

Nutrition for People Living with Cancer

A guide for people with cancer, their families and friends



For information & support, call **13 11 20**

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Check the publication date above to ensure this copy is up to date.

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Note to reader

Always consult your doctor about matters that affect your health. This booklet is intended as a general introduction to the topic and should not be seen as a substitute for medical, legal or financial advice. You should obtain independent advice relevant to your specific situation from appropriate professionals, and you may wish to discuss issues raised in this book with them.

All care is taken to ensure that the information in this booklet is accurate at the time of publication. Please note that information on cancer, including the diagnosis, treatment and prevention of cancer, is constantly being updated and revised by medical professionals and the research community. Cancer Council Australia and its members exclude all liability for any injury, loss or damage incurred by use of or reliance on the information provided in this booklet.

Cancer Council

Cancer Council is Australia's peak non-government cancer control organisation. Through the eight state and territory Cancer Councils, we provide a broad range of programs and services to help improve the quality of life of people living with cancer, their families and friends. Cancer Councils also invest heavily in research and prevention. To make a donation and help us beat cancer, visit cancer.org.au or call your local Cancer Council.



Cancer Council acknowledges Traditional Custodians of Country throughout Australia and recognises the continuing connection to lands, waters and communities. We pay our respects to Aboriginal and Torres Strait Islander cultures and to Elders past, present and emerging.



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About this booklet

This booklet has been prepared to help you understand more about eating well before, during and after treatment for cancer.

It outlines the general guidelines for healthy eating and discusses common eating problems caused by cancer or its treatment. There are also tips for managing these issues, as well as suggestions for meals and snacks.

We cannot give advice about the best eating plan for you. You need to discuss this with your doctors, nurses and dietitians. However, we hope this information will answer some of your questions and help you think about other questions to ask your treatment team or dietitian (see page 60 for a question checklist).

This booklet does not need to be read from cover to cover – just read the parts that are useful to you. Some terms that may be unfamiliar are explained in the glossary (see page 61). You may also like to pass this booklet to family and friends for their information.

How this booklet was developed – This information was developed with help from a range of health professionals and people affected by cancer. It is based on Australian and international guidelines for nutrition, physical activity and alcohol.¹⁻⁴



If you or your family have any questions or concerns, call **Cancer Council 13 11 20**. We can send you more information and connect you with support services in your area. You can also visit your local Cancer Council website (see back cover).



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Key to icons

Icons are used throughout this booklet to indicate:



More information



Alert



Tips



The importance of eating well

You may know that eating well is important for your overall health and wellbeing, but not be aware of all the benefits. Good nutrition can:

- give you more energy and strength
- help you achieve or maintain a healthy weight
- improve your mood
- help prevent or reduce the risk of some conditions, such as heart disease, type 2 diabetes and even some cancers.

What to eat

The *Australian Dietary Guidelines*¹ provide advice on eating for health and wellbeing for the general population. They were developed by the National Health and Medical Research Council (NHMRC).

The next two pages outline the key recommendations from the guidelines. Following these guidelines will help ensure you eat well and may reduce your risk of developing some cancers. It is also important to be as physically active as possible (see pages 15–16).

What to drink

Fluids are essential for the body to function. All the organs, tissues and cells in your body need fluids to keep working properly. As a general guide, you should aim to drink at least 8–10 glasses of fluid per day. Most of this should be plain water, but fluid from soups, smoothies, milk, fruit juices, or ice cubes is also good. Tea and coffee also provide fluid, but they may cause you to urinate (pee) more often.

Alcohol may lead to weight gain and increase the risk of heart disease, type 2 diabetes and several cancers, such as bowel and breast. When it comes to cancer risk, there is no safe level of alcohol consumption. For healthy people who choose to drink alcohol, Cancer Council recommends you follow the NHMRC guidelines³ and have no more than 10 standard drinks a week and no more than 4 standard drinks on any one day (visit health.gov.au and search for standard drinks guide).

What to eat and drink during cancer treatment

Cancer and its treatment both place extra demands on the body.

Research shows that eating well before, during and after cancer treatment can help:

- improve quality of life by giving you more energy, keeping your muscles strong, helping you stay a healthy weight, and boosting mood
- your body cope with the side effects of treatment, improve how well treatment works, reduce length of hospital stays, and speed up recovery
- heal wounds and rebuild damaged tissues after surgery, radiation therapy, chemotherapy and other treatments
- improve your immune system and ability to fight infections
- reduce the risk of cancer coming back (recurrence).

During treatment, the side effects of cancer and its treatment may make it hard to eat enough or you may have trouble eating some foods.

You may need to be more flexible with what you eat. This may mean that the foods you are able to eat are quite different to those in your normal diet and perhaps not foods that are recommended as part of a healthy diet.

Pages 8–9 explain how your food choices may be different from the *Australian Dietary Guidelines* before, during and after cancer treatment.

Alcohol can also interact with some medicines. Check with your doctors before drinking wine, beer or spirits during cancer treatment.

General guidelines for healthy eating

The *Australian Dietary Guidelines* set out 5 key recommendations for adults. People with cancer may need to be more flexible about their food choices (see pages 8–9) and ask their doctor about breastfeeding.

Five key recommendations for healthy eating



1. Achieve and maintain a healthy weight by being physically active and choosing nutritious food and drinks to meet your energy needs.



2. Enjoy a wide variety of nutritious foods from the 5 food groups every day (see diagram opposite).



3. Limit your intake of alcohol and foods containing saturated fat, added salt and added sugars (see diagram opposite).



4. Encourage, support and promote breastfeeding.



5. Care for your food – prepare and store it safely (see pages 22–23).

Foods to limit

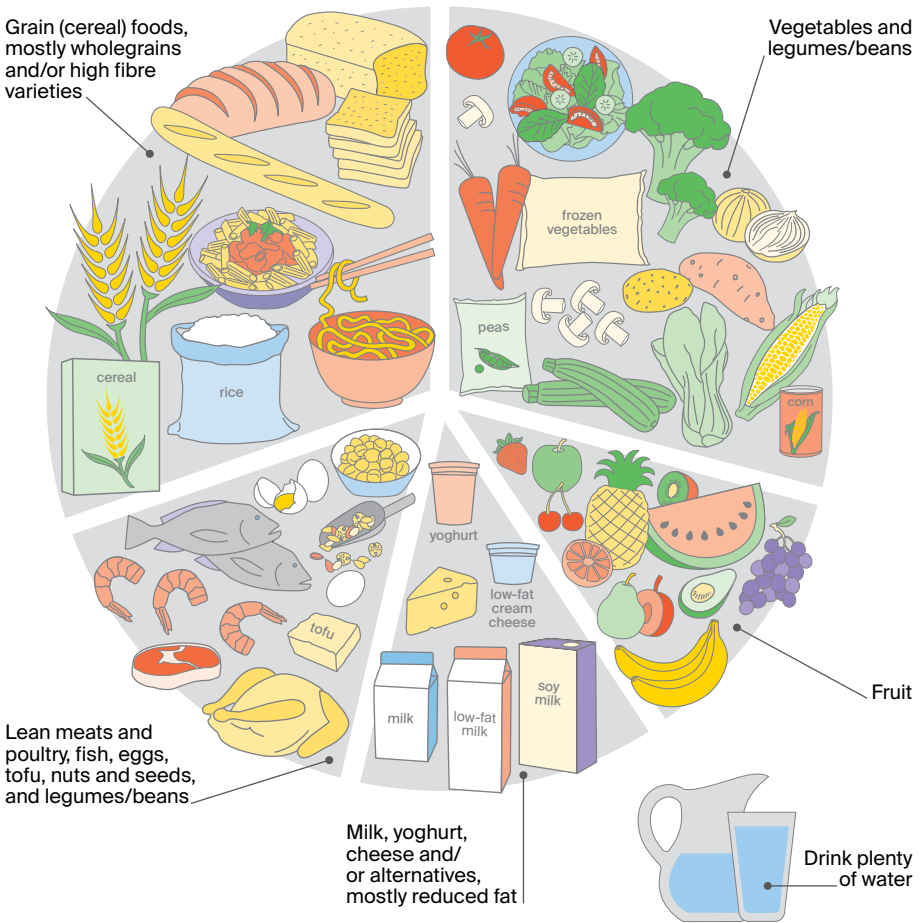


Use small amounts of fats such as butter and cooking oils. Choose varieties that are low in saturated and trans fats.



If you choose to eat fast food, processed meats and sweets and drink alcohol, only have them sometimes and in small amounts.

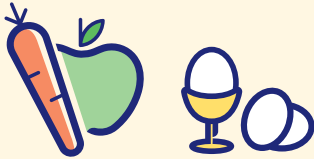
The diagram below is based on the NHMRC's "Australian Guide to Healthy Eating" diagram. Aim to eat a wide variety of foods from the 5 food groups and drink plenty of water. For more details, visit eatforhealth.gov.au.



How to eat well after a cancer diagnosis

During cancer treatment and recovery, you may need to adapt what you eat to help meet your body's changing needs.

Preparing for treatment



- Try to eat as well as you can before starting treatment.
- Eat a wide variety of foods from the 5 food groups (see previous page) and do some physical activity to build muscle (if you are feeling well enough).
- If you have lost weight or you are not eating as well as usual, you may need food with more energy (kilojoules, also known as calories) and protein.
- Ask your general practitioner (GP) or oncologist for a referral to a dietitian for advice about what to eat. You can also be referred to other health professionals, such as physiotherapists, exercise physiologists and psychologists. These health professionals can help prepare you for cancer treatment (see pages 56–57).
- Plan for days you don't feel like cooking. Fill your freezer with frozen meals.
- Organise a meal roster with family and friends.

During treatment



- You may need food with more energy (kilojoules) and protein. If you don't have much of an appetite, try eating small, frequent meals or snacks, rather than 3 large meals a day.
- If treatment affects what you can eat, see the tips on pages 18–41.
- If you are losing weight, pages 37–40 discuss how to avoid further weight loss. Ask for a referral to a dietitian if weight loss is ongoing or fast.
- Do regular physical activity to improve appetite and mood, reduce fatigue, help digestion and prevent constipation. Exercise professionals such as a physiotherapist or exercise physiologist can help you develop an exercise plan (see page 57).
- Check with your doctor or dietitian before taking vitamin or mineral supplements or making major changes to your diet.
- Look out for signs of malnutrition, see pages 42–43.

After treatment



- Try to maintain your weight to help you recover faster.
- Eat a wide variety of foods (see page 7 for more information) and do some physical activity to rebuild muscle and help you recover from the side effects of cancer treatment. For help developing an exercise plan, see a physiotherapist or exercise physiologist.
- If you continue to have treatment side effects that affect what you can eat, see pages 18–41.
- See a dietitian for support and help.

