



Leukaemia
Foundation

VISION TO CURE
MISSION TO CARE

Eating well

*A practical guide for people living with
leukaemia, lymphoma, myeloma, MDS,
MPN and related blood disorders*



1800 620 420



leukaemia.org.au

Australian Guide to Healthy Eating

Enjoy a wide variety of nutritious foods from these five food groups every day.
Drink plenty of water.

Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties



Use small amounts



Only sometimes and in small amounts



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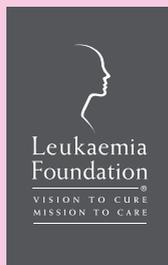
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The Leukaemia Foundation values feedback from people affected by a blood cancer and health care professionals working with them. If you would like to make suggestions, or tell us about your experience of using this booklet, please contact the Head of Blood Cancer Support at info@leukaemia.org.au.

January 2015



Introduction

This booklet has been written to provide practical information about eating well, before, during and after treatment for leukaemia, lymphoma, myeloma, MDS, MPN or a related blood disorder.

Some of you may have been recently diagnosed. Perhaps you have already started treatment or you are recovering after treatment. Whatever point you are at, we hope that the information contained in this booklet helps you to have a healthy and nutritious diet during this time.

There is no evidence that any specific type of food can cause or cure these cancers or disorders. There is evidence however that a healthy and nutritious diet can help your body to cope better with the effects of cancer and treatment.

It is important to talk to your treatment team before making major changes to the foods you eat, or before taking supplements (for example vitamins, minerals, herbal preparations or protein drinks). Dietitians and doctors are the most qualified people to talk to about your special food needs.

You may not feel like reading this booklet from cover to cover. It might be more useful to look at the list of contents and read the parts that you think will be of most use at a particular point in time. We have also included some internet addresses that you might find useful. In addition, many of you will receive information about eating well from your dietitian, doctor or nurses at your treating hospital.

A few recipes have been included at the end of the booklet. These provide examples of healthy and nutritious meals and snacks that you or your family can prepare.

Finally, we hope that you find this booklet useful and we would appreciate any feedback from you so that we can continue to serve you and your families better in the future.

The Leukaemia Foundation

The Leukaemia Foundation is Australia's peak body dedicated to the care and cure of patients and families living with leukaemia, lymphoma, myeloma and related blood disorders.

Since 1975, the Foundation has been committed to improving survival for patients and providing much needed support. The Foundation does not receive direct ongoing government funding, relying instead on the continued and generous support of individuals and corporate supporters to develop and expand its services.

The Foundation provides a range of support services to patients at no cost. This support may be offered over the telephone, face to face or online depending on the geographical and individual needs. Support may include providing information, patient education seminars and programs that provide a forum for peer support and consumer representation, practical assistance, accommodation, transport and emotional support/counselling.

The Leukaemia Foundation also helps to support the Australasian Leukaemia and Lymphoma Tissue Bank, a joint initiative with the Australasian Leukaemia and Lymphoma Group (ALLG), which gives researchers access to tissue samples for cancer research. The Foundation also funds research grants, scholarships and fellowships for talented researchers and health professionals as part of its national research program.

Foundation staff with health professional qualifications provide patients and their families with information and support across Australia.

Support Services

The Leukaemia Foundation has a team of highly trained and caring Support Services staff with qualifications and experience in nursing or allied health that work across the country.

They can offer individual support and care to you and your family when it is needed.

Support Services may include:

Information

The Foundation has a range of booklets, DVDs, fact sheets and other resources that are available free of charge. These can be ordered via the form at the back of this booklet or downloaded from the website.

Education & Support programs

The Leukaemia Foundation offers you and your family, disease-specific and general education and support programs throughout Australia. These programs are designed to empower you with information about various aspects of diagnosis and treatment and how to support your general health and wellbeing.

Emotional support

A diagnosis of a blood cancer/disorder can have a dramatic impact of a person's life. At times it can be difficult to cope with the emotional stress involved. The Leukaemia Foundation's Blood Cancer Support staff can provide you and your family with much needed support during this time.

Blood Buddies

A program for people newly diagnosed with blood cancer/disorder to be introduced to a trained 'Buddy' who has been living with blood cancer for at least two years, to share their experience, their learning, and to provide some support.





The health system can feel so big and overwhelming. Sometimes I don't even know what questions to ask to get what I need. The Foundation's staff help by pointing me in the right direction.

Online discussion forum

The Foundation has established an online information and support network for people living with leukaemia, lymphoma, myeloma, or a related blood disorder. Registration is free and participants can remain anonymous, see www.talkbloodcancer.com

Telephone discussion forums

This support service enables anyone throughout Australia who has or has had blood cancer to share their experiences, provide tips, and receive education and support in a relaxed forum. Each discussion is facilitated by a member of the Leukaemia Foundation Support Services team who is a trained health professional.

Accommodation

Some people need to relocate for treatment and may need help with accommodation. The Leukaemia Foundation's staff can help you to find suitable accommodation close to your hospital or treatment centre. In many areas, the Foundation's fully furnished self-contained units and houses can provide a 'home away from home' for you and your family.

Transport

The Foundation also assists with transporting people to and from hospital for treatment. Courtesy cars and other services are available in many areas throughout the country.

Practical assistance

The urgency and lengthy duration of medical treatment can affect everyday life for you and your family and there may be practical things the Foundation can do to help. In special circumstances, the Leukaemia Foundation provides financial support for patients who are experiencing financial difficulties or hardships as a result of their illness or its treatment. This assistance is assessed on an individual basis.

Advocacy

The Leukaemia Foundation is a source of support for you as you navigate the health system. While we do not provide treatment recommendations, we can support you while you weigh up your options. We may also provide information on other options such as special drug access programs, and available clinical trials.

