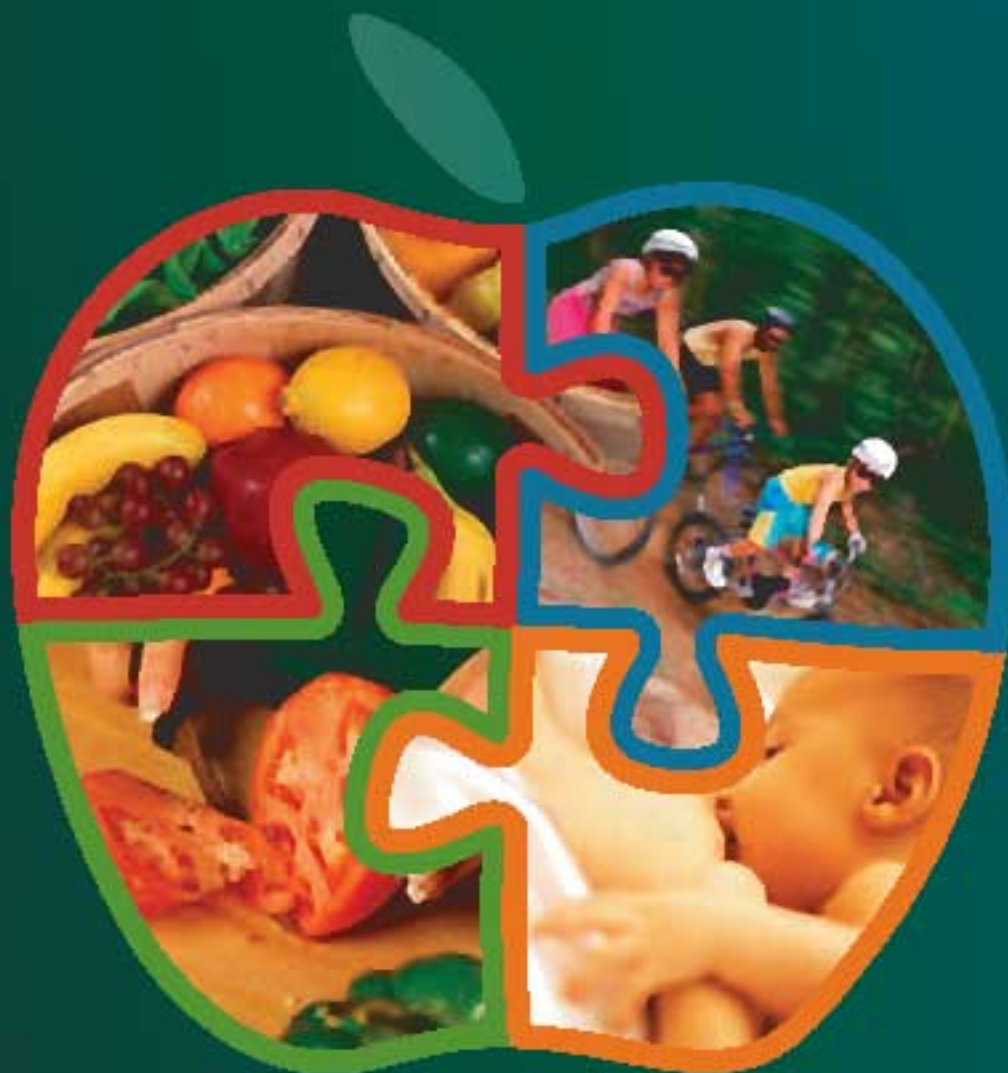


Food for health



Dietary guidelines for Australians **A guide to healthy eating**



Australian Government
Department of Health and Ageing
National Health and Medical Research Council

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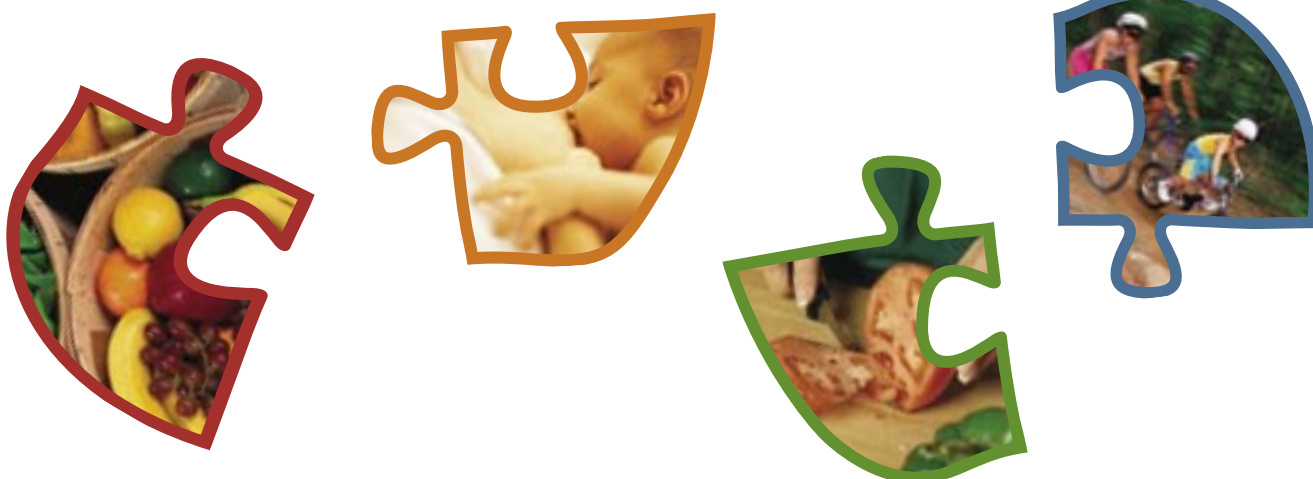
The Australian dietary guidelines and Food for Health information can also be found on the internet at <http://www.nhmrc.gov.au/publications/nhome.htm>

Reliable information about food, nutrition and health is also available from:

- Nutrition Australia — www.nutritionaustralia.org
- Dietitians Association of Australia (DAA) — www.daa.asn.au
- Food Standards Australia New Zealand (FSANZ) — www.foodstandards.gov.au who also produce *The official shopper's guide to food additives and labels: know what you are eating at a glance* (published by Murdoch)
- Local community health centres
- Commonwealth, State and Territory departments of health
- Baby, child and youth health centres
- Accredited practising dietitians in private practice (look in the yellow pages) or in hospitals and community centres
- National Heart Foundation of Australia — www.heartfoundation.com.au
- Diabetes Australia — www.diabetesaustralia.com.au

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The Dietary Guidelines for Australians

Nutritious foods and an active lifestyle can help achieve good health throughout life. This booklet outlines the Dietary Guidelines for Australians which have been developed by food and nutrition experts on behalf of the National Health and Medical Research Council and the Commonwealth Department of Health and Ageing.

