

A practical guide to living
with and after cancer

HEALTHY EATING AND CANCER

WE ARE
MACMILLAN.
CANCER SUPPORT

This booklet is one of a series of booklets on diet and cancer. It gives information about eating a healthy diet. We also have booklets on eating problems, diets to help you gain weight and recipes.

Our information booklets on diet and cancer are:

- *Healthy eating and cancer*
- *Eating problems and cancer*
- *The building-up diet*
- *Recipes from Macmillan Cancer Support.*

It's important to check with your hospital consultant, dietitian or nurse specialist that this is the right booklet for you, and whether you need any additional information.

If you would like more information about these booklets, you can contact our cancer support specialists on **0808 808 00 00**. They will be able to send you the booklet or booklets that contain the information you need.

Contents

<i>About Healthy eating and cancer</i>	3
Diet and cancer	4
Why a healthy diet is important	5
Making changes	6
A healthy eating guide	8
Alcohol	17
Keeping to a healthy weight	19
A healthy view on food	22
Commonly-asked questions about diet and cancer	23
How we can help you	31
Other useful organisations	35
Further resources	39
Questions you might like to ask your doctor, nurse or dietitian	43



About *Healthy eating* *and cancer*

Following a cancer diagnosis, many people want to make positive changes to their lives. Taking steps to live a healthier lifestyle is often a major part of these changes. This booklet has been written for people living with or after cancer, who want to know more about a healthy diet. It explains why diet is important, and has tips on how to eat well and maintain a healthy body weight. It aims to help you think about what changes you may want to make, and help you put them into practice.

There are also answers to some commonly-asked questions about diet and cancer, and other sources of support and information, which we hope you'll find useful.

If you'd like to discuss this information, call the Macmillan Support Line free on **0808 808 00 00**, Monday–Friday, 9am–8pm. If you're hard of hearing you can use textphone 0808 808 0121, or Text Relay. For non-English speakers, interpreters are available. Alternatively, visit **macmillan.org.uk**

Turn to pages 35–42 for some useful addresses and websites, and page 43 to write down questions for your doctor, nurse or dietitian. 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.

Diet and cancer

Experts think that up to 1 in 10 (10%) cancers in the UK may be linked to diet. There's a lot of research being done into which types of food may affect our risk of developing cancer.

One report showed that a lack of fruit and vegetables in the diet may contribute to about 6 out of 100 (6%) cancers in men. Being overweight may contribute to about 7 out of 100 (7%) cancers in women. There are many other reasons why people are overweight, but an unhealthy diet and lack of physical activity are often factors.

However, we still don't understand exactly how diet influences the risk of developing cancer. There are many reasons for this, mainly because both cancer and diet are complex.

Eating habits are very different from person to person. Our diets are made up of many types of foods, which in turn are made up of thousands of different substances. Some of these substances may increase our risk of cancer but others may protect us. And the influence on what we eat, and our risk of cancer, is likely to take many years, or even decades, to have an effect. So trying to find out how diet affects our risk of developing cancer is complicated.

For now, we do know which types of food help keep us healthy. And we know that a balanced diet and regular exercise helps us keep to a healthy weight, which can help reduce the risk of developing some cancers.

Why a healthy diet is important

Eating a balanced diet is one of the best choices you can make for your overall health. Many people find making this positive choice helps give them back a sense of control. It can also help you feel that you're doing the best for your health. Thinking about what and how much you drink is part of this too.

Eating well and keeping to a healthy weight will help you maintain or regain your strength, have more energy, and have an increased sense of well-being. It can also help reduce the risk of new cancers, heart disease, strokes and diabetes.

After cancer treatment, some people have a higher risk of developing other health problems, such as diabetes, heart disease or osteoporosis (bone thinning). If you've been told that you may be at an increased risk of any of these conditions, it's especially important to follow a healthy diet to help prevent them.

Making changes

It's not always easy to make major changes to our lives. It can be even more challenging when you have to cope with cancer, and perhaps cancer treatment too.

