

# Healthy Eating and Type 2 Diabetes

## Why are your food choices important?

What you eat can affect your health in a number of ways. For example, poor food choices may contribute to being overweight, high blood glucose levels, raised cholesterol and blood pressure, some cancers and heart disease.

A healthy meal plan can help you to:

- ▶ Control your blood glucose levels
- ▶ Control your weight
- ▶ Improve your cholesterol levels
- ▶ Reduce your risk of heart disease
- ▶ Improve your general health and wellbeing.

Changing your eating habits is not easy. Any changes to your food intake should be for the long term. Short-term diets are not recommended as you will soon return to your usual eating pattern. It is best to make small changes which you can continue indefinitely.

## How nutritious is your meal plan?

You should enjoy a wide variety of foods to ensure your body is getting all the nutrients it needs including carbohydrate, protein, essential fats, vitamins and minerals. The ideal meal plan for people with diabetes should be the same as for the whole family and following the Dietary Guidelines for Australians.

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## 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.

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## Eat regularly during the day and spread your food over breakfast, lunch and dinner

Each day aim to eat:

- ▶ 5 serves vegetables
- ▶ 2 serves fruit
- ▶ 5 serves grains, breads and cereals
- ▶ 2-3 serves low-fat dairy products
- ▶ 1 serve lean meat, chicken or fish or a meat alternative such as lentils, beans or tofu.

***People with higher energy needs may require more serves.  
A dietician can guide you on the quantity of food that you need.***

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## What is a serve?

### Vegetables

1 serve = ½ cup cooked vegetables or 1 cup salad or 1 small potato

### Fruit

1 serve = 1 medium-sized fruit, e.g. apple, orange or 2 pieces of smaller fruit, e.g. apricots, plums, kiwi fruit or 1 cup diced fruit or canned fruit

### Grains and cereals

1 serve = 1 slice bread or ¾ cup breakfast cereal or 1 cup cooked pasta or ½ cup cooked rice

### Dairy

1 serve = 250mL milk or 200g yoghurt or 40g (2 slices) cheese

### Meat and meat alternatives

1 serve = 100g cooked meat, chicken or fish or 2 eggs or 1/3 cup legumes

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## Carbohydrates and the glycaemic index

All carbohydrate foods break down to glucose during digestion. Glucose enters the bloodstream raising the blood glucose level. As carbohydrate provides the body with fuel for energy, it should be a part of all your meals and snacks. The quantity and types of carbohydrate-rich foods you eat will affect your blood glucose level. A very high carbohydrate intake may raise your blood glucose levels too high.

### Which foods contain carbohydrate?

- ▶ bread
- ▶ legumes
- ▶ biscuits
- ▶ rice
- ▶ fruit
- ▶ cakes
- ▶ pasta
- ▶ milk & yoghurt
- ▶ sugar
- ▶ grains
- ▶ cereals
- ▶ starchy vegetables such as potato, sweet potato and corn.

### What does GI mean?

The glycaemic index (GI) is a guide to how a carbohydrate food may affect your blood glucose level. A low GI food breaks down to glucose more slowly and causes a slower rise in the blood glucose levels compared to a high GI food. Try to choose more low GI carbohydrate foods – aim for at least one in each meal.

### Which foods have a low GI?

<i>Breads</i>	<i>Multigrain breads, preferably wholemeal grain breads Sourdough breads</i>
<i>Breakfast cereals</i>	<i>High fibre breakfast cereals such as rolled oats, untoasted muesli, All-Bran™, Guardian™</i>
<i>Pasta and noodles</i>	<i>Wheat pasta including spaghetti, macaroni, spirals Most noodles such as rice vermicelli, hokkien, egg noodles</i>

<i>Rice</i>	<i>Long-grain rice such as Doongara and Basmarti</i>
<i>Grains</i>	<i>Barley, buckwheat and bulgur</i>
<i>Fruits</i>	<i>Fresh, dried and canned fruit such as apples, pears, oranges, grapes, cherries, grapefruit, peaches, plums, kiwi fruit and firm bananas</i>
<i>Vegetables</i>	<i>Sweet potato and sweet corn Note: Most vegetables are low in carbohydrate and have little effect on blood glucose levels, eg salad, green and orange</i>
<i>Legumes &amp; pulses</i>	<i>All types (canned or dried) such as kidney beans, mixed beans, chick-peas, lentils and baked beans</i>
<i>Milk &amp; yogurt</i>	<i>Low fat milk and yogurt</i>

## Fibre

A healthy meal plan contains foods high in dietary fibre. There are two types of fibre – soluble and insoluble. Eating soluble fibre helps to lower blood glucose and cholesterol levels. Insoluble fibre is good for a healthy digestive system. Eat a variety of plant foods to get plenty of insoluble and soluble fibre. You should aim to eat at least 30 grams of fibre each day. Many of the low GI foods listed on the previous page are also good sources of fibre.