The Dietary Guidelines highlight the groups of foods and lifestyle patterns that promote good nutrition and health. No guideline is more important than another. Each guideline deals with a key health issue and is like a piece of a puzzle. This guide will help you put the pieces of the puzzle together.

Nutritional needs differ at different stages of life and these are reflected in the Dietary Guidelines. For the newborn, there is no better food than breast milk. Older children need a balance of foods to ensure good growth and development. The scales are tilted differently for adults who often need to balance eating and physical activity to prevent weight gain. For both children and adults, some principles always remain the same – the need to ensure that food is handled well and safe to eat and to enjoy a wide variety of nutritious foods.

The Dietary Guidelines for Australians are your best guide to food, nutrition and health. The guidelines for Adults and for Children and Adolescents are shown on the following pages. They have many things in common but children and adolescents do have some special needs.

Most Australians have access to a wide variety of nutritious foods and enough money to buy them. As a result, we typically enjoy a fairly good standard of nutritional health, but some of us are less fortunate.

The health of Australians living in rural areas is poorer than that of people in the cities. Also, rural Aboriginal and Torres Strait Islander peoples often face greater nutritional challenges than those of other Australians. People in remote areas can pay up to half as much again for basic healthy foods than people living in urban and metropolitan areas. Some reasons for this include higher costs of transport, higher store overheads and greater spoilage of foods.





The wide variety of foods enjoyed in the cities is just not available in many remote communities. But even in some urban areas, healthy fresh foods may drop off the daily menu for those who are unemployed, have little money or many mouths to feed.

Does healthy eating cost more?

While some nutritious foods can be more expensive, there are plenty of healthy food choices that are available without changing the family's budget.

Wholemeal bread, breakfast cereals, rice, pasta and vegetables and fruit in season – foods that should form the foundation of the diet – are not high cost foods. When diets are rearranged to allow for more of these foods, the overall costs can come down.

Is healthy eating sustainable?

Although the world currently has enough food to feed its people, the production of food is placing strain on the environment in a number of ways. The sustainability of food production and intake is becoming an increasingly important issue. Can we continue to use the water and soil the way we do now for growing food?

The new Dietary Guidelines for Australians promote a sustainable eating pattern. In the future, the guidelines may evolve and change to account for systems which prove to be non-sustainable in the long-term. In Australia, this may well be driven by water use. Australians are the highest per capita users of water in the world and most of this is used to produce our food.



Dietary Guidelines for Australian Adults

Enjoy a wide variety of nutritious foods

- Eat plenty of vegetables, legumes 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
Reduced-fat varieties should be chosen, where possible
- Drink plenty of water

and take care to:

- Limit saturated fat 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

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

Dietary Guidelines for Children and Adolescents in Australia

Encourage and support breastfeeding

Children and adolescents need sufficient nutritious foods to grow and develop normally

- Growth should be checked regularly for young children
- Physical activity is important for all children and adolescents

Enjoy a wide variety of nutritious foods

Children and adolescents should be encouraged to:

- Eat plenty of vegetables, legumes 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, cheese and/or alternatives. Reduced-fat milks are not suitable for young children under 2 years, because of their high energy needs, but reduced-fat varieties should be encouraged for older children and adolescents
- Choose water as a drink. Alcohol is not recommended for children

and care should be taken to:

- Limit saturated fat and moderate total fat intake. Low-fat diets are not suitable for infants
- Choose foods low in salt
- Consume only moderate amounts of sugars and foods containing added sugars

Care for your child's food: prepare and store it safely

Prevent excess weight gain

There has been a dramatic increase in the number of overweight children and adults in Australia over the last 20 years. Surveys suggest that Australians are becoming less active but eating more. Preventing excess weight gain is thus one of the greatest health challenges we face in the 21st century. We all know how hard it is to lose those extra kilo's, once they've appeared. For children and adolescents we need to ensure adequate food intake for normal growth, without overdoing it.

Does being overweight affect my health?

Carrying too much fat can be a strain on the body. Blood pressure and the level of fats in the blood may go up increasing risk of heart disease or stroke. These lead to an increase in the risk of heart disease and stroke. The chance of developing certain types of diabetes is markedly increased later in life. Pains in the lower back and arthritis are more common and the risk of some cancers is increased. If we can prevent excess weight gain in childhood and in adulthood, we can reduce our risk of many of these health problems.

Why are we getting fatter?

Each day of our lives our bodies take on fuel through the food we eat. We constantly burn this fuel over the day as we move about. The more we move, the more fuel we burn. If, at the end of a day, the body has fuel left over it is stored as fat – body weight increases a little. On the other hand, if we burn off more fuel than we have taken on board, the body will use up some of its stored fat – body weight falls a little.

When body weight is stable the balance of food intake and physical activity is close to perfect (Figure 1) and we will prevent excess weight gain. If weight is increasing the system is out of balance (Figure 2). This may be as a result of eating too much food, doing too little physical activity, or both.

So why are Australians getting fatter? It is probably a combination of both less activity and more food. No doubt we are less active than we used to be. Hard, physical labour is a thing of the past for most people. Much of our work and leisure time is spent looking at a computer or television screen.

The large variety of foods and drinks available today are part of the problem too. Many foods are high in kilojoules (food energy) and low in fibre and water content. We call these foods energy dense foods. Sugary drinks have also become increasingly popular. Foods and drinks are now very tasty and portion sizes have increased. From surveys in Australia we know that people's energy intakes are also increasing. For example over the decade from the mid '80s till the mid '90s, adolescents increased their energy intakes by more than 10%. It is easy to eat too much.

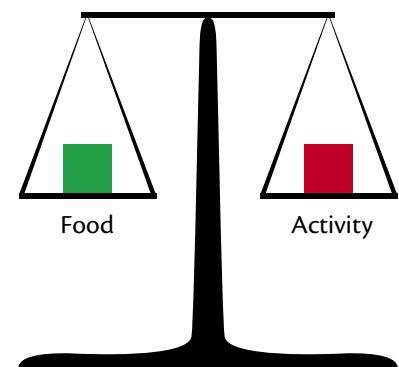


Figure 1. Weight stable.

