

	Monday	Tuesday	Wednesday
Breakfast			
Lunch			
Dinner			
Snacks and drinks			
Did I eat 5 portions of fruit or vegetables?			
Today's exercise			

What went well this week?

Date:

Thursday	Friday	Saturday	Sunday

Plans for	next week			

Food and activity planner

	Monday	Tuesday	Wednesday
Breakfast			
Lunch			
Dinner			
Snacks and drinks			
Did I eat 5 portions of fruit or vegetables?			
Today's exercise			

What went well this week?

Date:

Thursday	Friday	Saturday	Sunday

Plans for next week		

Healthy eating tips

These tips can help you make healthy decisions when choosing or cooking your food.

- Try to plan everything you are going to eat for the week ahead. You can use our food and activity planner to help plan your meals (pages 44 to 47). This will make you less likely to buy unhealthy food at the last minute.
- Start the day with a healthy breakfast. This may help you avoid eating sugary or high-fat snacks in the morning.
- Eat meals at regular times. This will help your body get used to a routine of when you eat. This may mean you are less likely to snack between meals.
- Make sure you drink plenty of fluids. Sometimes we mistake being thirsty for being hungry. Try to have a glass of water before meals.
- Turn off the TV during meals and put down mobile phones or other electronic devices. If you concentrate on your meal, you are less likely to eat more than you need.

Be aware of how much you eat

The amount you eat is just as important as what you eat.

If you eat big portions, you are more likely to gain weight. If you want to lose weight, there are things you can do to help you eat smaller portions:

- Use a smaller dinner plate. Bigger plates need more food to fill them.
- Choose a healthy starter, such as low-fat soup, melon or salad.
- Eat slowly and avoid having second helpings. It takes about 20 minutes for your stomach to tell your brain that you are full. Try to wait a while before deciding whether you want more.
- Serve your food directly onto your plate rather than at the table, and pack away any leftovers so that you are not tempted by a second helping.
- Avoid snacking straight from a bag or packet. Put the amount of food you want to eat on a plate.

Fast foods and eating out

Fast food is usually high in calories and fat. If you eat a lot of fast food, ready meals or takeaway foods, try to cut down and have these only occasionally.

Try to plan your healthy meals and snacks in advance. If you do not plan, you may end up buying takeaway food when you are hungry.

Even if you eat healthily, there may be times when you want to be more relaxed about food. You can still enjoy treats or meals out with family or friends. If you have a takeaway or eat out, try to follow these tips:

- Look for the healthier options on the menu. These may be labelled as a 'light' option.
- Have a boiled or jacket potato instead of chips. Or ask for boiled rice instead of fried rice.
- Choose baked options rather than fried.
- Try to avoid bread or nibbles before the starter or main course.
- Ask for a smaller portion size, or order a starter as a main course.
- Share a main course with someone.
- Choose tomato-based sauces with vegetables rather than creamy sauces.
- Order vegetables or a side salad to add to your meal.
- After you finish your main course, wait a while before you decide whether to order dessert.
- If you order dessert, choose one that is fruit-based. Ask for low-fat, low-sugar yoghurt instead of ice cream or cream.

Eating and socialising

Food gives us what we need to keep our bodies healthy and energised. But it can also be an important part of our social lives – for example, spending time with family or friends at a barbecue, or celebrating with foods like cake.

Even if you follow a healthy, balanced diet, it is normal not to always follow it strictly. Everyone enjoys having an occasional treat or meal out. If you are trying to lose weight, you could try having a smaller portion than you would normally.

Healthy menu ideas

Here are some ideas for healthy meals and snacks. You can use our food and activity planner to help plan your meals (pages 44 to 47). To keep a meal healthy and reduce calories, avoid frying foods. If you do fry any foods, use healthier fats, such as unsaturated fats like rapeseed or sunflower oil.

Breakfast

- Low-sugar, wholegrain cereal, muesli or porridge. Have this with skimmed, 1% or semi-skimmed milk, or an unsweetened, fortified plant-based milk such as almond milk.
- Fresh fruit or berries with low-fat or dairy-free yoghurt.
- A boiled, poached or scrambled egg, or scrambled tofu, with a slice of wholemeal toast.
- A bagel with low-fat cream cheese, nut butter or mashed banana.
- A homemade smoothie, made from fruit, vegetables and low-fat yoghurt or an unsweetened plant-based milk.
- Vegetarian or vegan sausages with a grilled tomato and mushrooms.
- A grilled breakfast instead of a fry-up.

