Diabetes can be well managed with healthy eating, combined with regular physical activity and weight management. If you have diabetes, it is recommended that you follow a healthy eating plan based on plenty of vegetables and legumes (such as chickpeas, lentils, low-salt baked beans and kidney beans). Include some high-fibre carbohydrate foods such as wholegrain breads and cereals and fruit, as well as some lean protein sources and reduced-fat dairy products. Reduce your intake of saturated (unhealthy) fat and added sugars, and choose foods low in salt. Reducing the serving size of your meals can also help you to maintain a healthy body weight and allows for better blood glucose management. It is recommended that you see a dietitian who can work with you to develop a healthy eating plan that is just right for you.

Healthy eating and diabetes

If you have diabetes, healthy eating can help you to:

• maintain general good health
• better manage your blood glucose levels
• achieve target blood lipid (fat) levels
• maintain a healthy blood pressure
• maintain a healthy body weight
• prevent or slow the development of diabetes complications.

Healthy eating for people with diabetes is no different than for everyone else. You do not need to prepare separate meals or buy special foods, so relax and enjoy healthy eating with the rest of your family.

Physical activity and diabetes

Along with healthy eating, physical activity is important. Be as active as possible in as many different ways as possible. Aim to do at least 30 minutes of moderate intensity physical activity on most, if not all days of the week. A regular half-hour of physical activity can help to:

• lower your blood glucose levels
• lower your cholesterol
• lower your blood pressure
• reduce stress and anxiety
• improve your mood and self-esteem
• improve the quality of your sleep
• increase muscle and bone strength.

If your goal is weight loss, aim to do at least 60 minutes of physical activity on most days of the week. If 30–60 minutes of physical activity seems like too much to start with, you can break this up into smaller blocks of 10–15 minutes, spread out across the day.

Resistance activity is also highly recommended for all people and especially people with diabetes. An exercise physiologist can help you to create a safe resistance activity program. Aim to do resistance type activities at least twice per week.

This could include:

• body weight exercises like push-ups, squats or lunges at home
• using dumbbells and resistance bands (such as Thera-Bands™) to do resistance exercises at home
• doing tasks around the home that involve lifting, carrying or digging
joining a gym and doing weights or other resistance exercises.

Also try to reduce the amount of time you spend sitting down either at work, at home or both. Some small activities you can do to help reduce the amount of time you spend sitting throughout the day include:

- Take the stairs rather than the lift.
- Park further away from your destination and walk.
- Get off public transport one stop earlier and walk the rest of the way.
- Get up to get a drink of water on a regular basis, at least once every hour.
- Do some chores, such as ironing, while watching TV.
- Play with your children or grandchildren in the park.
- Get up and talk to your work colleagues rather than emailing them.

**Basic eating guidelines for diabetes**

If you have diabetes, follow a simple healthy eating plan, which includes:

- Eat regular meals throughout the day.
- Make vegetables the main part of your meal. Aim to fill at least half of your plate with non-starchy vegetables or salad at both lunch and dinner time.
- You may need to reduce the serving size of your meals and snacks, as eating too much can lead to weight gain and make diabetes harder to manage.
- Include a small serving of high-fibre carbohydrate at each meal. Examples of high-fibre carbohydrate foods are wholegrain bread, cereals (such as oats, Vita Brits®, All-Bran® and natural muesli), wholemeal pasta, brown rice, quinoa, fruit and starchy vegetables (such as corn, sweet potato and potato).
- Choose reduced-fat or low-fat dairy products. Look for those with the least amount of added sugar. Greek yoghurt with fresh fruit is a good choice.
- Choose lean meats and alternatives, such as skinless chicken and turkey, fish, eggs, legumes (beans, lentils), tofu and nuts.
- Limit the unhealthy (saturated) fats that are found in foods such as full-fat dairy products, butter, cream, fatty and processed meats, fried foods, cakes, pastries, and foods containing palm oil and coconut oil.
- Include some of the healthy (unsaturated) fats like olive, canola or sunflower oil, monounsaturated or polyunsaturated margarines, oily fish, avocado, seeds and nuts.
- Oily fish is great for heart health. Aim to include oily fish such as salmon (tinned or fresh), sardines, mackerel, herring or tuna at least two to three times per week.
- Save baked items like cakes and biscuits, slices and desserts for special occasions.
- Avoid lollies and sweet drinks (soft drink, cordial, sports drinks, flavoured waters and energy drinks).
- Don't add salt when you cook or at the table and reduce the use of high-salt foods.
- Use herbs and spices to add flavour to your food.
- Limit alcohol to two standard drinks per day, with some alcohol-free days each week.

**Carbohydrates and diabetes**

Carbohydrates are digested in the body to form glucose in the blood, and this is what your body uses for energy. It is the amount of carbohydrate in your meal that has the greatest effect on blood glucose levels.

By eating regular meals and spreading your serves of carbohydrate foods out evenly throughout the day, you can maintain energy levels without causing large rises in blood glucose levels.

If you take insulin or diabetes medication, you may also need to eat snacks between meals. Check with your diabetes educator or dietitian for advice and information on how to get the right amount of carbohydrate in your meal plan.

**Glycaemic index (GI) and diabetes**

Some carbohydrate foods release glucose into the bloodstream more quickly than others. Foods that produce a
slower rise in blood glucose levels are described as having a low glycaemic index (GI) and can be helpful in blood glucose management.