Contacting us

The Leukaemia Foundation provides services and support in every Australian state and territory. Every person's experience of living with blood cancer is different. Living with blood cancer is not always easy, but you don't have to do it alone. Please call **1800 620 420** to speak to a local support service staff member or to find out more about the services offered by the Foundation. Alternatively, contact us via email by sending a message to info@leukaemia.org.au or visit www.leukaemia.org.au

With the cost of hospital car parking and how difficult it can be to find a car park, the Foundation's transport service made my hospital visits so much easier.

Why is it important to eat well?

Eating well is always important, but it is especially important if you have leukaemia, lymphoma, myeloma or a related blood disorder. These diseases and their treatments place extra demands on you both physically and mentally and it is important that the food you eat provides you with the energy and nutrients necessary to help meet these demands.

There are many benefits to eating well if you have a blood cancer or related disorder. Eating well may help you to:

- cope better with the side effects of cancer and cancer treatment
- recover more quickly following treatment
- have more energy and feel less tired
- maintain your body weight
- fight infection by boosting your immune system
- repair damaged tissues affected by treatment
- improve your sense of wellbeing
- improve your quality of life.

Some basic food facts

Food provides us with the energy (calories or kilojoules) and nutrients our bodies need for everyday activities, including the growth and repair of body tissues and the prevention of infection. By choosing to eat healthy and nutritious food we are more likely to get the right amounts of energy and nutrients needed to help our bodies grow and function properly.

Foods provide essential carbohydrates, proteins, fats, vitamins and minerals.

Eating the right foods before, during and after treatment can help you feel better and stay stronger.

Carbohydrates are an important source of energy, especially for our brain and muscles. Carbohydrates can be stored as sugars (glycogen) in the liver, for short-term energy and as excess fat for long-term energy. Good sources of carbohydrates include: starchy vegetables (for example potato, sweet potato), grains e.g. wheat, rice, oats, cereals, breads, pastas, legumes (lentils, chick peas, and kidney beans), and fruit.

Proteins are needed for every body function, including building and repairing body tissues like skin, muscles, bones and vital organs. They are also important for hormone production. Foods high in protein are also a valuable source of energy, vitamins and minerals. Good sources of proteins include: eggs, red meat, chicken, fish, nuts, dried beans, lentils and seeds. Dairy products such as milk, cheese and yoghurt as well as soy products like tofu, are also high in protein.

Fats are another important source of energy for the body. They are also necessary for healthy functioning of the body's immune system and nervous system, and for keeping us warm. Our bodies also need fats to help absorb vitamins and minerals and to make some hormones.

A diet rich in unsaturated fats (mainly plant and fish based) is healthier than a diet high in saturated fats. Unsaturated sources include olive oil, avocados, nuts, sunflower and safflower oil, lean meats and omega 3 fats from fish such as sardines, tuna and salmon. Saturated fats come from full fat dairy foods, cream, butter, coconut and palm oils, baked goods e.g. cakes and pastries and fatty meats.

The five food groups

There are five main food groups from which you need to choose a variety of foods every day.

These include the following:

Food	Serves per day	One serve equals
Bread, cereals, rice, pasta and noodles	at least 3-6 serves a day	1 sl bread, $\frac{2}{3}$ cup breakfast cereal, $\frac{1}{2}$ cup cooked rice, $\frac{1}{2}$ cup cooked pasta
Vegetables, legumes	at least 5-6 serves per day	1 medium potato, $\frac{1}{2}$ cup cooked vegetables, 1 cup salad vegetables, $\frac{1}{2}$ cup cooked legumes e.g. baked beans
Fruit	at least 2 serves per day	1 medium piece of fruit (apple, orange, pear, banana), 1 cup canned fruit, $\frac{1}{2}$ cup fruit juice, 30g dried fruit or 4 dried apricots
Milk, yoghurt, cheese and/or alternatives	at least 3-4 serves a day	250ml milk, 200g yoghurt, 2 slices or 40g of cheese or 125g ricotta, 1 cup soy, rice or other cereal drink with at least 100mg of added calcium per 100ml
Meat, fish, poultry, eggs, nuts	at least 2-3 serves per day	65g cooked lean meat (100g raw weight), $\frac{1}{2}$ cup cooked lean mince, 2 chops, 2 slices roast meat, 85g cooked lean chicken, 100g cooked fish or a small can, 2 large eggs, or 1 cup beans/cooked or canned legumes or 170g tofu, or 30g nut or seed butters/paste

Further information and resources and on healthy eating can be downloaded from The National Health and Medical Research Council at www.eatforhealth.gov.au

Nutrition at diagnosis

When you are first diagnosed, you have a great deal to cope with both emotionally and physically. The shock of the diagnosis may affect your appetite and oral intake.

Eating well before your treatment begins can help to give you more energy and strength to cope with treatment. This is not always possible however, as treatment sometimes needs to begin soon after the diagnosis is made.

The dietitian at your treating centre will be able to advise you on ways to eat well. Accredited Practising Dietitians (APDs) can also be found in some community health centres and also in private practice settings. Search the Dietitian's Association website at www.daa.asn.au/for-the-public/find-an-apd

Your GP should be able to provide more information. Your partner, carer, relatives and friends can also play an important role in helping you to maintain a healthy and nutritious diet. For example they may be able to shop and cook food for you until you feel well enough to do so for yourself.

There is a lot of misleading information available on the internet and other media regarding diet, nutrition and cancer. Before you make any dietary changes it is important to consult with your treating specialist and dietitian as some alternative diets may interfere with your medical treatment.

We have included in this booklet a checklist for a healthy eating and lifestyle plan (on page 34) which the Foundation recommends to ensure your diet provides the energy and nutrients to meet the demands of treatment and recovery.

Planning Ahead

Many people find that their normal eating patterns change while they are having treatment. You may not feel like cooking or eating the same amount or the same types of foods as usual.

To ensure that you have some convenient and nutritious food available at all times:

- cook in bulk and freeze individual serves e.g. soups, casseroles, pasta sauces and cakes
- have ready-made meals and snacks available. For example, keep the pantry stocked with items such as canned soups, instant pasta dishes, canned tuna/salmon, canned spaghetti and baked beans, long life desserts such as UHT custard, snack pack fruits, dried fruit, roasted nuts, muesli bars and nutritious breakfast cereals such as oats, muesli and wheat biscuits.
- family and friends may be able to help you with shopping and cooking
- community meal services such as Meals on Wheels may also be useful.