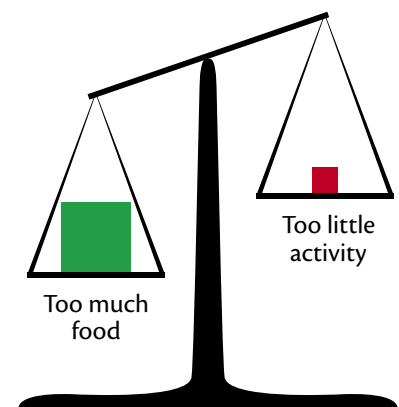


Figure 2. Weight increases.

Preventing excess weight gain

There is no secret to preventing excess weight gain. It's a matter of finding the balance between food intake and physical activity. The best approach is to make permanent changes to both food and activity habits.

Be active every day

Increasing physical activity burns fuel – burns fat. The amount of fat burned off will depend on two things - how often you are active and for how long. Aim to be active every day. Put together at least 30 minutes of moderate physical activity on most, preferably all, days. The best kind of physical activity is the one you like the most. Many people find walking easy and enjoyable. Also, try to be active in everyday life. Small amounts of activity, just moving about rather than sitting, all add up at the end of the day.



Eat smart

Not putting too much fuel in your body is vital to getting the balance right. The guide to eating a variety of nutritious foods (page 8) is a good place to start when planning your meals. Needless to say, keep the amounts you eat (portions) moderate in size. Green and yellow and orange vegetables are the exception to the rule. Eat as much of these as you can - they are filling yet low in kilojoules.

Pay special attention to the advice about fats (page 18), alcohol (page 20) and sugar (page 21). Fats are the richest source of kilojoules. Moderating the amount of fat in your meals will help limit your fuel intake. Remember that some commercial foods labelled "low fat" sometimes have about the same kilojoules as their non-low fat equivalent. Read the labels. Focus on cutting down on the not-so-healthy saturated fats. Use the healthy fats in moderation. Eat plenty of fruits and vegetables - they are rich in nutrients, fibre and water, but low in kilojoules.

Drinks are important. Sugary soft drinks, fruit drinks and cordials contain lots of kilojoules but are not as filling as solid foods and are easy to overconsume. Alcoholic drinks can increase appetite. Sugary and alcoholic drinks are sometimes called 'empty kilojoules' – they provide plenty of fuel without many essential nutrients to go with them. Consider alternatives to sugary soft drinks such as water or 'diet' soft drinks.



dietary guidelines

Adults

- ▷ Prevent weight gain: be physically active and eat according to your energy needs.

Children & adolescents

- ▷ Children and adolescents need sufficient nutritious foods to grow and develop normally.
- ▷ Growth should be checked regularly for young children.
- ▷ Physical activity is important for all children and adolescents.

Enjoy a wide variety of nutritious foods

Foods come in all shapes and sizes and may be of animal or plant origin. In Australia, we also have many different cultures, all with their own cuisines. Whichever style of eating we choose, we need to choose our foods with care so we obtain all the nutrients we need whilst enjoying the experience of our diverse food supply. It is not surprising that each food has a unique group of nutrients and often something special to offer.

- Wholegrain cereals are rich in B vitamins and fibre.
- Fruit and vegetables contain vitamin C and folate.
- Dairy foods are the best source of calcium.
- Red meats are rich in iron and zinc.
- Fish is an excellent source of omega 3 fats.
- Nuts and vegetable oils are rich in essential fatty acids and vitamin E.

Each food plays a role

None of these foods can do the job alone. Young babies can thrive on a single food, breast milk, but the rest of us need to eat a wide variety of nutritious foods to ensure our needs are met. Every food has a contribution to make – a small part to play in good nutrition, health and wellbeing.

The amount and variety of foods available in Australia are more than adequate to meet the nutritional needs of everyone no matter what cultural background they come from or what style of cooking they enjoy or prefer. Yet many people have problems getting the balance right. There are many who, for one reason or another, do not consume a sufficient variety of foods to meet their nutritional needs. Even more of us fall down on the other side of the equation, eating too much of the foods our bodies need least such as those high in saturated fat, salt, sugar and kilojoules.

Eating a variety of foods does not mean eating everything in sight. This would be the fast track to putting on weight. In a land where food is so abundant it is important to keep portion sizes small.

Quality and quantity

The key is to enjoy a wide variety of nutritious foods. We may need to eat less of some foods on our current menu in order to make room for the healthy foods our bodies need.

The following pages will guide you in selecting nutritious foods for good health.



dietary guidelines

Adults, children & adolescents

- ▷ Enjoy a wide variety of nutritious foods.



Enjoy a variety of foods every day



Drink plenty of water

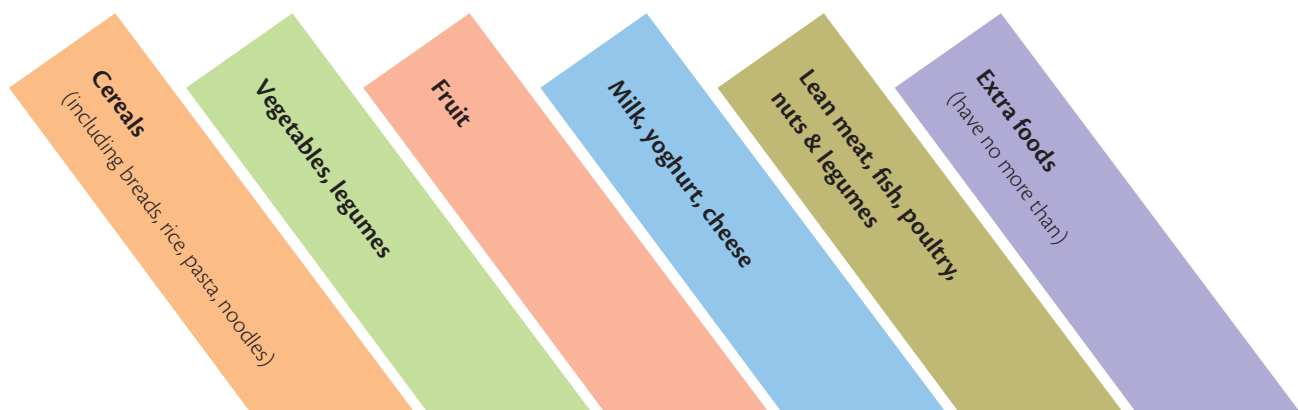
Choose these sometimes or in small amounts



Enjoy a wide variety of nutritious foods

How many serves of these foods should we eat on average each day?

