

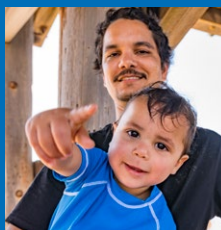
ndss

National Diabetes Services Scheme

An Australian Government Initiative

NDSS Helpline 1800 637 700
ndss.com.au

Information for people with type 2 diabetes



Find this resource at ndss.com.au

 **diabetes**
australia

The NDSS is administered by Diabetes Australia

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This information is intended as a guide only. It should not replace individual medical advice. If you have any concerns about your health, or further questions, you should contact your health professional.

The National Diabetes Services Scheme (NDSS) recognises the diverse communities of Aboriginal and Torres Strait Islander people as the first people of Australia and acknowledges their continuing connection to land, waters and culture. We pay our respects to all Elders past, present and future.

How to use this booklet

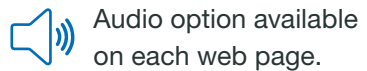
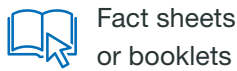
You will not need all the information in this booklet straight away.

This booklet is divided into sections covering the following information:

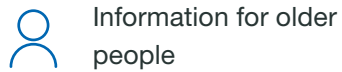
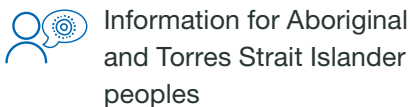
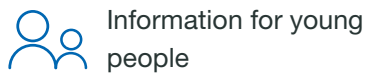
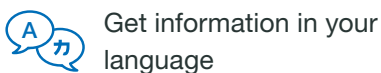
- » Getting to know the NDSS and what products and services are available to you.
- » Understanding type 2 diabetes.
- » Learning how you can start managing your diabetes from day to day. There is some information about ‘other’ types of diabetes. (There is a separate booklet for people with type 1 diabetes.)

You can take this booklet to your appointments to discuss topics with your health professionals. There are suggested questions at the end of most sections to guide you.

Throughout this booklet there are links to specific NDSS resources. Use the search function on the website to find:



Information is available to download, print, listen to or to view. You can also call the NDSS Helpline on **1800 637 700** to ask for a copy to be sent to you.



Welcome and introduction



Welcome to the National Diabetes Services Scheme

Introduction

Being diagnosed with type 2 diabetes or 'other' types of diabetes can be overwhelming.

You may feel relieved at having a diagnosis to explain the symptoms you may have been experiencing. You could also be feeling disbelief, sadness, anger or self-blame. Usually, these feelings ease as you:

- » learn more about diabetes and how to manage it
- » ask questions
- » involve your family and friends
- » connect with peers and your health professionals
- » plan and set goals.

What is the NDSS?

The NDSS is an initiative of the Australian Government administered by Diabetes Australia. It has been administered by Diabetes Australia since it started in 1987. Registration with the NDSS is free and open to all Australian residents diagnosed with diabetes.

Through the NDSS people with diabetes can access:

- » support services such as face-to-face and online self-management education programs for practical help and guidance
- » digital and printed diabetes and health information and resources
- » subsidised diabetes products.

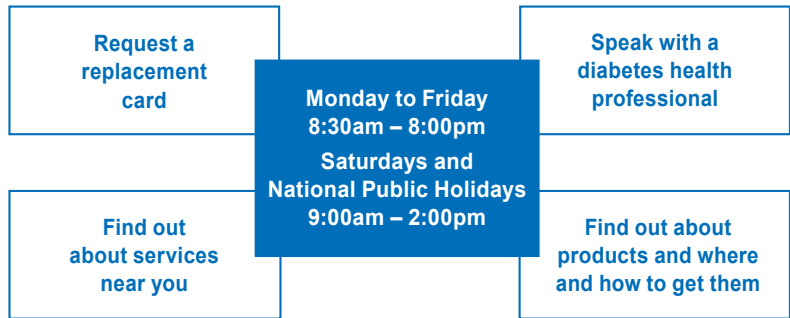
Stay up to date



The way you manage your diabetes can change over time. Services and products also change regularly. Keep in touch with the NDSS and your health professionals. You can update your details online at ndss.com.au/manage-your-registration or by calling the NDSS Helpline **1800 637 700**.

Now you are registered, you can book into face-to-face and online services at events.ndss.com.au or by calling the NDSS Helpline **1800 637 700**. You can also access subsidised diabetes products at community pharmacies (these are called NDSS Access Points (see page 18)).




 **Call the NDSS Helpline on 1800 637 700 to:**



  Follow us on **Facebook** or **Twitter** for information and updates.

If you are deaf, or have difficulties with hearing or speech:
 TTY (teletypewriter) **133 677**
 Speak and Listen on **1300 555 727**
 National Relay Service
nrschat.nrscall.gov.au/nrs/internetrelay and enter the NDSS Helpline number **1800 637 700**.

 If you need help with English, call: Translating and Interpreting Service (TIS): **131 450**. State your language. Wait to be connected to an interpreter, then ask for the NDSS Helpline on **1800 637 700**.

Your health care team

You are not alone. You can include diabetes specialists and other health professionals in your health care team. You can also invite family members, friends or a carer to be part of your health care team.



You may not need all the health professionals shown here. Talk to your doctor about how to set up your health care team.



Doctor or GP: Oversees your primary health care, prescribes medicines, monitors your health, may refer you to specialised and allied diabetes health services.



Diabetes educator: A health professional who can help you manage your diabetes. A credentialed diabetes educator (CDE) is a health professional who has specialised in diabetes education and care. They can help you learn how to manage and monitor your health with diabetes and provide advice on effects of food and exercise, insulin and monitoring your blood glucose levels. You can find a CDE near you at adea.com.au/find-a-cde.



Endocrinologist: Medical specialist in diabetes. A physician may provide specialist diabetes care in some circumstances.



Dietitian: Provides advice and support with healthy eating habits and (if needed) balancing medication or insulin and food.



Pharmacist: Dispenses medicines and provides advice on medications, insulin and diabetes products.



Podiatrist: Checks the health of your feet routinely and provides advice on caring for your feet.



Exercise physiologist or physiotherapist: Provides advice and supports you with being physically active.



Psychologist, counsellor, social worker: Provides emotional and psychological support.



Optometrist: Checks your eye health (may refer you to an ophthalmologist for treatment).



Ophthalmologist: Medical specialist in eye care and management.



Dentist: Checks the health of your teeth and gums routinely.



Aboriginal and Torres Strait Islander Health Worker: Provides local and culturally appropriate information and support for Aboriginal and Torres Strait Islander people.



Diabetes nurse practitioner: A registered nurse who has specialised in diabetes care and management and is qualified and authorised to practice in an advanced and extended clinical role. This is different to a practice nurse working with a GP.

You can search for health professional in your area at healthdirect.gov.au/australian-health-services.

Next steps

- » Understand type 2 diabetes, or your particular ‘other’ type of diabetes (see page 21).
- » Ask your doctor about your diabetes care plan so together you can set goals and targets, and link to the other health professionals who can support you (see page 8).
- » Talk to your doctor and health professionals about health checks and the annual cycle of care (see page 51).
- » Learn how you can manage your diabetes by:
 - discovering more about healthy eating, nutrition and carbohydrates (carbs) (see page 26), physical activity (see page 49), medications and monitoring (see pages 34 and 46)
 - attending local education and support programs (see page 12).
- » Find out which diabetes products you may need and where you can access them (see page 18).
- » Begin exploring the different aspects of living with type 2 diabetes and ‘other’ types of diabetes (see page 54), for example school, driving, work and travel, ageing and retirement.



