

Nutrition & Exercise

For people with cancer,
their family and friends

Nutrition and exercise

The Cancer Council Victoria 2007. Nutrition and exercise: for people with cancer, their family and friends. Melbourne: The Cancer Council Victoria.

First published October 2004

This edition January 2008

This booklet is available online – visit www.cancervic.org.au

Acknowledgments

We thank the Peter MacCallum Cancer Centre for its valuable contribution to the text.

Many Cancer Council services, including the publication of this booklet, would not be possible without the generous support of many Victorians.



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Introduction

People with cancer often have questions about nutrition and exercise.

You may be wondering if you are eating the right foods or if you should change your diet in some way. You may also be wondering if exercising is okay when you have cancer or are recovering from cancer treatment.

This booklet provides important information about eating well when you have cancer. It includes tips to help you cope if you are having eating problems during your treatment. There is also some advice for those who have a child with cancer. If you have specific dietary problems, or wish to know about your own dietary needs, speak to your doctor or dietitian.

The booklet also discusses the latest evidence on exercising to help recover from cancer treatment. Generally speaking, gentle exercise is beneficial when recovering from cancer and treatment, but this is something you will need to discuss with your doctor. Some people need to start exercising more slowly.

There are no special foods that you must use or avoid when you have cancer. The best general advice that we can give is to make sure that you eat well by having a variety of foods every day, and exercise at a comfortable level.

Eating well and exercising will help you to:

- feel better and have more energy
- get the most benefit from your treatment
- improve your body's ability to heal and fight infection
- tolerate your treatment with fewer side effects
- keep your weight at an appropriate level.



**Are you reading this for someone who does not understand English?
Tell them about the Multilingual Cancer Information Line. See the
inside back cover for details.**

Contents

Introduction	... 1
Cancer: the role of nutrition and exercise	... 4
Can poor nutrition and lack of exercise cause cancer?	4
Can good nutrition and exercise prevent cancer?	5
Can certain foods or exercise cure cancer?	5
Alcohol and cancer	7
Exercise may help you recover from treatment	... 8
What if I don't feel like exercising?	9
How soon after treatment can I start exercising?	9
How much exercise is enough?	10
When you shouldn't exercise	10
Cancer treatment may make eating difficult	... 11
Having a nasogastric tube	12
Tips to help you eat well	... 13
Loss of appetite	13
Taste changes	15
Nausea and vomiting	15
Dry mouth and/or throat	17
Sore mouth and/or throat	18

Indigestion	18
Bowel problems	19
A word about supplements	20
Tips to deal with weight changes	... 21
Weight loss	21
Weight gain	23
Quick and easy meals	... 24
Preparing meals	24
High-energy drink recipes	... 26
Special tips if you have a child with cancer	... 29
Eating well: general guidelines	... 31
Dietary guidelines for Australian adults	31
Physical activity guidelines for Australian adults	33
Index	... 35

Cancer: the role of nutrition and exercise



You may have heard that some foods are thought to cause cancer. Some people may even try to convince you that eating certain foods or avoiding others can cure your cancer. In this chapter we answer some frequently asked questions relating to food and cancer.

We also look at exercise and cancer. It appears that exercise helps to prevent certain cancers. Exercising can help to speed up recovery during and after treatment and help you to feel better.

Can poor nutrition and lack of exercise cause cancer?

There are many different types of cancers, with many different causes. Only some of these are understood. The development of cancer is the result of complex processes in which diet and exercise can sometimes play a part.

It is unlikely that any one food will cause a person's cancer. It is more likely that general eating habits, over a long period of time, have a greater effect than any one food or food additive.

Not exercising enough may increase a person's risk of some cancers.

Overweight and obesity

Being overweight increases the risk of several different cancers including breast, bowel and aggressive prostate cancers. A good diet and regular exercise will help you to keep a healthy body weight.

Can good nutrition and exercise prevent cancer?

There are many causes of cancer and no single food or diet will prevent cancer.

Regular physical exercise appears to decrease the risk of colon cancer and breast cancer. Exercise may help reduce the chance of cancer coming back. People with cancer, or who are recovering after cancer treatment, need to discuss with their doctor or physiotherapist what level of exercise is safe for them to do. Physical activity guidelines are included at the end of this booklet.

Can certain foods or exercise cure cancer?

Once a cancer has developed, no particular food or diet, or type of exercise, will cure it.

You need to eat a variety of foods to keep you well nourished during your treatment and keep your weight stable. This helps you to feel better, have more energy and be able to tolerate your treatment better.