This depends a little on your body size and activity level but aim for the following:



Children & teenagers						
4–7 years	5–7	2	1	2	½	1–2
8–11 years	6–9	3	1	2	1	1–2
12–18 years	5–11	3	3	3	1	1–3

Women						
19–60 years	4–9	5	2	2	1	0–2½
60+ years	4–7	5	2	2	1	0–2
Pregnant	4–6	5–6	4	2	1½	0–2½
Breast feeding	5–7	7	5	2	2	0–2½

Men						
19–60 years	6–12	5	2	2	1	0–3
60+ years	4–9	5	2	2	1	0–2½

What is a serve? Here are some examples

Cereals, breads etc		
2 slices of bread	1 medium bread roll	1 cup cooked rice, pasta, noodles
1 cup porridge	1 cup breakfast cereal flakes	or ½ cup muesli

Vegetables and legumes (choose a variety)		
Starchy vegetables		
1 medium potato or yam	½ medium sweet potato	1 medium parsnip
Dark green leafy vegetables		
½ cup cabbage, spinach, silverbeet, broccoli, cauliflower or brussels sprouts		
Legumes and other vegetables		
1 cup lettuce or salad vegetables	½ cup broad beans, lentils, peas, green beans, zucchini, mushrooms, tomatoes, capsicum, cucumber, sweetcorn, turnips, swede, sprouts, celery, eggplant etc	

Fruit		
1 piece medium sized fruit eg apple, orange, mango, mandarin, banana, pear, peach etc		
2 pieces of smaller fruit eg apricots, kiwi fruit, plums, figs		About 8 strawberries
1 cup diced pieces or canned fruit	½ cup fruit juice	¼ medium melon (rockmelon, honeydew)
Dried fruit eg 4 dried apricots	1½ tablespoons sultanas	About 20 grapes or cherries

Milks, yoghurt, cheese & alternatives		
250 ml glass or one cup of milk (can be fresh, longlife or reconstituted milk)		
½ cup evaporated milk	40g (2 slices) of cheese	250ml (1 cup custard)
200g (1 small carton) of yoghurt, plain or fruit, <i>or, as an alternative try:</i>		
a cup of calcium-fortified soy milk	1 cup almonds	½ cup pink salmon with bones

Meat, fish, poultry & alternatives		
65-100gm cooked meat or chicken (eg ½ cup mince, 2 small chops or 2 slices roast meat)		
80-120g cooked fish fillet, <i>or, as an alternative try:</i>		
2 small eggs	½ cup cooked (dried) beans, lentils, chick peas, split peas or canned beans	1/3 cup peanuts or almonds

Extras Foods which we can occasionally include for variety. They are generally higher in fat and/or sugar, kilojoules, salt etc		
1 medium piece of plain cake or 1 bun	3-4 sweet biscuits	Half a chocolate bar
60g jam, honey (1 tablespoon)	30g potato crisps	Slice pizza = 2 extras
1 can soft drink or 2 glasses cordial	2 scoops icecream	1 meat pie or pasty = 3 extras
2 standard glasses of alcohol (for adults only)		1 tablespoon (20g) butter, margarine, oil

Eat plenty of vegetables, legumes and fruits

Vegetables, legumes and fruits have a very special role to play in our daily diet. They are the protective foods. Together with nuts and seeds they not only provide us with many of the essential nutrients our bodies need from day to day, they also protect us against the ageing process. The word legumes includes lentils, beans and peas.

As we get older our bodies can start to show some wear and tear. Blood pressure can increase; the blood vessels that feed the heart with vital oxygen can start to become blocked with cholesterol; some people may develop diabetes, cataracts in their eyes or even get cancer. Eating plenty of vegetables, legumes and fruits and including some nuts and seeds throughout life, can help to protect against these common problems. This has been shown in many scientific studies from around the world.



Plant foods such as vegetables, legumes and fruit are protective foods

Nutritionists are still learning about the various ways these foods protect the body. The potassium and magnesium in fruits and vegetables appear to be crucial to controlling blood pressure. Folate may provide protection against heart disease. The essential fatty acids in nuts may play a role too. Vitamin C and other antioxidant substances may be vital to the health of the eyes. Antioxidants help “mop-up” some potentially harmful substances produced in the body as we break down our food to produce energy.

The goodness of vegetables may be lessened or increased by cooking, depending on the nutrient. So, it's a good idea to include both cooked and salad vegetables in your daily meals. Stir frying, microwaving or steaming are ideal ways to cook vegetables. Try not to boil vegetables for too long as some nutrients and flavour will be lost into the water. Frozen vegetables are also a good alternative and canned vegetables are also useful at times but look for lower salt varieties.

Although fruits are enjoyable foods to eat, many people simply forget about them. A full fruit bowl at home and at work would be a good reminder. Nuts are important too. They are very rich in nutrients and are a healthy between-meal snack. Legumes were something of a forgotten food but are now finding their way back into our meals. Bean curd and tofu are also made from legumes.



healthy tips

- ▷ Enjoy a variety of yellow, green and red vegetables, both salad and cooked.
- ▷ Eat at least five serves of vegetables a day.
- ▷ Eat at least two pieces of fresh fruit each day.
- ▷ Try nuts as a snack.



Is vegetarianism healthy?

Plant foods are important, protective foods. This, however, does not mean that plant foods alone will make your daily diet a healthy one. Variety is essential to good nutrition. A balanced vegetarian diet can be healthy but there are several nutrients which are found mainly or only in animal foods. These include vitamin B12, iron, zinc, calcium and some omega 3 fats. Care needs to be taken if you restrict animal foods in your diet.

Vegans

Vegetarians who choose to eat no foods of animal origin (vegans) face the greatest nutritional challenges. The most important of all is to meet the body's need for vitamin B12. This essential nutrient is only found in animal foods. An Australian study found two-thirds of strict vegetarians had low levels of vitamin B12 in their blood. Vitamin B12 deficiency can be a real risk. Eating vitamin B12-fortified foods or taking supplements is recommended for all vegans.

Care needs to be taken if you restrict animal foods in your diet.

The omega 3 fats found in fish are not found in common plant foods. These fats have a number of health benefits, particularly for heart function. As a result, strict vegetarians have low levels of these nutrients in their bodies. Vegetarians who avoid milk should also consider calcium-fortified soy beverages or calcium supplements. Protein needs can be met through legumes, nuts and cereals.