Lunch

- Homemade vegetable or lentil soup with a wholemeal bread roll.
- A grilled chicken salad.
- A poached or scrambled egg on a slice of wholemeal toast.
- An omelette with a side salad.
- A baked potato with tinned tuna (in spring water), sweetcorn or low-fat coleslaw.
- A wholemeal wrap with reduced-fat hummus and salad.
- Pilchards, sardines, mackerel or baked beans on toast.
- A wholemeal bread sandwich or pitta bread with egg or cold meat, served with salad.
- Falafel and salad with a flatbread.

Dinner

- Vegetable or meat curry or chilli with boiled brown rice.
- Wholegrain pasta with a low-fat sauce, vegetables and a side salad.
- Grilled or baked fish, with boiled or baked potatoes and vegetables.
- A vegetarian or vegan burger with vegetables or salad.
- Vegetable, turkey or tofu stir-fry with noodles.
- Lean beef, chicken or vegetable casserole with potatoes and vegetables.
- Grilled chicken with vegetables and potatoes.
- Reduced-fat mince or soya mince and potatoes. You could replace half the mince with vegetables or lentils.

Snacks

- Fresh fruit.
- Seeds, mixed nuts and berries. It can be cheaper to buy these in bulk from a supermarket or health food shop.
- Oatcakes with cherry tomatoes.
- Fresh carrot, cucumber or celery sticks, with a low-fat dip such as hummus or salsa.
- A handful of raisins or other dried fruit.
- Plain rice cakes with reduced-fat cream cheese.
- Homemade plain popcorn.
- Low-fat fruit yoghurt.

More recipe ideas

The World Cancer Research Fund (page 79) and British Dietetic Association (page 78) also have healthy recipes from all over the world.

Eating a healthy, balanced diet does not mean you have to buy expensive foods (page 12).

Food safety when your immunity is low

Cancer and some cancer treatments can weaken your immune system. If your immune system is weak, you are more at risk of infection and food poisoning. This is because you are less able to fight infections. You may also be less able to cope with the symptoms of food poisoning.

Following good food hygiene will reduce the risk of infection.

General tips for good food hygiene

Before you cook:

- Wash your hands before you prepare food, and before you eat.
- Clean cooking utensils and chopping boards thoroughly, especially after preparing meat or eggs.
- Wipe worktops with hot, soapy water or an anti-bacterial spray. This is very important if you have prepared raw meat or eggs.
- Wash or replace dishcloths and tea towels regularly.
- Keep pets out of the kitchen.

It is also important to do the following:

- Use fresh ingredients.
- Make sure your food is thoroughly cooked, especially meat and fish.
- Rinse all fruit and vegetables, including salads, in cold running water.
- Store food and drink at the correct temperature. Look at the packaging for storage instructions.
- Eat food before the best before and use by dates on the packaging.
- Throw away any mouldy food or food that has gone past the best before or use by dates.
- Be careful when eating out. Be aware of food choices and how food is prepared and cooked.



Foods to avoid if your immunity is very low

For most people, low immunity will not last long, so there is no need to follow a special diet. But if you are having high-dose chemotherapy, or a stem cell or bone marrow transplant, your immunity may be very low.

If your immunity is very low, your healthcare team will advise you to avoid some foods for a certain amount of time. It is important to follow their advice

Foods to avoid when your immunity is very low include:

- meat and fish pâté
- undercooked eggs with a runny yolk
- any product containing raw egg, such as homemade mayonnaise
- raw or undercooked meats, poultry, fish, or shellfish
- cold meats that have been smoked but not cooked, such as salami
- products that contain probiotics, such as some yoghurts
- food or drinks made from unpasteurised milk, such as some cheeses
- blue cheese (mould-ripened and blue-veined cheeses) such as Stilton.

It is important to rinse all fruit and vegetables, including salads, with water before eating them. Your doctor, nurse or dietitian may advise you to peel fruit and vegetables.