Young people with diabetes

Older people with diabetes

Aboriginal and Torres Strait Islander peoples

People from diverse backgrounds

Living in rural and remote areas



Adjusting to life with diabetes

Peer support for diabetes

NDSS services



How do I access NDSS services?

Now that you are registered you can access various support, information and education services. To find out more, go to ndss.com.au, call the NDSS Helpline on **1800 637 700** or contact your state or territory diabetes organisation (see page 16).

Do I need to pay for NDSS services?

NDSS services are free. Your state or territory diabetes organisation (NDSS Agent) manages face-to-face services.

What kinds of services are available to me?

Through the NDSS you can access:

- » information about diabetes self-management
- » fact sheets, booklets and other resources about type 2 diabetes and 'other' types of diabetes
- » face-to-face and online programs and activities, such as healthy eating and physical activity programs, and structured self-management education programs
- » peer support groups
- » subsidised diabetes products through community pharmacies
- » the NDSS Helpline on **1800 637 700** and website at ndss.com.au.

How do I access information and resources?

You can find information on all the topics covered in this booklet.

Use the links included in each topic.

Or go to ndss.com.au/resources.

Or call the NDSS Helpline on **1800 637 700** to order printed copies.



Translated information is also available.

The NDSS also provides reliable news and updates via: ndss.com.au/news



Facebook



Twitter

What kinds of programs and activities are available to me?

Talk to your health professionals to work out what programs might suit you. To find out more information and the dates and venues of upcoming programs, go events.ndss.com.au or call the NDSS Helpline on **1800 637 700**.

Education programs

Type 2 diabetes online education program

This is a free online program to help you learn more about living with diabetes. It provides information about where to go for help and has links to more information. There are short topics, including videos, and you can go through them in any order you choose. Look for **Type 2 diabetes and me** on the website.

Type 2 diabetes face-to-face and online education program

DESMOND is an education program for groups of adults with type 2 diabetes. It covers skills to help manage your type 2 diabetes, like healthy eating, managing medications and physical activity. Look for **DESMOND** groups in your area at events.ndss.com.au or go to ndss.com.au/services/support-programs/mydesmond to join the online program.

Short education programs and activities

There are a number of face-to-face and online short programs and activities on topics that can help you learn about managing your diabetes:

- » **Learn about carbohydrates (carbs)** the different types and the amount that is best for you.
- » **Learn about footcare** for diabetes and how to check and look after your feet.
- » **Learn about monitoring** and how to check your blood glucose levels at home and how to use these results to best manage your diabetes.
- » **Learn about shopping** to help you make healthy food choices and understand food labels.
- » **Learn about insulin**, what it is and how to use it.
- » **Learn about physical activity** including the benefits and how to get started in making physical activity part of your daily routine.

Support programs

Peer support

Peer support groups bring together people with diabetes who share common experiences, conditions, concerns, goals or interests.

By supporting each other, people improve their quality of life.

Peer support programs can either be face to face or online.

These are some examples. Go to ndss.com.au/services/support-programs to find a program or activity to meet your needs. To find out more and what services are available online, or face-to-face near you, go to events.ndss.com.au or call the NDSS Helpline on **1800 637 700**.



Support programs



Programs in other languages



Aboriginal and Torres Strait Islander communities program

Diabetes organisations

Diabetes Australia

Diabetes Australia is a registered charity and was first established in 1957 and is the national organisation for all people affected by diabetes and those at risk.

Diabetes Australia works in partnership with its member organisations, people with diabetes, diabetes health professionals, researchers and health care providers. Diabetes Australia is committed to reducing the impact of diabetes on the Australian community.

Diabetes Australia is a respected and valued source of information and advice for government and the community. Diabetes Australia has administered the NDSS since it began in 1987.

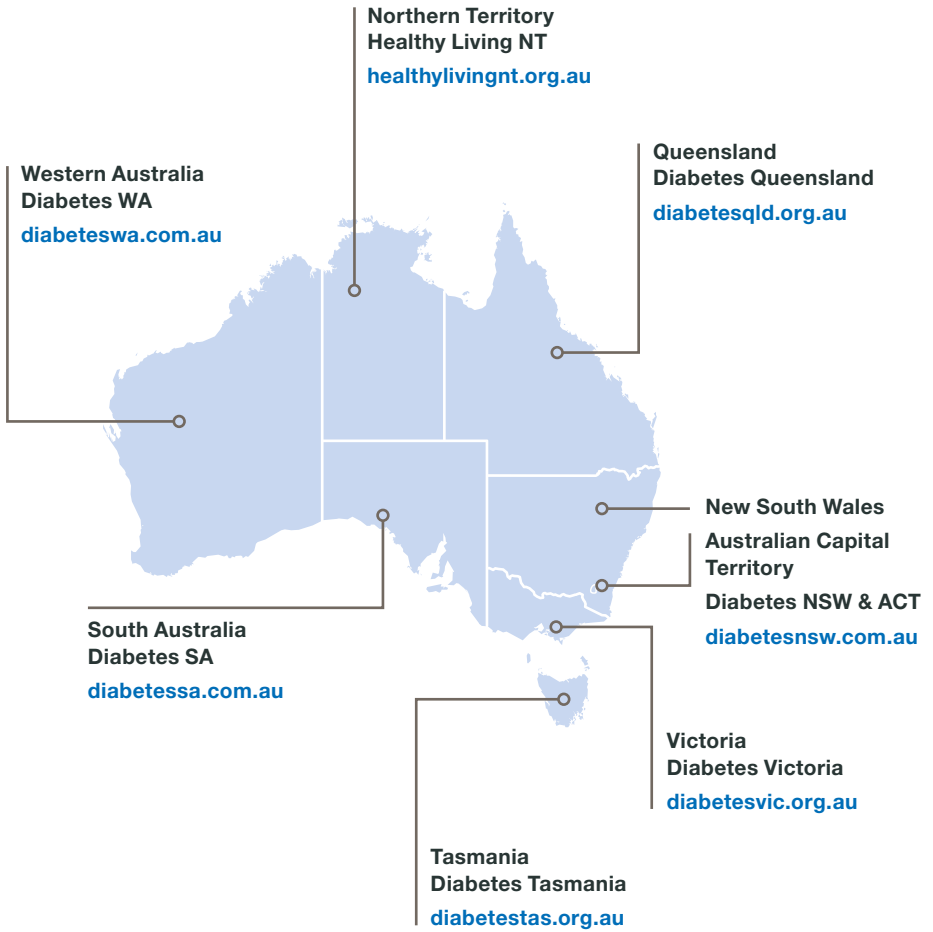
Phone: **02 6232 3800**

Email: **admin@diabetesaustralia.com.au**

Website: **diabetesaustralia.com.au**

State and territory diabetes organisations

All state and territory organisations are not-for-profit, member-based registered charities. Diabetes Australia appoints these organisations to be 'NDSS Agents' and provide NDSS support services within their state or territory. Your state or territory organisation can introduce you to the diabetes community, services and programs near you.



NDSS products



Now that you are registered with the NDSS, you can access subsidised diabetes products at more than 5,500 community pharmacies around Australia. The pharmacies are sometimes called ‘NDSS Access Points’.