Many people lose weight during treatment. It is advisable to eat a variety of foods, including food that is protein-rich, and get some regular gentle exercise to maintain your condition.

Case study

John

“As a bit of a foodie and a caterer, good nutrition came easy for me. But when I found out that I could lose weight during the transplant, I decided to build myself up in the three months prior. After seeking medical approval I did some exercise each day and tried to choose healthy and nutritious food like lean meat, fresh fruit and vegetables, rice, pasta, whole grains and lentils. By transplant day I had gained 13 kilos, was ready to take on the treatment, felt strong, energised and was in a good food and exercise routine which I continued after the transplant.”

Here are some tips to help you maintain your body weight and build up your muscle strength and resistance to infection:

- eat small frequent nutritious meals often during the day and include protein-rich foods with your meals
- try to continue regular exercise such as walking at least three times a week
- exercise with a friend for motivation and support
- if you feel okay, try some light weights to build up muscle strength but go easy and only train with weights every second day on a different muscle group, e.g. upper body and arms one day, abdominals and legs another day (no more than 2-3 times/week)
- drink plenty of water (when training, sip water every 15 minutes). Adults need at least 8-10 cups of fluid per day. Plain tap water is the best source of fluids however; tea and coffee also count as fluids.
- get plenty of rest and sleep
- if you can, go away for a short holiday with family or friends before your treatment begins
- make the most of this time to really get fit, healthy and positive. It will serve you well throughout the coming months.

Refer to our Kitchen and Pantry Suggestions on Page 35 to help you get an idea of the things that are useful to have around (if you don't have them already).

Dental Care

Before you start treatment it is a good idea to have a dental check-up. This is important to make sure that your teeth are in the best possible condition before treatment begins. After treatment your gums may be too sensitive for dental work. Your dentist, and the nurses and doctors at your treatment centre, will advise you on the best ways to care for your mouth and teeth at different times during and after your treatment.



Nutrition during treatment and beyond

The side-effects of commonly used cancer treatments (like chemotherapy and radiation therapy) place extra demands on your body for energy and nutrients. At the same time the side-effects of these treatments and the cancer itself can affect your normal eating patterns, reducing your desire for food and your ability to eat the amount or type of food you normally would.

Side-effects and their severity can vary from person to person depending on the type of disease involved, the treatment used and how an individual responds.

Some side-effects that can affect normal eating patterns may include the following:

- nausea (feeling sick) and vomiting
- dry/sore mouth and throat
- loss of appetite
- changes in taste and smell
- diarrhoea and/or constipation
- fatigue.

There is no doubt that these side-effects can be very unpleasant at times but it's good to remember that most of them are temporary and reversible. It is important that you report any side-effects you are experiencing to your doctor or nurse because many of them can be treated successfully, reducing any unnecessary discomfort for you.

In addition, the kinds of food you eat during and after treatment can also help by reducing the severity of side-effects, and in some cases preventing them.

I was surprised that foods I normally loved to eat began to taste so different after treatment.

Nausea and vomiting

Nausea and vomiting are common side-effects of cancer treatments. Thanks to improvements in anti-emetic (anti-nausea) drugs however, nausea is generally well controlled these days.

Tips on coping with nausea and vomiting:

- take anti-nausea medication as prescribed
- don't go for long periods without eating, as this may make your nausea worse
- have smaller meals more frequently during the day, rather than a few large ones
- get some fresh air and avoid strong or offensive smells. Avoid being in the kitchen when meals are prepared.
- if you feel better, eat some dry toast or crackers or stewed/canned fruit
- dry salty foods (for example crackers) and soft drinks (for example ginger ale) are often well tolerated
- slowly sipping flat soft drink is often better tolerated than bubbly drinks. Soft drinks help replace both fluid and carbohydrate.

- eat cold foods or those served at room temperature to minimise odours and preparation e.g. sandwiches, salads, cereal, puddings, custard, mousse, yoghurts, tinned fruit, or jelly
- a grated apple, ginger or papaya may help to settle nausea
- try to eat small amounts of white rice when nausea or vomiting subsides
- limit fatty and fried foods, as these take longer to pass through your stomach, causing more nausea
- try ginger containing foods, such as ginger beer, ale, tea or candied ginger.

If you are unable to eat any solid food, it is still important to drink plenty of fluids (about eight to ten glasses a day) so that you don't become dehydrated. Soups or high-protein high-energy drinks can make good substitutes for solid foods during this time. A dietitian can help with choosing nutritious fluids. Be sure to tell the doctor, nurse or dietitian if you are unable to drink or eat much at all.

You will receive anti-emetics (anti-nausea drugs) on a regular basis, before and for a few days after your treatment has finished. Be sure to tell the nurses

and doctors if the nausea or vomiting persists for longer, or if you think that the anti-emetics are not working for you. There are many different types of anti-emetics that can be tried.

Sore mouth or throat

A sore mouth or throat, also known as mucositis, is a common and uncomfortable side-effect of some cancer treatments. It usually starts about a week after the treatment has finished and goes away a couple of weeks later. During this time your mouth and throat could get quite sore and it may be difficult to eat. Soluble paracetamol and other topical drugs (ones which can be applied to the sore area) can help. If the pain becomes more severe, stronger painkillers might be needed.

Tips on coping with a sore mouth or throat:

- take painkillers as prescribed
- keep your mouth as clean as possible (see next page)
- if you normally wear dentures and they do not fit well, remove them once you feel your mouth becoming sensitive
- avoid foods that can irritate your mouth. These may include citrus fruits, spicy, salty or dry crunchy food and alcohol.