We have more information about stem cell and bone marrow transplants on our website. Visit macmillan.org.uk/stem-cell



Leftovers

If you decide to store food to eat later, let it cool down completely and then store it in the fridge or freezer.

Freezing extra portions is a useful thing to do before starting cancer treatment. It can save you time later. You must defrost food fully before reheating it.

If packaging says to cook an item from frozen, follow the cooking instructions. This is very important if you have low immunity because of treatment.

Only reheat food once, and make sure it is hot all the way through before you eat it. Do not reheat cooked rice. Eat rice as soon as it is cooked. If you are reheating food, take care not to burn your mouth or tongue.

Eating out

If your immunity is low, it is best to avoid eating out and takeaway food. If you eat out, try to choose a place where you know the food will be freshly prepared and properly cooked.

Avoid eating food from:

- salad bars
- buffets
- street vendors
- ice cream vans.

This is because it is difficult to know how fresh the food is.



Common questions about diet and cancer

These questions can help you understand more about diet and cancer. They may help you make decisions about the best foods to eat.

Can diet reduce the risk of cancer coming back?

After cancer treatment, some people change their diet to try to reduce the risk of cancer coming back. There is some evidence from breast and bowel cancer studies that diet may make a difference to the chances of cancer coming back. But there is not enough evidence to advise someone with a particular type of cancer about what to eat.

Cancer experts, including the World Cancer Research Fund (page 79), recommend following the same healthy, balanced diet that is recommended for cancer prevention.

For most people, the factors that are most likely to improve their health after cancer treatment are:

- eating a healthy diet
- keeping to a healthy weight (pages 40 to 42)
- doing regular physical activity we have more information in our booklet **Physical activity and cancer** (page 72).

The biggest benefits will probably be from a combination of these, rather than from just 1 change. Your GP, dietitian, doctors and nurses can advise you if there are any lifestyle changes you can make.

Should I take dietary supplements?

For most people, a healthy, balanced diet that contains a range of fruit and vegetables will provide all the nutrients they need. Large doses of vitamins, minerals and other dietary supplements are not usually needed or recommended.

It is better to get your nutrients from food instead of taking a supplement. But if you find it difficult to eat a balanced diet, it might help to take an A to Z multivitamin or a mineral supplement. Supplements can contain up to 100% of the recommended daily allowance. Talk to your doctor, nurse or dietitian before taking supplements or multivitamins.

Supplements may help in some situations. For example, supplements may be suitable for people who have had surgery for stomach cancer if they now cannot absorb all the nutrients they need. People at increased risk of bone loss may also benefit from taking calcium and vitamin D supplements.

Bone loss is called osteoporosis. Supplements can help to strengthen bones. Your healthcare team can tell you if you need to take a supplement. They can prescribe any you need. We have more information in our booklet Bone health and cancer treatment (page 72).

Studies currently show that taking supplements does not reduce the risk of cancer. There is even evidence that taking high doses of some supplements can be harmful. It can increase the risk of cancer in some people, or may have a harmful effect on people who have had cancer.

It is also possible that some supplements may interfere with how cancer treatments work. This may make cancer treatments less effective. If you are having cancer treatment, it is important to get advice from your cancer doctor before taking any supplements.

They can advise you about:

- any supplements you should take
- the doses of any supplements that may be suitable for you
- how often you should take the supplements.

They can also tell you about any possible side effects of supplements and how they might interact with other medicines. You can also talk to a pharmacist about any possible interactions.



Can 'superfoods' reduce the risk of cancer coming back?

'Superfoods' are foods that are thought to have extra nutrients that benefit your health. They are sometimes sold as being able to prevent or even cure many diseases, including cancer.

Popular superfoods include:

- blueberries
- broccoli
- kale
- raspberries
- green tea
- turmeric.

The term superfood is just a marketing term used to try to sell these foods. There is no reliable scientific evidence that any type of food is a superfood. It is much better to eat a balanced diet that includes a wide range of foods (pages 8 to 11).

You should aim to eat a diet that includes lots of different types of fruit, vegetables and wholegrain foods. This will help you make sure you are getting the widest possible range of nutrients. It may make your diet more enjoyable and interesting.

Should I follow a dairy-free diet?