Lacto-vegetarians

Including dairy foods in a plant-based diet solves the vitamin B12 problem. Also, dairy foods are the best source of calcium, which overcomes another of the nutritional shortcomings of a vegan diet.

Other challenges remain. Not eating meat removes the major source of iron and zinc from daily meals. Iron is of particular concern. Although iron is present in plant foods, it is less well absorbed than that from meats. Legumes, nuts and cereals are important sources of iron for people who choose not to eat meat. Eating fruits or fruit juices at the same meal will provide some vitamin C to assist iron absorption.



dietary guidelines

Adults, children & adolescents

- ▷ Eat plenty of vegetables, legumes and fruits.



Eat plenty of cereals, preferably wholegrain

Cereals are one of the most important foods. These simple grains are eaten in large amounts and provide half the energy and half the protein eaten by people around the globe. Not surprisingly, cereals form the foundation of our daily meals.

The cereal grains include wheat, maize (corn), rice, barley, sorghum, oats, rye and millet. In Australia cereal grains are used to make popular foods like breakfast cereals, bread, pasta, noodles and rice. Other cereal foods include flour, semolina, polenta, couscous and burgul.

Cereals play an important role in meeting the body's need for nutrients. They are excellent sources of B-group vitamins and contain useful amounts of vitamin E, essential fatty acids and minerals. They also provide dietary fibre.

What are wholegrains?

The most nutritious cereal foods are 'wholegrain'. These are made using all three parts of the cereal grain - the starchy core, the germ and the bran. Examples include high fibre breakfast cereals, wholemeal breads and crispbreads, oatmeal, brown rice, wholemeal pasta and popcorn. High fibre white breads contain more fibre than ordinary white bread but still do not generally have as many vitamins and minerals as wholegrain.

About one-third of our dietary fibre intake comes from cereals, especially wholegrains. Fibre plays a vital role in keeping us 'regular'. Including plenty of wholegrain foods and cereal fibre in your daily meals is a good way to prevent constipation and may reduce the risk of other bowel problems such as diverticular disease and bowel cancer

Several recent scientific studies have suggested wholegrains may help prevent coronary heart disease and, perhaps, diabetes - major health problems in Australia today. Wholegrains are key protective foods in our daily diet.



healthy tips

- ▷ Switch from white bread to wholemeal bread.
- ▷ Eat wholegrain cereal for breakfast.
- ▷ Include a variety of cereal foods in your meals such as pasta, noodles, rice, couscous and polenta.
- ▷ Eat at least four to five serves of cereal foods a day. Active men may need up to twice this amount.



dietary guidelines

Adults, children & adolescents

- ▷ Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain.

Include lean meats, fish, poultry and/or alternatives

Beef, lamb, pork, fish, poultry, eggs, shellfish, nuts and legumes are a varied group of foods with one thing in common – they are all excellent sources of protein. The major role they play in our daily diet, however, is as a source of iron.

Iron deficiency is a significant health problem in Australia. Too little iron in daily meals and high demands at certain stages of life can lead to low iron stores in the body and even anaemia. Tiredness, reduced ability at work and less resistance to infection may result. Low iron intakes are common in young women and vegetarians.

Best sources of iron

The best source of iron in the diet is red meat such as beef and lamb. Pork and chicken contain moderate amounts of iron and fish less again. Iron from meats and fish is particularly well absorbed into the body. Some plant foods also contain iron but it is in a different form and less well absorbed. Including meat in a meal with plant foods actually increases the absorption of iron from the plant foods.

Iron deficiency is a significant health problem

Red meats are also rich in zinc, another nutrient in short supply in the Australian diet. Again, zinc is better absorbed into the body from meat than plant foods. All meats, poultry, fish, shellfish and eggs are excellent sources of vitamin B12, a nutrient not found in plant foods. Vitamin B12 has a special role in protecting our DNA. Fish and seafood are also the richest sources of omega 3 fats. These omega 3 fats help protect the health of the heart.

Choose lean meats

Lean meats, trimmed of fat, are the best choices. Meat fat is high in saturated fats – the type that raises cholesterol. Sausages and luncheon meats tend to be high in fat. For people who choose not to eat meat, protein is available from legumes, cereals, nuts and seeds (see pages 12, 13, 14). These foods, however, are relatively low in available iron and zinc so other food sources such as wholegrain cereals need to be increased. Additional vitamin B12 sources are also needed.



healthy tips

- ▷ Enjoy lean red meat three or four times each week.
- ▷ Choose lean cuts of meat rather than sausages and processed meats.
- ▷ Try to eat one or two fish meals a week.



dietary guidelines

Adults, children & adolescents

- ▷ Include lean meats, fish, poultry and/or alternatives.



Include milk, yoghurt, cheese and/or alternatives

Milk, yoghurts and cheeses are part of the dairy food category. Milk is one of the most complete of all foods. It contains most of the nutrients our bodies need. Dairy foods are a good source of protein, vitamin A and some B vitamins but their most unique contribution is as a source of calcium. The calcium in dairy foods is also well absorbed into the body compared to other plant sources.



Calcium and bone health

Calcium is vital for the health of our bones throughout life. Physical activity is also of great importance in the development and maintenance of strong bones. During childhood and the teenage years bones grow longer and stronger. A constant supply of calcium is required to build healthy bones in this time of high demand. Older bodies require extra calcium too. From about middle age our bones begin to slowly weaken. This gradual bone loss can be slowed by a high calcium intake from dairy foods. As a result, the chance of breaking a bone can be reduced.

Dairy foods are the best source of calcium, by far

Calcium does not work alone in fostering good bone health. It works with vitamin D, which helps to absorb calcium into the body. Vitamin D can be made in the body by the action of sunlight on the skin or can be found in foods such as margarines, fatty fish, such as tuna or salmon, and eggs.

Is low-fat best?

Yes. Dairy fat is high in saturated fats, which can raise blood cholesterol and increase the risk of heart disease. Try to limit foods rich in dairy fat such as butter, cream, ice cream and full-fat cheeses. The best dairy foods to include in your meals are low and reduced-fat milks and yoghurts. These still contain calcium and other nutrients, but with less saturated fat. Cheeses can be added for variety but don't overdo it. There are reduced fat cheeses available but some soft, white low fat cheeses like cottage cheese, have very little calcium.