Recovery



- Focus on healthy eating once you've recovered from the side effects of treatment. For general healthy eating guidelines, see pages 6–7.
- Maintain a healthy weight and be physically active to help lower the chance of cancer coming back. For details on physical activity guidelines for adults, see pages 15–16.
- Limit how much alcohol you drink. If you choose to drink, have no more than 10 standard drinks a week and no more than 4 standard drinks in one day.
- Visit your doctor for regular check-ups and see a dietitian for support.
- ▶ See our *Living Well After Cancer* booklet.

Living with advanced cancer



- Good nutrition can improve quality of life.
- Adjust what you eat to meet your changing nutritional needs.
- Talk to your doctor about medicines that may improve your appetite.
- Relax usual dietary restrictions, e.g. use full-cream rather than low-fat milk.
- Consider nutritional supplements (see page 38) if you can't eat enough. Discuss options with your doctor, palliative care specialist or dietitian.
- See *Nutrition and advanced cancer* on pages 46–48.

Key questions

Q: Can food cause cancer?

A: The link between food and cancer is complex. There are many different types of cancer and many different causes of cancer, only some of which are understood.

Cancer starts when cells begin to grow out of control. The reason for this change is not always known. Poor eating habits combined with smoking, too little exercise, drinking too much alcohol, being overweight and too much sunlight exposure may, over a long period of time, increase the risk of developing some cancers.

Q: Should I avoid alcohol?

A: Drinking alcohol increases the risk of developing some cancers, particularly cancers of the mouth, throat, oesophagus, stomach, bowel, liver and breast. Mouth cancers are six times more common in people who drink alcohol than non-drinkers. The type of alcohol you drink – wine, beer, spirits – doesn't make a difference.

But drinking alcohol doesn't mean that you'll definitely get cancer. Your risk will depend on other factors, including your age and genetics.

Cancer Council recommends drinking less alcohol to reduce your risk of cancer. Drinking less alcohol has lots of other benefits too. It can help reduce your risk of accidents, high blood pressure and liver disease. See page 5 for more information on the NHMRC alcohol guidelines.

Q: Should I avoid processed meats and red meat?

A: The World Health Organization (WHO) classifies processed meats such as bacon, ham and salami as Group 1 carcinogens. This means there is a definite link with cancer. WHO puts processed meats in the same category as other proven causes of cancer such as tobacco, alcohol and ultraviolet (UV) radiation.

WHO classifies red meat as a Group 2A carcinogen. This means it probably causes cancer, but the evidence isn't as strong. These classifications do not indicate the risk of getting cancer; they describe the strength of the evidence that these foods are linked to cancer.

To reduce cancer risk, Cancer Council and the *Australian Dietary Guidelines* recommend that you:

- eat little, if any, processed meat such as bacon, ham and salami
- aim for no more than 455 g of cooked lean red meat (e.g. beef, lamb, pork, kangaroo, goat) per week. This could be one serve a day (65 g cooked) or 2 small serves at 3–4 meals a week.

You can swap a serve of red meat for fish, chicken, eggs or legumes (e.g. chickpeas or lentils) and get adequate amounts of the nutrients you need. If you are losing weight or finding it hard to eat enough during cancer treatment, ask your doctor or dietitian what foods to eat to help you get enough energy and protein.



If you have a question about food and cancer not answered in this book, make an appointment with an accredited practising dietitian (member.dietitiansaustralia.org.au/faapd) or visit cancer.org.au/iheard.



Before changing what you eat, following a specific diet, or taking new or more vitamins or mineral supplements (see opposite page), it is important to talk to your doctor or dietitian. They can discuss the advantages and disadvantages of any changes, and ensure they are safe during and after cancer treatment.

Q: Is organic food better?

A: Organic farmers and food producers grow and produce food without using synthetic pesticides or fertilisers. They also don't expose food to radiation to extend shelf life, or use seeds, plants or animals that have had their genetic make-up altered in a laboratory.

Some people believe it's better to eat organic foods because they don't have extra chemicals. However, there is no strong evidence that organic food is better for you, or that it will help you recover faster or reduce the risk of cancer coming back.

Organic fruits and vegetables contain the same vitamins and minerals as those grown in the usual way and can be more expensive to buy. Wash all fruit and vegetables thoroughly before you eat them. Focus on eating a wide variety of fruits and vegetables, rather than whether or not they're organic.

Q: Should I follow a special diet?

A: After a cancer diagnosis, you may think about changing what you eat. Improving your diet can help your body cope with the effects of cancer and its treatment, and speed up recovery. It can also give you a sense of control. Or you may need to adjust your diet to make sure you continue to eat the right balance of foods during or after treatment (see pages 8–9).

Some people claim that a particular diet or way of life can cure or control cancer on its own. Often these diets are promoted on social media or in the traditional media. There are no special foods, diets or vitamin and mineral supplements that have been scientifically proven to cure cancer. There's also no research that shows any particular foods can lower the chance of the cancer coming back, see page 17.

Many unproven diets encourage people to:

- cut one or more food groups (e.g. all dairy or all grains)
- eat large amounts of specific fruits and vegetables or their juices
- take special or high-dose supplements.

Following an unproven diet may mean you don't get enough energy (kilojoules/calories), protein, fat, carbohydrates, vitamins and minerals. This may affect your energy levels, cause unwanted weight loss and fatigue, and weaken your immune system. This may make it harder for you to cope with treatment and lead to malnutrition (see pages 42–43). Buying large amounts of fruits and vegetables, or supplements can be expensive. Cutting out specific foods can also make it harder to eat meals with your family, at restaurants or other people's homes.

► See our *Understanding Complementary Therapies* booklet.

Q: Should I take a supplement?

A: Vitamins and minerals are an essential part of a healthy diet and play an important role in the body's immune system. It's best to get your vitamins and minerals from eating whole foods, as these are easier for the body to absorb. If you are able to eat a wide variety of foods, you may not need to take vitamin and mineral supplements.

Some people may need to take vitamin and/or mineral supplements during and after treatment. For example, osteoporosis can be a side effect of treatment for prostate cancer and breast cancer, so you may need to take a calcium or vitamin D supplement. If you have had surgery to any part of your digestive system (e.g. gastrectomy), you will probably need to take nutritional supplements. A dietitian can give you more information.

Some people believe that taking high doses of certain vitamins will boost the body's immune system during cancer treatment. However, there is little evidence to support this claim. In fact, some vitamin and mineral compounds can be toxic at high levels, and may affect how radiation therapy, chemotherapy and other medicines work.

If your appetite is poor or if you're concerned you're not getting enough vitamins or minerals, check with your doctor or dietitian before taking any vitamin or mineral supplements.

Q: Does sugar feed cancer?

A: Sugar is a type of carbohydrate found naturally in fruit and dairy products. It is also added to soft drinks and many processed foods. Our body uses sugar for energy.

You may hear that because cancer cells use sugar to grow, cutting out all sugar and carbohydrates from your diet will stop the cancer growing. This is a myth and can be harmful. Cancer cells will get the energy they need to grow from other body tissues even if there are no carbohydrates available. The healthy cells in your body also use sugar to grow, so changing your diet in this way would mean missing out on the sugar that helps your vital organs work.

It's a good idea to limit drinks with high amounts of added sugar such as soft drinks, cordials, fruit drinks, vitamin waters, and energy and sports drinks. Foods and drinks high in sugar may cause you to put on weight. If you are losing weight or struggling to eat enough, having foods with sugar in them may help to keep your energy levels up. Talk to a dietitian about what to eat after a cancer diagnosis.

Q: Is fasting a good idea?

A: Some people think that eating very little or no food for a specific period of time (fasting) helps treat cancer, but there is not enough evidence to support this idea, and it can be harmful. Not eating enough can leave you feeling tired, cause you to lose muscle and weight, weaken your immune system and affect your ability to cope with treatment. These outcomes may lead to treatment delays or a shorter course of treatment.

It is important to try to eat enough of a wide variety of foods to meet your body's needs, so you maintain strength during treatment. Speak to your dietitian and treatment team before trying any fasting techniques.

Q: How important is exercise?

A: Along with eating well, physical activity is important for general health and wellbeing. Any activity that gets your body moving and speeds up your breathing and heart rate can help you achieve or maintain a healthy body weight, improve your mood, and reduce the risk of several conditions, such as heart disease, type 2 diabetes and some types of cancer.

*Australia's Physical Activity and Sedentary Behaviour Guidelines for Adults*⁴ encourage everyone to move more and sit less. Adults should aim to be active on most, preferably all, days of the week. Any physical activity is better than none. You don't have to go to the gym or run; going for a walk or doing housework can also help. The aim is to be as physically active as your abilities and condition allow. For details on how active to be, visit health.gov.au/health-topics/physical-activity-and-exercise.

The advice used to be to rest during cancer treatment. But now exercise is recommended for most people during and after treatment. Research shows that regular physical activity can:

- help manage fatigue and other common side effects of treatment
- increase appetite
- speed up recovery
- strengthen muscles and bones, and improve circulation
- reduce the risk of the cancer coming back (for some cancer types) and of developing other health problems
- improve quality of life by reducing stress and improving mood.

According to the Clinical Oncology Society of Australia (COSA) position statement on exercise in cancer care⁵, exercise should be prescribed to all cancer patients as a standard part of their cancer care to help manage the effects of cancer and its treatment.

Talk to your treatment team or GP before starting an exercise program, and see a physiotherapist or exercise physiologist to develop an exercise plan that suits your situation. A physiotherapist or exercise physiologist may be part of the team at your hospital or treatment centre, or your GP can refer you to one in private practice.

- ▶ See our *Exercise for People Living with Cancer* booklet.

Q: Should I see a dentist before starting treatment?

A: Cancer treatment often causes side effects that affect your mouth and teeth, such as dry mouth, mouth ulcers, tooth decay and mouth infections (see pages 25–32). These problems can make it hard to eat, and poor oral health can make them worse. This is why it is important to have a check-up with your dentist before treatment starts, especially if your treatment includes radiation therapy to the head or neck, some types of chemotherapy, or the drugs known as bisphosphonates (used to treat bone disease).

Your dentist can check the health of your teeth and find any problems early. You can also ask your dentist or your cancer treatment team for advice about caring for your teeth and mouth before, during and after treatment.

▶ See our *Mouth Health and Cancer Treatment* fact sheet.

Q: Can diet reduce the risk of cancer coming back?

A: After cancer treatment, you might think about changing what you eat to reduce the risk of cancer coming back. There's no research that shows any particular foods or eating plan can lower the chance of the cancer coming back.

To reduce your risk of cancer, follow the *Australian Dietary Guidelines* (page 6) and *Australia's Physical Activity and Sedentary Behaviour Guidelines for Adults* (see opposite page). These are similar to the World Cancer Research Fund International's cancer prevention recommendations. For more information, visit wcrf.org/diet-activity-and-cancer/cancer-prevention-recommendations.

Treatment side effects and nutrition

Eating well can be a challenge when you have cancer. Sometimes it's the cancer itself that prevents you from eating, digesting or absorbing food well. But usually it's because of the side effects of cancer treatments.

These side effects will vary from person to person, and depend on the type of cancer, treatment and medicines you have. For some people, treatment side effects only slightly change what they can eat. For others, side effects will have a bigger impact. Most side effects that affect eating are temporary and gradually get better after treatment ends.