Regular exercise has many benefits. It can help to combat fatigue, depression and muscle weakening. Unless there are particular reasons why you should not exercise, try to do some exercise on most days. This will help your body as you recover from cancer and cancer treatment.

Beware of 'anti-cancer' diets

No special foods, supplements or diets have been scientifically proven to cure cancer. Despite this, certain diets and supplements are promoted as helpful for people with cancer. Some are even claimed to cure cancer.

Some of these diets could cause great harm. They may interfere with your treatment, result in poor nutrition, or lead to weight loss.

Avoid diets that remove whole food groups, such as dairy products, meat or breads and cereals, as these are important sources of nutrients in your diet. Diets that avoid these foods may not provide you with enough energy or protein. You may then become more tired and lose weight.

It is also important to be wary of dietary supplements such as high doses of vitamins, minerals and herbs. Just because they are ‘natural’ does not mean that they are always safe. Some vitamins can be toxic in large quantities. Some dietary supplements can interact with chemotherapy, radiotherapy or medications so that treatments don’t work as they should.

Check with your cancer specialist before starting a new dietary supplement to make sure that it is safe and won’t affect your medical treatment.

There are a number of questions you should ask before starting any special diet or dietary supplement.

- How will it help me?
- Will it work?
- How does the person recommending it know it will work?
- Has it been clinically proven in trials?
- Will it provide a ‘miracle cure’?
- What results can I expect to see?
- When will I see results?
- Are there any side effects?
- How much will it cost?
- How long will I need to take/follow it?
- Will it interfere with my treatment?

Remember to be cautious, ask questions and confirm claims. Ask your doctor or dietitian for advice before making major changes to your diet.

Alcohol and cancer

Alcohol can increase cancer risk; however, there is little evidence to link alcohol intake with a risk for cancer recurrence and an effect on survival. Drinking a small amount of alcohol before meals may benefit someone with cancer by stimulating their appetite. Talk to your doctor about your situation, potential risk and any recommendations for abstaining from alcohol. It is also important for people with cancer not to replace nutrient-rich food with alcohol, as it has little or no nutritional value.

Exercise may help you recover from treatment




Exercising can help people cope with cancer treatment. Your family may want you to rest all the time, but this may not be the best thing for you. Exercise if you are able to, and if your doctor says it is safe.

Exercise helps in several ways.

- It can help you to feel in charge of your life.
- It can increase your energy and reduce fatigue.
- For some people on chemotherapy, exercise can reduce nausea and vomiting.
- It can help digestion and reduce constipation.
- It can increase strength, flexibility and heart and lung function.
- It can improve your mood.
- If you have had a stay in hospital for a few days, you will be a little weaker than you were before. Your doctor, or possibly a hospital physiotherapist or occupational therapist, will help you plan to become active again. The plan will include regular exercise – a short, sharp burst is no good!

Exercise can include walking, swimming, running, dancing, yoga, aerobics, tai chi and cycling. It also includes competitive sport, and



activities around the home, like mowing the lawn and vacuuming. Some of these are easier than others. What you choose to do will depend on your fitness, what you want to do, and what your doctor says is safe for you to do.

For people who were active in a particular way before having cancer, it is a good idea to stay with what you know. People who used to exercise vigorously may need to do less, especially if their fitness has reduced because of bed rest.

There is growing evidence to suggest that regular exercise after a cancer diagnosis can reduce the chance of the cancer coming back. This is particularly true for women who have been treated for early breast cancer, and for men and women who have been treated for early stage bowel cancer.

What if I don't feel like exercising?

A lot of people who are having or have had cancer treatment get fatigued. You should not overexert yourself when you feel like this – do not force yourself to exercise a lot if your body is really weary.

However, some exercise is possible for almost everyone. It may just be a walk around the garden or to the end of the street to begin with.

How soon after treatment can I start exercising?

This is a question to discuss with your doctor. It will depend on what sort of treatment you have had (or are having).

Doing too much too soon – and finding it too hard – means that some people give up altogether.

How much exercise is enough?

Your doctor, or possibly a physiotherapist or occupational therapist, will advise you about how much exercise is adequate.

When you shouldn't exercise

Check with your doctor before beginning any exercise program. Tell your doctor how much you plan to exercise and what you plan to do, and follow their advice.

Do not continue exercising if you have:

- light-headedness or dizziness
- excessive shortness of breath
- chest pain
- excessive tiredness
- persistent joint or muscle pain.

If you get any of these symptoms, tell your doctor.

Cancer treatment may make eating difficult

The common methods of treating cancer are radiotherapy, chemotherapy and surgery. Each of these treatments can produce side effects that can affect your ability to eat and drink. The following table provides a summary of the possible side effects that may be experienced, depending on your type of cancer and type of treatment.