Choose soft, moist foods that are easier to chew and swallow. Examples:

- cool/warm pureed and strained soups (containing pureed meats and vegetables)
- minced meats, chicken and fish with lots of sauce
- cow's milk or soy milkshake with honey, and yoghurt
- yoghurt with honey, for extra energy
- soft desserts, for example custard, mousses, crème caramels, rice puddings, ice cream
- pastas with sauces
- risottos
- eggs and egg dishes such as omelette, scrambled, frittata
- soft or pureed fruits, for example stewed apple, pear, prune, peach, watermelon, sliced or mashed ripe banana
- bread dipped in egg and lightly fried served with honey and cinnamon.

Your dietitian can advise you about high-protein and high-energy nutrition supplements if your diet remains inadequate.

Keeping your mouth clean

It is important to keep your mouth as clean as possible while you are having treatment, to help prevent infection. Your nurse will show you how to care for your mouth and teeth during this time.

Tips on keeping your mouth and teeth clean:

- using a soft toothbrush and mild toothpaste (if recommended), gently brush your teeth after every meal
- use a soft floss after every meal unless your gums are sensitive
- rinse your mouth with water or a solution recommended by your doctor, dentist or nurse after every meal and every one to two hours when it feels sore
- choose mouthwashes that are alcohol free and designed for sensitive mouths.

Dry mouth

Some cancer treatments affect the production of saliva, which can cause a dry mouth.

Tips on coping with a dry mouth:

- increase the amount of fluids you drink each day
- avoid dry foods - you may need to add extra sauce or gravy to moisten dishes
- rinse out your mouth with water or a recommended solution after food or as necessary to help stimulate saliva production.

To help stimulate saliva production:

- rinse your mouth with cold water regularly
- suck hard lollies (or soft jellies if your mouth is sore), or chew gum.

Loss of appetite

There are many reasons for loss of appetite. These include the physical side-effects of treatment as well as the psychological ones. Fear, anxiety and/or depression can all impact upon your desire for food. Most people find that although their appetite improves once they finish treatment, it often takes some time before they are able to eat as much as they used to.

Try eating small amounts of nutritious food more frequently (every couple of hours). This will help keep up your energy levels throughout the day.

Cancer treatment may especially deplete your body of protein. Try to eat a source of protein with all meals and snacks, for example meat, chicken, fish, nuts, dairy, eggs, or legumes.

It is always important to drink fluids so that you don't become dehydrated. Nutritious drinks like milkshakes, smoothies, high-protein soups and high-protein/high-energy drinks can make good substitutes for solid foods during this time.

The best foods to eat are those you enjoy.

Try improving your appetite, and your interest in food using:

Colour

Try more colourful fruit, vegetables and other foods like tomatoes, pumpkin, red and green capsicum, beetroot, carrots, tomato pasta sauce, roasted veggies, spaghetti bolognese or pasta with pesto sauce.

Aroma

Try foods with pleasing aromas such as fresh bread baking, fried onions and garlic, roast chicken, hearty soups or cinnamon or nutmeg in desserts.

Texture

Try foods with a variety of different textures like: crisp lettuce or rice crackers, soft bananas and custards .



Weight loss

Many people lose some weight during their treatment. This may be due to the side-effects of treatment and the body's need for extra energy. If you are trying to maintain or regain lost weight you may need to increase the amount of calories/kilojoules you are eating.

Avoid filling up on foods and drinks with little nutritional value such as broths, tea, coffee, sugar free drinks and low fat products.

The following suggestions may help:

- eat small, nutritious meals frequently (every two hours)
- choose nutritious snacks, for example: nuts, bananas, dried and fresh fruit, wholegrain breads, muffins and raisin toasts, cakes such as banana, carrot and fruit cake, biscuits with cheese or peanut butter, hummus and other high energy dips
- choose full fat milk, yoghurt and other dairy products
- add milk and/or protein powders (discuss with your dietitian) to foods such as soups, casseroles, cereals and milk puddings

- add grated cheese to soups, pasta dishes and egg dishes
- eat lean meat, chicken or fish with cooked vegetables and gravy
- high-protein/high-energy drinks may be recommended by a dietitian
- enrich foods using fats and oils as they are higher in calories. Try frying food, add margarine or olive oil to cooked vegetables, and spread margarine thickly on breads, add cream to soups and desserts, and use oil based salad dressings and mayonnaise.

Weight Gain

Weight gain may result from the use of steroids. These drugs can increase your appetite (so make sure when you are hungry, that you make healthy food choices) and over time might cause your body to hold on to too much fluid (fluid retention). These effects are usually temporary. Please see your doctor to discuss this type of weight gain if it happens to you.

I was worried about the weight I was putting on. Thankfully the weight came off after my steroid treatment finished.

Changes in taste and smell

Many people find that food doesn't taste or smell the same as it did before treatment and it can take some time for this to return to normal.

Tips on improving your sense of taste and smell:

- keep your mouth clean and fresh
- enhance the taste of food by adding sauces, herbs and spices
- avoid smells you find unpleasant. Cold foods such as sandwiches, salads or yoghurt may be better tolerated than hot foods.
- try using plastic utensils if some foods taste metallic
- try lemon drops or mints if you have a metallic taste in your mouth
- choose a different type of protein if you develop a strong dislike for a particular source such as chicken, fish, tofu, eggs, nuts and cheese
- try citrus fruits
- make foods look, smell and taste more appealing.

Diarrhoea

Some cancer treatments can cause damage to the lining of your bowel wall. This can lead to cramping, wind, abdominal swelling (bloating) and diarrhoea (frequent passing of loose bowel motions). Be sure to tell your nurse or doctor if you experience any of these symptoms, or if you see blood in your bowel motion.

If you are having diarrhoea it is important to keep yourself as well hydrated as possible to replace fluids and electrolytes lost from your body. Frequent severe diarrhoea may make you dehydrated, so it is important to seek medical advice if this occurs.