This chapter covers some of the most common impacts of cancer treatment on nutrition. It also includes practical suggestions for coping with treatment side effects and getting the nutrients you need.

Worrying about the diagnosis and treatment can also affect your appetite. If this is the case for you, talk to a family member or friend, the social worker at the hospital, your doctor or a psychologist. You can also call Cancer Council 13 11 20.

“I went through all the symptoms you could think of – I had vomiting, diarrhoea, metallic taste in the mouth, and I lost a lot of weight. The nausea was really bad. It made my appetite go. I tried to eat, and all I could handle was dry biscuits. Chemotherapy took a toll on my body.” MARIE

How cancer treatments can affect nutrition

Treatment	Possible side effects
<p>surgery removes tumour or repairs part of the body</p>	<p>difficulty chewing and swallowing, reflux, diarrhoea, constipation, difficulty absorbing nutrients, weight loss, pain, fatigue</p>
<p>chemotherapy drugs that kill or slow the growth of cancer cells</p>	<p>appetite loss, nausea, vomiting, constipation, diarrhoea, mouth sores, taste changes, lowered immunity, fatigue, weight loss</p>
<p>radiation therapy the use of a controlled dose of radiation to kill or damage cancer cells; also known as radiotherapy</p>	<p>appetite loss, fatigue, taste changes, nausea, vomiting, diarrhoea, dry mouth, difficulty chewing or swallowing, bowel obstruction, mouth sores, reflux, weight loss, pain, fatigue</p>
<p>hormone therapy drugs that block the hormones that help some cancers grow</p>	<p>weight gain, appetite changes, nausea, increased cholesterol levels, constipation, mood changes</p>
<p>stem cell transplant the process of replacing stem cells destroyed by high-dose chemotherapy</p>	<p>lowered immunity, sore mouth and throat, nausea, vomiting, diarrhoea, fatigue, loss of appetite, weight loss</p>
<p>steroid therapy drugs used to reduce inflammation in the body</p>	<p>increased appetite, weight gain, increased risk of infection, stomach irritation, unstable blood sugar levels</p>
<p>targeted therapy drugs that target specific features of cancer cells to stop the cancer growing</p>	<p>diarrhoea, nausea, vomiting, constipation, taste changes, mouth sores, fever, increased risk of infection, weight loss</p>
<p>immunotherapy drugs that use the body's own immune system to fight cancer</p>	<p>diarrhoea, bloody bowel movements, abdominal pain, bloating, weight loss or weight gain</p>

Coping with eating issues

Changes to how much you eat may make you feel anxious. You may worry about upsetting people who have prepared your food, or you may feel self-conscious about eating in public. It may also be hard to adjust to your changing relationship with food – for example, if you previously loved cooking and eating, but have now lost your appetite.

Be active every day



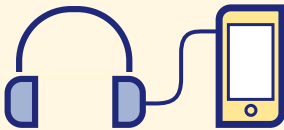
Studies show that exercising each day can help people feel better. It may also improve your appetite and help maintain a healthy weight.

Find ways to enjoy mealtimes



Take the focus off what and how much you can eat by playing music, sitting outside, lighting candles or eating with friends. This can help improve your quality of life.

Try relaxation and meditation



Relaxation and meditation exercises can help manage stress. You can use various recordings, videos, podcasts and apps to guide you through different exercises. See our *Finding Calm During Cancer* relaxation and meditation podcast.

Talk to someone



You may find it useful to talk to someone who is not a family member or friend. You could speak to a dietitian, social worker, psychologist, nurse or doctor, or call Cancer Council 13 11 20. Another option is to join a cancer support group. Cancer Council can put you in touch with others by phone, in person or online.

Fatigue

A common side effect of treatment is feeling extreme and constant tiredness. This is known as fatigue. It is different to normal tiredness because it usually doesn't improve with rest. Fatigue can be caused by treatment side effects that reduce the number of red blood cells (anaemia) or that affect your appetite.



How to manage fatigue

- Eat a wide variety of foods. See a dietitian for advice tailored to you.
- Plan ahead for when you feel too tired to cook. Buy frozen meals from the supermarket or prepare food in advance and store it in the freezer.
- Cook in the morning when you are less likely to be tired.
- Buy groceries online instead of going to the shops.
- Ask for and accept offers of help with shopping and cooking from others.
- Use apps such as CanDo (candoapp.com.au) to coordinate offers of help.
- Keep snacks such as wholefood muesli bars, dried fruit, nuts and wholegrain crackers in handy locations, e.g. in your bag or car. This will allow you to keep your energy levels up if you have unexpected delays.
- See pages 50–52 for light meal and snack ideas.
- Use home delivery meal companies or services that bring pre-prepared food to you. Or try companies that deliver ingredients with recipes that you can cook at home yourself.
- Do regular exercise to help improve fatigue and appetite (see pages 15–16).
- Eat with others to make meals as enjoyable as possible, particularly if you are feeling too tired to eat.
- ▶ Listen to our podcast episode on cancer fatigue and see our *Fatigue and Cancer* fact sheet.

Lowered immunity

Cancer and some treatments (such as chemotherapy and stem cell transplants) can reduce your white blood cell level, making it harder for your body to fight infections. If this happens, you will need to take care preparing and storing food because you are more likely to get foodborne illnesses.

Making safer food choices

Food type	Safe action	Precautions to take
chicken	<ul style="list-style-type: none"> • cook thoroughly • thaw in refrigerator or microwave and cook immediately 	<ul style="list-style-type: none"> • refrigerate leftover cooked chicken immediately – don't let it cool on the benchtop • eat within 24 hours; reheat until steaming hot • don't refreeze raw chicken after defrosting • don't buy ready-to-eat chicken
meat	<ul style="list-style-type: none"> • cook thoroughly • thaw in refrigerator or microwave 	<ul style="list-style-type: none"> • refrigerate leftover cooked meat immediately – don't let it cool on the benchtop • eat within 24 hours; reheat until steaming hot • don't refreeze raw meat after defrosting
seafood	<ul style="list-style-type: none"> • cook thoroughly • buy fresh seafood 	<ul style="list-style-type: none"> • refrigerate leftover seafood immediately, and eat within 24 hours • avoid raw seafood (e.g. oysters, sushi) and ready-to-eat peeled prawns • don't buy ready-to-eat smoked seafood
cold meats	<ul style="list-style-type: none"> • store home-cooked cold meats in fridge 	<ul style="list-style-type: none"> • avoid ready-to-eat cold meats from the deli counter and packaged, sliced ready-to-eat cold meats
sandwiches	<ul style="list-style-type: none"> • eat freshly made 	<ul style="list-style-type: none"> • avoid pre-made sandwiches

General precautions

- Wash your hands and knives, cutting boards and food preparation areas thoroughly with hot soapy water before and after cooking.
- Take extra care when eating out. Where possible, ask for meals to be made fresh and avoid pre-prepared foods that have been sitting for unknown periods of time.

Food type	Safe action	Precautions to take
salad, fruit and vegetables	<ul style="list-style-type: none"> • wash thoroughly before preparing 	<ul style="list-style-type: none"> • refrigerate leftovers immediately, and eat within 24 hours • avoid ready-to-eat or pre-packaged deli salads (including pre-cut fruit salads and roast vegetables) • pick unblemished fruit and vegetables
eggs	<ul style="list-style-type: none"> • keep uncracked, clean eggs in fridge • cook until yolks and whites are solid 	<ul style="list-style-type: none"> • avoid cracked, dirty and raw eggs • avoid food containing raw eggs (e.g. homemade mayonnaise, raw cake mix and biscuit dough)
cheese and other dairy products	<ul style="list-style-type: none"> • eat hard or processed cheese • store cheese and pasteurised dairy products in fridge 	<ul style="list-style-type: none"> • avoid soft, semisoft and surface-ripened cheeses (e.g. camembert, brie, ricotta, feta, blue) • avoid unpasteurised dairy products
packaged food	<ul style="list-style-type: none"> • eat within use-by dates 	<ul style="list-style-type: none"> • store unused perishable food in fridge in clean, sealed containers, and use within 24 hours of opening
ice-cream	<ul style="list-style-type: none"> • keep frozen 	<ul style="list-style-type: none"> • avoid soft serve ice-cream

Loss of appetite

Not feeling like eating is known as loss of appetite. This may happen because of the side effects of cancer itself or the treatment, such as feeling sick, not enjoying the smell of food, or worrying about the diagnosis and treatment. Loss of appetite can contribute to weight loss (see pages 37–40) and malnutrition (see pages 42–43). It is important to keep trying to eat so you can maintain your weight and meet your nutrition needs.



How to manage loss of appetite

- Eat small meals every 2–3 hours during the day, and keep to a regular eating pattern rather than waiting until you're hungry.
- Follow your appetite. It's okay to eat what you feel like, when you feel like it, e.g. have cereal for dinner or a main meal at lunchtime. Putting on or maintaining your weight is the main focus at the moment.
- Exercise before a meal. Gentle physical activity can make you feel hungry, e.g. take a short walk around the block.
- Use a smaller plate. A big plate of food may put you off eating.
- Add extra energy to your food with butter, cream, cheese and sour cream. See page 40 for more tips.
- Choose fluids that are high in kilojoules and protein, such as milk, milkshakes, smoothies or creamy soup. These may be easier to manage than a meal.
- Make mealtimes more enjoyable by setting the table, playing music or eating with someone.
- Manage side effects that may be affecting your appetite – see this chapter for tips on coping with loss of smell and taste, dry mouth, mouth sores, nausea and vomiting, and fatigue.

Reflux (indigestion, heartburn)

Some cancers, treatments and medicines can cause stomach contents to come back up into the oesophagus (food pipe). This is known as reflux, and it can irritate the lining of the oesophagus. Reflux can lead to a burning feeling in the upper chest, oesophagus and/or throat. This sensation is called indigestion or heartburn. Eating certain foods (see below) or lying down after eating can make heartburn worse.

Heartburn may make you feel too uncomfortable to eat much, which could lead to weight loss. Keeping a diary of the foods you eat and your symptoms can help you identify which foods trigger the heartburn. If the tips below don't relieve heartburn, let your doctor know. They may be able to prescribe medicines to help.



How to manage reflux

- Avoid large meals; try to eat three small meals and three snacks throughout the day.
- Eat slowly and enjoy your meal. Avoid wearing tight clothing (especially belts) while eating.
- Sip fluids between meals, rather than drinking large amounts at mealtimes.
- Limit or avoid foods that may make heartburn worse – very spicy foods, high-fat foods (e.g. fried food, pastries, cream), acidic foods including tomato and tomato products, citrus fruits, vinegar, chocolate, coffee (including decaf), strong tea, soft drinks and alcohol.
- After eating, sit upright for at least 30 minutes and avoid lying down or activities that involve bending over (e.g. gardening).
- Sleep with the head of the bed lifted by 15–20 cm. Put blocks under the front bed legs or use a wedge under the mattress.