Treatment	Possible side effects	
<p>Radiotherapy</p> <p>The use of radiation to destroy or injure cancer cells so they cannot multiply. The aims of radiotherapy are to cure or control cancer, or relieve symptoms of cancer.</p>	<p>Loss of appetite</p> <p>Taste changes</p> <p>Indigestion</p> <p>Nausea</p> <p>Vomiting</p> <p>Sore mouth or throat</p>	<p>Dry mouth or throat</p> <p>Difficulty swallowing</p> <p>Painful swallowing</p> <p>Diarrhoea</p> <p>Constipation</p>
<p>Chemotherapy</p> <p>The use of special drugs to treat cancer by destroying or slowing the growth of cancer cells. The aim of chemotherapy is to cure or control cancer, to relieve symptoms or to help other treatments.</p>	<p>Nausea</p> <p>Vomiting</p> <p>Loss of appetite</p> <p>Taste changes</p> <p>Indigestion</p>	<p>Sore mouth or throat</p> <p>Dry mouth or throat</p> <p>Painful swallowing</p> <p>Diarrhoea</p> <p>Constipation</p>
<p>Surgery</p> <p>The physical removal of the cancer.</p>	<p>Loss of appetite</p> <p>Increased nutrition requirements</p>	<p>Diarrhoea</p>

Having a nasogastric tube

Some people with head and neck cancer or oesophageal cancer need temporary help with feeding, using a nasogastric tube. This involves passing a soft tube through the nose, down the throat and into the stomach. A liquid diet can then be fed through the tube and will help you to maintain your weight and nutritional needs.

While this may seem a bit strange at first, it's quite common and will provide relief if you have a very sore mouth and/or difficulty swallowing.

Tips to help you eat well



Good nutrition is important during treatment. Sometimes the side effects of treatment or the effects of illness can make it difficult to eat and drink all that your body needs. You may have problems such as decreased appetite, nausea, vomiting, sore mouth and throat, or bowel changes. The following information provides tips to help you eat well during this very important time.

Loss of appetite

- Take advantage of every opportunity to eat (e.g. if your appetite is better in the morning, plan bigger meals then and smaller snacks later in the day).
- Eat small, regular meals (e.g. have six small meals instead of three large ones to avoid overloading your stomach).
- During the day, have frequent sips of nourishing fluids such as milk drinks and juices, rather than tea or coffee. There are recipes for high-energy drinks on page 26: try making up a jug, keeping it in the fridge and having a small glass every hour or every time you think of it.

- Avoid cooking smells that put you off eating where possible. Ask other family members to cook for you, or use foods that are ready to eat. Foods that are cold or at room temperature may be more appealing.
- Having family and friends around at meal times makes it more enjoyable. Avoid talking about your treatment at meal times.
- Exercise may also help to stimulate your appetite. Try some light exercise for 10 minutes before meal times.
- Choose foods with attractive colours and use garnishes. Foods that look good are more appealing.
- If you are not hungry, you may find that you forget to eat. In this case you should keep to a planned meal pattern and 'eat by the clock'.
- Try to relax before meals – worry or anxiety can affect your appetite.
- Eat your most nourishing meal or snacks when you are feeling the best.
- If your doctor allows, have a small glass of dry wine, beer or spirits about half an hour before a meal to help stimulate your appetite. Don't drink too much. For men, the recommended limit is no more than two standard drinks a day. For women, it's one standard drink per day.

A standard drink equals:

- 285 mL of beer (one glass of beer) or
- 100 mL of wine (one glass of wine) or
- 30 mL of spirits (one measure of spirits).

Taste changes

- If you experience taste changes, and food you used to like does not taste good, try new foods.
- Experiment with herbs, spices, sauces and dressings for extra flavour.
- Red meat may be unappealing. Try chicken, fish, eggs, cheese, tofu or legumes such as baked beans to give you protein instead.
- Always make sure your mouth feels fresh and clean before and after eating.
- Try sucking on mints or sour lollies to help keep your mouth fresh (if you are not diabetic).
- Use a mouth moisturising lotion. Your doctor, nurse or dietitian can recommend a suitable one for you.

Nausea and vomiting

Nausea is feeling like you may vomit or be sick. People having cancer treatment often have nausea and vomiting. This makes it difficult to eat well during treatment.