Tips on coping with diarrhoea:

- take anti-diarrhoea medication only if prescribed (follow directions carefully)
- limit foods that may increase diarrhoea and may help decrease bloating and discomfort, for example foods high in fibre such as wholegrain breads and cereals, citrus fruits, fruits with skins and seeds, dried fruit, large quantities of fruit juice, vegetables including cabbage, brussel sprouts, peas, beans and legumes, alcohol, strong tea, caffeinated drinks like coffee, and spicy food

- sometimes it can help to reduce the amount of lactose in your diet by limiting cow's milk – or drinking lactose-free cow's milk products, soft cheese, custard and ice cream (while you have diarrhoea). Soy or rice milk can be used as a substitute to cow's milk.
- drink plenty of liquids like water, dilute fruit juices, weak cordials, clear soups and weak tea. You may need to sip on oral rehydration solutions from the pharmacy
- sip boiled water with sliced ginger or a teaspoon of sea salt and a tablespoon of honey
- suck on fruit juice ice cubes
- eat boiled white rice and pasta.

If your bottom/anus is sore try using 'baby wipes' which may be more soothing. You may also benefit from applying a barrier cream (like zinc cream, lanolin or pawpaw cream) to help protect the skin around your anus, which can become sore.

Constipation

Constant changes in treatment, medications (e.g. some chemotherapy and pain relief drugs), food and fluid intake and lack of mobility for long periods can slow bowel function and cause constipation.

Inform the medical staff if your bowels are not working regularly.

Increasing the amount of fibre and fluids in your diet and having some regular exercise can help to prevent constipation. In some cases a gentle laxative is required to help soften the bowel motion.

You can increase your fibre intake by adding some of the following foods to your diet:

- wholemeal and wholegrain breads like those containing rye, spelt, soy and linseed
- wholemeal pastas
- wholegrain cereals like those containing bran and oats, rye, barley, brown rice



Why are fluids important?

It is important to drink plenty of fluids (eight to ten glasses or more) during the day to avoid becoming dehydrated and to keep the kidneys functioning well. Some fluids make great short-term nutritious substitutes for solid food as they contain important nutrients like proteins, vitamins and minerals. Varying the types of fluids you are drinking ensures that you are having a wider range of nutrients throughout the day.

There are many different 'healthy' fluids to choose from. These include:

- fruit and vegetables — especially those with skins and edible seeds including celery, carrots, peas, green beans, broccoli, corn, oranges, plums, figs, dates, prunes, apples
- legumes or pulses – lentils, kidney beans, baked beans, chick peas, mung beans, red and black beans, soy and white beans
- dried fruit and unsalted nuts and ground seed and nut mixes such as LSA – linseed, sunflower and almonds (buy at a supermarket)
- drink eight to ten glasses of fluid a day.
- water – try drinking a couple of litres a day (carry a bottle with you when you go out)
- soups – for example: pea and ham, thick meat and vegetable, mixed vegetable, pumpkin, miso or chicken noodle soup
- milkshakes and smoothies (made with cow's or soy milk)
- juicy fruits – watermelon, oranges, apples, berries, mangoes, citrus, pineapple, grapes, plums, peaches, lychees
- fruit juices – apple, orange, pear, apricot nectar
- ice blocks/cubes – made with water or fruit juice.

Fatigue

During treatment, and for some time afterwards, there is a good chance you will feel more tired than usual. It is important to listen to your body and make sure that you have enough rest during the day; for example, you may need an afternoon nap. Apart from getting adequate rest there are some things you can do which may give you more energy and reduce your feelings of fatigue.

Tips on reducing fatigue:

- Do some gentle exercise or physical activity regularly. As well as making you feel better and less fatigued, exercise can give you more energy and help improve your muscle tone. Seek help or advice from the physiotherapist at the hospital or an exercise physiologist or fitness instructor, who is used to working with people recovering from injury or illness. They can help prescribe activities that are appropriate to your needs at the moment.

You could also:

- eat small nutritious meals frequently
- try to include a protein-rich food at each main meal; for example: meat, chicken, eggs, fish, legumes, nuts, cheese or other dairy food
- choose whole grain carbohydrate foods like breads, cereals, rice, pasta that will give you energy throughout the day
- eat plenty of fruit and vegetables
- drink plenty of fluids (water, fruit juices and vegetable juices) to keep your body hydrated
- rest when you are tired.

It's amazing the difference a good night's sleep can make. Things just seem so much better in the morning after a good night's sleep.

Trouble sleeping

There are many reasons why you may have difficulties sleeping at different times, even when you are tired. These may include side-effects of medications, inactivity, an unfamiliar and/or noisy environment and interruptions to your sleep. Anxiety and depression can also interfere with our normal sleeping patterns.

Our eating habits and the kinds of foods we eat can affect our sleeping. If you have difficulty sleeping you may find the following suggestions helpful.

Tips on improving sleep:

- talk to your doctor or nurse about any difficulties you are having getting to sleep or staying asleep
- limit the number of stimulant drinks like coffee, cola drinks, alcohol, and tea you have during the day and especially late at night
- choose more protein-rich foods (meat, dairy foods, lentils, chicken, fish, tofu, eggs, and nuts) throughout the day
- eat small nutritious meals throughout the day and especially at night and ensure that your last major meal is at least two hours before sleep
- have some regular exercise during the day, if possible in the fresh air. This may help with the quality and length of time you sleep at night. If you are in hospital you may have access to a veranda where you can sit or walk in the fresh air. Make sure you are protected from the sun.
- try a relaxing activity like stretching or meditation before sleeping
- a warm milk drink.



Eating in hospital

There are many reasons why you may not feel like eating much while you are in hospital. If you don't feel like eating the hospital food, the hospital dietitian can give you more ideas about the types of foods to suit you at a particular time, or other available food options that are not listed on the menu.

If you are on a high-protein diet you may be offered high-protein or high-energy drinks. If you cannot eat or drink, there are other options available which will give you adequate nutrition for a short time.

Ask your treatment team whether your family and friends can bring in some of your favourite foods. Remind them, however, not to be surprised or too disappointed if you still don't feel like eating.