Changes in taste or smell

Some treatments can affect the taste and smell of foods. Chemotherapy and targeted therapy drugs can change the taste receptors in the mouth. Radiation therapy or surgery to the head, neck and mouth area can damage the salivary glands and tastebuds on the tongue. Food may taste bitter or metallic, or may not have as much flavour as before.

It's common to have changes in taste during treatment and for a short time afterwards. People with cancer often say, "All food tastes the same", "Food tastes like cardboard", "Food tastes metallic", or "I no longer like the taste of my favourite food". It may take several months for your sense of taste to return to normal. In some cases, taste changes may be permanent.

Some people find that even the taste of water is a problem. This can make it challenging to get through the recommended amount of water each day and to swallow medicines with water. Adding lemon, lime, fruit juice, cordial or fresh mint to water may make it easier to drink.

A sore mouth, sore throat or swallowing difficulties can make it hard to eat. Talk to your doctor, speech pathologist, dentist or dietitian – some of the suggestions listed on the opposite page may not be suitable.

► See our *Understanding Taste and Smell Changes* fact sheet.

“During treatment, I developed an active sense of smell. I hated certain smells and did all I could to avoid them. My mouth felt very dry, which made food taste unappetising. Adding extra sauce helped.” HELEN



How to manage changes in taste or smell

Taste changes

- Add extra flavour to meals (e.g. fresh herbs, spices, lemon, lime, ginger, garlic, soy sauce, honey, chilli, pepper, Worcestershire sauce or pickles).
- Keep trying different foods, as your tastes may change. You may not like bitter drinks (e.g. tea, coffee, beer, wine) or sweet foods (e.g. chocolate), even if you liked them before treatment. It is common to prefer savoury foods after treatment.
- If meat tastes unpleasant during treatment, replace it with other protein sources (e.g. cheese, eggs, nuts, dairy foods, seafood, baked beans, lentils, chickpeas).
- Add a little sugar to food if it tastes bitter or salty.
- Serve food hot or warm.
- Use bamboo cutlery if metal spoons, forks and knives taste metallic.
- Drink through a paper or silicone straw so the taste isn't as strong. Metal straws may add a metallic taste.

Smell changes

- Eat cold food or food at room temperature – hot food smells stronger.
- Consider not eating your favourite foods when having chemotherapy. Some people find afterwards that they cannot tolerate the smell of foods associated with their treatment.
- Avoid using large amounts of strong-smelling ingredients (e.g. garlic, onion, spices).
- If cooking smells bother you, ask others to cook, then stay out of the kitchen when food is being prepared.
- Turn on the exhaust fan, open a window and cover pots with lids to help reduce cooking smells, or cook outside on the barbecue.
- Avoid eating in stuffy or overly warm rooms. Have meals outside.
- Take good care of your mouth (see the next page), as a bad or bitter taste in the mouth can make things smell unpleasant.

Dry mouth

Radiation therapy to the head or neck area and surgery that affects the salivary glands can reduce the amount of saliva in your mouth, make your mouth dry or make your saliva thick and sticky. This is known as xerostomia. Without enough saliva, bacteria can grow too quickly and may cause oral thrush, which will make eating and swallowing more difficult. A dry mouth can also make it harder to keep your teeth and mouth clean, which can increase the risk of tooth decay.



How to relieve a dry mouth

- Rinse your mouth often. Ask your doctor or nurse what type of alcohol-free mouthwash to use and how often to use it. They may give you an easy recipe for a homemade mouthwash.
 - Brush your teeth with a soft toothbrush.
 - Ask your dentist or health care team what oral (mouth) lubricants or saliva substitutes to use.
 - Avoid foods that may sting your mouth, such as crunchy or dry foods (e.g. chips, nuts, toast, dry biscuits), and salty or spicy foods.
 - Soften food by dipping it into milk, soup, tea or coffee, or moisten it with sauce, gravy, cream, custard, etc. See pages 30–31 for more ways to adjust the texture of food.
 - Sip fluids during meals and throughout the day.
 - Avoid smoking and limit alcohol and coffee as they remove fluids from the body.
 - Chew sugar-free gum to stimulate the flow of saliva.
 - Suck on ice cubes or frozen grapes or rub the inside of your mouth with a small amount of grapeseed oil, coconut oil or olive oil to moisten your mouth.
 - Use a moisturising lip balm to keep your lips moist.
- See our *Mouth Health and Cancer Treatment* fact sheet.

Chewing and swallowing problems

Chewing and swallowing involve your lips, teeth, tongue and the muscles in your mouth, jaw and throat working together. Surgery to the jaw, mouth or throat areas can cause swallowing difficulties. Radiation therapy can also make chewing and swallowing hard. These changes are usually temporary, but can sometimes be permanent.

Problems chewing – People with dentures who lose weight may find their teeth become loose. Treatment for head and neck cancer sometimes involves removing teeth. Both of these things can make it hard to chew.

Difficulty swallowing – If you're having difficulty swallowing (dysphagia), you may need to change the consistency of food by chopping, mincing, pureeing or thickening it (see table on the next two pages). Signs that the texture of food is causing problems include taking longer to chew and swallow; coughing or choking while eating or drinking; feeling like food or drink is going down the wrong way; food sticking in your mouth or throat like a ball; or throat clearing after meals. A speech pathologist can assess how your swallowing is working, and a dietitian can suggest ways to make sure you are getting enough nutritious food (see pages 56–57).

Feeding tubes – Severe swallowing problems can make it hard to eat and drink. You may need a feeding tube until swallowing gets easier. This will help you meet your nutrition needs. A feeding tube is rare for most people with cancer, but is more of a possibility with cancers affecting the head and neck, stomach, oesophagus or lung. If a feeding tube is required, your treatment team will discuss this with you.

► See our *Understanding Head and Neck Cancers* or *Understanding Stomach and Oesophageal Cancers* booklets.

Ways to change the texture of foods

If you need to adjust the texture of your food, this sample menu provides some ideas. See a speech pathologist and dietitian for other options. You can also try some of the meal and snack suggestions on pages 50–52. Check with your dietitian if you have

Food texture	Breakfast	Lunch
<p>Soft and bite-sized Food can be chewed but not necessarily bitten. It should be easily broken up with a fork and need little cutting. Sauce or gravy can be added to make it softer.</p>	<ul style="list-style-type: none"> • scrambled or poached eggs • soft chopped fruit and yoghurt • oats or cereal softened with milk or yoghurt 	<ul style="list-style-type: none"> • boiled and mashed egg mixed with tinned tuna and store-bought mayonnaise (avoid homemade mayonnaise) • baked beans
<p>Minced and moist Food should be soft and moist and easily form into a ball in the mouth. Small lumps can be mashed up with the tongue rather than by biting or chewing.</p>	<ul style="list-style-type: none"> • oatmeal porridge or wheat biscuits with lots of milk and little texture • well-cooked rice pudding • congee (rice porridge) with little texture 	<ul style="list-style-type: none"> • soup with well-cooked vegetables or meat pieces (no bigger than 4 mm) • well-cooked lentil dhal with very soft rice
<p>Pureed The texture of pureed food means it can be moulded, layered or piped to make it look more appealing. You can add sauce or extra liquid if you prefer.</p>	<ul style="list-style-type: none"> • strained or pureed porridge (made with milk) • strained or pureed congee 	<ul style="list-style-type: none"> • well-cooked pasta that has been pureed in a blender with added sauce • pureed tinned tuna with store-bought mayonnaise • pureed mashed potato • pureed soup strained to remove lumps

another health condition, such as diabetes, or if you have been told you need thickened fluids, as you may not be able to have all of the foods suggested here or you may need to modify them. For more information on food textures, see iddsi.org.

Dinner	Snacks, dessert and drinks	Avoid
<ul style="list-style-type: none"> • casserole with small pieces of tender meat and well-cooked vegetables • well-cooked rice or wheat noodles (not fried) with boiled vegetables and crumbled soft tofu or tender meat 	<ul style="list-style-type: none"> • mango • stewed fruit pieces • yoghurt with soft fruit pieces • soft cake with lots of custard • fruit smoothie 	<ul style="list-style-type: none"> • nuts • dried fruit • dry or gristly meat • raw vegetables • muesli • hard cheeses (unless melted) • hard crackers, crisps • bread, sandwiches
<ul style="list-style-type: none"> • moist macaroni cheese • mashed or scrambled tofu with small, soft vegetable pieces (no bigger than 4 mm) • moist risotto 	<ul style="list-style-type: none"> • mashed banana • steamed egg pudding • soft cheesecake without the crust • semolina pudding • creamed rice • milkshake • milk or soy milk 	<ul style="list-style-type: none"> • nuts • hard vegetables • all bread and crackers • dried food • lollies (jubes, marshmallows)
<ul style="list-style-type: none"> • pureed chicken blended with extra gravy or sauce and pureed noodles • pureed lentil dhal or curry and pureed rice 	<ul style="list-style-type: none"> • pureed pear or apple pushed through a sieve • yoghurt with no fruit pieces or lumps • ice-cream • mousse • milk or soy milk 	<ul style="list-style-type: none"> • meat • eggs • cereals or vegetables that have not been pureed in a blender • peanut butter

Mouth sores

Chemotherapy and radiation therapy can damage the cells lining the mouth and digestive tract, leading to ulcers and infections. This is known as oral mucositis. A sore can form on any soft tissue in your mouth, and make it painful to eat and swallow.

Your doctor can give you medicines to reduce pain and discomfort when you eat or drink. Some medicines can be applied directly to the mouth sores to numb them.

To reduce discomfort, eat softer foods. You may need to avoid hot, cold, salty, spicy or acidic foods and drinks. Mucositis usually gets better a few weeks or months after treatment ends.

Nausea and vomiting

Nausea is feeling sick and vomiting is throwing up. It's common to have them together. Radiation therapy, chemotherapy, other medicines and the cancer itself can cause nausea and vomiting. If you have chemotherapy, you will be given anti-nausea medicine with your treatment and to take at home afterwards. In many cases, this will prevent severe nausea and vomiting, but some people do still feel sick and may vomit. It's important to take anti-nausea medicine as directed to help prevent nausea from occurring – don't wait until you feel sick.

Nausea and vomiting can also be triggered by stress, food smells, gas in the stomach or bowel, motion sickness or even the thought of having treatment. After a person has had a few treatment sessions, they may link certain sights, sounds or smells with treatment and feel nauseated when they experience them. This is known as anticipatory nausea or vomiting, and it is more common in people having chemotherapy.



How to cope with nausea and vomiting

Nausea

- Have a light snack before chemotherapy, and don't eat for a few hours after.
- Eat small meals every 2–3 hours. Going without food for long periods can make nausea worse.
- Choose dry or bland snacks, e.g. crackers, toast, dry cereals, bread sticks or pretzels.
- Have cold foods or foods at room temperature as they have less aroma.
- Drink fluids all day to avoid becoming dehydrated.
- Try drinks and foods with ginger, e.g. ginger tea, non-alcoholic ginger beer, ginger biscuits.
- Avoid foods that are too sweet, fatty, fried or spicy, or that have strong smells.
- Brush teeth regularly to help reduce tastes that may make you feel nauseated.
- Don't eat your favourite food when feeling nauseated as you may develop a permanent dislike.