Nausea

Nausea can be caused by treatment, medication, anxiety, emotional stress or your illness. There are a number of drugs that help to control nausea and the feeling that you may vomit. It might be best to take these medications regularly, to keep nausea away. If the ones that your doctor has prescribed are not working, tell your doctor or nurse – there are others that you could try. You can also try the following until your symptoms settle.

- Have only small snacks around treatment time (e.g. sandwiches, soup, biscuits and cheese, fruit or yoghurt).
- Eat small amounts and regularly. For example, eat six small meals instead of three large ones to avoid overloading your stomach.

- Don't go for long periods without a snack. An empty stomach can worsen nausea.
- If you wake up feeling sick, keep a small snack next to the bed and have it before getting up (e.g. a dry biscuit, or fruit and nut mix).
- Cold food or food at room temperature is often better as the smell of hot food can make you feel sick. If possible, ask others to cook for you and stay away from the kitchen while hot food is being prepared.
- Have regular sips of cool, clear drinks (e.g. sports drinks, dry ginger ale, flat lemonade, apple juice, ice chips or icypoles).
- Salty foods (e.g. dry biscuits, crisps, soup) and sour foods (e.g. lemon, pickles) may help reduce nausea. Sour or mint sweets may also help. Keep these with you.
- Try having lighter, lower-fat foods. Avoid rich, heavy foods such as pastry, fried foods, creamy sauces or chocolate.
- Remove bad mouth tastes by cleaning your teeth, rinsing your mouth or using a mouth moisturising lotion before eating.

Vomiting

You can avoid some situations where you are likely to feel sick, but not always. You must drink regularly when you have been vomiting in order to avoid dehydration.

After vomiting you will need to try to eat normally again. Here's some advice on how to increase your food and drink intake after vomiting.

Stage 1: Small sips

If you have been vomiting a lot do not try to force food down. Start with small sips of fluid such as water, dry ginger ale, cold flat lemonade, soda water, or diluted fruit juice. Also try ice cubes, flavoured ice or icypoles. Boiled lollies, jellied sweets, mints or citrus flavoured-sweets may also be helpful.

Stage 2: Introducing drinks

Once you feel that your vomiting is controlled, you may find that nausea and the feeling of fullness persist. Try small, frequent sips of nourishing fluids such as milk drinks and juices (e.g. every 15 minutes).

Remember: hunger can make nausea worse. Try jelly, sports drinks, full strength fruit juice, a spoonful of ice cream in lemonade, tea with honey or lemon and sugar, or clear soups.

Stage 3: Introducing solid food

Once you can manage fluids well, try small amounts of solid foods such as plain dry biscuits, thin crisp toast with honey, jam or a yeast-based spread such as vegemite, plain rice, noodles, sago, oatmeal or soft stewed fruit. Milk is nourishing but may be difficult to tolerate at first. If so, try cheese and biscuits, custards, yoghurt or yoghurt drinks, which may be better tolerated.

Stage 4: Returning to regular eating

As soon as you are able, increase your food intake until you are eating a normal, well balanced diet. Heavy, rich foods may still be difficult to digest so are best avoided. Try foods such as fruit and vegetables, plain biscuits, lean, grilled meat, fish or chicken, poached or boiled eggs, boiled, baked or mashed potato, yoghurt or small amounts of milk.

Remember that an important part of managing nausea and vomiting is to take the anti-sickness medications prescribed by your doctor.

If you continue to have severe nausea or vomiting, contact your doctor or treatment nurse.

Dry mouth and/or throat

- Eat moist meals and have extra gravies or sauces with them.
- Drink fluids with your meals.
- Sip fluids between meals to keep your mouth moist.

- Cut up or mince food so you don't have to chew as much.
- Talk to your doctor or nurse about oral lubricants/moisturisers.

Sore mouth and/or throat

- Keep your mouth clean and use the mouthwashes your doctor or nurse recommends.
- Avoid very hot or very cold food and drinks.
- Avoid highly seasoned or spiced foods such as pepper, chilli, mustard, vinegar, salty foods, curries and spiced sauces.
- Avoid rough, crunchy or dry foods such as potato chips, nuts, pretzels, crisp toast, dry biscuits, crust on roasts or fried foods.
- Try fruit nectars or blackcurrant syrup instead of citrus fruit juices.
- Effective pain relievers are available to soothe or numb the mouth. If one pain reliever is not working well enough, speak with your doctor or nurse about increasing your dose or adding an extra pain reliever. Contact your doctor or treatment nurse for more information.

