

food choices for people with diabetes

Healthy eating, along with regular physical activity, can help you to manage your blood glucose levels, reduce your blood fats (cholesterol and triglycerides) and maintain a healthy weight. Refer to the *Physical Activity and Type 2 Diabetes* information sheet for more about how to be active every day and the *Physical Activity* information sheet for support persons of children with type 1 diabetes.

What should I eat?

To help manage your diabetes, your meals need to be:

- > An appropriate size – for you
- > Regular and spread evenly throughout the day
- > Lower in fat, particularly saturated fat
- > Based on high fibre carbohydrate foods such as wholegrain breads and cereals, dried beans, lentils, starchy vegetables and fruits.

On the following pages, we give information about different types of foods and their effect on our health:

Fats	page 2
Carbohydrates	page 3
Sugar	page 4
Alternative sweeteners	page 5
Protein	page 5
Alcohol	page 5

A typical one day meal plan:

Breakfast	page 7
Light meal	page 7
Main meal	page 7
Between meal snacks (if required)	page 7

Healthy eating for people with diabetes is no different to that which is recommended for everyone. There is no need to prepare separate meals or buy special foods, so relax and enjoy healthy eating along with the whole family!



Fat

Fats have the highest energy (kilojoule or calorie) content of all foods. The type of fat is important, as well as the amount. Eating a lot of fat or eating fat regularly may make you gain weight which in the long run may make it more difficult to manage your blood glucose levels. On the other hand by using small amounts you can still add flavour to your food. If you choose healthy fats you may improve your health and reduce your risk of heart disease.

Saturated fat and trans fat

It is important to limit saturated and trans fats because they raise your LDL-C ('bad' cholesterol) levels and lower HDL-C ('good' cholesterol).

Saturated fat is found in animal foods like fatty meat, milk, butter and cheese. Vegetable fats that are saturated include palm oil (found in solid cooking fats, snack foods or convenience foods) and coconut products such as copha, coconut milk or cream.

Trans fats occur naturally in small amounts in meat and dairy foods. They can also be formed as a by-product of the manufacturing process and can be found in foods such as microwaved popcorn, croissants, biscuits, pastries, doughnuts, hard margarines (usually cooking margarines) and commercial deep fried foods.

To reduce saturated and trans fats:

-
- > Choose reduced or low fat milk, yoghurt, ice cream and custard.

 - > Choose lean meat and trim any fat off before cooking.

 - > Buy skiness chicken of where possible remove the skin from chicken (where possible, before cooking).

 - > Avoid using butter, lard, dripping, cream, sour cream, copha, coconut milk, coconut cream and hard cooking margarine.

 - > Try reduced fat cheese varieties.

 - > Limit pastries, cakes, puddings, chocolate and cream biscuits to special occasions.

 - > Limit pre-packaged biscuits, savoury packet snacks, microwaved popcorn, cakes and doughnuts.

 - > Limit the use of processed deli meats (devon/polony/fritz/luncheon meat, chicken loaf, salami etc) and sausages.

 - > Avoid fried takeaway foods such as chips, fried chicken and battered fish. Choose BBQ chicken (without the skin) and grilled fish instead.

 - > Avoid pies, sausage rolls and pasties.

 - > Avoid creamy sauces or dressings. Choose sauces based on tomato or other low fat ingredients and low fat dressings made from small amounts of polyunsaturated or monounsaturated fats (eg: sunflower, grapeseed, olive or canola oils).

 - > Limit creamy style soups.

Polyunsaturated and monounsaturated fat

Some fat is important for good health. Use a variety of polyunsaturated and monounsaturated types to achieve a good balance.

Polyunsaturated fats include

- Polyunsaturated margarines (check the label for the word 'polyunsaturated')
- Sunflower, safflower, soybean, corn, cottonseed, grapeseed and sesame oils
- The fat found in oily fish such as herring, mackerel, sardine, salmon and tuna

Monounsaturated fats include

- Canola and olive margarines
- Canola and olive oil
- Avocado

Seeds, nuts, nut spreads and peanut oil contain a combination of polyunsaturated and monounsaturated fat.

Ideas for enjoying healthy fats:

-
- > Stir-fry meat and vegetables in a little canola oil (or oil spray) with garlic or chilli

 - > Dress a salad or steamed vegetables with a little olive oil and lemon juice or vinegar

 - > Sprinkle sesame seeds on steamed vegetables

 - > Use linseed bread and spread with a little canola margarine

 - > Snack on a handful of unsalted nuts, or add some to a stir-fry or salad

 - > Spread avocado on sandwiches and toast, or add to a salad

 - > Eat more fish (twice a week) because it contains a special type of fat (omega 3) that is good for your heart
-

Carbohydrate

Carbohydrate foods are the best energy source for your body. When they are digested they break down to form glucose in the bloodstream. If you eat regular meals and spread your carbohydrate foods evenly throughout the day, you will help maintain your energy levels without causing large rises in your blood glucose levels.