To find a community pharmacy near you:

- » go to our NDSS Online Service Directory at osd.ndss.com.au or to healthdirect.gov.au/search-results/pharmacy
- » call the NDSS Helpline on **1800 637 700**.

What types of diabetes products are available through the NDSS?

You can access a range of subsidised products through the NDSS including:

- » blood glucose monitoring strips
- » urine monitoring strips
- » fully subsidised continuous and flash glucose monitoring products (if you have a condition similar to type 1 diabetes, and meet the eligibility criteria; **not subsidised for people with type 2 diabetes**)
- » fully subsidised insulin syringes and pen needles (if you need insulin or approved non-insulin injectable medications).

Medicines (including insulin) are not available through the NDSS. You will need a prescription from your doctor or diabetes nurse practitioner to get these from a pharmacy.

Concession cards, quantities of products you can order, and planning for travel

- » If you hold a valid concession card, you are eligible for extra subsidies.
- » Your community pharmacy can order any subsidised diabetes products not in stock. This can take 24-48 hours or a bit longer in some regional and remote areas.
- » To avoid wastage, do not over-order products as most have a use-by date.
- » There are limits to the quantity of products you can access through the NDSS. You can find these limits at ndss.com.au/products.
- » You can only order NDSS products while in Australia.
- » If you are travelling overseas, you can order up to six months' supply to take with you. Products cannot be sent overseas through the NDSS.

Understanding diabetes



What is diabetes?

Diabetes is a condition where there is too much glucose (a type of sugar) in your blood. Glucose is our main source of energy. We get glucose from foods containing carbs like bread, pasta, rice, cereals, fruits, starchy vegetables, milk, yoghurt and sweets (see page 27). Glucose can also be stored and released when needed at times when you are not eating.

Your blood glucose levels are controlled by insulin, a hormone produced in the pancreas. As glucose enters your bloodstream, the pancreas releases more insulin. Insulin helps glucose to move from the bloodstream into your cells (such as muscle cells), where it is used for energy.

Generally, people develop diabetes due to:

- » your body becoming less sensitive to the effect of insulin (known as insulin resistance), OR
- » your pancreas not making enough (or any) insulin.

Many people with type 2 diabetes may have a combination of these problems. This means your insulin is not working very well (insulin resistance) and your pancreas is not making enough insulin.

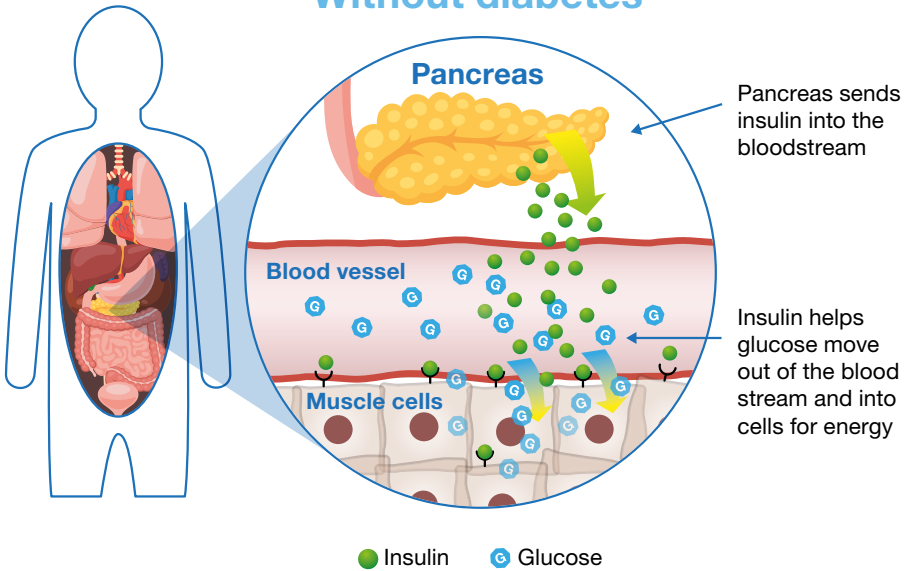
High blood glucose levels can cause health problems (see pages 44 and 52). But with the right treatment and care, people with diabetes can live a healthy life.

What are the different types of diabetes?

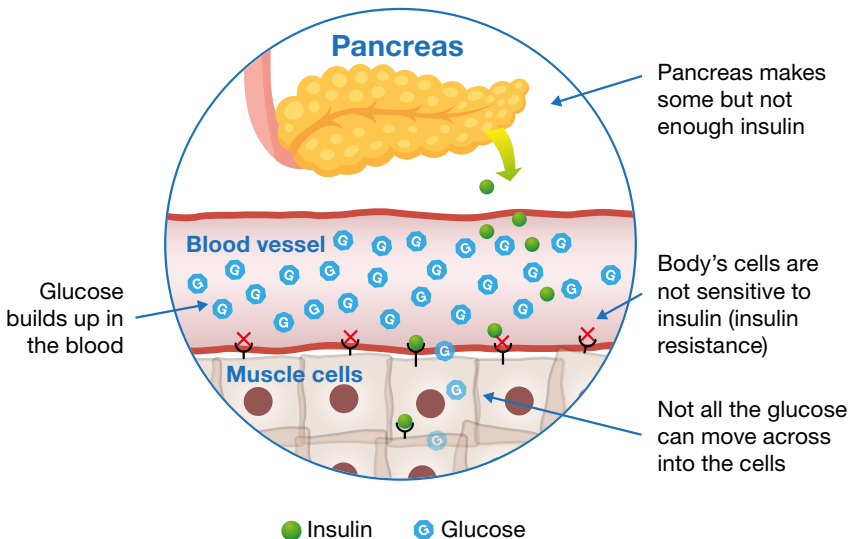
The three most common are type 2 diabetes, type 1 diabetes, and gestational diabetes. There are many other less common types of diabetes as well.

What happens in your body after you eat (carb) food?

Without diabetes



Type 2 diabetes



Type 2 diabetes

With type 2 diabetes, your pancreas makes some insulin but not as much as your body needs. This may be because your insulin is not working as well as it used to (insulin resistance) or your pancreas is producing less insulin over time. Often it is a combination of both: insulin resistance as well as making less insulin.

The cause of type 2 diabetes is not fully understood. It may be related to factors that you cannot change such as your family history, ethnicity and age. Other factors such as bodyweight, what you eat, and physical activity can also increase the risk of type 2 diabetes in some people.

To manage type 2 diabetes, your health professionals will help you understand how to:

- » identify healthy eating choices that suit you
- » add achievable activity goals into your routine
- » know if you need glucose-lowering medications and explain how they work
- » monitor glucose levels at home (if you need to)
- » know if you need insulin replacement at any stage
- » manage your diabetes around activity, study or work, stress, being sick, hormonal changes and during pregnancy.



Type 2 diabetes



Understanding type 2 diabetes

Other types of diabetes

There are other less common types of diabetes. These include:

- » diabetes resulting from specific health conditions, such as cystic fibrosis, pancreatitis, cancer, OR
- » diabetes resulting from use of certain medications such as steroids (like prednisolone), immunosuppressants (taken after an organ-transplant) or some cancer medications.

The management will depend on your type of diabetes. Your health professionals will provide you with information and a treatment plan to suit you.

These types of diabetes are referred to as 'other' types of diabetes throughout this booklet (type 1 diabetes is covered in a separate booklet).



Other types of diabetes



Other diabetes list

Questions for your health professionals

How will my diabetes change over time?

What will make my blood glucose levels rise?

What will make my blood glucose levels go down?