Some people turn to food when life is stressful, which is known as comfort eating. For others, being busy means we don't have time to look at healthier options when we're food shopping. It can sometimes be easier to choose ready meals. For some people, the cost of food is an issue. So you may want to change the way you eat, but thinking of how to do it may feel too hard.

It may help to make healthy changes to your diet gradually, at a comfortable pace, at a budget you can afford, and when you feel ready. You could start by writing down what you normally eat for a few weeks. Compare this with information on healthy eating. Then set yourself some small, realistic goals, and decide how you will achieve them. For example, if you've never had fruit with breakfast; try adding fresh or stewed fruit, or a glass of fruit juice. For snacks, you could try swapping chocolate with a small portion of dried fruit and nuts.

Gradually increase your goals over time. Keep track of your progress and how you feel physically and emotionally. Making changes can be enjoyable, as you may discover new foods that you haven't tried before.

If you're not sure how to go about changing your diet, ask your GP or specialist nurse. A dietitian can help you make these changes, and also advise you about any other dietary problems during or after your cancer treatment.

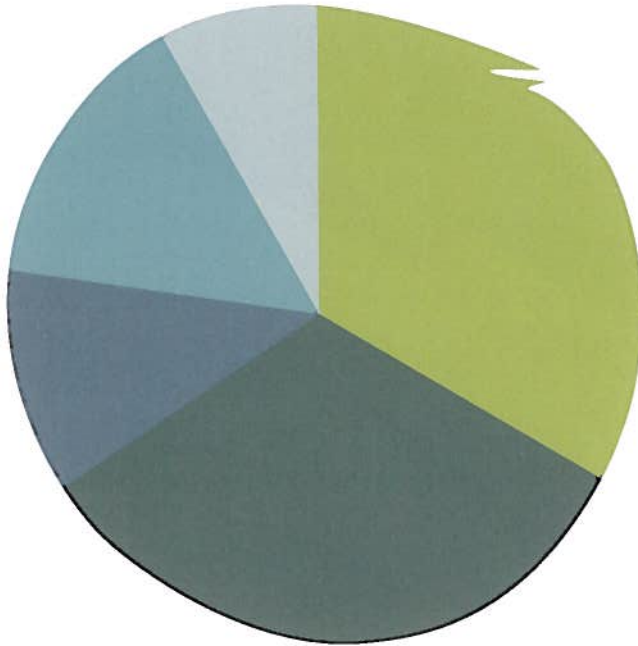
Whether you want to make small or big changes to your diet, it may take time to find healthy foods that you like, or a diet that works for you. It can help to try different foods. This can stop you getting bored and may help motivate you to continue a healthy diet in the long-term.

A healthy eating guide

Before making changes to your diet, it can help to talk to a dietitian, your GP or cancer specialist. For most people, a daily balanced diet includes:

- lots of fruit and vegetables
- plenty of starchy (carbohydrate) foods such as bread, rice, pasta, noodles, couscous and potatoes
- some protein-rich foods such as meat, poultry, fish, nuts, eggs and pulses (beans and lentils)
- some milk and dairy foods such as cheese, yoghurts and cream
- just a small amount of food high in fat, salt and sugar
- drinks should mainly be water, tea and coffee (without added sugar), or sugar-free drinks such as fizzy drinks, colas and squashes. See pages 17–18 for more information about alcoholic drinks.

This shows the proportion of each food group that make up a healthy diet:



Fruit and vegetables
(page 11)



Milk and dairy
(pages 13–15)



Starches
(page 12)



Fat/salt/sugar
(pages 14–16)



Protein
(pages 12–14)



Fruit and vegetables

Fruit and vegetables are a good source of many vitamins and minerals, and a great source of fibre. They should make up about a third of the food we eat every day. But most of us don't eat enough of them.