Healthy carbohydrate foods that have a low GI include some high-fibre breads and cereals (especially grainy bread and oats), pasta, basmati or low GI rice, quinoa, barley, most fruit, legumes and low-fat dairy products.

Aim to include at least one 'low GI' food per meal. Taking care with portion sizes is still important when eating low GI foods, as large servings of these foods can result in high blood glucose levels and weight gain.

Some low GI foods may be high in saturated fat, added sugar and energy – for example, ice cream and chocolate. Always check the list of ingredients and the energy (calorie or kilojoule) content of packaged foods. Foods with a GI of 55 and below are low GI foods.

The GI values of foods are only an average, and people will often react very differently to foods. People with diabetes are advised to test their blood glucose levels to determine the effect of various foods on their own blood glucose levels.

Sugar intake and diabetes

People with diabetes who follow a healthy eating plan can include a small amount of sugar in their diet. However, the sugar should be eaten as part of a nutritious meal. For example, add one teaspoon of honey to plain porridge, include tinned fruit in natural juice and some types of high fibre breakfast cereals with dried fruit, such as natural muesli.

Fat consumption and diabetes

All fats are high in energy. Eating too much fat can lead to weight gain, which may make it more difficult to manage your blood glucose levels and can increase blood fats (cholesterol and triglycerides). The type of fat you eat is also important. People with diabetes have a greater risk of developing heart disease, so try to eat less saturated fat.

Foods high in saturated fat include meat fat, full-fat dairy foods, cream, solid cooking fats (such as butter, lard, copha and ghee), oils such as palm and coconut, and products that contain these fats (for example, fried foods, some cakes and biscuits, and convenience foods).

When you do eat fats, choose mainly:

- polyunsaturated fats and oils – found in polyunsaturated margarines (check the label), sunflower, safflower, soybean, corn, cottonseed, grapeseed and sesame oils. Also found in oily fish such as herring, mackerel, sardine, salmon and tuna, as well as nuts and seeds
- monounsaturated fats and oils – found in canola or olive oil margarines, canola and olive oil, and in avocados, nuts and seeds.

Protein consumption and diabetes

The body uses protein for growth and repair. Most people only require two to three small serves of meat or other protein foods each day. Most protein foods do not directly affect your blood glucose levels.

Protein foods include lean meat, skinless poultry, seafood, eggs, unsalted nuts, soy products such as tofu and legumes (dried beans and lentils, chickpeas, four-bean mix, kidney beans, etc.). Legumes also contain carbohydrate, so they may have an impact on your blood glucose levels.

Some sample serves of protein foods that are low in fat include:

- one cup of cooked split peas, beans, lentils or other legumes
- 100 g of cooked fish or other seafood
- 65 g of cooked lean red meat
- 80 g of cooked poultry without the skin
- two eggs (try poached, scrambled with low-fat milk or boiled rather than fried).

Sample meal plan for healthy eating with diabetes

Choose foods that you like and that satisfy you. Include a small serving of carbohydrate foods in each meal or snack to help manage blood glucose levels. You can eat your main meal at lunch or dinner.

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**Breakfast**

Some breakfast choices include:

- 3/4–1 cup of high-fibre breakfast cereal with low-fat milk and one piece of fruit, or
- 1/2 cup natural muesli or rolled oats with either milk or reduced fat Greek yoghurt, or
- two slices of wholegrain toast – with thinly spread peanut butter, baked beans, grilled tomato with avocado, poached or boiled eggs, ricotta cheese and tomato, or sardines
- water, tea or coffee.

**Light meal**

Some light meal choices include:

- one sandwich made with wholegrain bread, or one roll, or six small high-fibre crackers with thinly spread avocado
- lots of salad vegetables
- 65–80 g of lean meat or skinless poultry or 100 g of fish or other seafood OR two eggs OR 40 g of reduced-fat cheese or 1 cup of cooked legumes (such as beans or lentils)
- water, tea or coffee.

**Main meal**

Some main meal choices include:

- 1/2–1 cup of cooked rice or pasta or one to two small potatoes
- lots of other vegetables
- 65–80 g of lean meat or skinless poultry or 100 g of fish or other seafood, or one cup of cooked legumes (such as beans or lentils)
- water, tea or coffee.

**Between-meal snacks**

Not everyone needs to include snacks between meals. Talk to your diabetes educator or dietitian if you are unsure.

If you do include snacks, select healthy choices such as:

- fresh fruit
- a small serve of reduced-fat natural yoghurt with fruit
- a glass of low-fat milk
- one slice of wholegrain bread with toppings such as thinly spread peanut butter, ricotta or cottage cheese and tomato
- one slice of fruit bread
- high-fibre crackers with similar toppings as above.

**Talk to a dietitian**

People with diabetes should discuss their food habits with a dietitian so that appropriate dietary recommendations can be designed for their needs.

**Where to get help**

- **Your GP**
- **Local community health centre**
- **Dietitians Association of Australia** Tel. 1800 812 942
- **Diabetes Australia NDSS Helpline** Tel. 1300 136 588
- **Life! Helping you prevent diabetes, heart disease and stroke** Tel. 13 RISK (13 7475)
- **Baker Heart and Diabetes Institute** Tel. (03) 8532 1111

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