

Understanding type 2 diabetes

Practical information to help
you understand diabetes and
the underwriting process

Important Information

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Introduction

If you are suffering from type 2 diabetes, you are not alone. In fact, according to the latest National Health Survey¹, about one million Australians have type 2 diabetes.

Dealing with diabetes can be challenging. It can have a large impact on your bodily functions and how you go about your day to day activities.

In this booklet you will find some information to help you better understand type 2 diabetes, how you can help to manage your condition, and comprehend the underwriting experience with diabetes.

While this information may help you, it is not a substitute for medical advice and it is important for you to maintain an ongoing relationship with your doctor, any medical specialists you may have and any other health professionals that are within your medical team.

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Understanding diabetes

Your body requires energy to fuel all of its functions on a daily basis.

Glucose is a type of sugar that is your body's main energy source. When you eat food, your body works to convert the glucose into energy by transporting it through the bloodstream to other tissues such as your muscles, or your liver for processing. It does this by working with a hormone called insulin.

When you have diabetes, your ability to convert glucose to energy is compromised either because insulin is not being produced, or because there is not enough insulin being produced. This can mean that there is a high level of glucose circulating in your bloodstream. Over time this can cause damage to your organs and may result in complications such as:

- A heart attack or stroke
- Kidney failure and other complications
- Blindness
- Limb amputations
- Poorer mental health associated with depression, anxiety and stress.

There are three main types of diabetes:

- 1 Type 1 diabetes**
A form of diabetes that occurs when the pancreas does not produce insulin. This is the result of an auto-immune attack, which destroys the cells that produce insulin. It may also be called Type 1 Diabetes Mellitus (T1DM) or Insulin Dependent Diabetes Mellitus (IDDM).
- 2 Type 2 diabetes**
A form of diabetes that occurs when the body progressively becomes more resistant to the effects of insulin and/or when the pancreas loses the ability to produce enough insulin. Type 2 diabetes is the most common type of diabetes.
- 3 Gestational diabetes**
A form of diabetes that occurs during pregnancy and usually goes away after the baby is born.

This booklet will focus on type 2 diabetes, which accounts for approximately 85–90% of all diabetes cases².



MEDICAL TERMS YOU MIGHT HEAR

Insulin: insulin is a hormone produced in the pancreas by cells called 'beta cells.' Insulin facilitates the transport of glucose from the bloodstream to body tissues.

You may see type 2 diabetes referred to as Type 2 Diabetes Mellitus (the non-abbreviated name) or T2DM. Previously, it has also been referred to as 'Non-Insulin Dependent Diabetes Mellitus' or NIDDM so you may still hear this term.

What are the risk factors for type 2 diabetes?

The cause of diabetes cannot always be explained. There are however some risk factors that may increase a person's chance of developing type 2 diabetes. These risk factors may include:



Age

As you get older, your risk of developing type 2 diabetes increases³.



Family history

Both the risk of diabetes and risk factors for diabetes (such as high blood pressure) are strongly linked to family history³.



Ethnicity

People with Pacific Islander, Southern European or Asian ethnicity have a higher risk of developing type 2 diabetes⁴. Aboriginal and Torres Strait Islander people are also more likely to develop diabetes than non-Indigenous Australians⁵.



Personal medical history

Women who have given birth to a child over 4.5kg, have suffered from gestational diabetes, or had Polycystic Ovarian Syndrome, are at a higher risk of developing type 2 diabetes⁶.



Overweight and obesity

Being overweight or obese can increase insulin resistance and therefore increase the risk of developing type 2 diabetes⁷.



Insufficient physical activity

Being physically active can help to regulate your blood sugar levels and reduce your risk of developing type 2 diabetes. This is because physical activity helps your body become more sensitive to the action of insulin, and also helps to remove glucose from the bloodstream.



Some types of antipsychotic or steroid medication

There is an increased risk of diabetes in patients with schizophrenia and this risk can be elevated by some antipsychotic medications⁸. Steroid medication can raise blood glucose levels by reducing the action of insulin, which can in turn cause the release of stored glucose from the liver into the bloodstream.