Research suggests that people who eat diets high in fruit and vegetables may have a lower risk of heart disease. It also suggests that these diets may reduce the risk of developing some types of cancer (cancers of the mouth, gullet and bowel). Fruit and vegetables help food move quicker through the digestive system and prevent constipation.

Try to eat at least five portions of fruit and vegetables a day. A portion is 80g (3oz) of raw, cooked or tinned fruit and vegetables, and is roughly:

- three heaped tablespoons of vegetables
- a dessert bowl of salad
- one average-sized fruit, like an apple, pear or banana
- two smaller fruits, like apricots or plums
- a slice of larger fruits, such as melon or mango
- a handful of small fruits, like cherries or berries
- a glass of fruit juice (150ml). Fruit juice only counts as one portion a day however much you drink.

Different coloured fruits and vegetables contain different nutrients. Eating a variety of fruit and vegetables of different colours will help make sure you're getting a wide range of valuable nutrients.

Starchy foods and fibre

Starchy foods such as bread, chapatti, cereals, rice, pasta, yams and potatoes are a very important part of a healthy diet. They are a good source of energy and a major source of fibre, iron and B vitamins. Starchy foods should make up about a third of the food we eat each day.

Foods rich in fibre are a healthy option, but most people don't eat enough. Try to include a variety of fibre-rich foods in your diet, such as wholegrain bread, brown rice, oats, beans, peas, lentils, grains, seeds, fruit and vegetables.

High-fibre foods are more bulky. They help us feel full, so we're less likely to eat too much. Fibre helps keep bowels healthy and prevent constipation. Eating a diet with plenty of high-fibre foods may also help reduce the risk of bowel cancer. And the fibre found in foods such as oats, beans and lentils may help reduce the amount of cholesterol in the blood.

Protein

The body needs protein to perform a wide range of functions, such as the repair and growth of body cells. Protein-rich foods are often also a good source of vitamins and minerals.

Meat

Several studies suggest that eating lots of red and processed meat can increase the risk of developing bowel cancer and prostate cancer. Red meat is beef, pork, lamb and veal. Processed meats include sausages, bacon, salami, tinned meats, and packet meats like sandwich ham.

The greatest risk seems to be for people who eat two or more portions of red or processed meat (about 160g) a day. People who eat less than two portions a week (about 140g) seem to have the lowest risk. No link has been found between eating poultry, such as turkey and chicken, and the risk of developing cancer.

A portion of meat should be about the size of your palm. Try to avoid processed meats, and eat more fish, chicken, turkey, beans or lentils instead. Eating meat that's cooked at high temperatures, such as those used in frying and barbecuing, may also increase the risk of developing some cancers.

Other sources of protein

Other sources of protein, often found in vegetarian and vegan diets, include pulses (peas, beans, and lentils) and nuts. Pulses can form the base of lots of meals. Nuts can be used in both sweet and savoury dishes and are high in energy. They contain good amounts of both protein and some of the healthier unsaturated fats (see page 14).

Some vegetarians include egg and dairy products, like cheese, as a source of protein in their diet. Although eggs are a good source of protein, hard dairy cheese can be high in unhealthy saturated fats and should be eaten in small amounts. Vegan cheese made from soya can be a healthier alternative to dairy cheese.

Soya is also available as mince, burgers, sausages, milk, and tofu. Myco-protein (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. If you are worried about this, talk to your doctor or cancer nurse specialist.

Fat

Having some fat in our diet helps us to absorb vitamins A, D, E and K, and provides us with essential fatty acids that we can't make ourselves. But most people in the UK eat too much fat.

Foods that are high in fat are also high in energy (calories), so eating a lot of fat can make you more likely to put on weight.

There are different types of fat:

Saturated fat can raise cholesterol levels in the blood and increase the risk of heart disease. Foods that are high in saturated fat include cheese, butter, ghee, burgers, sausages, samosas, biscuits, pastries, cakes and chocolate. Current advice is for men not to eat more than 30g, and women not to eat more than 20g of saturated fat a day. Try to use the nutrition label on foods as a guide. High-fat foods contain more than 20g of fat per 100g. Low-fat foods contain less than 3g of fat per 100g.