Fortified soy milk, sardines and some nuts are fair sources of calcium for people who choose not to eat dairy foods.



healthy tips

- ▷ Use low-fat dairy foods at two or more meals each day.
- ▷ Low-fat milk and yoghurt are excellent choices.
- ▷ Be moderate with full fat cheeses.



dietary guidelines

Adults, children & adolescents

- ▷ Include milk, yoghurt, cheese and/or alternatives.

Adults

- ▷ Reduced fat varieties should be chosen where possible.

Children & adolescents

- ▷ Reduced fat milks are not suitable for young children under 2 years because of their high energy needs.
- ▷ Reduced fat varieties should be encouraged for older children and adolescents.

Drink plenty of water

Water is essential for life. We can do without some nutrients for weeks, even months, but a few days without water is life-threatening. Water makes up about two-thirds of our body weight. We need it to absorb nutrients from food, transport them around the body and flush away our waste products. Through perspiration the body uses water to lower body temperature when the weather is warm.

Regular drinks replace water lost from the body during the day. In a mild climate an average person needs to drink about a litre and a half of fluids each day. In hotter parts of Australia much more may be needed to prevent the body becoming dehydrated.

Risks of dehydration

Drinking too little fluid can lead to dehydration. In the short-term this may cause physical and mental tiredness. In the long-term, low fluid intake can increase the risk of developing kidney stones. For those people who have had kidney stones in the past, increasing fluid intake will help prevent them coming back. Scientific studies also indicate that plenty of fluid can help protect against cancer of the urinary tract – in the bladder, prostate and kidney. Tap water is also a good source of fluoride for strong teeth and bones.

Young children and elderly people are more at risk of dehydration. Also, with increasing age, the sensation of thirst becomes weaker and people may drink less than they should.



dietary guidelines

Adults

- ▷ Drink plenty of water.

Children & adolescents

- ▷ Choose water as a drink.

Choosing drinks

Water

The best, cheapest and safest drink. Water provides the fluid we need, without the added kilojoules or caffeine found in many other drinks. Tap water also gives us fluoride which helps in development of strong teeth and bones. Bottled water does not usually have good levels of fluoride.

Milk:

Low or reduced-fat milks are good sources of fluid - rich in nutrients yet lower in saturated fat and kilojoules than full-fat milk. Soy milks are a suitable alternative but should be fortified with calcium and vitamin B12.

Fruit juice:

Good source of fluid and some vitamins. Contains kilojoules, so enjoy in moderation.

Tea/coffee:

Do contain some antioxidants (especially tea) but also contain caffeine, which is a stimulant. Any added sugar means added kilojoules. Enjoy in moderation.

Soft drinks:

High in kilojoules when sweetened with sugar - 'empty kilojoules'. Not recommended for regular consumption. 'Diet' soft drinks are an alternative to add some variety.

Energy drinks:

Soft drinks plus caffeine – similar to a strong cup of coffee. Not recommended for regular consumption.

Alcohol:

Increases loss of water from the body. Also 'empty kilojoules'. Not recommended as a source of fluid.

Limit saturated fats and moderate total fat intake

Different types of fats are found in different foods. Fats may be solid or liquid. Fats may be easy to see, such as butter, margarine, vegetable oils and the fat on meat, or hidden away in nuts, avocados, biscuits, cakes, pastries, snack foods and many take-away foods.

In some ways fats are all the same. For example, they are all high in kilojoules, so we need to be moderate in our overall intake of fat to help control our body weight. Fats also contain the fat-soluble vitamins. Fats may be very different in other ways. Some are essential nutrients (you need to eat them as the body cannot make them itself); others are not. Some fats raise the level of cholesterol in the blood; others actually lower it.

Healthier fats

We all need some fat in our diets. The polyunsaturated fats are essential nutrients -sometimes referred to as the essential fatty acids. There are two of them – omega 6 and omega 3. Polyunsaturated fats lower the level of cholesterol in the blood and may benefit the heart in other ways. Although not essential in the diet, monounsaturated fats are also thought of as healthier fats. They have a neutral effect on blood cholesterol.

The healthier fats are mainly found in monounsaturated or polyunsaturated vegetable oils, margarines and salad dressings; and in nuts, avocados and seeds. These foods are also the major sources of vitamins D and E. Eating small amounts of these foods regularly will ensure we get the essential fatty acids and vitamins our bodies need.

Not-so-healthy fats

Saturated fats are the not-so-healthy fats. They increase the level of cholesterol in the blood, which increases the risk of heart disease. Unlike the polyunsaturated fats, they are not essential in our diet. In fact, the less of them we eat, the better. Limiting the amount of saturated fat in our daily meals is the best way of keeping cholesterol in check. Saturated fats are found in butter, cream, cheese and other full-fat dairy products. Fatty meats, sausages, biscuits, cakes, pastries, snack foods and fried take-away foods are also rich in saturated fat. Limiting saturated fat also reduces the total amount of fat in your diet, helping to keep body weight under control.



healthy tips

- ▷ Limit your intake of biscuits, cakes, pastries, snack foods and fried take-away foods (see page 10 or 11).
- ▷ Limit your use of full-fat dairy foods, fatty meats and sausages.
- ▷ Choose unsaturated vegetable oils and margarines in moderation.



dietary guidelines

Adults

- ▷ Limit saturated fats and moderate total fat intake.

Children & adolescents

- ▷ Limit saturated fats and moderate total fat intake.
- ▷ Low-fat diets are not suitable for infants.

Choose foods low in salt

The traditional role of salt in foods was as a preservative. Before refrigeration, large amounts of salt were added to meat to prevent bacteria from spoiling it. With greater availability of fresh foods and increased ease of storing them, there is now less need for salt in foods.

Salt has also traditionally been used to flavour many of our everyday foods. Indeed, most of the salt we eat today is already present in the foods we buy. Breads, breakfast cereals, margarines, soups and cheeses are all significant sources of salt. Of course, these foods also provide important nutrients in the diet. Processed meats, snack foods and many take-away foods are often laden with salt but offer less nourishment. In addition, many people also commonly add extra salt at the table.

Today there are many alternative ways to enhance the flavour of our foods including a wide range of herbs and spices that can be used without the problems associated with a high salt intake.

Why do we worry about salt?

When too much salt is eaten blood pressure tends to rise. High blood pressure is the most common complaint seen by most doctors. It's a concern as high blood pressure increases the risk of both heart disease and stroke. Lowering blood pressure reduces this risk. Scientific studies have shown that reducing salt intake in some people (as well as increasing consumption of foods such as fruits and vegetables) can lower blood pressure but how much better it would be not to develop the problem in the first place.