Have nutritious snacks on hand for the times when you feel hungry.

These could include:

- a bowl of fresh seasonal fruit (washed)
- healthy fruit and nut bars
- single serve cartons of fruit
- fresh bananas or avocados
- long life juices and protein drinks
- small packets of roasted nuts and dried fruits
- rice crackers and cheese
- small tins of tuna, baked beans, fruit
- multigrain or soy and linseed bread, sourdough, fresh bakery bread
- home cooked cake for example, carrot and banana cake
- plain or flavoured milk.

Food for children

Healthy and nutritious food provides the energy and nutrients needed by growing children. It also helps them to cope better with the demands of cancer and cancer treatment. It may be challenging however getting children to understand and eat what is 'good for them', especially when they are feeling sick, tired or simply do not have any appetite.

The following suggestions may help to improve your child's appetite and enjoyment of food during this time:

- allow your child to eat when they are hungry, which often means snacking in between meal times. A bowl of cereal or a fruit smoothie is a valuable source of nutrients and energy for your child, especially if they miss out on other meals during the day.
- offer your child healthy snacks and try to limit the amount of non-nutritious and high-saturated fat foods, (for example chips and chocolate), and high-sugar foods (for example lollies). These foods shouldn't be substituted for more nutritious foods on a regular basis.

- try to make meal times as relaxed and enjoyable as possible. Try to continue normal family routines around food, for example try to have the usual eating times. If your child doesn't feel like eating at this time, they may feel like eating later.
- make food more interesting by using novelty plates and cutlery, cutting foods like vegetables into different shapes, making faces with pieces of vegetables or meat on pizza. Boxed foods may be more attractive for example dried fruit, Sustagen, protein drinks, fruit juices.
- encourage children to help with cooking and preparation of meals.

Thankfully my family brought in food I loved and I could eat it whenever I felt up to it. It made such a difference.

*Golden Health Rule -
always wash your hands with
soap and water before
handling food.*

Try offering your child some of the following nutritious and tasty foods:

- dips and vegetable sticks
- chunky vegetable, chicken and noodle soup
- homemade healthy pizza
- salmon and potato patties with fresh corn and peas
- freshly cooked salmon/chicken and vegetable kebabs with a tasty dipping sauce
- fruit salad (preferably homemade) and custard or ice cream
- stewed fruits for example apple, pear, rhubarb, apricots and peaches
- mashed banana with custard or ice cream
- toast with melted cheese and tomato, or baked beans and cheese
- vegetables like broccoli and cauliflower in a creamy cheese sauce with slithers of almonds or other nuts

- foods sweetened with honey
- frozen fruit juice cubes or icy poles
- fruit juices
- porridge with brown sugar or honey and fruit (banana, sultanas)
- bowls of colourful seasonal fruit within easy reach e.g. plums, grapes, bananas, cherries, apples, pears, mangoes
- tempura vegetables (vegetables cooked in a light batter) – potatoes, sweet potato, carrots, beans, pumpkin, zucchini
- stir-fries with thinly sliced meat, vegetables and noodles
- oven roasted vegetables with olive oil – beetroot, sweet potato, pumpkin or potatoes cut into chips.

Tip: have containers of pieces of colourful fruit and vegetables, nuts and dried fruit handy for children to grab during play.

General wellbeing and food hygiene

Blood and bone marrow cancers and their treatment can affect your immune system and make you more susceptible to infection. The length of time it takes for your immune system, in particular your white blood cell count, to recover mainly depends on the type of treatment you have had. Your doctor and nurse will advise you about how to reduce your risk of infection during this time.

It is always important to follow some basic rules about safely storing, cooking and handling foods, to help prevent infection, especially while your immune system (white cell count) is low.

All foods contain some bacteria, which generally is not a problem as long as the food is well prepared and well cooked. If in doubt about any food – cook it, and serve it hot and steaming. This destroys any harmful bacteria. The Food and Hygiene Guide on page 33 provides some simple and easy to follow rules on food safety and reducing the risk of infection.

Some people are advised to follow 'low bacteria diet' guidelines to help reduce their risk of infection while they are having treatment. This generally means avoiding foods that are more likely to contain more harmful microorganisms.

It is advisable to consult the dietitian and your treatment team about the kinds of foods to avoid while your white blood cell count is low. Some of these foods may include salads, paté, shellfish, seafood, some vegetables like raw mushrooms and strawberries and soft cheeses (brie, camembert).

Vitamin and mineral supplements

It is always a good idea to talk with your treatment team before taking any vitamin and mineral supplements. Many of these substances are expensive and there is still some controversy about their benefits and safety. Some may seriously interfere with the treatment your doctor has prescribed. Eating healthy and nutritious food can usually provide you with all the vitamins and minerals your body needs.

Alcohol

It is probably fine to drink a small amount of alcohol occasionally (e.g. a glass of wine with dinner) if you feel like it. You do need to check with your doctor however as there may be times when it should be avoided, for example while you are taking certain medications or undergoing certain types of chemotherapy.

The new 2009 NHMRC guidelines on alcohol consumption recommend that healthy adults drink no more than two standard drinks on any day, and that people under 18 years of age, pregnant and breastfeeding women not to drink alcohol at all. The full guidelines can be seen on line at <http://www.nhmrc.gov.au/guidelines/publications/ds10>

Exercise

There are many benefits to exercising on a regular basis before, during or after treatment. Exercise not only makes you feel better, it also improves your energy levels, sleeping patterns and general strength and fitness. Talk to your doctor or nurse first, then exercise professionals about the kind of exercise that might be most suitable for you.

If you are exercising outdoors (for example going for a walk) you need to avoid direct sunlight on your skin. Your skin is particularly sensitive to the damaging effects of ultraviolet (UV) sunlight after treatment and can burn easily. You can protect your skin from the sun by wearing a hat, a long sleeved top and pants and applying sunscreen to any exposed areas. You can go out in the early morning and late evening but do try to avoid the sunniest (peak UV) parts of the day. These are between 11am and 3pm in daylight saving time (late October to late March), and between 10am and 2pm the rest of the year.