How can I see a credentialed diabetes educator to help me understand my diabetes?

How can I see a social worker, counsellor or psychologist to help me adjust to life with diabetes or reduce other stressors in my life?

How can I see a dietitian to help me with healthy eating?

How can I see an exercise physiologist or physiotherapist to help me increase my activity levels safely?

Nutrition and healthy eating



Now that I have type 2 diabetes, what do I eat?

You can eat the same healthy, balanced diet that is recommended for everyone. Healthy eating can help you manage your blood glucose levels. It can also help reduce your blood pressure and cholesterol and manage your weight.

Each person with type 2 diabetes will eat different foods, depending on many factors including what they like, their cultural background, and their activity levels. Although it may be helpful to make some changes to your diet, you do not need to eat special foods or stop eating all the foods you enjoy.

Include a variety of nutritious foods from each of the five food groups in the Australian Dietary Guidelines (eatforhealth.gov.au/guidelines).



What foods and drinks will make my blood glucose levels rise?

Food and drinks that contain carbs have the biggest effect on your blood glucose levels. Carbs are broken down into glucose and enters your bloodstream. For example, when you eat rice it is broken down into glucose, which causes your blood glucose levels to rise.

Carb foods

Many carb foods are an important source of energy as well as fibre, vitamins and minerals. Choose nutrient-rich carb foods, such as:

- » wholegrain breads and cereals
- » wholegrain pasta, brown rice, barley and quinoa
- » starchy vegetables, like potato, sweet potato and corn
- » legumes, like chickpeas, lentils and dried or canned beans
- » fruit
- » dairy foods, like milk and yoghurt.

Carbs: nutrient-rich



Eat less carbs that are nutrient-poor and high in added sugars, fats or salt, such as:

- » cakes, biscuits, pies and pastries
- » sugary drinks, like regular soft drinks and fruit juice
- » sweets, lollies, and other sugary foods
- » deep-fried takeaway foods.

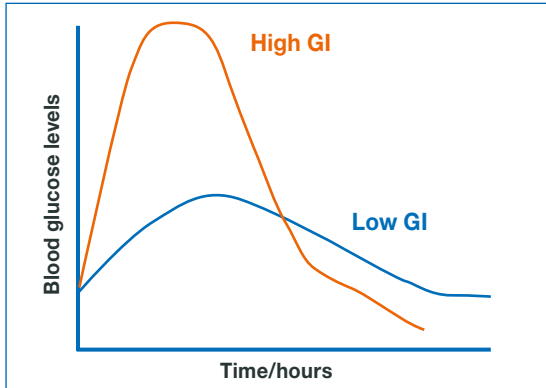
Carbs: high added sugars, fats or salts



What is the glycemic index?

The glycemic index (GI) is a ranking of carbs according to how quickly they raise blood glucose levels after eating. For example, white bread (high GI) might raise blood glucose levels more quickly than wholegrain bread (lower GI).

Choosing low or intermediate GI carbs may help to manage the rise in blood glucose levels after you eat.



Source: glycemicindex.com

GI numbers are a guide only. Also consider the amount (portion) of carbs in the foods you eat and whether the food is a healthy choice.



Glycemic index

Carbohydrate counting

Your blood glucose levels are affected by the amount (portion size) of the carb food you eat and the type of carbs.

If you take insulin, you can learn how to calculate the amount of carbs in your food and drinks and match it with how much insulin you take. This is called carb counting. Talk to your health professionals about learning how to do this.



Carb counting

Making healthy meals

Aim to fill half your plate with vegetables or salad, followed by a quarter of lean protein and a quarter of healthy carbs.

1/2 plate

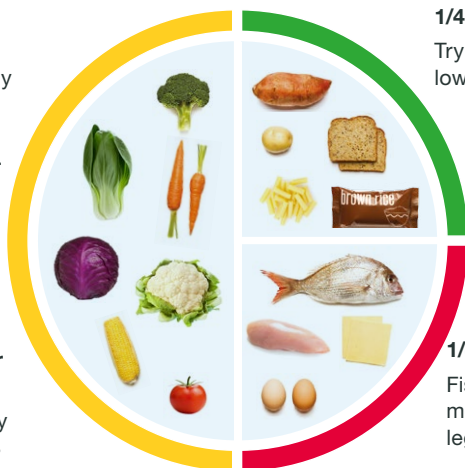
vegetables

Choose a variety of colours, e.g. green, yellow, orange and red.



Water

Avoid sugary drinks



1/4 plate carbs

Try to swap higher GI for lower GI carbs

1/4 plate protein

Fish, poultry, meat or meat alternatives, tofu, legumes and eggs

Include some healthy unsaturated fats such as olive oil, avocado, canola and sunflower oils. There is no need to cut out all sugar, but having too many sugary foods and drinks can make your blood glucose levels rise and may increase your weight.

Children and older people may have different nutritional needs.



Making healthy food choices

Healthy meal ideas

Healthy snacks

Hints for healthy cooking

Healthy eating as you age

What type of diet is best?

For some people, making some changes to what you eat can be helpful without following a specific meal plan.

There is no single diet that suits everyone who has diabetes.

Before making major changes to your diet, talk to your health professionals in case your medications need adjusting.



Understanding food labels

Alternative sweeteners

Eating out

Healthy weight and waistline

Extra weight, particularly around your waist, can make your body more insulin resistant. Eating too much saturated fat, such as butter, fatty and processed meats, fried food, cake and biscuits, also increases insulin resistance.

With type 2 diabetes, losing any extra weight, or reducing your waistline, can make it easier to keep your blood glucose levels in your target range. It can also reduce the amount of medication you need to take.

Work with a dietitian to come up with some goals and an eating plan that suits your needs and lifestyle. To find a dietitian in your area, go to dietitiansaustralia.org.au/find-an-apt or call Dietitians Australia on **1800 812 942**.

Alcohol and diabetes

It is recommended that everyone limit the amount of alcohol they drink to no more than two standard drinks per day. For some people, not drinking at all is the safest option.

When you have diabetes, drinking more than the recommended amount of alcohol can:

- » impair your judgement and your ability to make decisions about your diabetes management
- » increase your risk of a low blood glucose level (also known as hypoglycaemia or hypo) if you take insulin or certain diabetes medications
- » cause you to gain weight due to the energy in the alcohol and the foods we often eat when drinking
- » increase your risk of diabetes-related complications.

Talk to your health professionals about how you can safely enjoy a small amount of alcohol, if you choose to drink.



Alcohol

Questions for your health professionals

How can I see a dietitian to help set achievable goals for healthy eating?

How can I learn more about carbohydrate foods and their impact on my blood glucose levels?

What is my healthy weight range? What is my healthy waistline range?

Is timing of meals important?

What happens if I skip meals?

Will insulin or my glucose-lowering medications affect my appetite or weight?

If I choose to drink alcohol, how can I do this safely with regards to my diabetes?

Introduction to diabetes management



Monitoring blood glucose levels

There are two ways to monitor your blood glucose

1. A blood test ordered by your doctor. This is called the glycated haemoglobin level (or HbA1c).
2. A finger prick check you can do yourself. This is called self-monitoring your blood glucose levels.