Dairy products, such as milk, cheese and yoghurt, are an important source of protein, calcium and some vitamins. Calcium is needed for strong bones and teeth.

Many research studies have looked for a link between cancer and diets with a lot of dairy products. But these studies have not found a clear link. There is some evidence that dairy products may help reduce the risk of bowel cancer. But no links have been found for any other types of cancer.

Cancer experts do not recommend following a dairy-free diet to reduce the risk of cancer. If you prefer to follow a dairy-free diet, you need to make sure you get enough calcium from other foods, such as:

- tinned sardines and tinned salmon (with bones)
- dark green, leafy vegetables, such as spinach
- · kidney beans
- dried figs
- foods fortified with calcium, such as some types of plant-based milk made from soya, rice, almonds or oats.

Should I avoid soya foods?

Soy foods such as soya milk and tofu contain natural substances called phytoestrogens. Phytoestrogens have a chemical structure similar to the hormone oestrogen. Phytoestrogens are also found in foods such as chickpeas and linseeds.

Oestrogen can encourage some cancers to grow. Because of this, some people worry that foods or supplements containing phytoestrogens might encourage oestrogen-sensitive cancers to grow.

There is currently no evidence that suggests you need to avoid foods containing phytoestrogens such as soya. Although it is safe to consume soya foods, it is recommended not to take supplements with phytoestrogens, such as black cohosh and red clover. This is because there is not enough evidence on their effectiveness and safety.

Does sugar feed cancer?

All cells in our bodies need glucose (sugar). Glucose gives all cells the energy to function and survive. Cancer cells, like all other cells, also need glucose.

The idea that sugar feeds cancer developed because cancer cells grow and multiply quickly, and need glucose for energy, like all cells. It was thought that cutting sugar from our diet would starve the cancer or even stop it developing. But all carbohydrates break down into a form of glucose and provide energy for all of the cells in our body. So this idea is too simple for the complex biology involved.

There is no evidence that sugar directly increases the risk of cancer or encourages it to grow. But too much sugar, or sugary foods and drinks in our diet, can cause weight gain. And being overweight or obese can increase the risk of some cancers.

It is important for the healthy cells in our body to get enough energy from our diet. This is especially true during cancer treatment. Sugar is found in our diet in a variety of foods (pages 26 to 28).

Our bodies get glucose and energy from starchy foods such as bread, breakfast cereals, rice and pasta. These are called carbohydrates (pages 16 to 17). Sugar is also found naturally in some fruit, vegetables and dairy products.

Sugar can also be added to foods when they are be prepared or processed. It is also in foods like in honey, syrups, fruit juices and fruit concentrates. Sugar itself contains no useful nutrients, apart from energy.

It is possible to get all the energy you need from healthier foods. It is best to limit the amount of sugar from sugary food and drinks in your diet, unless you have received specialist advice from a dietitian.

Foods high in sugar include:

- biscuits and cakes
- chocolate and sweets
- syrups
- fruit juice
- fizzy drinks.

Can ultra-processed foods cause cancer?

Ultra-processed foods are food products that include many additives and ingredients not usually used in home cooking. This includes:

- preservatives
- emulsifiers
- sweeteners
- artificial colours and flavours.

These ingredients are used to make the food last longer. This means they can be stored for longer before they need to be eaten.

Ultra-processed foods also often include high amounts of sugar, saturated fat and salt. This means they are generally less healthy and have fewer nutrients.

Ultra-processed foods include:

- processed meats like sausages and ham
- fizzy soft drinks
- some packaged breads and buns
- sweet or savoury packaged snacks, such as biscuits and crisps
- ice cream
- ready-to-eat meals.

Research has shown that there may be a link between a high intake of some ultra-processed foods and cancer and other diseases. But more research is needed.

Ultra-processed foods may make up a large part of some people's diet. It is best to try to limit the amount of processed food you have, but you do not have to completely avoid them. Not all ultra-processed foods are the same. Check the food labels (pages 36 to 37) and try to choose foods that are lower in sugar, salt or saturated fat.

Are artificial sweeteners safe to eat?

Artificial sweeteners are chemical substances used in many foods and drinks instead of sugar. They include aspartame, saccharin, sorbitol and xylitol.