Unsaturated fat helps reduce cholesterol levels in the blood. Omega 3 fatty acids, a type of unsaturated fat, are found in oily fish like mackerel, salmon, trout and sardines. Several research studies have shown that eating 1–2 servings of oily fish a week reduces the risk of developing heart disease.

However, there may be some potential health risks from eating too much oily fish. This is because chemicals,

pesticide residues, and metals like mercury may be found in the water the fish were caught in. These substances can end up in the water through industrial or farming processes. Mercury can occur naturally in the water. So the UK Food Standards Agency recommends that children, and women who may become pregnant, eat up to two portions a week, and that women past childbearing age and men don't eat more than four portions a week.

Other good sources of unsaturated fat include nuts and seeds, and sunflower, olive and vegetable oil.

It's important to try to eat less fat, and to choose foods that contain unsaturated fats instead of saturated.

What you can do to eat less fat:

- Eat more skinless fish and chicken, rather than red meat.
- Choose lean cuts of meat and trim off all the fat you can.
- Eat less fried food – bake, grill, steam or poach food instead.
- Choose lower-fat dairy products when you can.
- When you're shopping, check the labels for unsaturated and saturated fat, and choose lower-fat options.
- Put more vegetables and beans and a bit less meat in stews and curries.
- Try more vegetarian recipes.
- Cut out or reduce the number of fatty takeaways, such as burgers, curries and kebabs, that you eat.
- Avoid snacks that are high in fat, such as pastries, crisps and biscuits.

Salt

Diets that are high in salt can increase the risk of developing stomach cancer. Reducing your salt intake will help lower your blood pressure, and your risk of heart disease and strokes. Most people in the UK eat more salt than they need. The maximum recommended allowance of salt for adults is 6g per day, which is about a teaspoon.

When we think about how much salt we eat, we usually think of how much we add to our food or cooking. But about three-quarters (75%) of the salt we eat comes from processed foods such as bread, bacon, snacks and convenience foods.

You can find out how much salt is in processed foods by checking the labels. If there's more than 1.5g salt per 100g (or 0.6g sodium), the food is high in salt. Low-salt foods contain 0.3g salt or less per 100g (or 0.1g sodium).

When you're buying bread, cereal and ready meals, compare the amount of salt in different types and choose the lower ones. Frozen meals tend to have less salt than chilled ones. When you're buying tinned vegetables and tuna, choose the type in spring water rather than salted water or brine.

- Try not to add salt to your food.
- Add herbs, spices or black pepper to pasta dishes, vegetables and meat instead of salt.
- Marinate meat and fish before cooking to give them more flavour.

Alcohol

Alcohol has been linked with an increased risk of developing some types of cancer. An American study has shown that as little as one drink a day can increase the risk of mouth, gullet (oesophagus), breast, liver, and bowel cancers.

The more alcohol someone drinks the greater the overall health risk. Alcohol is also high in calories and can contribute to weight gain. Drinking a large amount of alcohol in one session (binge drinking) is thought to be worse for your health than drinking a small amount each day.

One drink isn't the same as 1 unit of alcohol. In the UK, 1 unit is 10ml (8g) of pure alcohol. For example:

- Half a pint of lower strength (3–4%) beer, lager or cider contains 1 unit.
- Half a pint of higher strength (5%) beer, lager or cider contains 1.5 units.
- A standard glass of wine (175ml), often called a small glass in pubs and bars, contains 2.1 units.
- A large glass of wine (250ml) contains 3 units.
- A single measure (25ml) of 40% spirits contains 1 unit.
- A bottle (275ml) of an alcopop contains 1.5 units.

It's best to limit alcohol intake and include one or two alcohol-free days each week. Current drinking guidelines recommended by the UK government and the NHS are:

- Men should avoid drinking more than 3–4 units of alcohol a day.
- Women should avoid drinking more than 2–3 units of alcohol a day.