Vomiting

- Take sips of fluids as often as possible, e.g. flat dry ginger ale, cold flat lemonade, weak cordial, or cold apple juice. Oral rehydration solutions, such as Hydralyte or Gastrolyte, can help keep you hydrated.
- See your doctor if vomiting lasts for more than a day or if you can't keep fluids down, as you may become dehydrated.
- Slowly introduce more nourishing fluids once you stop vomiting, e.g. cold or iced drinks; milk or fruit drinks with added water so they are not too strong; clear broth; weak tea.
- Have small amounts of solid foods once vomiting is under control, e.g. plain dry biscuits; toast or bread; stewed fruits and yoghurt.
- Increase how much you eat until you're eating what is normal for you.
- ▶ Listen to our podcast episode on appetite loss and nausea.

Constipation

Constipation is when your bowel movements (faeces, stools or poo) are hard and difficult to pass. It can be caused by different factors including: some chemotherapy and anti-nausea drugs; strong pain medicines (opioids); eating less fibre; not moving around as much; not drinking enough (dehydration); or not eating enough.

If you have severe constipation with symptoms such as abdominal (tummy) pain and swelling, nausea and vomiting, this may be sign of a blockage in the bowel (bowel obstruction). This needs urgent medical attention (see page 47).



How to manage constipation

- Drink 8–10 glasses of fluid a day (e.g. water, herbal tea, milk-based drinks, soup, prune juice) to soften faeces.
- Eat foods high in insoluble fibre (e.g. wholegrain breads, cereals or pasta; raw and unpeeled fruits and vegetables; nuts and seeds; legumes and pulses).
- If you add foods with more insoluble fibre to your diet, drink more fluids to avoid the extra fibre making constipation worse.
- Ask your doctor about using a laxative, stool softener and/or fibre supplement.
- Plan to do some physical activity every day. Ask your doctor, exercise physiologist or physiotherapist about the amount and type of exercise that is right for you.
- Visit your doctor if you see blood in your faeces. They'll check for haemorrhoids or any other issues.
- If you have had surgery for bowel cancer and have a stoma, see pages 44–45, and ask your health care team for specific dietary advice. They may suggest eating more low-fibre foods to avoid constipation.

Diarrhoea

Diarrhoea is when you have loose, watery bowel movements several times a day. You may also get cramping and pain, and have an urgent need to go to the toilet. Chemotherapy, radiation therapy to the abdomen (belly) or pelvis, some types of surgery (e.g. bowel), medicines, infections, reactions to certain foods, and anxiety can all cause diarrhoea. If the tips below don't help improve diarrhoea, ask your doctor about anti-diarrhoea medicines and rest until you feel better.

For support managing constipation and diarrhoea, call the National Continence Helpline on 1800 33 00 66 or visit continence.org.au.



How to manage diarrhoea

- Drink plenty of water and other fluids such as diluted cordials and oral rehydration solutions (e.g. Gastrolyte) to prevent dehydration. Avoid high-sugar drinks, alcohol, strong caffeine or very hot fluids.
- Watch for signs of dehydration such as dark yellow urine (pee) or urinating less than usual.
- Choose foods that are low in insoluble fibre (e.g. bananas, mashed potato, white rice, white pasta, white bread, steamed chicken without skin, white fish). It may also help to eat foods that are high in soluble fibre (e.g. oats, barley, rye, legumes, peeled fruits and vegetables, avocado, soy products).
- Avoid foods that are high in insoluble fibre (e.g. wholegrain breads, bran cereals, nuts and seeds, raw fruit, vegetable skins) and foods that increase bowel activity (e.g. spicy, fatty or oily foods, caffeine, alcohol or artificial sweeteners).
- Switch to soy milk or lactose-free milk for a period of time. Having diarrhoea may affect your ability to digest the natural sugar in milk (lactose).

Dumping syndrome

This is a group of symptoms that develops when food moves too quickly from the stomach into the small bowel. You may have cramps, nausea, racing heart, sweating, bloating, diarrhoea or dizziness.

Dumping syndrome can develop after surgery to remove part or all of the stomach (for example, gastrectomy).

The symptoms can vary depending on what you eat. Foods and drinks high in sugar such as soft drinks, juices and cordial can make dumping syndrome worse. Symptoms may begin 15–30 minutes after eating, or sometimes after several hours. They often improve over time. Your treatment team can suggest changes to what you eat and medicines to help manage dumping syndrome.

► See our *Understanding Stomach and Oesophageal Cancers* booklet.

Other types of bowel irritation

Some chemotherapy drugs, stem cell transplants and radiation therapy to the pelvic area can make the bowel swollen and sore. This is called colitis when it affects the colon (the large bowel), and proctitis when it affects only the rectum (the last part of the bowel before the anus). You may feel the need to empty your bowels often, perhaps without much result. Straining can cause discomfort, and there may be blood or mucus in your bowel movements. Diarrhoea, nausea and vomiting are also common, but can be managed with medicines.

The small bowel may become irritated after chemotherapy or radiation therapy to the abdomen or pelvic area. This is known as enteritis and it can cause discomfort in the abdomen (like cramps or wind pain), pale and runny bowel movements, and more wind than usual.



How to manage bowel irritation

- Eat and drink slowly, take small mouthfuls and chew your food well to avoid swallowing air.
- Have foods low in insoluble fibre (see page 35) to reduce bowel irritation in the short term. Include foods high in soluble fibre to “soak up” additional liquid in your bowel.
- Avoid fatty, spicy or fried foods, and rich gravies and sauces.
- Reduce foods such as corn, beans, cabbage, onions, pickles and fizzy drinks, which can produce wind.
- Drink plenty of water, and eat soft or cooked peeled fruit, fine wholemeal bread and bran to provide soft bulk. You may be encouraged to take an oral rehydration solution, such as Hydralyte or Gastrolyte, to keep hydrated.
- Do some gentle exercise, such as walking, to encourage more regular bowel movements.
- Tell your doctor if symptoms don’t improve. Bowel irritation is usually temporary, with colitis and proctitis lasting up to 8 weeks and enteritis lasting 1–2 weeks after treatment ends.

Weight loss

It’s common for people diagnosed with cancer to lose weight. This is because the process of cancer cells dividing uses up a lot of energy, and treatment side effects can change your desire to eat (loss of appetite, see page 24), or make eating difficult or painful.

Weight loss may depend on the type of cancer you have. Losing weight without trying is a sign of malnutrition (see pages 42–43). Advanced cancer may mean the way the body absorbs food changes. This is

known as cachexia (see pages 47–48). With the support of your cancer care team you can prevent or slow down weight loss.

Maintaining your weight, particularly your muscle stores, will help you stay strong and recover faster. If the tips on the opposite page don't help, talk to your dietitian about nutritional supplement drinks (see below) or having a feeding tube.

You and your family and friends may be concerned that the suggestions on the opposite page are high in energy and protein. During treatment when you don't feel well enough to eat, just eating something is more important than making healthy food choices. Keep in mind that these changes are often temporary – you can return to the usual guidelines for healthy eating (see pages 6–7) once you have recovered from treatment.

Nutritional supplements

If you cannot eat a balanced diet, or are losing weight without trying, your doctor or dietitian may suggest nutritional supplements such as Sustagen, Ensure, Fortisip or Resource. These are high in energy and protein, and provide nutrients that can help maintain your strength.

Nutritional supplements are available as:

- powders to mix with milk or water, or sprinkle on food
- ready-made drinks, puddings, custards and jellies.

They can be used as snacks between meals, or some can be added to drinks or meals.

A dietitian can recommend the right nutritional supplement for you. If you are having difficulty swallowing, talk to a speech pathologist for directions on thickening the supplements.

Many pharmacies and supermarkets sell nutritional supplements. While you don't need a prescription for many supplements, a prescription may make them cheaper to buy.



How to manage weight loss

- Treat food like medicine: something your body needs regularly to feel better.
- Set times for meals and snacks rather than waiting until you're hungry.
- Have your biggest meal when you're hungriest and not too tired.
- Eat your favourite foods at any time of day.
- Carry snacks so you can eat any time you feel like it. Try hard-boiled eggs, muesli bars, dried fruit and nuts, crackers and fruit buns.
- Choose drinks and snacks that are higher in protein and energy (kilojoules), e.g. drink full-cream milk rather than water and choose cheese and biscuits over lollies.
- Add high-protein foods, e.g. poultry, fish, meat, eggs, tofu, dairy, nuts, seeds and legumes, to every meal or snack.
- Add fats and oils (kilojoules) to what you are already eating, e.g. use extra butter, avocado, nut butters, cheese, extra virgin olive oil and cream. Avoid food and drinks labelled low-fat or no fat.
- Have dessert after meals.
- Do some gentle exercise, e.g. a walk before meals to increase your appetite.
- Make enriched milk to use in tea and coffee, cereal, soups, sauces, scrambled eggs, milkshakes and smoothies. Add 4 or more heaped tablespoons of milk protein to 1 litre of full-cream milk and mix thoroughly. Use straightaway, or keep refrigerated and use within 24 hours (stir before use).
- Stock up on ready-to-use nutritional supplement drinks when you are travelling or on other occasions when it is difficult to prepare a meal. See opposite page for more information on nutritional supplements.
- See next page for more suggestions on ways to add energy and protein to your meals and snacks.

Ways to add energy and protein

Add these ingredients	to these meals and snacks
full-cream cow's milk, cream, coconut milk or soy milk (liquid or powdered versions)	porridge, sauces, desserts, mashed vegetables, egg dishes, cream soups, scrambled eggs, congee, milkshakes, flavoured milk drinks (e.g. Milo, Akta-Vite)
yoghurt or sour cream	dips, salad dressings, fruit, potatoes, roast vegetables, soups, rice dishes, lentil dhal
butter, margarine or olive oil	bread, toast, mashed potato, cooked vegetables, rice and pasta dishes, soup
cheese (e.g. cheddar, cream cheese, feta, haloumi)	scrambled eggs, sauces, soups, baked potatoes, vegetables, casseroles, salads, toast, sandwich fillings, pasta, crackers, tacos, sauces
mayonnaise (store bought, avoid homemade)	egg or chicken sandwiches, potato salad, coleslaw, salad dressing, tinned tuna
peanut butter, other nut butters	bread, toast, porridge, crackers, pancakes, scones, fruit, smoothies
avocado	toast, sandwich fillings, dips, salads, crackers, smoothies
nuts and seeds, e.g. LSA (linseed, sunflower seeds and almonds), almond meal, hemp seeds, chia seeds	porridge, muesli, yoghurt, salads, baked goods, stir-fries, desserts
beans or legumes	rice dishes, toast toppings, salads, pasta dishes, soups, casseroles, mince dishes
egg or tofu	toast, sandwich fillings, stir-fries, mashed potato, soups, pasta sauce, salads

Weight gain

Although it is more common to lose weight during treatment, some people put on weight. This is more likely to happen with certain types of cancer such as breast cancer.