Managing your type 2 diabetes



Unfortunately, once you are diagnosed with diabetes, there is no cure. However, you can take some steps to manage your diabetes, slow its progression and reduce the risk of further medical complications.

While not a complete list, here are some of the things you can do to help manage your diabetes:

1 See your doctor

Type 2 diabetes is usually best managed with healthy eating and regular physical activity. This is best tackled using an integrated approach, based on a range of medical, psychological and physical therapies. This can be coordinated by your doctor, and may involve a range of health professionals such as an endocrinologist (diabetes specialist), a diabetes educator or diabetes nurse practitioner, an accredited practising dietitian, an accredited exercise physiologist, an ophthalmologist or optometrist, a registered podiatrist, a pharmacist and/or a counsellor, a clinical psychologist, or a social worker.

An integrated approach is also effective with the help and support of your family and friends.

2 Monitor your blood glucose level

Regularly monitoring your blood glucose levels can provide you and your health professional team useful information to help with the management of your diabetes.

A variety of things can affect your blood glucose levels, including:

- Food and drink
- Exercise
- Emotions
- Sickness
- Medicines.

Self blood glucose monitoring allows you to check your own blood through a finger-prick blood sample and can help you understand how your body responds to various lifestyle factors.

The main aim of treating diabetes is to keep your blood glucose levels within a target range. For type 2 diabetes this is:

**6-8mmol/L
before meals***

**6-10mmol/L
two hours after
starting meals***

* Targets are as recommended by the NHMRC, Blood Glucose Control in Type 2 Diabetes (2009)

Keeping your blood glucose levels within the target range can reduce the risk of developing complications related to diabetes.



You may be at risk of hypoglycaemia (low blood sugar) with a blood glucose level of less than 4mmol/L, particularly if you use certain types of insulin or tablets. It is important to discuss how and when you monitor your blood glucose levels with your doctor or credentialed diabetes educator.

3 Eat well

ASSESSING A HEALTHY WEIGHT

These goals are a general guide. Work with your doctor to set your personal goals.

Healthy eating is important for all Australians, including those with type 2 diabetes. Diabetes and its effect on the body is quite complex, and different people need to manage their diabetes in different ways.

If you are overweight or obese, it may benefit you to lose weight to help control your diabetes.

A good foundation for healthy eating is found in the Australian Dietary Guidelines⁹ which suggest the following tips to help achieve a healthy weight and improve overall health.

Enjoy a wide variety of foods from these five groups every day

- Vegetables, including different types and colours, and legumes/beans
- Fruit
- Grain (cereal) foods, mostly wholegrain and/or high cereal fibre varieties, such as breads, cereals, rice, pasta, noodles, polenta, couscous, oats, quinoa and barley
- Lean meats and poultry, fish, eggs, tofu, nuts and seeds, and legumes/beans
- Milk, yoghurt, cheese and/or their alternatives, mostly reduced fat (reduced fat milks are not suitable for children under the age of two years).

And drink plenty of water.

BODY MASS INDEX (BMI)

How to measure BMI



For example, a 75kg person with a height of 1.75m:



Risk Classification

BMI	Classification	Risk
Less than 18.50	Underweight	Low*
18.50 – 24.99	Normal range	Average
25.00 – 29.99	Overweight/Preobese	Increased
30.00 – 34.99	Obese Class 1	Moderate
35.00 – 39.99	Obese Class 2	Severe
40.0 or greater	Obese Class 3	Very severe

* Risk of other clinical problems increased

Limit intake of foods containing saturated fat, added salt and added sugars

Limit intake of foods high in saturated fat such as biscuits, cakes, pastries, pies, processed meats, commercial burgers, pizza, fried foods, potato chips, crisps and other savoury snacks.

- Replace high fat foods which contain predominantly saturated fats such as butter, cream, cooking margarine, coconut and palm oil with foods that contain predominantly polyunsaturated and monounsaturated fats such as oils, spreads, nut butters/pastes and avocado.

Limit intake of foods and drinks containing added salt.

- Read labels to choose lower sodium options among similar foods.
- Do not add salt to foods in cooking or at the table.