Between-meal snacks that contain carbohydrates can be useful for some people who take insulin or diabetes tablets. Discuss with your accredited practising dietitian (APD) or credentialed diabetes educator to see if this applies to you.

The amount of carbohydrate you eat will affect how high the blood glucose levels rise in your bloodstream after a meal. Too large a serve can mean too large a rise.

Although all carbohydrate foods break down into glucose, they do so at different rates – some slow, some fast. The glycemic index (GI) is a way of describing how a carbohydrate-containing food affects blood glucose levels.

food choices

The best combination is to eat moderate amounts of carbohydrate and include high fibre foods that also have a low GI. Your dietitian (APD) can give you an idea of how much you need to eat.

The foods listed below are high in carbohydrate and are healthy choices. Those in bold have a lower GI:

- > Bread or bread rolls – especially wholegrain and wholemeal varieties such as **Burgen® Breads**, Tip-Top **9 Grain Original**, **9 Grain Wholemeal®**, **9 Grain Original Mini Loaf**, **Wonderwhite® Lower GI**.
- > High fibre breakfast cereals such as rolled oats, **All-Bran®**, **Guardian®**, Weet-Bix® and untoasted muesli.
- > **Pasta**, rice (Basmati or **Doongara**) and other grains such as barley, **bulgur**, **quinoa** and couscous.
- > **Legumes – baked beans, kidney beans, chick peas, lentils, 3 bean mix.**
- > Fruit – all types such as **apples, oranges, peaches, bananas**, melons. Fruit is a good source of fibre; try to eat the whole fruit rather than drinking the juice. Include at least 2 serves of fruit a day (1 serve = 1 medium piece apple, orange or pear OR 2 small kiwifruit or plums).
- > Milk products or dairy alternatives – choose low fat varieties of **milk, soy drink** (calcium fortified), **yoghurt** and **custard**. Include 2–3 serves a day (1 serve = 1 cup of milk OR 200 g yoghurt).
- > Vegetables that contain a significant amount of carbohydrate – potatoes, orange sweet potato, **yams, sweet corn**. Other vegetables (such as salad vegetables, green vegetables, and orange vegetables) are generally low in carbohydrate and therefore have little effect on your blood glucose levels. Include at least 5 serves of vegetables each day (1 serve = 1 cup salad vegetables OR ½ cup cooked vegetables).
- > You also need to consider a food's other nutritional qualities such as fat, added sugar and salt content. While some high fat foods and many sugary foods such as chocolate, ice cream and toasted muesli have a low GI, they are often not suitable for everyday eating.
- > Some occasional foods (such as dry or sweet biscuits, chocolate or chips) and sugary foods (such as jam, honey or sugar) are also carbohydrate foods. These can be eaten in small amounts.

Sugar

A healthy eating plan for diabetes can include some sugar. However, it is still important to consider the nutritional value and the quantity of the foods you eat. In particular, be aware of the amount of high sugar foods such as sweets, lollies and standard soft drinks that you eat.

Some sugar can be used in cooking and many recipes can be modified to use less than the amount stated or substituted with an alternative sweetener. Select recipes that are low in fat (particularly saturated fat) and contain some fibre, for example a fruit based dessert with a low-fat crumble topping.

In general, be aware of the type and amount of sugars added to foods.(manufacturers sometimes use fruit juice or other sources of sugar to avoid using table sugar). If too much is eaten, they may affect your weight, dental health and overall diabetes control. Discuss with your dietitian or diabetes educator about when and how frequently to include these types of foods/drinks.

Alternative sweeteners

While it is no longer necessary to always use alternative sweeteners instead of sugar, artificially sweetened products are suitable alternatives for foods and drinks that are high in added sugars, such as cordials and soft drinks.

Alternative sweeteners based on acesulphame K (950)*, aspartame (951)*, cyclamate (952)*, saccharin (954)*, sucralose (955)*, alitame (956)*, stevia (960)* or neotame (961)* are all suitable for people with diabetes. They don't provide kilojoules, won't affect blood glucose levels and are found in many low joule products. These have all been approved for use in Australia by Food Standards Australia New Zealand. However it is important to remember that many foods that use alternative sweeteners (such as soft drinks) are not everyday foods so should still be consumed in small amounts.

Protein

Most protein foods do not directly affect your blood glucose levels. They include lean meat, poultry without the skin, seafood, eggs (not fried), unsalted nuts and soy products such as tofu and legumes (dried beans and lentils). Legumes are a good source of fibre and should be included regularly. They are also a carbohydrate food so will affect your blood glucose levels.

Protein foods do provide important nutrients for good health. However most Australians already eat enough protein and do not need to eat more.