Weight gain can happen as a side effect of treatment and/or medicines:

- Some chemotherapy drugs can cause your body to retain extra fluid in cells and tissues. This is called oedema, and it can cause weight gain and make you feel and look puffy. If chemotherapy makes you feel nauseated, you may find snacking helps but means you eat more.
- Hormone therapy lowers the amount of hormones in the body, which slows your metabolism.
- Steroid therapy (corticosteroids) can cause a larger abdomen, fluid retention (oedema), and a rounded, puffy face. Steroids can also increase your appetite, which may mean you eat more and put on weight.

Feeling stressed or depressed can also make some people eat differently, and being tired because of the treatment may make it harder to exercise.

If you put on weight during treatment and are concerned, speak to your doctor or dietitian about how to best manage it. It is important that your body gets enough nutrition, so do not try a weight loss diet without guidance from a health professional.



Other nutrition concerns

Some nutritional issues need extra care. Speak to your doctor or a dietitian for help managing these issues.

Malnutrition

When you eat foods with less energy and protein than your body needs over a period of time or you lose weight without trying, you may become malnourished. This can occur before, during or after treatment.

Factors that increase the risk of malnutrition include:

- surgery for head and neck, lung and gastrointestinal cancers, which may make it hard to swallow and digest food
- increased nutritional needs caused by cancer and treatments such as chemotherapy, radiation therapy and surgery
- symptoms or side effects of treatment such as loss of appetite, nausea, vomiting, dry mouth and mouth sores
- loss of nutrients through diarrhoea or vomiting
- some medicines
- anxiety, stress and fatigue.

Many of the difficulties with eating, swallowing and digestion discussed in the previous chapter can contribute to, or be symptoms of, malnutrition. Other signs of malnutrition include muscle weakness; significant weight loss; dry and brittle hair and nails; and pale or pigmented skin.

Having malnutrition can increase your risk of infection and reduce your strength, ability to function and quality of life. It can also affect

how your body responds to cancer treatment and make your recovery longer. You can become malnourished regardless of how much you weigh – it is possible to be malnourished even if you are overweight or obese. Talk to your doctor or dietitian if you think malnutrition may be an issue. It is important to do this early so you receive the right advice. They may ask you questions such as have you lost weight without trying or have you been eating poorly because of a decreased appetite.

Diabetes

Insulin is a hormone that controls the amount of sugar in the blood. A person with diabetes does not create or produce enough insulin or has a resistance to the effects of insulin. This means they need medicines to help control their blood sugar levels.

Side effects and diabetes – Some treatment side effects may make controlling blood sugar levels difficult. These include loss of appetite, nausea, fatigue, constipation and diarrhoea. If you are unable to eat enough, your blood sugar levels may drop too low.

You may need to check your blood sugar levels more often and have snacks that include a variety of carbohydrates. Choose carbohydrate foods that produce a slower rise in blood glucose levels – these are described as having a low glycaemic index (GI). You can also talk to your doctor about changing your dose of insulin or tablets.

Steroids and diabetes – Some medicines, such as steroids, can also cause high or unstable blood sugar levels in people with diabetes. How long the steroids affect your blood sugar levels will depend on the dose and type of steroid you are taking. Steroids given as creams or nasal sprays are unlikely to affect blood sugar levels.

Enzyme replacement therapy

The pancreas produces digestive enzymes to help break down food. If you have had surgery for pancreatic cancer, your body may not be able to make enough of these enzymes. This will affect your ability to digest food and is often referred to as pancreatic exocrine insufficiency.

Signs include diarrhoea, pain in the abdomen, bloating and pale, floating faeces. To help prevent these symptoms, ask your doctor or a dietitian for information on enzyme supplements.

► See our *Understanding Pancreatic Cancer* booklet.

Blood sugar levels should go back to a healthy range once you have finished your course of steroids. Talk to your doctor about how to monitor your blood sugar levels if you have diabetes and are prescribed steroids. Strategies may include taking medicines, eating well and moving more.

Pancreatic cancer and diabetes – Some people with pancreatic cancer develop diabetes before the cancer is diagnosed or after surgery to remove the pancreas. The way diabetes is managed varies from person to person, but it usually includes making changes to your diet and taking medicines including insulin.

Eating with a stoma

In some cases, after surgery for bowel cancer you may need a stoma. This may be temporary or permanent. A stoma is a surgically created opening in the abdomen that allows bowel movements (faeces, stools or poo) to leave the body. The end of the bowel is brought out through the opening and stitched onto the skin. A bag is attached to collect the faeces.

If you have a stoma, you may need to change what you eat in the first few weeks to help the stoma settle. The amount of matter coming out of the stoma (output) will vary depending on how much you eat and when you eat.



What to eat when you have a stoma

- Work with your dietitian to explore which foods cause problems for you. Different foods can affect people differently.
- Keep a diary of what you eat and how it affects you. Make a note of the foods that cause constipation or diarrhoea, gas, pain or bloating. It is better to limit – not eliminate – these foods in your diet, as you may find that what you can handle improves over time.
- When returning to your usual diet, introduce one food at a time. If something causes a problem, try it again in a few weeks to see if your response has improved.
- Share this information with your dietitian or the health care team because it can help them figure out how to manage any issues.
- Sometimes foods such as nuts, seeds and very fibrous foods can build up and block the stoma. A stoma blockage can be uncomfortable and cause a bloated feeling or nausea. If you experience symptoms of a blockage for more than two hours or you start vomiting, contact your nurse or hospital.
- If your stoma output is higher than recommended, drinking oral rehydration solutions can help replace the lost fluid. You can also ask your dietitian for information.
- ▶ See our *Understanding Bowel Cancer* booklet. The Australian Government's *Improving Bowel Function After Bowel Surgery* booklet may also be helpful. For a copy, call 1800 33 00 66 or visit continence.org.au.

Nutrition and advanced cancer

If cancer spreads from where it started to other areas of the body (secondary or metastatic cancer), problems with eating and drinking may occur or get worse. It's common for people with advanced cancer to lose their appetite. This often leads to weight loss and malnutrition (see pages 42–43). Controlling symptoms that affect your ability to eat or drink will help improve your quality of life. Soft foods and clear liquids may be easier to digest. It's okay to focus on eating foods you enjoy.

► See our *Living with Advanced Cancer* booklet.

Nausea and vomiting

Many people with advanced cancer have problems with ongoing nausea and vomiting. Nausea and vomiting may be caused by pain medicines, cancer growth, blockage in the bowel (see opposite page), slower digestion, or high calcium levels in the blood (hypercalcaemia). Feeling tired or anxious may make the nausea worse.

The suggestions on pages 32–33 may help reduce nausea and vomiting. Ask your doctor about what medicines may help.

Mouth problems

People with advanced cancer may have a dry mouth or a sore mouth and throat. These problems may be caused by drinking less or by some types of treatment. See page 28 for ways to ease a dry mouth. If chewing and swallowing become difficult, it may be necessary to change the texture of your food (see pages 30–31).

Blockage in the bowel

Cancer, surgery or changes to digestion in or near the abdomen sometimes cause the bowel to become blocked (bowel obstruction).

This can also happen if the cancer comes back. Because faeces (stools or poo) cannot pass through the bowel easily, you may have symptoms such as nausea (feeling sick), vomiting, constipation or abdominal discomfort and pain.

To relieve symptoms of a bowel obstruction, you may be given medicines including laxatives and enemas, or have a small tube (stent) put in that helps keep the bowel open. The stent is inserted through the rectum using a flexible tube called an endoscope.

Cachexia

People with advanced solid tumours (e.g. cancer of the lung, pancreas, oesophagus, stomach, liver and bowel) may develop a muscle-wasting syndrome known as cachexia. This means the way the body uses protein, carbohydrates and fats changes, and it can burn up energy faster. Symptoms include:

- loss of weight, including loss of fat and muscle mass
- feeling sick (nausea)
- feeling full after eating small amounts
- anaemia (low numbers of red blood cells)
- weakness and fatigue
- inflammation in the body (shown on a blood test).

Your doctor or dietitian will discuss the best way to manage cachexia. They may suggest eating more foods high in energy, fat and protein, and taking nutritional supplements (see page 38), or medicines such as appetite stimulants.

If you continue to have problems maintaining your nutrition, your treatment team may recommend feeding through a tube in the nose (nasogastric or NG tube) or stomach (often known as a PEG or RIG tube). However, each person is different and, depending on your situation, tube feeding may or may not be recommended. Your treatment team will give you more information.

Use of medicinal cannabis

Medicinal cannabis refers to a range of prescribed products that contain the two main active ingredients, delta-9-tetrahydrocannabinol (THC) and cannabidiol (CBD). THC and CBD are cannabinoids. Other types of cannabinoids include cannabis, which is also known as marijuana, weed and pot.

Cannabinoids are chemicals that act on certain receptors found on cells in our body, including cells in the central nervous system.

There is no evidence that medicinal cannabis can treat cancer.

There is some evidence that cannabinoids can help people who have found conventional ways to treat symptoms and side effects unsuccessful, e.g. chemotherapy-induced nausea and vomiting.

To date, published studies have shown medicinal cannabis to have little effect on appetite and weight.

Cannabis is an illegal substance in Australia. However, the Australian Government allows seriously ill people to access medicinal cannabis for medical reasons.

The Therapeutic Goods Administration's Special Access Scheme allows eligible medical practitioners to apply to import and supply medicinal cannabis products. The laws about access to medicinal cannabis vary between states and territories. These may affect whether you can be prescribed this substance where you live.

To find out more, visit tga.gov.au/medicinal-cannabis.

Meal and snack ideas

When you feel too tired or unwell to shop for food or cook, or if you're missing meals while having treatment, the quick meal and snack ideas in this chapter may help.

Some may not seem like healthy choices, but if you have a poor appetite it's important to focus on high-protein and high-kilojoule food and fluids to ensure your body gets all the energy it needs. You can return to the healthy eating guidelines (see pages 6–7) when your appetite improves.

Avoid foods that might make any treatment-related side effects worse (e.g. if you have a sore throat, do not eat dry, coarse snacks or acidic foods). If you have another health condition, such as diabetes (see pages 43–44), the suggestions in this chapter may not be suitable.

Check with your doctor or a dietitian before changing what you eat and drink while having cancer treatment.