Introducing younger members of the family to a diet lower in salt early in life, may prevent a lifelong preference developing and give them a much wider variety of tastes to enjoy throughout life.

Other effects of diet on blood pressure

Salt is not the only thing in food that affects blood pressure. Fruit and vegetables and low-fat dairy products each help lower blood pressure. Regular physical activity also helps keep blood pressure in check. Being overweight can increase blood pressure markedly. Drinking too much alcohol can raise it too.



healthy tips

- ▷ Include more fresh foods, especially fruits, vegetables in daily meals.
- ▷ Look for 'reduced-salt' or 'low-salt' foods when shopping. Low salt foods contain less than 120mg of sodium per 100g.
- ▷ Try to limit salty snacks, take-away foods, processed meats, cheese and butter.
- ▷ Use a range of herbs and spices to flavour foods instead of salt.



dietary guidelines

Adults, children & adolescents

- ▷ Choose foods low in salt.

Limit your alcohol intake

Australians have always been in two minds about alcohol. We use it to celebrate at weddings, birthdays and many other social occasions. Having a beer with friends on a hot day is a very Australian thing to do. On the other hand, alcohol is the root cause of many social and health problems and results in 50,000 hospital admissions each year. At high intakes, alcohol is both intoxicating and toxic. Alcohol is certainly not recommended for children.

Risks to health

Heavy intakes of alcohol can cause short-term and long-term problems. Soon after drinking to excess the major problem is an increased risk of accidents due to the loss of judgement, control and reaction time. Accidents are not confined to the road – they can occur in the workplace too.

If heavy alcohol intakes continue over time the toxic effect of alcohol takes its toll. Alcohol damages the liver, causing a disease called cirrhosis. High intakes of alcohol also increase the risk of cancer of the mouth, throat and oesophagus. Excess alcohol also raises blood pressure, which increases the risk of heart disease and stroke.

The following patterns of drinking are considered unsafe:

- heavy drinking with little food intake
- inexperienced drinkers overdoing it
- excessive drinking on the weekend or at parties

Alcohol also contains kilojoules which can add to a weight problem. Like sugar, alcohol is sometimes called 'empty kilojoules' because it contains few nutrients for the body to use. As alcohol is very high in kilojoules, on average, no more than one drink per day for women and two drinks per day for men are recommended as part of a healthy diet.

Can drinking be safe?

Yes. Having a drink or two with an evening meal appears to be a safe pattern of drinking. At this level of intake there are no intoxicating or toxic effects. One or two drinks a day may even protect against heart disease. Alcohol has good effects on cholesterol in the blood and may reduce the risk of blood clots forming.

Women are advised to drink less than men. Of course, there are some people who would do best to drink no alcohol at all. These include children and adolescents, women who are planning pregnancy, or are pregnant, breastfeeding mothers, drivers and machine operators, people taking certain prescription drugs and people with a history of alcoholism. There may be some serious health problems in the long term if men consume, on average, more than four drinks a day and women two drinks a day.



dietary guidelines

Adults

- ▷ Limit your alcohol intake if you choose to drink.

Children

- ▷ Alcohol is not recommended for children.

Consume only moderate amounts of sugars and foods containing added sugars

In the past, sugar has been unfairly blamed for causing a range of health conditions such as diabetes, heart disease, cancer or hyperactivity in children. Although we now know that none of these conditions are caused by sugar itself, nevertheless, sugar does provide extra kilojoules in the diet without adding any other beneficial nutrients and it does play an important role in tooth decay.



Sugar's place in a healthy diet

A moderate amount of sugar in daily meals is not a problem. In fact, spreading a little jam on wholemeal bread or sprinkling a little sugar to wholegrain breakfast cereal can make these nutritious foods more enjoyable to eat.

An excessive intake of sugar is another issue. Today, ideal foods are rich in essential nutrients yet low in kilojoules. Sugar provides the opposite - it has no essential nutrients yet is high in kilojoules. Very high sugar intakes can do one of two things – push healthier foods from the diet or increase overall kilojoule intake. Neither of these is desirable.

Sugary drinks and overweight

Overweight is rapidly increasing in both adults and children. This trend is due to lower levels of physical activity and increased intakes of kilojoules. In recent years there has been a marked increase in the popularity of sugary soft drinks, fruit drinks and cordials. These drinks are the major source of added sugar in our daily diet, by far and increasingly come in larger sizes.

Although there have been dramatic declines in tooth decay in Australia it remains an important health problem. Having sticky, sugary foods and drinks regularly can increase the risk of tooth decay though many other factors are important too. Sweet biscuits, cakes and pastries are generally high in both sugar and saturated fat. Having a little less of these is another step towards a healthier diet.



healthy tips

- ▷ Limit sugary soft drinks, cordials and juice drinks. Remember, one glass of about 250mls may contain up to 30g of added sugar, a large can nearly 40g and a large bottle up to 60g.
- ▷ Consider 'diet' versions when you feel like a soft drink, but remember that water is the best option.
- ▷ Limit lollies, sweet biscuits, cakes and pastries.



dietary guidelines

Adults, children & adolescents

- ▷ Consume only moderate amounts of sugars and foods containing sugars.

Care for your food; prepare and store it safely

Australia has one of the safest food systems in the world. Nevertheless, we still have many thousands of cases of food poisoning a year, many of which occur in the home, and care still needs to be taken to ensure food does not become contaminated with harmful bacteria ('germs') and unsafe to eat. Correct handling and storage of foods will limit the chance of becoming sick from eating unsafe food.

How germs cause illness

The germs that can contaminate food are bacteria and viruses. If they come into contact with food these germs feed on it and grow in number, especially if the temperature is to their liking. Eating a contaminated food brings all these germs into the stomach from where they can cause illness. Some germs produce toxins in the food. When the food is eaten, the toxin causes the problems that follow, rather than the germs themselves.

The effects of eating contaminated food vary widely. Eating 'off' food may cause only minor effects in healthy adults, such as an upset stomach. However, symptoms can be more severe and include stomach pains, vomiting and diarrhoea. These can pose special health risks to pregnant women, the young, the sick and the elderly.

How does food become unsafe?