Limit intake of foods and drinks containing added sugars such as confectionery, sugar-sweetened soft drinks and cordials, fruit drinks, vitamin waters, energy and sports drinks.

Limit your alcohol intake

If you choose to drink alcohol, limit your intake. Australian guidelines¹⁰ recommend no more than two standard alcoholic drinks per day.

For women who are pregnant, planning a pregnancy or breastfeeding, not drinking alcohol is the safest option.

WHAT IS A STANDARD DRINK?



1 pot or middy (285mL) of full strength beer



1 stubby or can (375mL) of mid strength beer



1 schooner (425mL) of light beer



100mL of wine



1 nip (30mL) of spirits



Everyone's needs are different with diabetes. Please consult your doctor or Accredited Practising Dietitian for tailored dietary advice.

4 Enjoy the benefits of exercise

Engaging in physical activity is an important part of diabetes management as it can regulate your blood glucose levels.

Exercise can also help you to control your weight, improve your mental health and help to increase your energy levels. Please consult your doctor before starting an exercise program.

Australia's Physical Activity and Sedentary Behaviour Guidelines¹¹ recommend adults to be active on most, preferably all, days of the week. The guidelines recommend a weekly total of 2½ to 5 hours of moderate-intensity exercise, along with strength-training (resistance) activities twice a week. The guidelines also recommend to break up long periods of sitting as often as you can.

You are discouraged from strenuous physical activity if you are feeling unwell or have ketones present in your blood or urine¹².

What is moderate intensity exercise?

Moderate intensity physical activity requires some effort, but still allows you to speak easily while undertaking the activity (you should be able to talk but not sing during the activity). Examples include brisk walking, riding a bike, recreational swimming, dancing, social sports, aqua aerobics and gardening.

What are strength-training or resistance exercises?

Strength-training or resistance exercises use weight to cause muscles to contract. This type of exercise builds strength, endurance and tone in muscles.

Strength-training exercises can use body weight, elastic resistance bands or other external weights (such as dumbbells) for creating the resistance.

Examples include:

- Squats
- Bicep curls
- Shoulder press
- Lunges
- Push-ups.



Consult your doctor, accredited exercise specialist or physiotherapist before starting a new exercise program.

5 Take your medications as prescribed

Medications may be used in the treatment and management of diabetes.

All medication can have side effects and you should not take any medication without first consulting your doctor. Medication is not a substitute for healthy eating and physical activity, but should complement a healthy lifestyle.

The main medications used in the treatment and management of type 2 diabetes include:

Tablets

According to the National Diabetes Service Scheme (NDSS)¹³, there are five classes of tablets currently used in Australia for lowering blood glucose levels for people with type 2 diabetes. Tablets are usually the first line of medication used in treating type 2 diabetes and are taken orally. They can be prescribed from one or a combination of groups:

- Biguanides (e.g. Metformin)
- Sulphonylureas (e.g. Glicazide and Glibenclamide, Glipizide, Glimepiride)
- Thiazolidinediones/Glitazones (e.g. Rosiglitazone, Pioglitazone)
- Alpha Glucosidase Inhibitors (e.g. Acarbose)
- DPP-4 Inhibitors (e.g. Linagliptin, Saxagliptin, Sitagliptin, Vildagliptin).

Non-insulin injectables

Incretin mimetics (e.g. exenatide and liraglutide) are medications that are administered by an injection, but are not insulin. They mimic the behaviour of a hormone in our bodies called 'incretin' which regulates our blood glucose level after meals.

Mixed insulin contains a pre-mixed combination of either a fast-acting or a short-acting insulin and an intermediate-acting insulin.

Insulin

In some people with type 2 diabetes, their condition may progress to the point where their body is no longer producing enough insulin. In this case, they need to start taking insulin medication to help control their blood glucose levels.