Research continues to find out whether there is a link between artificial sweeteners and certain types of cancer. Where possible, try to have foods with naturally occurring sugars instead of foods with artificial sweeteners. This includes fruit, or unsweetened food and drinks.

Using artificial sweeteners can be an alternative to adding sugar to food or drink. This could be to help keep to a healthy weight, or if you have diabetes. If you are using them to help with weight loss, there are also other ways to manage weight without artificial sweeteners (pages 40 to 42).

We have more information in our booklet Diabetes and cancer treatment (page 72).

Should I eat only organic food?

Some people worry that pesticides used in non-organic farming may cause cancer. If you have had cancer, you may wonder whether you should follow an organic diet to prevent cancer or reduce the risk of it coming back.

In the UK, a pesticide can only be used once its safety has been tested. Laws ensure that all agricultural pesticides are used within a safe level. So far, there is no clear evidence that eating organic food will reduce the risk of cancer.

Organic food products are expensive compared to non-organic products. What we do know is that eating a variety of fruit and vegetables every day, whether organic or non-organic, can help reduce cancer risk. The current advice is to wash all fruit and vegetables thoroughly before you eat them, whether they are non-organic or organic. This removes pesticides and harmful bacteria.

What about GM foods?

Genetically modified (GM) foods are not common in the UK. They have not been available for long enough for there to be any conclusive evidence to suggest that GM foods cause cancer. Their long-term effects are not yet known, and more research is needed. This means some people may choose not to eat them.

Do anti-cancer diets work?

There have been a lot of claims made about alternative diets for treating cancer over the past few years. There have also been claims made about possible cures. It is understandable that people want to know about diets that seem to offer the hope of a cure.

There is currently no evidence that these diets can shrink or cure cancer, or increase someone's chance of survival. The recommendation is to follow a healthy, balanced diet for your overall general health (pages 8 to 11).

Some people get satisfaction from following these types of diet. But others find them expensive, unpleasant to eat and difficult to follow. Some diets may lack important nutrients or be unbalanced in other ways. They may even be harmful. This may lead to unplanned weight loss during treatment and make side effects worse. They can also be hard to follow, which can take the enjoyment out of eating and make you unhappy.

It can be confusing to have different advice about what to eat. Dietitians, doctors and specialist nurses recommend a well-balanced and enjoyable diet as the best way to keep healthy. If you choose to follow a specific diet, speak to a dietitian to check if you are missing any important nutrients.

Is fasting safe for someone with cancer?

Some people may fast for religious and spiritual reasons. For example, Muslims are required to fast from sunrise to sunset during Ramadan. If you are having cancer treatment, you are not usually expected to fast. Speak to your local imam if you have any questions about this.

If you have diabetes, we have a booklet Diabetes and cancer treatment, which has information about managing diabetes if you are fasting during Ramadan (page 72).

Other people may fast for potential health benefits. The safety of fasting when you have cancer will depend on your individual situation. It may sometimes be safe to fast for part of the day. Research is looking into the benefits and risks of fasting whilst having cancer treatment.

It is always important to talk to your cancer doctor, specialist nurse, GP or dietitian before fasting.

We have more information about fasting during Ramadan on our website. Visit macmillan.org.uk/ ramadan-and-cancer





About our information

We provide expert, up-to-date information about cancer. And all our information is free for everyone.

Our information has the PIF Tick quality mark for trusted health information. This means our information has been through a professional and strong production process.

Order what you need

You may want to order more booklets or leaflets like this one. Visit orders.macmillan.org.uk or call us on 0808 808 00 00.

We have booklets about different cancer types, treatments and side effects. We also have information about work, financial issues, diet, life after cancer treatment and information for carers, family and friends.

Online information

All our information is also available online at macmillan.org.uk/ **information-and-support** You can also find videos featuring stories from people affected by cancer, and information from health and social care professionals.

Other formats

We also provide information in different languages and formats, including:

- audiobooks
- Braille
- British Sign Language
- easy read booklets

- interactive PDFs
- large print
- translations.

Find out more at macmillan.org.uk/otherformats

If you would like us to produce information in a different format for you, email us at informationproductionteam@macmillan.org.uk or call us on 0808 808 00 00.