Food and hygiene guide

Food preparation

- always wash your hands with soap and water before handling food.
- clean surfaces and equipment thoroughly before preparing food.
- wear disposable gloves (available in supermarkets and chemists) when handling raw meat.
- wash chopping boards and knives in hot soapy water between uses when preparing both raw and ready to eat foods.
- wash cutting boards and knives with dishwashing soap after each use, especially if cutting raw meat or fish.
- wash and peel raw fruit and vegetables before cooking and eating.
- thaw frozen foods completely before cooking or reheating, especially raw chicken and other meats (thaw in the refrigerator overnight, not on the kitchen bench).
- thaw food once only (do not refreeze thawed foods).
- reheat thawed cooked foods, until steaming hot.

Cooking

- cook meats and seafood thoroughly before serving (even if you like rare meat).
- once cooked, serve food immediately or keep steaming hot until serving.
- if you are using a microwave, stir food and ensure it is steaming hot all the way through before serving.
- when eating out, order food which is freshly cooked and steaming hot.

Storage

- store raw and ready-to-eat foods separately.
- always store raw meat covered and away from other foods in the fridge. If thawing frozen meats keep it below cooked foods to prevent contamination by spillage.
- discard raw meat in the fridge after one day.
- do not eat foods from salad bars, pie or food warmers.
- if cooking food in advance, cool and chill or freeze straightaway – do not leave food to cool on the bench top.
- avoid foods past 'use by' date.
- avoid foods in damaged packaging.

(For more tips on food hygiene and preparation visit www.foodstandards.gov.au).

Checklist for a healthy eating and lifestyle plan

The following are some suggestions for a healthy eating and lifestyle plan which you and your family may find helpful.

- Drink lots of water every day (eight to ten glasses) – keep a drink bottle handy.
- Eat a variety of foods.
- Eat a variety of colourful fruit and vegetables in season.
- Have citrus fruits to increase intake of vitamin C.
- If juicing fruit, drink it straight afterwards. This ensures that you get the most benefit from the vitamins contained in the fruit.
- Include green leafy vegetables like broccoli, cauliflower, cabbage, brussel sprouts, kale, spinach, rocket, lettuce and bok choy.
- Include coloured vegetables like carrots, pumpkin, sweet potato, capsicum, beetroot and turnip.
- Include dairy foods such as milk, yoghurt and cheese for protein and calcium.
- Always wash fruit and vegetables before cooking and/or eating.
- Eat protein with every meal.
- Eat fish (fresh, frozen or tinned) such as salmon, snapper, herring, sardines, perch up to three times a week.
- Increase your intake of fibre by including foods such as whole grains, cereals (especially oats), vegetables .
- Include garlic, onion, spices like turmeric and herbs like parsley, coriander, sage, basil, thyme when preparing meals as these are rich in vitamins and minerals.
- Limit deep fried, non-nutritious, high fat and sugar foods, likes, chips, donuts etc.
- Ensure your intake of essential fats is adequate by eating foods such as avocados, olive oil, nuts, fish (especially oily fish like salmon), flaxseeds and oil, and sunflower seeds.
- Reduce alcohol to one standard drink or less a day for a woman and two standard drinks or less a day for a man. Have at least two alcohol-free days a week (ask your doctor about alcohol, you may be told to avoid alcohol completely during treatment).
- Quit smoking (contact the Quitline, or your GP if you need help to do this – it is hard for many people).
- Take some regular daily exercise. Small lots of 10-15 minutes a couple of times a day is beneficial. But remember to only do as much as you are comfortable with.
- Stretch, meditate, do yoga and try to laugh more!

Kitchen and pantry suggestions

To make life easier and your nutritional choices simpler, here are some non-essential, but useful suggestions to have on hand in your kitchen or pantry:

- containers of dried chickpeas, lentils, rice, red kidney beans, oats
- whole grain breakfast cereals like oats, muesli, weet-bix
- spices – nutmeg, turmeric, coriander, cumin, basil, oregano, star anise
- salad herbs – parsley, coriander, basil, sage, rosemary, thyme
- olive oil or vegetable oil for cooking
- Hoi sin sauce, soy and sweet soy, rice noodles
- tinned tomatoes for pasta sauces
- dried noodles and pasta
- packets of dried biscuits, for example water crackers and/or rice crackers
- small tins of tuna, sardines and baked beans for quick snacks
- onions, garlic and ginger
- blender
- juicer machine
- non-stick frying pan
- a sharp knife
- take-away plastic containers for freezing foods
- your favourite cookbook.

Freezer Foods

- vegetables including stir-fry mix of carrots, broccoli, capsicum, sugar snap peas, water chestnuts
- corn and peas, broad beans, cauliflower, baby beans and spinach
- frozen raspberries and blueberries are a great standby for smoothies and desserts
- fish, chicken fillets, lean red meat (beef or lamb).

Bread

Try something different such as flat breads and wraps, and corn tortillas or go to your local bakery and ask for their variety of seeded or wholemeal breads. If you are gluten intolerant, there are many types of bread available in supermarkets and bakeries which are gluten-free.

Useful internet addresses

Leukaemia Foundation

www.leukaemia.org.au

American Cancer Society

www.cancer.org

The Cancer Council Australia

www.cancercouncil.org.au

Department of Health & Ageing (The Australian Guide to Healthy Eating Poster and more information on nutrition and healthy eating)

www.eatforhealth.gov.au

Food Standard Australia New Zealand

www.foodstandards.gov.au

Go for 2 and 5

www.gofor2and5.com.au

Leukaemia Foundation – online support group

www.talkbloodcancer.com

Leukemia & Lymphoma Society of America

www.leukemia-lymphoma.org

Look Good ...Feel Better Program

www.lgfb.org.au

National Cancer Institute (USA)

www.cancer.gov/cancerinfo

National Cancer Institute (USA) – eating tips

www.cancer.gov/cancertopics/eatinghints

Recipe ideas

The following recipes provide examples of healthy, nutritious and easy-to-prepare meals and snacks, which you and your family may enjoy.