Where to find recipes online

- *From Treatment to Table* is a collection of recipes for people with head and neck cancer. If you have trouble swallowing, the recipe book *Beyond the Blender* may help. Visit headandneckcancer.org.au and search for recipe books.
 - For culturally relevant recipes for Chinese and Greek communities, visit cancer.org.au and search for culturally diverse recipes (developed by the University of Tasmania's Centre for Rural Health).
 - For healthy recipe ideas, visit livelighter.com.au.
-

Light meal and drink ideas

- baked beans on toast with grated cheese
- crumpets or muffins toasted with cheese, and a piece of fruit
- scrambled or poached egg on toast and a glass of orange juice
- tuna or sardines on buttered toast with fresh tomato
- omelette with cheese or mushrooms and buttered bread
- toast with cheese, avocado or peanut butter, followed by sliced banana and yoghurt
- cereal or toasted muesli with full-cream milk and yoghurt
- porridge or rice pudding made with milk and cream
- congee
- pancakes or French toast with fruit and maple syrup

Nourishing drinks

These drinks are high in protein, energy, vitamins and minerals:

- enriched milk (see page 39) mixed with Akta-Vite, Milo or Horlicks
- milkshake
- banana smoothie
- mango lassi (see recipe)
- hot chocolate
- flavoured milk
- apricot lemon crush (see recipe)



Apricot lemon crush

- 410 g can apricot halves in natural juice
- 1 cup natural yoghurt
- juice of 1 lemon
- 1 tbsp honey
- 2 tbsp wheatgerm
- crushed ice

Place all ingredients in a blender and blend until smooth.

Mango lassi

- 1 cup canned mango in natural juice
- 1 heaped tbsp milk powder or powdered nutritional supplement
- 1 tsp honey
- ½ cup natural yoghurt
- 3 ice cubes

Place all ingredients in a blender and blend until smooth.

Main meal ideas

- fresh or frozen fish with chips and salad
- grilled lamb cutlets, mashed potato with margarine or butter, and peas and carrots
- pasta with a ready-made sauce, e.g. pesto or bolognaise, and cheese
- cheesy vegetable bake (see recipe opposite)
- lentil dhal with chapatis or rice
- green or red chicken or vegetable curry with basmati rice
- salmon, tuna or egg with store-bought mayonnaise, salad and buttered bread roll
- frozen or fresh lasagne or moussaka
- frittata or quiche
- salmon or tofu with soba noodles
- occasional takeaway such as noodles, stir-fry, curry and rice, hamburgers or pizza (ensure the food is freshly cooked)
- refrigerated leftover food from the previous day – reheat till steaming
- microwave potato with baked beans and cheese
- egg, tempeh and cooked vegetables with gado gado (peanut) dressing
- wrap with falafel, hummus and salad



Cheesy vegetable bake

- oil, for greasing dish
- 400 g sweet potato or pumpkin*, peeled and thinly sliced
- 1 parsnip and 1 carrot, peeled and thinly sliced
- 4 potatoes, peeled and thinly sliced
- ½ cup thickened cream
- ½ cup cheddar cheese, grated

Preheat oven to 180°C.

Brush a medium ovenproof dish with oil. Layer the vegetables in the prepared dish. Drizzle each layer with a small amount of cream. Top with the remaining cream and sprinkle with cheese.

Bake for 1 hour or until vegetables are tender and top is golden brown.

* Use whatever vegetables you have.

Snack ideas

- crackers with cheese
- pita bread with hummus
- buttered pikelets, scones, muffins, fruit buns, crumpets, finger buns or raisin toast
- celery with cream cheese or peanut butter
- hard-boiled eggs
- dried fruit and nuts
- jaffles, sandwiches and toast
 - try egg and store-bought mayonnaise, cheese, peanut butter, avocado, tinned salmon or tuna
- milk puddings, such as creamed rice, rice pudding, custard, mousse and instant puddings
- fruit (fresh, frozen or tinned) with custard, yoghurt, jelly, ice-cream, cream or condensed milk
- stewed fruit with custard or cream
- creamy soup with added cream, and buttered toast
- hot chips, chicken nuggets or fish fingers
- instant noodles with frozen vegetables
- potato crisps, pretzels or corn chips with dips, salsa or guacamole
- yoghurt or ice-cream
- frozen sausage rolls, meat pies, samosas or spring rolls



Potato and leek soup

- 1–2 tsp olive or vegetable oil
- 2 leeks, cleaned and sliced
- 1 tsp cumin seeds
- 1 kg potatoes, peeled and finely chopped
- 5 cups vegetable or chicken stock
- ½ cup cream

Heat oil in a large saucepan and cook leeks until soft. Add cumin seeds and cook for 2 minutes. Add potatoes and stock to saucepan and bring to the boil.

Reduce heat and simmer for 25–30 minutes or until potatoes are tender.

Add soup to a blender or food processor and puree until smooth. Stir in cream.

Caring for someone with cancer

If you're caring for someone with cancer, you may need to help them manage eating issues caused by the cancer and its treatment. It's natural to worry that the person you're caring for isn't eating well or is losing weight, but try to avoid tension about food, as this may only increase their anxiety and yours. They are likely to feel upset that they can't finish or eat a meal you've prepared. There are many reasons why someone may not feel like eating. You can read about different ways of coping with eating issues in the *Treatment side effects and nutrition* chapter (pages 18–41).

These tips may help you to support the person you're caring for:

- Ask them what they'd like to eat.
- Gently encourage them to eat foods that are high in kilojoules and protein when they are feeling well.
- Serve small amounts of food at a time and freeze the leftovers.
- Have ready-to-eat food available for when they feel like eating (e.g. tinned fruit, yoghurt, frozen meals).
- Keep mealtimes flexible and be willing to try new ideas or recipes (see pages 50–52 for suggestions).
- Offer their favourite foods at the times when you know their appetite is good.
- Make meals as enjoyable as possible – play music, set the table with candles and flowers.
- Take care to prepare food safely (see pages 22–23).
- Accept that during treatment the focus of the person with cancer may need to be on simply eating something, rather than on eating nutritious food all of the time.

If your child has cancer

The nutritional needs of children with cancer are different to adults, as children continue to grow and develop during treatment. The treatment team will monitor the weight and growth of your child closely during treatment.



Be flexible

Let your child eat when they feel like it, not just at mealtimes. Be flexible in what they eat, e.g. allow your child to have the same foods often or breakfast cereal for dinner if that's what they prefer.



Offer nutritious food

Try not to make an issue of your child's lack of appetite. Instead, encourage them to eat nutritious, high-kilojoule foods when they are feeling well.



Allow occasional treats

During treatment, any nourishment is better than none. Allow your child to eat fatty or sugary foods like cake, chips, chocolate and takeaway occasionally.



Eat at the table

Discourage your child from eating in front of the television or computer as it can be distracting.



Make mealtimes fun

Focus on making mealtimes as relaxed as possible and see them as an opportunity to come together to share stories and discuss any concerns. Regular family meals also give a child a sense of stability.

Looking after yourself

Being a carer can bring a sense of satisfaction, but it can also be exhausting and stressful. Trying to prepare food for someone who is having trouble eating can be especially challenging.

It is important to look after your own wellbeing, so you also need to eat well (see pages 6–7) and get some exercise (see pages 15–16). Give yourself some time out and share your concerns with somebody neutral such as a counsellor or your doctor, or call Cancer Council 13 11 20. There is a wide range of support available to help you with both the practical and emotional aspects of your caring role.

Support services – Support services such as Meals on Wheels, home help or visiting nurses can help you in your caring role. You can find local services, as well as information and resources, through the Carer Gateway. Call 1800 422 737 or visit carergateway.gov.au.

Support groups and programs – Many cancer support groups and cancer education programs are open to carers as well as to people with cancer. Support groups and programs offer the chance to share experiences and ways of coping.

Carers Australia – Carers Australia provides information and advocacy for carers. Visit carersaustralia.com.au.

Cancer Council – You can call Cancer Council 13 11 20 or visit your local Cancer Council website to find out more about carers' services.

► See our *Caring for Someone with Cancer* booklet.

Seeking support

Eating well and managing nutrition-related side effects can feel overwhelming, but there are many sources of support.

Health professionals who can help

Your GP and treatment team can answer questions about nutrition and physical activity, but the following experts can also help.

Dietitian

An accredited practising dietitian (APD) is a health professional with a four-year university degree in science, nutrition and dietetics. Using scientific evidence, they modify diets to help treat disease symptoms and to get the most out of food without the use of supplements.

Dietitians work in all public and most private hospitals. You can ask your cancer care team if they can arrange an appointment with the dietitian. Dietitians in private practice may also have their own website.

- ▶ To find an accredited practising dietitian, contact Dietitians Australia on 1800 812 942 or visit dietitiansaustralia.org.au.

Nutritionist

The term nutritionist refers to both qualified nutrition scientists and naturopathic nutritionists. Some dietitians call themselves nutritionists.

Nutritionists working in the natural health industry should have at least a diploma of nutrition, or equivalent, from a university or naturopathic college. For nutrition advice specific to cancer or another disease or condition, speak to an accredited practising dietitian.

Speech pathologist

A speech pathologist is a health professional who diagnoses and treats people having difficulties with speech, language, fluency and voice. Speech pathologists also help people who have problems swallowing food and drinks. They need a university degree and may work in hospitals or in the community.

- ▶ To find a speech pathologist, contact Speech Pathology Australia on 1300 368 835 (outside Victoria), 9642 4899 (Victoria only) or visit speechpathologyaustralia.org.au.

Exercise professionals

Physical activity is also important in managing your health and wellbeing. The most appropriate health professionals to design an exercise program for people with cancer are exercise physiologists and physiotherapists. Both have completed a four-year university degree. They can help develop a program based on what you can do and any physical side effects related to the type of cancer you have.

- ▶ You can search for an accredited exercise physiologist (AEP) at Exercise & Sports Science Australia's website at essa.org.au/find-aep, or for a physiotherapist at the Australian Physiotherapy Association's website at choose.physio/find-a-physio.

Chronic Disease Management Plan

If you are referred to a dietitian, speech pathologist, exercise physiologist or physiotherapist as part of a Chronic Disease Management Plan, you may be eligible for a Medicare rebate for

up to 5 visits per calendar year. Most private health insurers provide a rebate depending on the type and level of cover. For more information, visit health.gov.au and search for chronic disease management.

Support from Cancer Council

Cancer Council offers a range of services to support people affected by cancer, their families and friends. Services may vary by location.

Cancer Council 13 11 20



Our experienced health professionals will answer any questions you have about your situation and link you to local services (see inside back cover).

Information resources



Cancer Council produces booklets and fact sheets on more than 25 types of cancer, as well as treatments, emotional and practical issues, and recovery. Call 13 11 20 or visit your local Cancer Council website.

Legal and financial support



If you need advice on legal or financial issues, we can refer you to qualified professionals. These services are free for people who can't afford to pay. Financial assistance may also be available. Call Cancer Council 13 11 20 to ask if you are eligible.

Practical help



Cancer Council can help you find services or offer guidance to manage the practical impacts of cancer. This may include helping you access accommodation and transport services.

Peer support services



You might find it helpful to share your thoughts and experiences with other people affected by cancer. Cancer Council can link you with individuals or support groups by phone, in person, or online. Call 13 11 20 or visit cancercouncil.com.au/OC.

Useful websites

You can find many useful resources online, but not all websites are reliable. These websites are good sources of support and information.