The language we use

We want everyone affected by cancer to feel our information is written for them

We want our information to be as clear as possible. To do this, we try to:

- · use plain English
- explain medical words
- use short sentences
- use illustrations to explain text
- structure the information clearly
- make sure important points are clear.

We use gender-inclusive language and talk to our readers as 'you' so that everyone feels included. Where clinically necessary we use the terms 'men' and 'women' or 'male' and 'female'. For example, we do so when talking about parts of the body or mentioning statistics or research about who is affected.

To find out more about how we produce our information, visit macmillan.org.uk/ourinfo



Other ways we can help you

At Macmillan, we know how a cancer diagnosis can affect everything, and we are here to support you.

Talk to us

If you or someone you know is affected by cancer, talking about how you feel and sharing your concerns can really help.

Macmillan Support Line

Our support line is made up of specialist teams who can help you with:

- emotional and practical support if you or someone you know has been diagnosed with cancer
- clinical information from our specialist nurses about things like diagnosis and treatments
- welfare rights advice, for information about benefits and general money worries.

To contact any of our teams, call the Macmillan Support Line for free on 0808 808 00 00. Or visit macmillan.org.uk/support-line to chat online and find the options and opening times.

Our trained cancer information advisers can listen and signpost you to further support.

Our cancer information nurse specialists can talk you through information about your diagnosis and treatment. They can help you understand what to expect from your diagnosis and provide information to help you manage symptoms and side effects.

If you are deaf or hard of hearing, call us using Relay UK on 18001 0808 **808 00 00**, or use the Relay UK app.

You can also email us, or use the Macmillan Chat Service via our website. You can use the chat service to ask our advisers about anything that is worrying you. Tell them what you would like to talk about so they can direct your chat to the right person. Click on the 'Chat to us' button, which appears on pages across the website. Or go to

macmillan.org.uk/talktous

If you would like to talk to someone in a language other than English, we also offer an interpreter service for our Macmillan Support Line. Call 0808 808 00 00 and say, in English, the language you want to use. Or send us a web chat message saying you would like an interpreter. Let us know the language you need and we'll arrange for an interpreter to contact you.

Macmillan Information and Support Centres

Our Information and Support Centres are based in hospitals, libraries and mobile centres. Visit one to get the information you need and speak with someone face to face. If you would like a private chat, most centres have a room where you can speak with someone confidentially.

Find your nearest centre at macmillan.org.uk/informationcentres or call us on 0808 808 00 00.

Help with money worries

Having cancer can bring extra costs such as hospital parking, travel fares and higher heating bills. If you have been affected in this way, we can help. Please note the opening times may vary by service.

Financial advice

Our expert money advisers on the Macmillan Support Line can help you deal with money worries and recommend other useful organisations that can help.

Help accessing benefits

You can speak to our money advisers for more information. Call us free on 0808 808 00 00. Visit macmillan.org.uk/financialsupport for more information about benefits.

Help with work and cancer

Whether you are an employee, a carer, an employer or are self-employed, we can provide information to help you manage cancer at work. Visit macmillan.org.uk/work

Talk to others

No one knows more about the impact cancer can have on your life than those who have been through it themselves. That is why we help bring people together in their communities and online.

Support groups

Whether you are someone living with cancer or a carer, family member or friend, we can help you find support in your local area, so you can speak face to face with people who understand. Find out about support groups in your area by calling us or by visiting macmillan.org.uk/ selfhelpandsupport

Online Community

Thousands of people use our Online Community to make friends. blog about their experiences and join groups to meet other people going through the same things. You can access it any time of day or night. Share your experiences, ask questions, or just read through people's posts at macmillan.org.uk/community

You can also use our Ask an Expert service on the Online Community. You can ask a money adviser, cancer information nurse or an information and support adviser any questions you have.

Macmillan healthcare professionals

Our nurses, doctors and other health and social care professionals give expert care and support to individuals and their families. Call us or ask your GP, consultant, district nurse or hospital ward sister if there are any Macmillan professionals near you.

Other useful organisations

There are lots of other organisations that can give you information or support. Details correct at time of printing.

Nutrition and diet information and support

British Dietetic Association

Tel 0121 200 8080

www.bda.uk.com

Provides general information about food and health. Has information about accessing a dietitian, and a number of food factsheets about medical conditions and diet.