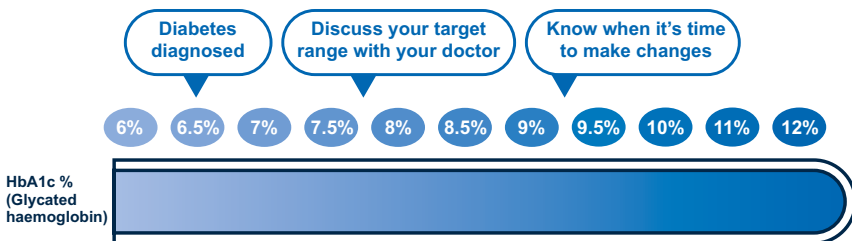
Note: Continuous glucose monitoring (CGM) and Flash glucose monitoring (Flash GM) devices are available in Australia (see page 38). These devices are generally only recommended if you are giving yourself insulin. They are not subsidised on the NDSS for people with type 2 diabetes. However, for those with 'other' types of diabetes who require insulin, talk to your diabetes health professional about whether you are eligible or not.

Glycated haemoglobin level

The glycated haemoglobin (HbA1c) level reflects the average amount of glucose that has been in your blood over the past two to three months. It is not the same as your daily blood glucose level.

If your HbA1c level is above target, it means there has been too much glucose in your blood (on average). If it stays above target, then you are at greater risk of the glucose damaging your blood vessels and causing diabetes-related complications (see page 51).

The recommended HbA1c target for most people is 7.0% (53mmol/mol) or less. Your target may be higher or lower than this depending on your age and goals of care. Discuss your target with your doctor or diabetes educator.



You can arrange an HbA1c test with your doctor every 3 to 6 months.

Self-monitoring blood glucose levels

Self-monitoring involves doing a finger prick check using a hand-held glucose meter. The result is a 'snapshot' of what your blood glucose level is at that particular time. When and how often you check your glucose levels will depend on how your diabetes is managed.

You will get different readings at different times of the day or night. Talk to your doctor or diabetes educator about your blood glucose level target range.

Not all people with type 2 diabetes need to self-monitor their blood glucose levels routinely.

You will need to self-monitor blood glucose levels routinely if you:

- » are taking insulin
- » are pregnant or actively planning pregnancy
- » are taking certain glucose-lowering medications or have a tendency to have blood glucose levels that are too low.

You may find it useful to self-monitor blood glucose levels when you are sick or when you change your diet, activity levels or diabetes medications. Talk to your health professionals about this.

Why self-monitor blood glucose levels?

An aim of diabetes management is to keep blood glucose levels within a specified target range to help you feel well and reduce the risks of diabetes-related complications.

- » Routine self-monitoring can help you see the effects of food, exercise, medication and illness on your blood glucose levels.
- » It can also help you identify any patterns or changes that you can discuss with your health professionals.

When to check blood glucose levels

Ask your doctor or diabetes educator how often and when to check your blood glucose levels.



When you wake up: this measures your 'fasting' glucose level



5 min
Before a meal
(if you take a
mealtime insulin)



2 hours after a meal
(to see the effect of
the meal or mealtime
insulin dose)



Overnight: 2-3am
(do this occasionally
if you are on a
basal insulin)

Source: Diabetes Tasmania

Driving safely: If you are taking insulin or certain glucose-lowering medications, check your blood glucose level before you drive a vehicle. Do not drive if your blood glucose level is under 5.0mmol/L.

How do I self-monitor blood glucose levels?

Blood glucose monitoring strips for meters are subsidised through the NDSS if your doctor or diabetes health professional recommends that you monitor blood glucose levels at home. They are available through most community pharmacies (see page 18). You may also be able to access a free blood glucose meter. To find out more, go to [ndss.com.au/products/blood-glucose-testing-strips](https://www.ndss.com.au/products/blood-glucose-testing-strips).

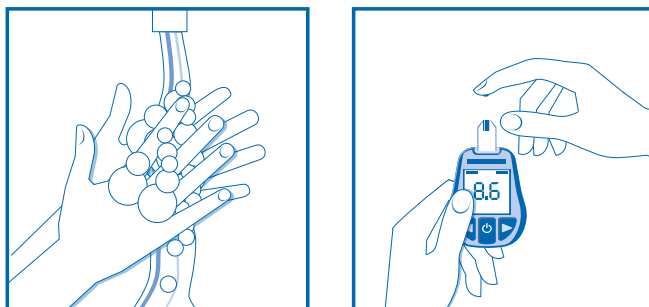
A range of blood glucose meters are available to purchase from your community pharmacy (NDSS Access Point). Diabetes organisations and some diabetes centres (hospital services) may also have blood glucose meters. A pharmacist or diabetes educator can help you select a suitable meter and help you to use it.

Lancets are not subsidised but can be purchased over the counter at most pharmacies.

Your doctor or diabetes educator will explain when and how often to check your blood glucose levels.

All meters require you to carry out the following steps:

- » wash your hands using soap and water (do not use alcohol wipes or hand sanitiser as this may affect the result)
- » place a monitoring strip into the meter, which will turn it on
- » use the finger pricking device (also called a lancet) to get a small drop of blood
- » apply the blood to the monitoring strip
- » wait for the meter to display your reading
- » dispose of the lancet needle in a sharps container (see page 48).



The blood glucose reading on your meter will be displayed in mmol/L (millimoles per litre). All meters store the reading in a memory. Be sure the time and date settings on the meter are correct. This allows you and your health professionals to review your readings and daily patterns. You can also write your readings in a record book.



Blood glucose monitoring

Your annual cycle of care

Diabetes and driving

Blood glucose monitoring strips

If you are not using insulin, you will be able to buy subsidised blood glucose monitoring strips during the first six months of your NDSS registration. If you wish to continue self-monitoring, a health professional will have to complete a form every six months to provide you with continued access.



Blood Glucose Monitoring Strip Six Month Access Form

Your GP can also download this form through their practice software.

Continuous and flash glucose monitoring

Finger prick checks only reveal your blood glucose at a single point in time. There are also devices that can read your glucose levels continuously throughout the day or night. They include continuous glucose monitoring (CGM) and flash glucose monitoring (Flash GM) devices.

These devices are not recommended for people who do not require insulin or who are not at risk of hypoglycaemia.

Fully subsidised continuous and flash glucose monitoring products are available through the CGM Initiative as part of the NDSS for eligible children and young people under 21 years with conditions similar to type 1 diabetes who require insulin (not subsidised for people with type 2 diabetes).



Conditions very similar to type 1 diabetes, eligible for the CGM Initiative

For people with type 2 diabetes, CGM and Flash GM products are not subsidised through the NDSS.

Ketones

Ketones develop when the body breaks down fat for energy. Large amounts of ketones can make you very unwell.

If you take certain medications called SGLT2 inhibitors you may be at risk of developing ketones. SGLT2 inhibitors include dapagliflozin (Forxiga), empagliflozin (Jardiance) and ertugliflozin (Steglatro).

Ask your doctor or diabetes educator if you need to check for ketones and how to do this. Some glucose meters can check blood ketones, or you can check for urinary ketones.

Have a sick day action plan (see page 59) which includes when and how to check for ketones. If you develop stomach pain, nausea, vomiting, seek medical attention.



Living with type 2 diabetes – what to do when you are sick

Questions for your health professionals

What is my glycated haemoglobin (HbA1c) result?

Can we discuss my HbA1c target?

When will my next HbA1c level be due?

Do I need to self-monitor my blood glucose levels?

Can you show me how to set up and use my blood glucose meter?

Questions for your health professionals

What can I do if the finger prick hurts or I cannot get enough blood?

When and how often will I check my blood glucose levels?