Bacteria are present everywhere and they, like us, enjoy good food. All fresh foods are on the germs' menu. We need to take care of these foods – store, prepare and cook them safely. There are a number of ways that food can become contaminated. For example:

- Touching food with unclean hands.
- Using dirty kitchen utensils.
- Allowing raw foods, such as meat, fish and poultry, to come into contact with cooked foods. This can occur if raw and cooked foods are prepared on the same chopping board or with the same knife. Also, raw meats stored in the refrigerator can drip onto cooked foods.

Germs like warm temperatures - not too hot, not too cold. Problems can arise when cooked food is kept lukewarm for long periods. These are perfect conditions for bacteria to grow and multiply. Although all germs may have been killed when a food was first cooked, it is possible for food to become



healthy tips

- ▷ Always wash hands before preparing or serving food and after handling animals or visiting the toilet.
- ▷ Wash everything well after use.
- ▷ Store raw foods down low in the fridge and check fridge temperatures regularly.
- ▷ Foods and left-overs that belong in the refrigerator should always be returned there as soon as possible.
- ▷ Thaw frozen meats in the refrigerator.
- ▷ Once cooked, pasta and rice should be stored in the refrigerator.
- ▷ Look for the "best before" and "use-by" dates on packaged foods.



dietary guidelines

Adults, children & adolescents

- ▷ Care for your food: prepare and store it safely.

contaminated again and for the bacteria to grow in numbers in balmy conditions. At low temperatures many germs 'go to sleep' – they are still alive but they do not multiply in numbers and spoil food. This explains why food keeps much longer in a refrigerator than it does sitting on a kitchen bench at room temperature.

At high temperatures bacteria die. If fresh food is well cooked and eaten straight away it is generally safe to eat.

Foods to watch out for

All foods bought fresh, stored properly at home and carefully prepared should be completely safe to eat. Take special care with the storage and handling of seafood and raw meat.

There are greater risks when eating foods prepared away from home for large numbers of people at events, take-away outlets and restaurants. The following foods are ones to watch:

- cooked meats and foods containing meat e.g. meat pies
- foods containing dairy products
- foods containing eggs
- cooked rice and pasta dishes
- salad bars.



Packaged foods

Packaged foods in Australia are processed according to high standards of hygiene and, in many cases, may be kept for long periods under ideal conditions. Canned foods are sterile - they contain no bacteria at all and can be stored in a cupboard for long periods. Once a can is opened, however, its contents should be removed and stored in the refrigerator and used within a few days. Some foods are vacuum-packed to preserve them, denying bacteria the air they need to grow. Food acids may be added to lower the pH of foods and slow the growth of bacteria.

Packets of dried pasta and rice can be stored at room temperature for long periods. They lack the water that bacteria need to grow and multiply. With any packaged food, it is wise to follow the 'best before' or 'use by' dates printed on the packaging.



Encourage and support breastfeeding

Breast milk is the best and most natural food for infants. It is ideally suited to their needs. It not only provides nutrients for the baby but special growth factors and protection against infection and disease. The best start a baby can have is to be exclusively breast fed for the first six months of life.

How does breastfeeding work?

Close contact between mother and baby immediately after birth helps to establish breastfeeding. The high protein milk produced immediately after birth is called colostrum. Breast milk changes over time. After a week or two the colostrum is gradually replaced by mature breast milk, which is higher in fat.

Breast milk also changes during a feed. Part of the benefit of breastfeeding is that babies can satisfy their thirst first and their hunger second from the one feed. The amount of fat in breast milk is low at the start of a feed and high at the end. Fast-growing babies, who need plenty of kilojoules, will stay on the breast a little longer to get the benefits of the rich milk available at the end of the feed.

It is important that breastfeeding women themselves have a good diet and that they limit their consumption of alcohol and stimulants such as caffeine.

Why is breast milk so special?

Breast milk is uniquely suited to the needs of infants. It provides all the nutrients needed for the first six months of life and ensures no deficiencies occur. Breast milk provides protein, carbohydrates, fat, omega 6 and omega 3 fatty acids and all the vitamins and minerals a baby needs to grow and thrive.

The benefits of breast milk go beyond good nutrition. Breast milk:

- contains unique growth factors
- has anti-infective agents, which protect against diarrhoea
- protects against asthma and lung infections
- protects against eczema.

Breast milk has its greatest health benefits in the first three months of life. It is also hygienic, inexpensive, convenient and available on demand. Breastfeeding has benefits for the mother too, assisting in the recovery after childbirth and the return to normal body weight.



dietary guidelines

Adults, children & adolescents

- ▷ Encourage and support breastfeeding.

How long should women breastfeed?

Although customs vary across different cultures, an infant has no need for any other food than breast milk during the first six months of life. Breast milk is both the safest and best food for a child during this period.

The Dietary Guidelines recommend:

- breast milk be the only food for about the first six months of life
- the introduction of solid foods and continued breastfeeding from about 6 months
- after six months of age, breastfeeding should continue, with solids and other drinks, as long as it is appropriate for the mother and infant.

If mothers cannot exclusively breastfeed to the first six months of life they are encouraged to breastfeed as much and for as long as they can. Check with your doctor or health care worker if you have any questions about your child's development and for feeding issues such as suitable use of infant formula and complementary foods.

Is cow's milk suitable?

If breastfeeding is stopped before the baby is 12 months of age, a commercial infant formula should be used instead. Cow's milk is not suitable for infants. Avoiding cow's milk during the first 12 months of the baby's life will also help protect against the development of cow's milk allergy.

Support and encouragement

Although most new mothers in Australia commence breastfeeding, by three months just under a third have stopped or introduced other foods. New mothers need encouragement and help from hospital staff and health care professionals in the early days after birth to establish breastfeeding. Later, mothers tend to rely on support from family members and friends.

Support from the father of the child or other close family members is particularly important. Fathers or other close family members are encouraged to attend antenatal classes, learn about the practical aspects of breastfeeding and discuss breastfeeding with the mother.

The Australian Breastfeeding Association is a community organisation that provides assistance and support for breastfeeding mothers. A local network of mothers, group discussions, educational sessions and one-to-one advice are all available to provide mothers with support, guidance and friendship.

All Australians can play a part in helping to encourage and support breastfeeding.

Breastfeeding as the foundation for a healthy life

Breastfeeding is the foundation for healthy life. Eating the right types of food, in the right amounts, getting plenty of exercise and taking care to prepare and store food safely during childhood, adolescence and adulthood will help you and your family to stay healthy and active throughout your life.



Enjoy a wide variety of nutritious foods



Prevent excess weight gain



Prepare and store food safely



Encourage and support breastfeeding