British Nutrition Foundation

Tel **0207 557 7930**

www.nutrition.org.uk

Has information about different food types and healthy eating.

Diabetes UK

Helpline (England, Wales and Northern Ireland): 0345 123 2399 Helpline (Scotland): 0141 212 8710

www.diabetes.org.uk

Provides information and support to anyone affected by any type of diabetes. Has information about managing diabetes and also funds research.

World Cancer Research Fund

Tel 0207 343 4200

www.wcrf.ora

Provides information about how diet, weight and physical activity affect the risk of developing and surviving cancer.

General cancer support organisations

Black Women Rising

www.blackwomenrisinguk.org

Aims to educate, inspire and bring opportunities for women from the BAME community. Shares stories and supports Black cancer patients and survivors through treatment and remission.

Cancer Black Care

Tel **0734 047 1970**

www.cancerblackcare.org.uk

Provides support for all those living with and affected by cancer, with an emphasis on Black people and people of colour.

Cancer Focus Northern Ireland

Helpline **0800 783 3339**

www.cancerfocusni.org

Offers a variety of services to people affected by cancer in Northern Ireland

Maggie's

Tel 0300 123 1801

www.maggies.org

Has a network of centres in many locations throughout the UK. Provides free information about cancer and financial benefits. Also offers emotional and social support to people with cancer, their family, and friends.

General health information

Drinkaware

www.drinkaware.co.uk

Provides independent alcohol advice, information and tools to help people make better choices about their drinking. Also has a web chat, for anyone concerned about their own drinking, or someone else's.

Health and Social Care in Northern Ireland

www.northerntrust.hscni.net

Provides information about health and social care services in Northern Ireland.

NHS.UK

www.nhs.uk

The UK's biggest health information website. Has service information for England.

NHS 111 Wales

111.wales.nhs.uk

NHS health information site for Wales.

NHS Inform

Helpline 0800 22 44 88

www.nhsinform.scot

NHS health information site for Scotland.

Counselling

British Association for Counselling and Psychotherapy (BACP)

Tel 0145 588 3300

www.bacp.co.uk

Promotes awareness of counselling and signposts people to appropriate services across the UK. You can also search for a qualified counsellor on the 'Therapist directory' page.

UK Council for Psychotherapy (UKCP)

Tel 0207 014 9955

www.psychotherapy.org.uk

Holds the national register of psychotherapists and psychotherapeutic counsellors, listing practitioners who meet exacting standards and training requirements.

Emotional and mental health support

Mind

Helpline **0300 123 3393**

www.mind.org.uk

Provides information, advice and support to anyone with a mental health problem through its helpline and website.

Samaritans

Helpline 116 123

Email jo@samaritans.org

www.samaritans.org

Provides confidential and non-judgemental emotional support, 24 hours a day, 365 days a year, for people experiencing feelings of distress or despair.

Support for LGBTQ+ people

LGBT Foundation

Tel 0345 330 3030

lgbt.foundation

Provides a range of services to the LGBT community, including a helpline, email advice and counselling. The website has information on various topics including sexual health, relationships, mental health, community groups and events.

OUTpatients

www.outpatients.org.uk

A safe space for anybody who identifies as part of the queer spectrum and has had an experience with any kind of cancer at any stage. Also produces resources about LGBT cancer experiences. OUTpatients runs a peer support group with Maggie's Barts.

Support for carers

Carers UK

Helpline 0808 808 7777

www.carersuk.org

Offers information and support to carers across the UK. Has an online forum and can put people in contact with local support groups for carers.

Your notes and questions

Disclaimer

We make every effort to ensure that the information we provide is accurate and up to date, but it should not be relied upon as a substitute for specialist professional advice tailored to your situation. So far as is permitted by law, Macmillan does not accept liability in relation to the use of any information contained in this publication, or third-party information or websites included or referred to in it. Some photos are of models.

Thanks

This booklet has been written, revised and edited by Macmillan Cancer Support's Cancer Information Development team. It has been approved by members of Macmillan's Centre of Clinical Expertise.

With thanks to: Lindsey Allan, Macmillan Oncology Dietitian; Laura Askins, Senior Specialist Dietitian; and Gemma Hutton, Oncology Dietitian.