Indigestion

- Try six small meals rather than three large meals each day.
- Avoid fried and fatty foods and highly seasoned spicy foods.
- Drink between meals rather than with meals. Sips of milk or yoghurt drinks are sometimes helpful.
- Relax at meal times. Eat slowly and chew food well.
- Avoid alcohol, smoking, coffee, strong tea and very hot drinks.
- Avoid lying down for two or three hours after meals, use pillows to raise your head or try lifting the head of the bed by putting wood under the bed legs.
- Speak to your doctor or nurse about medication that might reduce indigestion.

Bowel problems

Your treatment may cause constipation or diarrhoea. These can be caused by radiotherapy, chemotherapy, medications, anxiety, infection or a change in diet.

Constipation

Constipation is when your bowel movements are not regular and you have hard motions that are difficult to pass. Medications such as strong pain relievers are a common cause of constipation. Other common causes include a diet lacking in fibre, poor intake of fluids and lack of exercise.

Try the following:

- Have more wholegrain breads and cereals.
- Have more fruit and vegetables (especially raw and unpeeled).
- Drink six to eight cups (1½–2 litres) of fluid each day. This can include water, milk, juice, cordial, tea, coffee and soups.
- Try to do light exercise regularly, such as walking.
- Use a fibre supplement or laxative. Ask your doctor or nurse to suggest one for you.

Constipation caused by pain relievers, such as codeine and morphine, is not always helped by eating extra fibre. Your doctor should prescribe medication to help bowel function when your pain relievers begin. Speak to your doctor about this.

Diarrhoea

Diarrhoea is frequent, watery stools. Your body loses a lot of fluid when you have diarrhoea, so you need to replace this fluid. If diarrhoea is severe, or persists for more than a couple of days, there is medication you can take to treat it – speak to your doctor or nurse.

Try these suggestions until your diarrhoea is better.

- Drink lots of fluids. Aim to have eight to 12 cups (two to three litres) of fluid each day. Water, sports drinks and electrolyte-replacing treatments are recommended (e.g. Gastrolyte, Hydralyte).
- Eat small, frequent meals. Have six smaller snacks rather than three large meals each day.
- Reduce raw fruit and vegetables. Avoid all skins and seeds. Have soft, stewed or canned fruits, such as banana and stewed apples, and soft cooked vegetables, such as potato or pumpkin.
- Reduce your intake of wholegrain and wholemeal breads and cereals. Have white bread and rice, plain biscuits and refined breakfast cereals.
- Have products containing 'good' bacteria: those that have 'active' or living bacteria, sometimes labelled 'probiotic', e.g. yoghurt, Yakult.
- Avoid fatty foods. Have tender, lean meats with skin and fat removed.
- Avoid spicy foods.
- Have small amounts of dairy foods.
- Avoid caffeine, alcohol and drinks that are very hot or cold.

Once your bowel function returns to normal, it is very important that you return to a balanced diet that includes fresh fruit and vegetables and wholegrain breads and cereals.

A word about supplements

Many people assume that dietary and herbal supplements can be safely taken along with prescription medication. Unfortunately, this is not always true and large doses of some vitamins and minerals may reduce the effectiveness of cancer treatment. Consult with your doctor before taking any dietary and herbal supplements.

Tips to deal with weight changes



You may find that you have difficulty keeping your normal weight during treatment. Many people lose weight, while others gain weight. You should try to stay the weight you were before you were diagnosed with cancer and/or began treatment, but this is not always possible.

Weight loss

Cancer treatment and the disease itself may cause you to lose weight. Weight loss often occurs from muscle rather than fat stores and needs to be controlled if possible. Keeping your normal weight helps you to cope with treatment better and recover more quickly. A nourishing diet will help you to maintain weight or gain any lost weight.

A nourishing diet

Eat nourishing foods that are high in energy and protein during this time. It is important to eat regularly and eat well.

Try adding extra energy to the foods and drinks that you normally have. Here's how.

- Add extra margarine, butter or oil to bread, toast, muffins, vegetables, pasta sauces, soup, rice, savoury sauces (e.g. white sauce or gravy), salad, meat, chicken, fish, eggs or dry biscuits.
- Add extra honey, sugar or jam to breakfast cereal, bread, toast, muffins, fruit (e.g. stewed or tinned), milkshakes, yoghurt, custard or puddings (if you are not diabetic).
- Add extra cream to breakfast cereals, pasta sauces, vegetables, fruit, soup, savoury sauces, eggs, milkshakes, yoghurt, custard or puddings.
- Add extra cheese to pasta, vegetables, salad, soup, meat, savoury sauces or eggs.
- Drink nourishing fluids such as milk drinks and juices rather than tea or coffee.
- Use fortified milk. Sprinkle $\frac{2}{3}$ cup skim milk powder onto two cups of milk and mix until dissolved. Store it in the refrigerator and use it wherever you normally use milk. Fortified milk provides extra energy and protein.
- Use the high-energy drink recipes on page 26 and have a small glass full every half an hour during the day.