When would it be useful to do any extra blood glucose levels checks?

What are my blood glucose level target ranges
(before a meal and 2 hours after a meal)?

What do I do if my blood glucose level is outside my target range?

Hypoglycaemia

Hypoglycaemia (also known as a hypo or low blood glucose level) is when your blood glucose levels drop too low, usually to less than 4.0 mmol/L.

Usually, you will notice or feel a hypo. It is important to treat a hypo immediately. Tell your family, friends and colleagues about how to manage a hypo.

Am I at risk of hypoglycaemia?

Not everyone with type 2 diabetes or 'other' types of diabetes is at risk of a hypo. You are at risk if:

- » you take insulin or certain glucose-lowering medications e.g. gliclazide
- » you are fasting or become unwell.

Many factors can cause hypos, including:

- » injecting too much insulin
- » injecting insulin too early before a meal, or too late after a meal
- » having too much glucose-lowering medication
- » not eating enough food (especially carbs)
- » delaying or missing a meal
- » being more active than usual
- » drinking alcohol, particularly without eating enough carbs
- » illness (vomiting or diarrhoea).

How will I know if I am too low?

You will probably feel unwell if you are having a hypo. However, you may not always feel the early warning symptoms. It is important that you do a finger prick check if you think your blood glucose levels may be low. Signs and symptoms include:

- » shakiness
- » sweating
- » fast heart rate
- » confusion
- » irritability
- » hunger
- » tiredness or loss of concentration.

If a hypo is not treated immediately, it can progress to confusion, behaviour changes, unsteadiness and loss of consciousness.

How do I treat a hypo?

Have a hypo management plan and always keep your glucose meter and hypo treatment with you wherever you go.

A hypo management plan will be individualised for everyone depending on your age, risk of severe hypo and other factors. Generally, the plan will involve the steps below.

Make sure you are safe. If you are driving a vehicle, pull over to the side of the road. Follow these steps:

- 1. Check** your blood glucose level. If you cannot check, go straight to step 2.
- 2. Treat** with 15 grams of fast-acting carbs (glucose), for example:
 - » glucose tablets equal to 15 grams of carbs OR
 - » 6-7 regular jellybeans or 4 large jellybeans OR
 - » 1 tube of oral glucose gel (equal to 15 grams of carbs) OR
 - » ½ can (150mL) of regular (not 'diet') soft drink
 - » 100mL of Lucozade® OR
 - » 3 teaspoons of sugar or honey OR
 - » ½ glass (125mL) of fruit juice.
- 3. Check** your blood glucose level after 15 minutes. Treat again (step 2) if you are still too low (for example, below 4.0mmol/L).
- 4. Eat** long-acting carbs (or your next main meal), for example:
 - » a slice of bread OR
 - » a glass of milk or soy-milk OR
 - » a piece of fruit OR
 - » 1 small tub (100g) fruit yoghurt.
- 5. Assess** what caused your hypo so you can make changes to try and avoid another one. It may be a good idea to discuss this with your health professionals.



Managing hypoglycaemia

Diabetes and driving

Questions for your health professionals

Am I at risk of having a hypo?

What can I do to avoid having a hypo?

How can I avoid a hypo when exercising or fasting?

Can you help me with a hypo management plan?

What do I do after I have had a hypo to avoid having another one?

What do I tell the people around me about hypo (family, friends, work colleagues)?

What should I do if I have a hypo while driving?

How can I avoid a hypo if I drink alcohol?

Hyperglycaemia

Hyperglycaemia is when your blood glucose levels are too high. Usually this is a blood glucose level greater than 15.0mmol/L. You and your health professionals may decide on a slightly higher or lower blood glucose level to define hyperglycaemia for you, so discuss this with them.

An occasional blood glucose level above your target is not usually a problem. But, a pattern of being above your target blood glucose level is worth discussing with your health professionals.

An example might be if it happens more than twice at the same time of day or night.

Long periods of hyperglycaemia can be dangerous and need treatment, or a medical emergency can develop.

Am I at risk of hyperglycaemia?

Hyperglycaemia can happen in anyone who has type 2 diabetes or 'other' types of diabetes.

An illness, infection, or taking steroid medications can increase your risk.

Causes of hyperglycaemia include:

- » missed medication or insulin dose
- » eating more carbohydrate food than usual
- » being less active than usual
- » stress (emotional or psychological)
- » being unwell or having an infection
- » taking certain medications, such as steroids
- » over-treating a hypo.

Hyperglycaemia may just mean that you need to review your treatment. For example, you may need to begin, change or increase medications or insulin. Contact your health professionals if you are concerned.

How will I know if my blood glucose levels are too high?

You may not always notice when your blood glucose levels are too high, but hyperglycaemia can make you:

- » tired
- » pass more urine
- » thirsty
- » feel hungry (even though you are eating).

If blood glucose levels remain high, you might notice sores or cuts that do not heal very quickly, weight loss, or blurred vision.



Living well with type 2 diabetes – what to do when you are sick

Steroid medications and diabetes

Questions for your health professional

If I do not need to self-monitor my blood glucose levels, how will I know if my glucose levels are too high?

What is my blood glucose level target range?

What can I do if I am worried about high blood glucose levels?

Do I need to check for ketones, and if so, when?

What is the normal range for ketones (blood or urine)?

What is a sick day action plan?

Can you help me develop a sick day action plan?

Medications for type 2 diabetes

Do I need medication to manage my diabetes?

Besides healthy eating and keeping active, you may also need medications to manage your diabetes.

There are various types of medications for type 2 diabetes. Most are tablets, but there are a few injectable medications that are not insulin. You may also need insulin (see page 47). With 'other' types of diabetes, you may benefit from taking glucose-lowering medications, but this depends on what type of diabetes you have.

Discuss treatment options with your health professionals to help you decide what will work best for you.



Non-insulin injectables



Medications for type 2 diabetes

Complementary or alternative medications

Talk to your pharmacist or doctor before you start any complementary or alternative medications. Some of these may affect your diabetes or interact with the other medications you are taking.

Questions for your health professionals

Will I benefit from taking any diabetes medications?

Can I have the name and dose of my medications and directions for when to take them?

How do my medications work?

What do I do if I miss a dose of my medication?

What are the common side effects of my medications and what should I do if I experience side effects?

Will any of my medications increase my risk of hypo?

If I need to inject my medication can someone show me how to do this?

Are there any times when I should not take my medication, such as before surgery or when I'm fasting or if I am sick?

Insulin

Do I need to take insulin?

With type 2 diabetes, you may need to start taking insulin. This is not unusual; currently about one in every four people with type 2 diabetes needs insulin.

With 'other' types of diabetes, you may also need to take insulin. This will depend on the type of 'other' diabetes you have. Talk to your health professionals.

It is common to feel worried, nervous or even angry about starting insulin. Needing insulin is not 'your fault'. It does not mean you have 'failed' in any way. Insulin can make a positive difference to your diabetes management.

You may need insulin temporarily, for example when you are sick (see page 59) or if you have to take steroid medications.



Insulin

Concerns about starting insulin (for people with type 2 diabetes)

Starting insulin (for people with type 2 diabetes)

Insulin injection devices

Insulin is usually given as an injection into the fat layer just under the skin. It can be given using a syringe, but more commonly it is given using a pen device.

Your doctor or diabetes educator will show you how to use a pen device to inject your insulin dose safely. You will need to be in regular contact with your health professionals to work out the right dose for you.