Australian

Cancer Council Australia	cancer.org.au
Cancer Council Online Community	cancercouncil.com.au/OC
Cancer Council podcasts	cancercouncil.com.au/podcasts
Guides to Best Cancer Care	cancer.org.au/cancercareguides
Healthdirect Australia	healthdirect.gov.au
Australian Dietary Guidelines	eatforhealth.gov.au
Australian Physiotherapy Association	choose.physio
Cancer Australia	canceraustralia.gov.au
Carer Gateway	carergateway.gov.au
Continence Foundation of Australia	continence.org.au
Department of Health	health.gov.au
Dietitians Australia	dietitiansaustralia.org.au
Exercise & Sports Science Australia	essa.org.au
Nutrition Education Materials Online	health.qld.gov.au/nutrition/patients
Nutrition Society of Australia	nsa.asn.au
Services Australia	servicesaustralia.gov.au
Speech Pathology Australia	speechpathologyaustralia.org.au

International

American Cancer Society	cancer.org
Macmillan Cancer Support (UK)	macmillan.org.uk
National Cancer Institute (US)	cancer.gov
World Cancer Research Fund International	wcrf.org

Question checklist

Asking your doctor or dietitian questions will help you manage nutrition issues associated with your cancer treatment. You may want to include some of the questions below in your own list.

Diet during treatment

- Will this cancer treatment affect what I can eat?
 - Should I be on a special diet? Should I eat only organic foods?
 - Should I avoid any particular food during treatment?
 - What other changes to my diet can I expect?
 - Is it safe to take vitamin supplements?
 - I'd like to try a special diet I've heard might help. Is it likely to cause any harm?
 - How can I stay strong during treatment?
 - Should I see a dentist?
-

Symptoms and side effects

- Why am I losing/gaining weight?
 - Why am I feeling sick?
 - Why am I so tired?
 - How can I reduce nausea? Will medicine help? When should I be taking anti-nausea medicine?
 - What can I do about mouth ulcers? How long will they take to heal?
 - Why has my sense of taste or smell changed? Will it return to normal?
 - Will these symptoms go away and, if so, when?
 - Are my bowel habits of concern?
 - Can you refer me to a dietitian or speech pathologist for help with swallowing difficulties?
-

After treatment

- Do I need to change my diet after treatment ends?
 - Is there a diet that can help me stay cancer-free?
 - How can I get my strength and fitness back?
 - Can you refer me to a dietitian to help with ongoing side effects?
-

Glossary

abdomen

The part of the body between the chest and hips, which contains the stomach, spleen, pancreas, liver, gall bladder, bowel, bladder and kidneys. Also known as the belly.

anaemia

A reduction in the number or quality of red blood cells in the body.

balanced diet

A diet that includes a variety of wholefoods to give you nutrients for good health.

cachexia

Loss of body weight and muscle mass, causing weakness.

calories

See energy.

carbohydrate

The part of food made of sugar and starches. Found in grains; rice; starchy vegetables (potato and sweet potato); lentils and peas; and breads, cereals and pasta.

chemotherapy

A cancer treatment that uses drugs to kill cancer cells or slow their growth.

colitis

Inflammation of the inner lining of the colon (large bowel).

constipation

Difficulty passing a bowel movement (faeces, stools or poo) regularly or often.

diabetes

A condition in which sugars are not taken up in the body properly because the pancreas does not make enough of the necessary hormone (insulin), or the body has become resistant to the effect of insulin.

diarrhoea

When you have runny and watery faeces (stools or poo) and need to go to the toilet very frequently.

diet

The food a person regularly eats.

dietitian

A university-qualified health professional who supports and educates people who have chronic disease, including cancer, about nutrition and diet. Also called an accredited practising dietitian.

digestion

The breakdown of food in the stomach and bowel so nutrients can be used by the body.

digestive system

The body system that processes food and drink, absorbs nutrients and disposes of solid waste. Also called the gastrointestinal (GI) tract.

dumping syndrome

When partially digested food moves into the small bowel too quickly, causing symptoms such as cramps and dizziness.

dysphagia

Difficulty swallowing.

energy (kilojoules/calories)

Energy is counted in kilojoules or calories and provides fuel for our daily activities.

Energy is obtained from food and drink.

enteritis

Inflammation of the inner lining of the small bowel.

exercise physiologist

A university-trained health professional who specialises in using exercise as medicine, particularly for people with medical conditions.

fatigue

Extreme feeling of tiredness and lack of energy that doesn't go away with rest.

feeding tube

A flexible tube used to provide liquid nutrition and hydration to people unable to swallow.

fibre

The part of plant foods that the body cannot digest. It's important in digestive health.

foodborne illness

Illness caused by eating food that contains bacteria, viruses or parasites.

heartburn (indigestion)

A sensation of tightness or burning in the chest. It is caused by reflux.

immune system

A network of cells and organs that defends the body against attacks by foreign invaders, such as viruses.

immunotherapy

Treatment that uses the body's own immune system to fight cancer.

intolerance

Inability to digest a particular food properly.

kilojoules

See energy.

lactose

A type of sugar found in milk and some milk products.

laxative

A medicine that stimulates bowel movements and relieves constipation.

malnutrition

An imbalance of energy and nutrients in the body that can affect health and how the body responds to treatment and recovery.

metabolism

The chemical process by which food is changed into energy in the body.

minerals

Components of food that the body needs to develop and function properly, e.g. iron, zinc and calcium.

mucositis

Sores in the mouth or throat.

nausea

Feeling sick or wanting to be sick.

nutrition

The process of eating and digesting food that the body needs.

nutritionist

A health professional who provides information and support about nutrition. May be a qualified nutrition scientist or naturopathic nutritionist.

nutritious/nourishing

Food that is a good source of energy (kilojoules/calories) and/or protein, fats, carbohydrates, as well as vitamins and minerals.

oesophagus

The food pipe. The passage that carries food from the throat into the stomach.

pelvis

The lower part of the trunk of the body: roughly, the area that extends from hip to hip and waist to groin.

physiotherapist

A university-qualified health professional who uses physical methods, such as massage and exercise, to help restore movement and mobility.

proctitis

Inflammation of the rectum (last part of bowel).

protein

An essential part of food that the body needs to repair itself and build muscle.

radiation therapy

The use of targeted radiation to kill or damage cancer cells so they cannot grow, multiply or spread. Also called radiotherapy.

red blood cells

Blood cells that carry oxygen around the body.

reflux

When stomach acid flows up into the oesophagus.

side effect

Unintended effect of a drug or treatment.

speech pathologist

A university-qualified health professional who helps with speech or swallowing difficulties.

steroids

A class of drugs that is mostly used to reduce inflammation in the body.

stoma

A surgically created opening to allow urine or faeces to leave the body.

surgery

A procedure performed by a surgeon to remove or repair a part of the body.

References

1. National Health and Medical Research Council, *Australian Dietary Guidelines*, Commonwealth of Australia, Canberra, 2013.
2. M Muscaritoli et al., “ESPEN practical guideline on nutrition in cancer patients”, *Clinical Nutrition*, vol. 40, iss. 5, 2021, pp. 2898–2913.
3. National Health and Medical Research Council, *Australian Guidelines to Reduce Health Risks from Drinking Alcohol*, Commonwealth of Australia, Canberra, 2020.
4. Australian Government Department of Health, *Australia’s Physical Activity and Sedentary Behaviour Guidelines for Adults (18–64 years)*, Commonwealth of Australia, Canberra, 2014, viewed 23 February 2022, available from health.gov.au/health-topics/physical-activity-and-exercise/physical-activity-and-exercise-guidelines-for-all-australians.
5. P Cormie et al., “Clinical Oncology Society of Australia position statement on exercise in cancer care”, *Medical Journal of Australia*, vol. 209, no. 4, 2018, pp. 184–87.

symptoms

Changes in the body that a person feels or sees, which are caused by an illness or treatment, e.g. pain, tiredness or rash.

targeted therapy

Drugs that target specific features of cancer cells to stop the cancer growing and spreading.

vitamins

Substances of food that the body needs to function properly, e.g. vitamin C, folate.

white blood cells

Blood cells that help fight infection.

xerostomia

Dry mouth.

Can’t find a word here?

For more cancer-related words, visit:

- cancercouncil.com.au/words
 - cancervic.org.au/glossary
-



How you can help

At Cancer Council, we're dedicated to improving cancer control. As well as funding millions of dollars in cancer research every year, we advocate for the highest quality care for cancer patients and their families. We create cancer-smart communities by educating people about cancer, its prevention and early detection. We offer a range of practical and support services for people and families affected by cancer. All these programs would not be possible without community support, great and small.

Join a Cancer Council event: Join one of our community fundraising events such as Daffodil Day, Australia's Biggest Morning Tea, Relay For Life, Girls' Night In and other Pink events, or hold your own fundraiser or become a volunteer.

Make a donation: Any gift, large or small, makes a meaningful contribution to our work in supporting people with cancer and their families now and in the future.

Buy Cancer Council sun protection products: Every purchase helps you prevent cancer and contribute financially to our goals.

Help us speak out for a cancer-smart community: We are a leading advocate for cancer prevention and improved patient services. You can help us speak out on important cancer issues and help us improve cancer awareness by living and promoting a cancer-smart lifestyle.

Join a research study: Cancer Council funds and carries out research investigating the causes, management, outcomes and impacts of different cancers. You may be able to join a study.

To find out more about how you, your family and friends can help, please call your local Cancer Council.



Cancer Council

13 11 20

Being diagnosed with cancer can be overwhelming. At Cancer Council, we understand it isn't just about the treatment or prognosis. Having cancer affects the way you live, work and think. It can also affect our most important relationships.

When disruption and change happen in our lives, talking to someone who understands can make a big difference. Cancer Council has been providing information and support to people affected by cancer for over 50 years.

Calling 13 11 20 gives you access to trustworthy information that is relevant to you. Our experienced health professionals are available to answer your questions and link you to services in your area, such as transport, accommodation and home help. We can also help with other matters, such as legal and financial advice.

If you are finding it hard to navigate through the health care system, or just need someone to listen to your immediate concerns, call 13 11 20 and find out how we can support you, your family and friends.



If you need information in a language other than English, an interpreting service is available. Call 131 450.



If you are deaf, or have a hearing or speech impairment, you can contact us through the National Relay Service. communications.gov.au/accesshub/nrs

*Cancer Council services and programs vary in each area.
13 11 20 is charged at a local call rate throughout Australia (except from mobiles).*

For information & support
on cancer-related issues,
call **Cancer Council 13 11 20**

Visit your local Cancer Council website

Cancer Council ACT
actcancer.org

Cancer Council NSW
cancercouncil.com.au

Cancer Council NT
cancer.org.au/nt

Cancer Council Queensland
cancerqld.org.au

Cancer Council SA
cancersa.org.au

Cancer Council Tasmania
cancer.org.au/tas

Cancer Council Victoria
cancervic.org.au

Cancer Council WA
cancerwa.asn.au

Cancer Council Australia
cancer.org.au

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