At present, insulin is only available as an injectable medication, where it is injected into the fatty tissue of the body (as opposed to directly into the muscle or bloodstream). There are different types of insulin which may be prescribed from one or a combination of groups:

Type of insulin	How long it takes to start working	Time at which the insulin peaks in action	How long the insulin lasts
Fast-acting	1 to 20 minutes	1 hour	3 to 5 hours
Short-acting	Within 30 minutes	2 to 4 hours	6 to 8 hours
Intermediate-acting	Approx. 1½ hours	4 to 12 hours	16 to 24 hours
Long-acting	Up to 4 hours	No pronounced peak	24 hours

Before injecting your insulin, check the leaflet included in the pack for instructions on preparation.

HANDY HINT

Take your medicines as prescribed by your doctor. To do this, establish good routines and plan ahead with any disruptions in your normal routine. Also discuss any possible side effects and how to reduce them with your doctor.

6

Manage your emotional health

A diagnosis of diabetes often means that you'll need to make some changes to your daily life. This isn't always easy and may affect your emotional wellbeing.

It is common to experience a range of emotions including fear, guilt, sadness and stress. Some emotional issues that can occur among people with diabetes include:

Diabetes distress

People with Type 2 diabetes may experience distress in response to the practical, social and financial impacts of being diabetic which can result in poor medical and emotional wellbeing. Diabetes distress can often be confused with depression. However, diabetes distress is typically related to the management of diabetes only, rather than a broader view on life generally.

Concerns about using insulin

People with type 2 diabetes can often feel concerned about having to take insulin to manage their condition. You may experience hesitation around using needles, or feel like you have 'failed' because you need to use insulin. Despite this, insulin can be a very effective way to treat diabetes so it is important to address your concerns with your doctor.

Fear of hypoglycemia

Fear is a common problem with any medical condition and one common fear of people with diabetes is the fear of having a 'hypo' (a period or onset of low blood glucose level). You may also have concerns about losing consciousness, being embarrassed, having an accident or injury, or losing independence.

Anxiety and depression

Research shows that approximately one in four people with type 2 diabetes experiences depression, and one in six people with type 2 diabetes experiences anxiety.¹⁴

Disordered eating

Eating problems such as binge eating, insulin restriction or food avoidance can occur in people with diabetes. You may develop an eating problem as a result of trying to self-manage your diabetic condition, which can lead to poorer health outcomes including obesity, reduced emotional wellbeing, and possibly a severe eating disorder.

While emotions come and go, it is important to address feelings of concern and distress if they last longer than two weeks. With the right treatment, most people can manage feelings of concern and distress and recover from emotional health concerns.

WHAT ARE SOME OF THE SIGNS OF DISORDERED EATING?

- *Unnecessary avoidance of certain food groups*
- *Obsessive attitude to food*
 - *Unstable periods of restraint, then overeating*
- *Rapid or extreme weight gain or less.*

What is depression?

Depression is more than just sadness or a low mood – it's a serious condition that can have severe effects on both physical and mental health.

While some of the following symptoms may be as a result of your diabetes and its treatment, they could also indicate depression. If you have experienced any of the following, talk to your doctor.

Have you:

- Felt isolated from social supports?
- Lost or gained a lot of weight or had less or more appetite?
- Had sleep disturbance?
- Lacked motivation to engage with others or tasks which you previously enjoyed?
- Felt irritable, frustrated and moody?
- Felt slowed down, restless or overly busy?
- Felt tired or had no energy?
- Felt worthless or excessively guilty?
- Had poor concentration, difficulties thinking or been very indecisive?
- Had recurrent thoughts of death or dying?

What is anxiety?

Anxiety is more than just feeling a bit stressed – it's a serious condition that can make it difficult to cope with day to day life.

While some of the following symptoms may be as a result of your diabetes, they could also indicate anxiety. If you have experienced any of the following symptoms, talk to your doctor.

Are you:

- Feeling very worried or anxious most of the time?
- Finding it difficult to calm down?
- Experiencing physical symptoms such as hot or cold flushes, tightening of the chest, difficulty breathing or a racing heart?
- Experiencing recurring thoughts that cause anxiety, but may seem silly to others?
- Feeling overwhelmed or frightened by sudden feelings of intense panic or anxiety?
- Avoiding situations or things which cause anxiety (e.g. social events or crowded places)?