## Tips to increase your soluble fibre intake

- ▶ Eat legumes at least twice a week – add some kidney beans, 3 bean mix or lentils to your soup, casserole or pasta sauce or make a bean salad
- ▶ Add extra vegetables to dishes
- ▶ Leave the skin on fruits
- ▶ Add some oat bran or psyllium husks to your breakfast cereal
- ▶ Add oat bran to homemade bread or muffins.

## Sugar

Small amounts of sugar can be included as part of a healthy meal. For example, 1-2 teaspoons of sugar added to porridge or a teaspoon of jam or honey on multigrain toast. Savoury foods containing sugar such as baked beans and tomato sauce can also be eaten.

Avoid or find alternatives to foods which contain large amounts of sugar such as soft drink, regular jelly and confectionery. Some artificially sweetened foods are suitable, but be aware some may be high in fat.

## Fats

Although blood glucose levels are directly affected by carbohydrate, eating too much fat is also a problem. Fats provide us with energy and some vitamins, so a small amount is essential. However, too much leads to carrying excess body weight, which increases insulin resistance.

There are different types of fats in food and some are worse for your health than others. Saturated fat and trans fat increase the risk of heart disease by increasing blood cholesterol levels.

**Saturated fat** is found in:

- ▶ animal products (e.g. butter, full cream milk, cheese and yoghurt, fatty meats, processed meats, cream, lard)
- ▶ palm oil which is often used in commercial snacks and baked products such as biscuits, pastries, takeaway foods, chips
- ▶ coconut oil including coconut cream and milk

**Trans fat** is found in a variety of foods manufactured with vegetable oils such as biscuits, pastries and some margarines.

Ways to reduce your saturated and trans fat intake:

- ▶ eat less fried foods, pies, processed meats, chips, chocolate, biscuits and pastries
- ▶ limit butter, lard, cream and sour cream
- ▶ choose lean meat and trim any fat off meat before cooking
- ▶ remove chicken skin
- ▶ use low fat dairy products
- ▶ use monounsaturated and polyunsaturated oils and margarine spreads. Remember they are still high in kilojoules so minimise the amount if you are trying to lose weight.

***When used in small quantities, both monounsaturated fat and polyunsaturated fat can help to improve blood cholesterol levels. Monounsaturated fat can help improve cholesterol levels if it is used in place of saturated fat.***

**Monounsaturated fat** is found in:

- ▶ oils such as olive, canola, sunola and peanut oil
- ▶ margarines made from monounsaturated vegetable oils such as olive or canola oil
- ▶ nuts such as peanuts, almonds and cashews
- ▶ avocado
- ▶ olives

**Polyunsaturated fat** also helps improve cholesterol levels. Polyunsaturated fat is found in:

- ▶ oils such as sunflower, safflower and soybean oil
- ▶ margarines made from polyunsaturated vegetable oils such as sunflower or grapeseed oil
- ▶ walnuts
- ▶ fish

**Omega-3 fats** (a type of polyunsaturated fat) improve your heart health and have other health benefits. Eat fish (fresh or canned) at least twice a week to increase your intake of omega-3 fats. Fish such as salmon, gemfish and blue grenadier are good sources of omega-3 fats.

**Plant sterols** are added to some foods including margarine spreads such as Flora Proactiv™ and Meadow Lea Logicol™. These help to reduce cholesterol levels. Discuss the use of these products with your health professional as quantities are important, and they are not suitable for everyone.

## **Cholesterol in food**

Cholesterol is found in foods such as eggs, offal (eg kidneys, liver and brain) and seafood. Although cholesterol in food can increase your blood cholesterol level, it is more important to limit foods high in saturated fat or trans fat.

## **Protein**

Protein is used by the body for growth and repair and is found in foods such as meat, fish, eggs and dairy products. The body's requirements for protein are met by 2-3 serves of dairy foods and 1 serve of meat or fish each day. A higher protein intake is not necessary and many foods high in protein are also high in saturated fat (e.g. dairy foods, meat) so eating more protein may also increase saturated fat intake.

## **Salt**

A high salt (sodium) intake contributes to high blood pressure in some people. Reducing the amount of salt you eat may help reduce your blood pressure.

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## **Tips to reduce your salt intake**

- Avoid adding salt to food or in cooking – use herbs and spices for flavour
  - If eating processed foods, choose those with a lower sodium content
  - Look for food products with less than 400mg sodium per 100g
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## Alcohol

Alcohol is high in energy and therefore can contribute to weight gain. If taking insulin or medications for diabetes, alcohol may increase your risk of hypoglycaemia (low blood glucose levels). To reduce the risk of hypoglycaemia, don't drink alcohol without having a meal or snack containing carbohydrate.