Sharps disposal

Do not put needles into the general rubbish. Place the following into a sharps container:

- » needles (lancets) from your finger pricking device
- » syringe or insulin pen needles
- » insertion needles from continuous or flash glucose monitoring devices
- » used continuous or flash glucose monitoring sensors.

To find out where to get a sharps container and how to dispose of sharps, contact your:

- » local council or health department
- » community pharmacy, community health centre or public hospital.

Questions for your health professionals

How will I know if I need to start insulin?

Do I need a prescription for insulin and how much will it cost?

How many doses does an insulin pen contain? How long will a pen or a cartridge last?

What are the advantages and disadvantages of disposable versus refillable insulin pens?

Can you provide me with spare insulin pens (if using refillable insulin pens)?

What is the name of my insulin?

How quickly does my insulin start to work and how long does it work for?

Do I give myself insulin before a meal or at the same time every day?

Can someone show me how to give myself insulin safely?

How can I avoid and treat hypos and who can I contact if I have a hypo?

What is the recommended way to store my insulin at home and when I am out?

Physical activity and diabetes

Being active is good for your physical and emotional health. Getting and staying active helps you manage your diabetes better.

Being active helps:

- » your insulin to work better (you become more sensitive to insulin)
- » your muscles to use more glucose for energy, which usually lowers blood glucose levels
- » lower your blood pressure
- » reduce your risk of heart disease
- » reduce stress and improve your mood
- » you maintain a healthy weight.

How much activity is beneficial?

Any amount of physical activity helps. Think about your daily activities. Housework or gardening, going for a walk or climbing stairs are all helpful. It is recommended that adults with diabetes aim for 30 minutes of activity a day up to five days a week. For children and young people, aim for 60 minutes a day.

If you have not exercised for some time and you would like to start now, talk to your doctor first about how to do this safely, especially if you are taking insulin.

Start slow and gentle. For example, start with a 10-minute walk. Try and increase this from once to twice then three times a day. Or gradually increase the time you walk.

If you are already active or you exercise regularly, the goal will be to keep going. If you change your type of activity or increase your exercise, make sure you consider how this might affect your blood glucose levels.

Exercise and blood glucose levels

Exercise can affect your blood glucose levels during and after your activity. If are on insulin:

- » monitor your blood glucose levels and know what to do if they are too high or too low
- » avoid hypos by eating some extra carbs (a snack) before you exercise
- » you may need to lower your insulin dose for planned exercise to reduce your risk of hypo
- » keep your hypo treatment and your blood glucose meter with you at all times
- » do not exercise if your blood glucose level is above 15.0mmol/L or if you are not feeling well.



Physical activity

Questions for your health professionals

How will I manage my insulin doses when I exercise?

Do I need to monitor my blood glucose levels before and after exercise? What blood glucose level targets would you recommend before and after exercise?

What is the difference between cardiovascular (aerobic) and resistance (anaerobic) exercise and the effect on my blood glucose levels?

How can I see an exercise physiologist or physiotherapist to guide me with simple activities to get me started?

Are there any local community activities that might suit me?

Managing your health

Looking after your diabetes is important for your long-term health. There is a lot you can do to avoid or delay diabetes affecting different parts of your body.

You may not notice any changes or feel any different from day to day. Many of the long-term effects of diabetes happen slowly over a period of time. This is why it is important to have regular diabetes health checks.

Your health professionals will check your HbA1c at least every three to six months (see page 34) but they may do it more often. They will also review your blood pressure, kidneys, eyes, feet and teeth at least every once to two years.



Diabetes health checks



Your diabetes annual cycle of care

What are diabetes-related complications?

With any type of diabetes, blood glucose levels above your targets can impact parts of your body. Damage can occur over time to the blood vessels and nerves. This can affect the heart, brain, kidneys, eyes and feet, and may also cause digestive problems or problems with sexual function.

Your doctor and health professionals can help you manage your diabetes to minimise the long-term effects on your health.

It is recommended that you:

- » see your doctor at least every 3 to 6 months.
- » see a podiatrist at least every 1 to 2 years.
- » get your eyes checked at least every 1 to 2 years.
- » see a dentist at least every year.



Looking after your kidneys

Looking after your eyes

Looking after your feet

Looking after your dental health

Sexual health and diabetes

Diabetes-related complications

Questions for your health professionals

What can I do to look after my feet?

What can I do to look after my eyes?

How often will you be checking my kidney function, blood pressure and cholesterol?

How often will you review my diabetes management plan and treatment?

How often should I have my HbA1c checked?

How can I access a dentist locally?

Living with type 2 diabetes

Living with type 2 diabetes



Adjusting to life with type 2 diabetes or ‘other’ types of diabetes will take time. You don’t need to make big changes straight away. Talk to your friends and family and discuss your goals and priorities with your health professionals. The aim of this section is to answer basic questions and outline things to think about when you are ready.

Driving and diabetes

Can I still get a driver’s license and who do I need to inform?

Yes. People with type 2 or ‘other’ types of diabetes can get a license to drive private and commercial vehicles/trucks.

You will need to notify the driver licensing authority in your state and territory that you have diabetes if you take certain glucose-lowering medications (e.g. gliclazide) or insulin.

	I have diabetes and manage with:		
	Healthy eating and activity alone (no medications)	Glucose-lowering medications	Insulin
Private Licence	No need to notify driver licensing authority (<i>Except in Victoria. VicRoads require notification</i>).	Notify driver licensing authority. Review every five years by treating doctor.	Notify driver licensing authority. Review every five years by treating doctor. Review every two years by treating doctor.
Commercial Licence	No need to notify driver licensing authority (<i>Except in Victoria. VicRoads require notification</i>).	Notify driver licensing authority. Review every year by treating doctor or endocrinologist.	Notify driver licensing authority. Review every year by treating doctor or endocrinologist.

There are other circumstances when you will need to notify the driver licensing authority. Talk to your health professionals, or call your state or territory driving license authority.

You will need a fitness to drive medical report before you apply for a learner permit to drive a car.

Driver licensing authorities

State	Contact	Website	Phone
VIC	Vic Roads	vicroads.vic.gov.au	13 11 71
SA	Department of Planning, Transport and Main Roads	sa.gov.au/topics/driving-and-transport	13 10 84
ACT	Access Canberra	accesscanberra.act.gov.au	13 22 81
NT	Northern Territory Department of Transport	nt.gov.au/transport	1300 654 628
WA	Department of Transport	transport.wa.gov.au	13 11 56
QLD	Department of Transport and Main Roads	tmr.qld.gov.au	132 380
NSW	Roads and Maritime Services	rms.nsw.gov.au	13 22 13
TAS	Department of State Growth	transport.tas.gov.au	1300 135 513



Diabetes and driving

Does my vehicle insurer have to know I have diabetes?

Let your car insurance company know that you have diabetes. They will ask you if they need any more health information.

If you have any car insurance problems, contact the Australian Financial Complaints Authority on **1800 931 678**.

What if I drive a commercial vehicle?

You need to have a *fitness to drive* medical report every year if you take insulin or blood glucose-lowering tablets to manage your diabetes (see page 46). A doctor who is a specialist in diabetes or an endocrinologist will need to prepare and certify your medical report. This report will go to the medical review staff in your state or territory driver licensing authority.

Contact Austroads (austroads.com.au or **02 8265 3300**) or the National Transport Commission (ntc.gov.au or **03 9236 5000**); or, talk to the medical review staff in your state or territory driver licensing authority if you need more information.