Thanks also to the people affected by cancer who reviewed this edition. and those who shared their stories.

We welcome feedback on our information. If you have any, please contact informationproductionteam@macmillan.org.uk

Sources

Below is a sample of the sources used in our healthy eating information. If you would like more information about the sources we use, please contact us at informationproductionteam@macmillan.org.uk

British Dietetic Association. www.bda.uk.com [accessed July 2025].

Eat well, spend less. British Dietetic Association. Available from www. bda.uk.com/resource/food-facts-eat-well-spend-less.html [accessed July 2025].

The Eatwell Guide. NHS. Available from www.nhs.uk/live-well/eat-well/ food-guidelines-and-food-labels/the-eatwell-guide [accessed July 2025].

World Cancer Research Fund. Cancer risk factors. Available from www. wcrf.org/diet-activity-and-cancer/risk-factors [accessed July 2025].

Can you do something to help?

We hope this booklet has been useful to you. It is just one of our many publications that are available free to anyone affected by cancer. They are produced by our cancer information specialists who, along with our nurses, money advisers, campaigners and volunteers, are part of the Macmillan team. When people are facing the toughest fight of their lives, we are here to support them every step of the way.

We want to make sure no one has to go through cancer alone, so we need more people to help us. When the time is right for you, here are some ways in which you can become a part of our team.

5 ways you can help someone with cancer

1. Share your cancer experience

Support people living with cancer by telling your story, online, in the media or face to face.

2. Campaign for change

We need your help to make sure everyone gets the right support. Take an action, big or small, for better cancer care.

3. Help someone in your community

A lift to an appointment. Help with the shopping. Or just a cup of tea and a chat. Could you lend a hand?

4. Raise money

Whatever you like doing you can raise money to help. Take part in one of our events or create your own.

5. Give money

Big or small, every penny helps.

To make a one-off donation see over.

Please fill in your p	ersonal details	Do not let the taxman		
Mr/Mrs/Miss/Other		keep your money		
Name		Do you pay tax? If so, your gift will be worth 25% more to us -		
Surname		at no extra cost to you. All you have to do is tick the box below and the tax office will give 25p		
Address				
Postcode		for every pound you give.		
Phone		I am a UK tax payer and I would like Macmillan Cancer Support to treat all donations I make or have made to Macmillan Cancer Support in the last 4 years as Gift Aid donations until I notify you otherwise.		
Email				
Please accept my g (Please delete as ap				
I enclose a cheque Charity Voucher ma Macmillan Cancer S	de payable to			
OR debit my: Visa / MasterCard / Card / Switch / Ma	•	I understand that if I pay less Income Tax and/or Capital Gains Tax than the amount of Gift Aid claimed on all my donations in that tax year it is my responsibility to pay any difference. I understand Macmillan Cancer Support will reclaim 25p of tax on every £1 tha I give.		
Card number				
Valid from	Expiry date	Macmillan Cancer Support and our trading companies would like to hold your details in order to contact you about our fundraising, campaigning and services for people affected by cancer. If you would prefer us not to use your details in this way please tick this box. In order to carry out our work we may need to pass your details to agents or partners who act on our behalf.		
Issue no	Security number			
Signature		If you would rather donate online		
		go to macmillan.org.uk/donate		
Date / /				







This booklet is for people living with cancer or after cancer who want to know more about a healthy diet.

The booklet explains what makes a healthy diet and has tips on how to eat well and keep to a healthy weight. It also answers some commonly asked questions about diet and cancer.

At Macmillan we know cancer can disrupt your whole life. We'll do whatever it takes to help everyone living with cancer in the UK get the support they need right now, and transform cancer care for the future.

For information, support or just someone to talk to, call **0808 808 00 00** or visit **macmillan.org.uk**

Would you prefer to speak to us in another language? Interpreters are available. Please tell us in English the language you would like to use. Are you deaf or hard of hearing? Call us using Relay UK on 18001 0808 808 00 00, or use the Relay UK app.

Need information in different languages or formats?
We produce information in audio, interactive PDFs, easy read, Braille, large print and translations.
To order these, visit macmillan.org.uk/otherformats or call our support line.



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