Tasty Toast Options

Try some of the following on toast. If you are neutropenic, you may have specific requirements and the following may not be appropriate for you.

- fried mushrooms (in olive oil) with black pepper and some chopped parsley
- sardines, tahini, lemon juice and pepper to taste
- baked beans fried in onion with grated cheddar cheese, pepper and some chopped parsley
- tomatoes roasted in oven for 20 minutes with olive oil, balsamic vinegar and topped with basil and pepper to taste
- avocado spread thickly with black pepper to taste
- avocado, tomato and smoked salmon
- scrambled eggs with fried onion, turmeric, rocket or parsley.

Sandwich Fillings

- tuna, Spanish onion, mayonnaise
- avocado, hummus, chicken and rocket (washed thoroughly)
- pesto, turkey, tomato, lettuce (washed thoroughly)
- tinned salmon, squeeze of lemon juice, capers, mayonnaise and lettuce
- chicken, walnuts, rocket and mayonnaise
- hard boiled egg, mayonnaise, chives and parsley with lettuce
- cold roast lamb or beef, horseradish mustard, lettuce, chutney
- avocado, cheese, lettuce or rocket, tomato, cucumber, beetroot.

Hot Sandwich Fillings

- baked beans, cheese and tomato
- spaghetti bolognese sauce, grated parmesan and rocket
- ham, tomato and cheese with fresh basil
- slices of roasted vegetables – red and green capsicums, zucchini, onions and tomatoes with pesto and tasty cheese.

Easy Tuna Salad

Serves 2

Contains Omega 3 oils and a good combination of proteins and carbohydrates.

- 2 small tins tuna in oil or brine
- Small Spanish onion diced
- 1 tblsp mayonnaise, juice of half lemon, half tsp French mustard, pepper
- 2 hard boiled eggs, quartered
- Cooked, cold green beans
- Cooked cold new potatoes, halved
- Finely diced anchovies (optional)
- Leaves of baby cos or iceberg lettuce (washed thoroughly) broken up
- Fresh chopped parsley (washed thoroughly)
- Cherry tomatoes (washed thoroughly) and halved
- Mixing bowl

Mix all ingredients and serve for lunch or dinner in mixing bowl.

Healthy Pizza

Serves 1

- Commercial whole meal pizza bases (buy in supermarket freezer section)
- Tomato paste
- Fresh chopped basil leaves
- Slices of mozzarella cheese
- Slices of mushrooms
- Green, red and yellow capsicum finely chopped

Smear tomato paste onto pizza bases and then add layers of cheese topped with fresh basil, mushrooms and capsicums.

Bake in a hot oven for five minutes or until cheese melts. Grill for two minutes.

Brown Rice With Stir-fried Vegetables

Serves 2

This brown rice recipe is slower to digest, high in fibre, and includes most of your daily vegetable requirements. It is good for constipation.

For ease of preparation place all veggies into a blender and pulse until diced.

- Cooked brown rice (use 2 cups)
- One onion finely diced
- One green capsicum diced
- One yellow capsicum diced
- One red capsicum diced
- 1 cup of diced zucchini
- 250g mushrooms
- Fresh corn cut from one cob
- Clove of garlic finely sliced
- Two sticks of celery diced
- Six snow peas cut diagonally or 1 cup of fresh or frozen peas
- One hot red chilli diced (optional)
- 1 tblsp olive oil
- Sweet soy sauce

Stir-fry veggies in olive oil and add two tablespoons of sweet soy, then add to rice and mix. Serve hot or cold.

Cooking Fish

1. Heat oven to 200°C
2. Wrap fish fillets in foil with some sliced lemon and chopped fresh herbs or nuts
3. Place into oven for 15 minutes
4. Remove from oven and let stand for 5 minutes

Hearty Bean Soup

Serves 4

Increase quantities for more servings. This is a great winter soup. For individual meals, freeze in small containers.

- 250g of cannellini beans, red kidney beans and black-eyed beans (soaked overnight)
- 1 litre of water and 1.5 litres of vegetable stock
- 1 medium onion
- 4 cloves garlic
- 250g firm tofu (cubed) - optional.
In fridge section of supermarket or Asian stores
- 2 tbsps olive oil
- 1 potato cubed
- 1 large carrot
- 1 tblsp sage chopped
- 1 tblsp parsley chopped
- 250g of cabbage finely shredded
- Ham hock (optional)
- Pepper to taste
- ½ tsp smoked paprika (optional)
- 1 large can of tomatoes
- Grated parmesan
- Pepper to taste

Lightly fry onions, garlic, and sage in half the olive oil and set aside.

Boil beans for one hour until soft. Add water and stock with potato, carrot and ham hock and simmer for another hour. Add remaining ingredients bring to boil, simmer for 30 minutes until cabbage is cooked. Before serving, add tofu if desired.

Season and serve with grated parmesan and chopped parsley.

Stewed fruit

Choose fresh fruit in season.

Combine selected fruit in a lidded pot covering the base with water. Bring to boil, reduce heat and simmer until fruit is soft. You don't need to add sugar if you don't want to, as the fruit itself is often sweet enough. Rhubarb is an exception to this rule and may have a tablespoon of sugar or honey added during the cooking process. If you are cooking apples, you may want to add half a teaspoon of cinnamon and some cloves for taste.

Combinations of fruit for stewing include:

- apricots, peaches, plums
- rhubarb, apple, sultanas
- prunes, apples
- apples, cinnamon, cloves.

Serve on porridge or muesli with natural yoghurt.



This information booklet is produced by the Leukaemia Foundation and is one in a series on leukaemia, lymphoma, myeloma, MDS, MPN and related blood disorders.

Copies of this booklet can be obtained from the Leukaemia Foundation in your state by contacting us.

The Leukaemia Foundation is a not-for-profit organisation that depends on donations and support from the community. Please support our work.

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