Drinking one or two units of alcohol a day may give some protection from coronary heart disease, especially in men over 40 and women who have been through the menopause. However, it is a relatively small benefit.

Keeping to a healthy weight

It's not good to be either underweight or overweight. Eating too much can make you overweight, which can lead to health problems such as heart disease, high blood pressure or diabetes. Not eating as much food as your body needs can also affect your health.

If you're underweight, or find it difficult to eat enough to maintain your weight, you can find helpful advice in our booklets *The building-up diet* and *Recipes from Macmillan Cancer Support*.

Many people in the UK are heavier than the recommended weight for their height. And unfortunately, certain types of treatment for cancer, such as hormonal therapies or steroids, can cause weight gain. Losing weight can be difficult, but keeping a healthy body weight is one of the best ways to reduce your risk of developing cancer. There's more information and advice about managing your weight in our booklet *Weight management after cancer treatment*.

Being overweight increases the risk of many types of cancer, including cancers of the bowel, kidney, womb, oesophagus (gullet) and breast cancer in women who have been through the menopause.

There's also evidence that women who have breast cancer after the menopause may be able to reduce their risk of the cancer returning by keeping to a healthy body weight after treatment.

Try to keep your weight within the normal range for your height. Your GP can advise you on your ideal weight. If you're concerned about your weight, get in touch with your GP or a dietitian for advice and support.

Be patient with yourself. Losing weight is a gradual process. It's important to eat a balanced diet to make sure you get all the nutrients you need to keep your body healthy. It's reasonable to aim to lose about 0.5–1kg (1–2lbs) a week.

- Only eat as much food as you need according to how active you are. You may need to discuss your calorie needs with a dietitian.
- Eat a balanced diet, with lots of fruit and vegetables, and less fat and sugar.
- Be more physically active.

If you're thinking of increasing your physical activity, our booklet *Physical activity and cancer treatment and the Move more* information pack tell you everything you need to know about how to be more active and the benefits of doing so.



A healthy view on food

Food doesn't just give us what we need to keep our bodies healthy and energised. Socially, we often enjoy spending time with family and friends at meals and barbecues, or celebrating with treats like cakes. Sometimes we eat a favourite food to reward ourselves.

Even when you've successfully changed to a more balanced diet, you may not always feel like sticking strictly to it. This is normal for all of us. Everyone enjoys having an occasional treat or enjoying a meal out with friends, but maybe try having a smaller portion than you'd normally have. If you're eating well most of the time, you can allow yourself less healthy foods occasionally.

Another idea is to have one 'free' day a week, when you can eat whatever you want. You may quickly find that the healthier you eat, the less you crave the so-called 'forbidden foods'. Your idea of treats may also change to healthier options.

'I try and have my five portions of fruit and veg a day and wholemeal bread and things like that. But I eat meat. I use butter. I drink alcohol. And I aim to do those things in moderation rather than give them up.'

Commonly-asked questions about diet and cancer

Can diet reduce the risk of cancer coming back?

People often ask if what they eat can reduce their risk of the cancer returning. This is the subject of a lot of research. There is some early evidence from breast and bowel cancer studies that diet may make a difference to the chances of the cancer coming back.

But there still isn't enough clear information to make precise recommendations about what someone with a particular type of cancer should eat. In general, cancer experts recommend following a healthy balanced diet (see page 8).

For most people, the factors that are most likely to have the greatest impact on your health include diet, weight control and regular physical activity. The biggest difference will probably be from a combination of factors, rather than from making any one particular change.

Your healthcare team (this includes your GP, doctors and nurses) are the best people to advise you what, if any, lifestyle changes you can make that may help reduce your risk of cancer coming back.

What foods should I avoid when I have low immunity?

Make sure that eggs are well-cooked, and use shop-bought, not home-made mayonnaise. If your immunity is low, avoid pâté, raw eggs, live bacterial yoghurt and cheeses made from unpasteurised milk, such as Brie and blue-veined cheeses. These foods may contain harmful bacteria.