Nutritional supplements

If you are struggling to maintain weight or are having a mainly liquid diet, nutritional supplements can be of great benefit. They are an excellent source of energy, protein, vitamins and minerals. They are meant to supplement a normal diet.

These drinks are available in powder or liquid forms. Making your own drinks from the powder forms of these products is generally cheaper. They can also be added to other foods, used in baking or sprinkled on breakfast cereals for extra nutrition. A dietitian can advise the best product for you.

Weight gain

Weight gain is a problem for some people having treatment for cancer. This may be because of decreased activity, increased food intake (especially increased fat intake), hormonal changes or medications such as steroids.

Try to maintain your normal weight during treatment. You should not try to lose weight during this time because your body is under stress and you need a nutritious diet to help your body cope well with treatment. If you want to lose weight, the best time is after you have finished treatment and recovered from any side effects.

If you are overweight or a healthy weight and are concerned about weight gain:

- have less fat, especially animal fats
- have more fibre, including wholegrain breads and cereals and legumes
- eat more fruit, vegetables and legumes
- avoid alcohol
- exercise regularly.

For advice on weight loss after you've finished your treatment, talk to a dietitian.

Quick and easy meals



It is often difficult to eat well when you don't feel like shopping for food or cooking because you are tired or unwell. You may miss meals while having treatment or waiting for appointments. Here are some quick and easy meal and snack ideas for these times.

Preparing meals

- Try to prepare and freeze meals on your good days so that you don't have to spend so much time preparing food when you are not well.
- Use a microwave oven to speed up cooking and reheat frozen meals.
- Convenience foods, such as frozen meals, takeaway foods and single serve, prepared meals, are handy if cooking becomes difficult or you can't be bothered. Keep a supply of these meals at home so that you can have a meal you know you'll like on the table in 10 minutes. However, don't rely completely on these foods, because it's important to include fresh foods in your diet.
- As far as possible, make your meals the same as those for the rest of your family so that cooking is not a chore.

- Keep a supply of ready-to-eat snacks, such as milk drinks, custard/ puddings, cold meat or chicken, cheese, yoghurt and ice cream in the refrigerator, so that you have a nourishing snack available whenever you need it.
- Accept offers from family or friends to cook meals for you.
- It is very important not to miss meals, so plan ahead. If you are likely to be waiting a while for treatment or appointments, or spend a long time travelling to and from appointments, take a snack or drink with you.

Snack ideas

- Cheese and biscuits
- Yoghurt, ice cream
- Custard, mousse, crème caramel, rice pudding
- Toasted sandwiches
- Milkshakes/smoothies
- Cakes, biscuits, muffins
- Muesli bars, fruit bars
- Tinned fruit
- Breakfast cereal and breakfast drinks
- Dried fruit and nuts

Meal ideas

- Eggs – poached, scrambled, fried, omelettes
- Frozen meals from the supermarket
- Pasta with bottled sauce
- Two-minute noodles
- Soup – tinned, packet, fresh
- Baked beans
- Tinned spaghetti
- Tinned fish – tuna, sardines, salmon
- Frozen or tinned vegetables
- BBQ chicken from the deli

High-energy drink recipes



Often people with cancer find it hard to meet their nutritional requirements. The following drink recipes can be used as supplements both for and in between mealtimes. They are all very easy to prepare. The recipes can be altered to suit your tastes, the only limitation being your imagination. If you are diabetic, talk to your doctor or dietitian about preparing foods with less sugar.

✳ The drinks can be made up and kept in the fridge throughout the day. You may prefer to pour small amounts into a glass frequently through the day or sit down and have a large glass two or three times during the day.

Apricot lemon crush

425 g can of apricot halves in natural fruit juice
1 cup natural yoghurt
juice of 1 lemon
1 tablespoon honey
2 tablespoons wheatgerm
crushed ice

Blend ingredients together.

Banana drink

- 2 cups milk
- 1 banana
- 1 egg
- 3 dessertspoons nutrition formula powder
- 1 dessertspoon skim milk powder
- 1 dessertspoon glucose powder or sugar
- crushed ice

Blend ingredients together.

***** Avoid using raw eggs in recipes if your immune system is weakened.

Egg flip

- 1 egg
- 1 cup milk
- vanilla syrup or essence to taste
- 1 teaspoon sugar (or to taste)

Blend ingredients together, strain, sprinkle with nutmeg if desired.