Employment

Does my employer need to know I have diabetes?

Generally, you only need to tell your employer if you work in a safety-sensitive job (for example, police or ambulance officer, construction, or driving a public transport vehicle), or if your diabetes and health affects your ability to do the essential tasks of your job. However, you may want to tell them so they can support you in managing your diabetes when at work (for example, ensuring you have regular meal breaks and assisting you if you need help with treating a hypo at work).

Talk with your diabetes health professionals about managing your diabetes while at work.

To know your rights and avoid discrimination when applying for a job or while in your current job, talk to staff at your state or territory equal opportunity and human rights commission, your union delegate or professional association.

Seek advice before disclosing health information to your employer.

Insurance

If you have life, personal, income protection or accident insurance, you need to tell your insurer that you have diabetes.

By law, health insurance companies are not allowed to discriminate against people with diabetes, but there may be extra costs for some types of insurance.

Medical alert identification

Do I need to wear medical alert identification?

It is your personal choice to wear or carry medical alert identification (ID). Some people with type 2 diabetes or 'other' types of diabetes who take insulin choose to wear or carry medical alert identification.

Smoking

Smoking when you have diabetes increases your chances of:

- » high blood pressure
- » heart disease
- » stroke
- » problems with your feet
- » teeth and gum problems.

If you would like help to stop smoking, speak with your doctor or contact Quitline (quit.org.au or **137 848**).

Recreational drugs

For people with diabetes, recreational or ‘party’ drugs have the potential to be more harmful than for people without diabetes. They may have a direct effect on your blood glucose levels. If you forget to take your insulin or medications, or if you forget to eat, this could lead to serious consequences.

Be informed about what recreational drugs are and how they can affect your diabetes management.

Travel

Plan carefully before travelling in Australia or overseas.

You need to think about:

- » vaccinations
- » travel insurance
- » allowing for different foods
- » how to cope with time zone changes
- » air travel with an insulin pump
- » extreme climates (and altitudes)
- » mishaps—such as long delays and misplaced baggage
- » illness and sick day management.

You will need:

- » a letter from your doctor
- » scripts for all medications including insulin (in Australia)
- » your NDSS registration and Medicare cards (in Australia)
- » enough diabetes supplies for your time travelling time.

If you take insulin or other injectable medications, you need to consider storage and the timing of doses through different time zones. Update your sick day action plan and pack a sick day kit. See your health professionals well before your departure date.



Travelling by air



Travel

Transitions: managing diabetes through life changes

Learning how to adapt your diabetes management through changes in your life is important. Physical and emotional stresses can make blood glucose levels difficult to keep within your target range. Different stages in life also bring with them different challenges for your diabetes.

Illness and sick days

When you are unwell, you need to take extra care of your diabetes. Infections can cause your blood glucose levels to rise (see page 44). Vomiting and/or diarrhoea can cause your blood glucose levels to drop and ketones to rise (if you take certain glucose-lowering medications) (see pages 39 and 40).

Talk to your health professionals about a personal sick day action plan. Update your sick day plan whenever there is a change in your diabetes management.



Sick days during pregnancy for type 2 diabetes



Living well with type 2 diabetes – what to do when you are sick

Diabetes and emotional and mental well-being

Managing your diabetes every day is demanding. Diabetes is more than a physical condition – it can affect your emotional well-being as well. Feeling down or worried about your diabetes does not mean you have a mental health condition. You are not alone and if you are worried, talk to your health professionals, family and friends, and other people with diabetes (for example, through peer support programs).

If you have diabetes you are at risk of developing diabetes-related distress and possibly depression. If you had depression before you were diagnosed with diabetes, it could make your depression worse. It is a difficult cycle—you have to take care of one condition to keep on top of the other. Speak to your health professionals. There is support available.



Diabetes and emotional health



Diabetes distress

Diabetes and anxiety

Diabetes and depression

Diabetes and disordered eating

Fear of hypoglycaemia

Peer support for diabetes

When and how psychologists can support people with diabetes

Pregnancy

Women with type 2 diabetes can have a healthy pregnancy and a healthy baby. Although diabetes brings extra risks during pregnancy, you can reduce these risks by getting the right advice and support before you get pregnant. With ‘other’ types of diabetes, advice on pregnancy will be specific to your type of diabetes.

If you are planning pregnancy, give yourself time to prepare and talk to your health professionals.

If you are not planning pregnancy, talk to your health professionals about contraception.



Contraceptive choices Pregnancy planning checklist



Pregnancy and diabetes Having a healthy baby: a guide to planning and managing pregnancy for women with type 2 diabetes

Women with diabetes

You may find that the hormonal changes that come with your menstrual cycle can affect your blood glucose levels. For each person it is different. Some do not notice a change during their period. Others might notice their blood glucose levels rising a few days before their period. And others may find each month it's a little different. Your appetite may also change during your period.

Your blood glucose levels can also be affected by the hormonal changes that happen during menopause.

Talk to your health professionals if you are concerned.

Sexual health and diabetes

Diabetes can sometimes contribute to sexual problems for men and women. For example, high blood glucose levels over time may damage the blood vessels or nerves supplying sexual organs. This can lead to erectile dysfunction in men and decreased sensation or vaginal dryness in women.

How you are feeling can impact on your sexual health too. If you are feeling worried or embarrassed about a sexual problem, it may be helpful to talk to your health professionals. If you feel uncomfortable about raising the topic, it may help to prepare what you have to say beforehand.



Sexual health and diabetes

Young people

More young people in Australia are being diagnosed with type 2 diabetes.

Any diagnosis of diabetes affects your whole family. Each of you needs some support in adjusting to the diagnosis. Parents often experience feeling some form of guilt or responsibility. Siblings may feel that their needs are not being met.

Children and teenagers have different ways of coping with diabetes. They need time and support to express their fears and emotions. Each stage of development through childhood to young adulthood can present new challenges, including not wanting to deal with diabetes at all.

There is a lot to learn for parents and young people when there is a diagnosis of type 2 diabetes. A good place to start is to adopt healthy eating habits and regular exercise as a family. Talk to your health professionals.



Resources for young people



Caring for someone with diabetes (for family and friends)

Older people

As you age, other health conditions can make living with diabetes more complicated.

Your diet and appetite may change and keeping active may become more challenging. You may also be less likely to feel symptoms of high (see page 44) or low (see page 40) blood glucose levels. Regular diabetes reviews with your health professionals are essential to help you adjust your goals.



Older people with diabetes



Healthy eating: a guide for older people living with diabetes

You and your health care team: a guide for people over 65 living with diabetes

Managing diabetes as you age: a guide for people over 65 living with diabetes

Privacy



Privacy policy

You can find the Privacy Policy on the NDSS website at ndss.com.au/privacy or you can request a hard copy by contacting the NDSS Privacy Officer. If you have any questions or if you would like to make a complaint about how we have handled your information, please contact the NDSS Privacy Officer. More information about the *Privacy Act* and what it means for you can be found at oaic.gov.au.

NDSS Privacy Officer Diabetes Australia

GPO Box 3156, Canberra ACT 2601

E: privacy@diabetesaustralia.com.au

P: 02 6232 3800

Feedback



NDSS Feedback Form

We welcome your feedback. Go to ndss.com.au/ndss-feedback-form to access the NDSS Feedback Form. This form can also be used for general queries about the NDSS. You can also email info@ndss.com.au.

NDSS Helpline 1800 637 700
ndss.com.au