Other foods, condiments and drinks

You can use these foods to add flavour and variety to your meals:

-
- > Herbs, spices, garlic, chilli, lemon juice, vinegar and other seasonings

 - > Products labelled 'low joule' eg: low joule/diet soft drinks

 - > Water, soda water, plain mineral water, tea, coffee, herbal tea

Alcohol

If you enjoy alcohol, it is generally acceptable to have two standard drinks a day*.

* This number may appear on the ingredient list in place of the name.

food choices

However, if you need to lose weight, you may need to limit your alcohol intake further. It's best to drink alcohol with a meal or some carbohydrate-containing food and aim to have alcohol free days.

One standard drink is equal to:

-
- | | |
|--|------------------------|
| > 100 ml wine | > 285 ml regular beer |
| > 30 ml spirits | > 60 ml fortified wine |
| > 425 ml low-alcohol beer (less than 3% alcohol) | |
-

It is important to remember:

-
- > That all alcoholic drinks are high in kilojoules and can contribute to weight gain.
 - > That low alcohol or 'lite' beers contain less alcohol than regular beers so a standard drink size is larger.
 - > People with diabetes do not need to have diet or low carbohydrate beers. These beers may be lower in carbohydrate but they are not necessarily lower in alcohol or kilojoules.
 - > When mixing drinks use low joule/diet mixers such as diet cola, diet ginger ale, diet tonic water.
 - > That drinking a lot of alcohol can increase the risk of hypoglycaemia if you are taking insulin or certain diabetes tablets.
 - > Some people may need to have less alcohol than generally recommended due to their age, medication or the need to lose weight. Discuss alcohol with your doctor or dietitian and refer to the *Alcohol and Diabetes* information sheet.
-

Weight management

Being overweight, especially around your waistline, makes it more difficult to manage your diabetes and increases your risk of heart disease.

If you are overweight a small weight loss (5–10% of body weight) can make a big difference to your health. Aim to lose weight gradually and set small achievable goals. Measuring your waistline is a great way of checking your progress rather than weighing yourself regularly. In general, if you are of Caucasian origin, women should aim for a waist circumference less than 80 cm and men should aim for less than 94 cm. Appropriate measurements for other ethnic groups can be checked with your doctor.

If you are carrying excess weight around the middle, try to lose some of it by:

- Reducing your portion sizes and following a diet plan lower in kilojoules and total fat (particularly saturated fat). A dietitian (APD) can help you with specific advice on adjusting your food intake to help with weight loss.
- Doing regular physical activity such as walking, dancing, riding a bike or swimming.
- Seeking advice from your doctor, dietitian (APD), diabetes educator (CDE) or State or Territory Diabetes Organisation.



An example of a typical meal plan for one day

Choose foods you like and which satisfy you and remember to include carbohydrate foods in each meal or snack to help manage your blood glucose levels. Carbohydrate-containing foods are highlighted in italics in the menu below.

Breakfast – for example...

- ¾ cup of high fibre *breakfast cereal* with *low fat milk* OR
 - 2 slices of *bread* or *toast*, preferably *wholegrain*, *wholemeal* or *high fibre white* with thinly spread margarine, peanut butter, jam, Vegemite® or try with *baked beans*, grilled tomato, or sardines **PLUS**
 - 1 piece of *fruit*
 - Tea, coffee or water
-

Light meal – for example...

- 1 sandwich made with 2 slices of *bread*, or 1 *bread roll* or 4 dry *biscuits* – preferably *wholegrain* or *wholemeal* – with thinly spread margarine or try with avocado or fat-free mayonnaise instead
 - Salad vegetables
 - A small serve of lean meat, skinless poultry, seafood, egg, fat reduced cheese or a more generous serve of legumes (such as *beans* or *lentils*)
 - 1 piece of *fruit*
 - Water, tea or coffee
-

Main meal – for example...

- 1 *bread roll* or 2 slices of *bread* (preferably *wholegrain* or *wholemeal*) OR 1 cup of cooked *pasta* or *rice* OR 2 medium *potatoes* or 1 cup *sweet potato* or *corn*
 - Other vegetables (include freely)
 - A small serve of lean meat, skinless poultry, seafood, egg, fat reduced cheese or a more generous serve of legumes (such as *beans* or *lentils*)
 - 1 piece of *fruit* OR small amount of low fat *yoghurt* or *custard*
 - Water, tea or coffee
-

You can eat your main meal at lunch or dinner, whichever you prefer.

Between-meal snacks

People with diabetes on certain types of tablets or insulin may require one snack between each meal and for supper. However, most people aiming to control their body weight may not need a snack between every meal. To find out what is best for you, discuss this with your dietitian or diabetes educator.

Good snack ideas include 1 piece of *fruit*, 1 tub of low fat *yoghurt*, 1 cup of low fat *milk*, 1 slice of *wholegrain bread*, 1 slice of *fruit bread* or 2 high fibre *crispbreads*. See the information sheet *Healthy Snacks and Diabetes* for more snack ideas.