Fruit mix

- 1 cup orange juice (or other fruit juice combination)
- 1 banana
- 1 scoop ice cream and/or cream
- 1 dessertspoon glucose powder or sugar
- crushed ice

Blend ingredients together.

Fruit shake

- ½ cup milk
- 1 tablespoon cream
- 1 scoop ice cream
- 1 serve stewed or fresh fruit
- 1 tablespoon skim milk powder

1 dessertspoon glucose powder or sugar
crushed ice
Blend ingredients together.

Fruit smoothie

1 cup milk
1 banana or equivalent soft fruit
1 tablespoon honey or sugar
1 tablespoon wheatgerm (if desired)
2 scoops ice cream and/or cream
crushed ice
Blend ingredients together, sprinkle with cinnamon.

High-calorie soup

55 ml cream soup
55 ml milk
1 tablespoon skim milk
1 egg
1 teaspoon glucose powder or sugar
Mix together thoroughly, then blend and heat slowly.

High-energy cordial

1 tablespoon cordial
1 teaspoon glucose powder or sugar
1 cup water
crushed ice
Mix cordial and glucose powder or sugar until smooth, stir in water.

High-energy juice

1 cup juice
1 dessertspoon glucose powder or sugar
Mix glucose powder or sugar with a little juice until smooth. Stir in remaining juice.

Special tips if you have a child with cancer



Children with cancer need good nutrition for normal growth as well as the demands made by their treatment. It is important to encourage your child to eat a balanced diet and to keep physically active while they are having treatment. Continue normal daily routines as much as possible, so your child does not feel separate from the rest of your family. Meal times are important times for families to share.

Even though you may be concerned about fussy habits, try to avoid food becoming a bargaining tool or a source of anxiety for either you or your child. Sometimes children use food to express the despair or frustration, which they can't express easily in other ways.

Loss of appetite and a feeling of fullness are side effects of some treatments. There are many ways in which you can stimulate your child's appetite and improve their dietary intake. A lot of tips already given in this booklet may be useful. Here are some extra things you can try:

- Let your child have food at any time, not just at meal times. If they have small meals, these will be supplemented by nourishing snacks.

- Be flexible. For example, allow your child to have breakfast cereal for dinner if that's what they would prefer.
- Sometimes, fatty or sugary foods may be useful high-energy snacks if they are all your child wants to eat. Any nourishment is better than none, but don't let these foods become a habit.
- Encourage your child to make meal times special occasions by letting them plan the table setting, use decorated paper cups, patterned plates, fancy drinking straws, coloured drinks, etc.
- Include takeaways in the family diet occasionally. This can help to tempt fussy eaters.
- Use the time between treatments, when there are less side effects, to make up for any nourishment your child may have missed during treatments.

If your child is losing weight as a result of treatment, ask your doctor or dietitian for further advice.

Eating well: general guidelines

Eating well means having a variety of foods every day from each of the food groups.

Dietary guidelines for Australian adults, from the National Health and Medical Research Council, provide general advice on healthy eating to remain well.

Dietary guidelines for Australian adults

- Enjoy a wide variety of nutritious foods.
- Eat plenty of vegetables, legumes (e.g. soy and other beans) and fruits.
- Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain.
- Include lean meat, fish, poultry and/or alternatives.
- Include milks, yoghurts, cheeses and/or alternatives. Choose reduced-fat varieties where possible.
- Drink plenty of water.

And take care to:

- Limit saturated fat (found in meat, dairy and some vegetable oils) and moderate total fat intake.
- Choose foods low in salt.
- Limit your alcohol intake if you choose to drink.
- Consume only moderate amounts of sugars and foods containing added sugars.

It is also important to:

- Prevent weight gain: be physically active and eat according to your energy needs.
- Care for your food: prepare and store it safely.
- Encourage and support breastfeeding.

Type of food	Number of serves	What is a serve?
Vegetables and legumes	5 serves per day (5 to 6 if pregnant, 7 if breastfeeding)	about an adult's handful ½ cup cooked vegetables 1 cup salad ½ cup legumes (e.g. lentils, beans)
Fruit	2 serves per day (4 if pregnant, 5 if breastfeeding)	2 pieces small-sized fruit (e.g. apricots, plums, kiwi-fruit) 1 piece medium-sized fruits (e.g. an apple or orange) 1 cup fruit salad or canned fruit
Breads and cereal	women: at least 4 serves per day (5 if breastfeeding) men: at least 5 serves per day	2 slices bread 1 cup cooked rice, pasta or noodles 1 cup breakfast cereal ½ cup muesli
Meat, fish, poultry & alternatives	1 serve per day (1 ½ if pregnant, 2 if breastfeeding) (no more than 3 to 4 serves of red meat per week)	65–100 g cooked meat or chicken (for example, ½ cup mince, or 2 small chops, or 2 slices meat) 80–120 g fish 2 small eggs ½ cup cooked legumes (e.g. chickpeas, lentils, beans), or protein-rich nuts or seeds
Milk, yoghurt, cheese & alternatives	2 serves per day	250 ml glass of milk 2 slices cheese 200 g yoghurt 250 ml glass of calcium-fortified soy milk