If you're on high-dose chemotherapy, your healthcare team may suggest that you avoid additional foods – ask them for advice.

Should I take dietary supplements?

For most people, a balanced diet provides all the nutrients they need, and taking large doses of vitamins, minerals and other dietary supplements isn't recommended. But people who find it difficult to eat a balanced diet may benefit from taking a multivitamin or mineral supplement containing up to 100% of the recommended daily allowance.

Supplements may be beneficial in some situations, such as for people who aren't able to absorb all the nutrients they need because of surgery for stomach cancer. People at increased risk of bone thinning (osteoporosis) may benefit from taking calcium and vitamin D supplements to help strengthen their bones.

Several studies have looked at whether taking supplements can reduce the risk of developing certain cancers. But the results have been disappointing, and in general the evidence is that taking supplements doesn't reduce the risk of cancer. There is even evidence that taking high doses of some supplements can increase the risk of cancer developing in some people.

One study found that people who smoke were more likely to develop lung cancer if they took supplements of beta-carotene (a substance the body uses to make vitamin A). And the results of other studies suggest that high doses of beta-carotene and vitamin A supplements may increase the risk of getting cancers of the gullet and stomach.

It's possible that some supplements may interfere with how cancer treatments work, and make them less effective. So if you're currently having treatment for cancer, it's important to get advice from your cancer specialist before taking any supplements. They can advise you about which, if any, you should take, and which doses might be suitable for you. They can also tell you about any possible side effects and interactions with other medicines.

What about 'superfoods'?

There isn't any scientific evidence for any one particular food being a 'superfood'. The greatest benefit to your health is likely to come from eating a balanced diet that includes a wide and varied combination of foods.

There are many substances in fruits and vegetables that may potentially have anti-cancer properties. However, at the moment we don't know this for certain, and we don't understand which ones are most likely to help or how they work.

So instead of looking for a 'superfood', it's better to aim for a 'superdiet' as recommended in healthy eating guidelines. This will help you make sure you're getting the widest possible variety of these substances. It will also make your diet more enjoyable and interesting, and it will probably be cheaper too.

Should I follow a dairy-free diet?

Many research studies have looked for a link between diets that are high in dairy products, and cancer (in particular breast and prostate cancer). But these studies haven't shown a clear link. Because of this, cancer experts don't recommend following a dairy-free diet to try to reduce the risk of cancer.

Dairy products are an important source of protein, calcium and some vitamins, but can be high in fat. Choose low-fat products to avoid putting on weight. Calcium is needed for strong bones and may help reduce the risk of bowel cancer. So if you decide to follow a dairy-free diet, you'll need to make sure you get enough calcium from other food sources, such as tinned sardines and salmon (with bones); dark green leafy vegetables, such as spinach; or fortified foods, such as some types of soya milk.

Does sugar feed cancer?

Sugar in your diet doesn't directly increase the risk of cancer, or encourage it to grow. But sugar contains no useful nutrients, apart from energy, and we can get all the energy we need from healthier sources. So it's best to limit the amount of sugar in your diet.



Should I only eat organic food?

Many people wonder if they should follow an organic diet to prevent cancer from coming back. Studies that examined the nutritional benefits of organic fruit and vegetables had mixed outcomes. Some claim that organic fruit and vegetables have better flavour and stay fresh for longer. So far, no research has been done to find out if an organic diet is more effective at stopping the recurrence or occurrence of cancer, compared to a non-organic diet.

Some people may worry that pesticides used in non-organic farming may cause cancer. 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.

Genetically modified (GM) crops have proved to be safe in the seven years they've been grown. But some people might feel that the long-term effects are unknown.

Buying organic or non-organic food is ultimately a personal choice. The current advice is to wash all fruit and vegetables, non-organic as well as organic, thoroughly before use to remove any form of pesticide.