STRATEGIES TO IMPROVE YOUR EMOTIONAL HEALTH

Seek help, information and support from your healthcare team

Health professionals such as your doctor, endocrinologist, diabetes educator or dietitian can give you non-judgmental advice on how to manage your condition and strategies to help make any changes easier.

Make some lifestyle changes

Exercise, maintaining a healthy weight and reducing alcohol intake can help to improve emotional wellbeing.

Psychological therapies

Cognitive Behavioural Therapy (a type of 'talking therapy' which focuses on changing unhelpful thinking patterns) or Acceptance Commitment Therapy (focusing on altering your perception of your thoughts) and/or medication may be recommended to you by your doctor.

Your doctor may also refer you to a mental health specialist like a psychiatrist, psychologist or social worker to help you with your recovery.

Psychiatrists are doctors who specialise in mental health. They can perform medical and psychological tests and prescribe medication. Some psychiatrists use psychological treatments like cognitive behavioural therapy (CBT) or integrated psychological therapy (IPT).

Psychologists, social workers and some occupational therapists specialise in providing non-medical psychological treatment for depression and other related disorders. You may be able to claim a rebate for this treatment through Medicare. To do this your doctor or psychiatrist will first have to refer you for this treatment.

Being connected is important

You will be able to manage your diabetes more effectively when other people like your family, friends, colleagues, health professionals, and support groups, help you.

Underwriting diabetes

Applying for life insurance requires a risk assessment process called underwriting. This process requires careful consideration to make sure we are able to fully assess your situation, and provide you with the right cover at the right price.

The insurance application will include questions that ask you about your personal medical history. The specific criteria for underwriting diabetes includes:

- Your age
- Your type of diabetes
- Blood glucose control (as measured by HbA1c readings)
- How long you have had diabetes
- Your lifestyle factors (such as smoking and obesity)
- The presence of other medical conditions (such as heart disease, high blood pressure and kidney disease)
- Your family history.

We may seek further information from you over the telephone or via a written questionnaire. With your consent, we may write to your treating doctor for more detailed information.

We also may require a current examination and blood test.

Underwriting outcomes

If your application for cover presents a higher risk, we may set a higher premium for cover. Occasionally, we may decline to provide you with cover, but we'll always explain why.

Important criteria for rating includes:

- Your diabetes is stable/well controlled (or an HbA1c reading < 7)
- There are no complicating factors
- You have good compliance with treatment
- There is well documented medical evidence.

At TAL we understand the privacy of your information is important to you and we respect the confidentiality of the information you provide to us. Read more about why we collect information and how we use it at tal.com.au/privacy-policy

Once we have agreed to provide you with cover and set your premium, and provided you have disclosed all relevant information at the time of your application, we cannot cancel or increase your premiums because of deterioration of your health or circumstances.



Where to find more information and support

National Diabetes Service Scheme

The National Diabetes Services Scheme (NDSS) is an initiative of the Australian Government that commenced in 1987 and is administered with the assistance of Diabetes Australia.

The NDSS aims to enhance the capacity of people with diabetes to understand and self-manage their life with diabetes. They also support people with diabetes by providing timely, reliable and affordable access to the NDSS support services and products.

Registration with the NDSS is free and open to all Australians who are diagnosed with diabetes.

→ ndss.com.au

About TAL

TAL is Australia's leading life insurance specialist, protecting people – not things – for over 150 years. Today, we insure more than 5 million Australians and in 2022, reached a new milestone paying \$3.5 billion in claims.

At the heart of the claims experience is you. Our goal is to help you lead as healthy and full a life as possible and help you get back to health as quickly as possible, taking into account all of your circumstances: your physical health, your mental wellbeing and your social support.

TAL's focused on your health

Health and wellbeing is at the heart of what we do. From your physical and mental health, to your social and financial wellbeing – helping you be the best you can be is our number one priority.

We want all Australians to live a life as healthy and full as possible, because that's what living this Australian life is all about. Our focus on your health begins when your cover does. Working with you to keep you well and supporting your return to health, with a personalised plan should the unfortunate happen and you suffer an illness or injury.

Because your health and wellbeing is as important to us as it is to you.

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