Source: *Food for health: dietary guidelines for Australian adults*, Australian Government, Department of Health and Ageing, National Health and Medical Research Council. Copyright Commonwealth of Australia reproduced by permission.

Physical activity guidelines for Australian adults

These guidelines, from the Department of Health and Ageing (1999), are for healthy Australian adults. If you are or have been ill with cancer, talk to your doctor before beginning any exercise program.

Movement is an opportunity, not an inconvenience.

People don't exercise as much as they used to, thanks to cars, machinery, TVs and DVDs and computers. Yet our need for exercise is as important as it was for our ancestors. Exercising reduces the risk of obesity and other health problems.

Think of exercise as a good thing: it is! Be active every day in as many ways as you can. Being active in small ways is likely to provide health advantages to almost all people, irrespective of age, body weight, health condition or disability.

Increase your daily activity

Here are some ideas about how to increase the amount of exercise you do every day.

- Make a habit of walking or cycling instead of driving or riding in a car.
- Do some gardening.
- Walk up stairs instead of using the lift or escalator.
- Do things by hand instead of using labour-saving machines.

Remember: some activity is better than none, and more is better than a little.

Do at least 30 minutes of moderate-intensity activity on most days

Moderate-intensity activity includes such things as a brisk walk or cycling. It's exercise that causes a slight, but noticeable, increase in breathing and heart rate. A good example is brisk walking at a pace

where you are able to comfortably talk but not sing. Other examples include mowing the lawn, digging in the garden, or medium-paced swimming or cycling.

Combine short sessions of different activities of around 10 to 15 minutes each, to a total of 30 minutes or more.

Moderate-intensity activity doesn't have to be continuous. Improvements in blood pressure, cholesterol and body weight can result from moderate-intensity activities of at least 30 minutes a day on most days, or doing 30 minutes continuously.

To keep it enjoyable, make the exercise part of work, family, community or social life.

Add some regular, vigorous activity

Vigorous exercise makes you 'huff and puff': it's when you're exercising and find that talking between breaths is difficult. Good examples are football, squash, netball and basketball, and activities such as aerobics, circuit training, speed walking, jogging, fast cycling or brisk rowing.

For best results, this should be added to the above guidelines on three to four days a week for 30 minutes or more each time. Vigorous exercise will increase your fitness (moderate-intensity exercise probably won't). It also provides extra protection against heart disease.

Children and teenagers under the age of 18 should do regular vigorous activity. Women who are pregnant are not advised to exercise vigorously.

Source: *An active way to better health*, National Physical Activity Guidelines for Adults, Australian Government, Department of Health and Aged Care, May 1999. Copyright Commonwealth of Australia reproduced by permission.

Index

- alcohol 7, 14
- appetite, loss of 13–14, 29
- bowel problems 19–21
- cancer
 - and exercise 5, 8–10
 - and food 5–6
 - causes of 4–5
- children with cancer 29–30
- constipation 19
- diarrhoea 19–20
- dietary guidelines for Australian adults 31–32
- diets 5–6
- dry mouth 17–18
- eating difficulties 11, 13–18
- exercise 8–10
 - and recovery from treatment 9
 - benefits of 1, 8
 - how much 10
 - how soon after treatment 9
 - recommendations 33–34
 - role of 5
 - when not to 10
- fatigue 9
- high-energy drink recipes 26–28
- indigestion 18
- meals
 - ideas for 25
 - tips on preparing 24–25
- nasogastric tube 12
- nausea 15–16
- nutrition
 - benefits of good 1
 - role of 4–6
- nutritional supplements 22
- obesity *See* overweight
- overweight 5, 23
- recipes
 - high-energy drinks 26–28
- side effects 11, 13, 29
- snacks 25, 29
- sore mouth 18
- sore throat 18
- taste changes 15
- treatments for cancer 11
- vomiting 16–17
- weight change 21–23
- weight gain 23
- weight loss 21–22, 30



Cancer information in other languages

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