It is recommended that people with diabetes limit alcohol to no more than 1 standard drink a day for women and 2 standard drinks a day for men.

**1 standard drink =** 285 ml beer  
375 ml light beer  
100 ml wine  
60 ml sherry  
30 ml spirit

## Meal Planning

Planning your meals in advance helps you to avoid impulsive choices, such as takeaway or convenience foods. A meal plan will guide your shopping purchases and help to make healthy eating become a habit. If you need some ideas on meals to cook, look through some healthy eating recipe books. A dietitian can assist you to design a meal plan that suits your individual needs.

## Sample Meal Plans

Add some variety to your meals. Try some of the following suggestions:

### Breakfast

Porridge (1/2 cup raw oats) with low fat milk and topped with slices of banana or  
A bowl of high fibre, low GI cereal with low fat milk and fruit or  
1-2 slices multigrain toast with a scrape of margarine and slices of tomato and pepper or  
1 slice multigrain toast with baked beans or  
Fresh fruit salad with low fat yoghurt.

### Lunch

1 multigrain sandwich or roll with tinned tuna, salad and a teaspoon of low fat mayonnaise or  
Vegetable soup with added legumes (dried or canned bean mix, lentils or barley) or  
1 small pita bread with tomato, avocado (1/4), alfalfa sprouts and salad .

### Dinner

Stir fry lean beef, chicken or fish and a variety of vegetables (e.g. capsicum, onion, broccoli, mushrooms, baby corn) cooked in 1-2 teaspoons of olive oil and served with steamed basmati rice (1 cup cooked) or  
Pasta (1½ cups cooked) with tomato and mushroom sauce, or stir through a small can of tuna or  
Lean steak or chicken (100 g) served with sweet potato, corn and salad or  
Baked fish (150 g) with steamed basmati rice (1 cup cooked) and stir-fried vegetables.

### Snacks

It is not necessary for all people with diabetes to have snacks in between meals. Some people may need to have a small snack to balance insulin or extra activity to prevent hypoglycaemia. See the fact sheet on Hypoglycaemia for more information. Ask your dietitian if you need a regular snack.

Some low fat snack suggestions are:

- fruit or fruit salad
- tinned fruit snack
- 1 small bowl of vegetable soup
- 200g tub of low fat yoghurt
- 1 slice fruit bread with ricotta cheese
- 1 toasted muffin with fruit spread
- plain popcorn.

## Controlling your weight

People with type 2 diabetes are often overweight and tend to carry excess fat around the waist. If you are overweight, losing weight will help you to lower blood glucose levels and improve cholesterol and blood pressure. Even a small weight loss can provide health benefits. You do not need to be in the healthy weight range to see improvements. A useful guide to a realistic and sustainable weight loss is to lose 5-10% of your weight over 3-6 months. A gradual weight loss of 1-2kg per month is generally easier to keep off than rapid weight loss.

## Targets for weight and waist loss

Timespan	Weight	Waist circumference
Short term	1-4 kg/month	1-4 cm/month
Medium term	10% of initial weight	5% after 6 weeks
Long term	10-20% of initial weight	less than 88 cm (females) less than 102 cm (males)

*From the Clinical Practice Guidelines for the Management of Overweight and Obesity in Adults.*

## Tips to help with weight loss

Reduce the amount of food you eat

- Serve a smaller size meal
- Eat more slowly and enjoy the flavours of your food
- Eat less in between meals
- Drink water

Cut down on fats

- Eat less high fat foods such as meat, cheese, biscuits, cakes and fried foods
- Add less fat such as butter, margarine and oil to foods

Eat more vegetables and salad

Eat at regular times and don't skip meals

Reduce your alcohol consumption if you drink more than 2 standard drinks per day

Be aware of non-hungry eating

- Become aware of your eating habits and the reasons you may be eating such as stress boredom or out of habit
- Keep a record of what you eat for a few days to help you become more aware of the reasons for eating
- Eat more slowly and stop eating when you feel full
- Try not to snack when you aren't hungry

Be more active.

***You may need to reduce the dose of your diabetes tablets or insulin when you lose weight. Speak to your doctor if you are experiencing low blood glucose levels under 3.5mmol/L.***

Extracted: [http://www.bakeridi.edu.au/health\\_services/health\\_fact\\_sheets/healthy\\_eating\\_type\\_2\\_diabetes/](http://www.bakeridi.edu.au/health_services/health_fact_sheets/healthy_eating_type_2_diabetes/)