Management of Diabetes Mellitus

A Comprehensive Clinical Guide

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GlycoMedix – Integrating Diabetes & Medication Care

This ebook is intended as an educational resource for people living with diabetes and healthcare professionals. It is not a substitute for individualised medical advice. Always consult your healthcare team for personalised management.

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Chapter 1: Understanding Diabetes — Overview & Classification

Diabetes mellitus is a group of metabolic conditions characterised by chronic hyperglycaemia resulting from defects in insulin secretion, insulin action, or both. If left unmanaged,

persistently elevated blood glucose levels cause progressive damage to blood vessels and nerves, leading to complications affecting the heart, kidneys, eyes, and feet.

Types of Diabetes

Type 1 Diabetes (T1D)
An autoimmune condition in which the immune system destroys insulin-producing beta cells in the pancreas. People with T1D produce little to no insulin and require lifelong insulin therapy. T1D can develop at any age but commonly presents in childhood and young adulthood.

Type 2 Diabetes (T2D)
The most common form of diabetes, accounting for approximately 85–90% of all cases in Australia. T2D is characterised by insulin resistance (where the body's cells do not respond effectively to insulin) combined with progressive decline in pancreatic beta cell function. It is strongly associated with lifestyle factors including overweight, physical inactivity, and unhealthy diet, though genetics also play a role.

Gestational Diabetes Mellitus (GDM)
Diabetes diagnosed during pregnancy that was not present before conception. GDM typically resolves after delivery but significantly increases the risk of developing T2D later in life for both the mother and child.

Other Types
Less common forms include Maturity-Onset Diabetes of the Young (MODY), secondary diabetes (due to other conditions such as pancreatitis or medications), and Latent Autoimmune Diabetes in Adults (LADA).

How Common is Diabetes in Australia?

- Over **1.5 million Australians** are living with diagnosed diabetes
- An estimated **500,000 Australians** may have undiagnosed T2D
- A further **2 million Australians** have pre-diabetes (impaired fasting glucose or impaired glucose tolerance)
- Diabetes is the **fastest growing chronic condition** in Australia
- Aboriginal and Torres Strait Islander peoples are **3–4 times more likely** to develop T2D compared to non-Indigenous Australians

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Chapter 2: Diagnosis & Screening

Diagnostic Criteria

Diabetes is diagnosed using one of the following tests, confirmed on a second occasion if the person is asymptomatic:

Test	Normal	Pre-diabetes	Diabetes
Fasting Plasma Glucose	< 6.0 mmol/L	6.0–6.9 mmol/L	≥ 7.0 mmol/L
2-hour OGTT	< 7.8 mmol/L	7.8–11.0 mmol/L	≥ 11.1 mmol/L
HbA1c	< 6.0% (42 mmol/mol)	6.0–6.4% (42–47 mmol/mol)	≥ 6.5% (48 mmol/mol)
Random Plasma Glucose	—	—	≥ 11.1 mmol/L + symptoms

A single test is sufficient for diagnosis if the person has classic symptoms of diabetes (polyuria, polydipsia, unexplained weight loss).

Who Should Be Screened?

The Australian Diabetes Society and RACGP recommend screening every **3 years** for adults aged 40 years and over, and every **12 months** for those at high risk, including:

- People with pre-diabetes
- People who are overweight or obese (BMI ≥ 25 kg/m²)
- People with a first-degree family history of T2D
- Women who have had GDM
- People with polycystic ovary syndrome (PCOS)
- Aboriginal and Torres Strait Islander peoples aged ≥ 18 years
- People with cardiovascular disease, hypertension, or dyslipidaemia
- People taking medications known to raise blood glucose (e.g. corticosteroids, antipsychotics)

The AUSDRISK Tool

The **Australian Type 2 Diabetes Risk Assessment (AUSDRISK)** tool is a validated questionnaire used in Australian general practice to identify individuals at increased risk of developing T2D. A score of **12 or more** indicates high risk and warrants a fasting blood glucose or HbA1c test.

Chapter 3: Glycaemic Targets & Monitoring

HbA1c Targets

HbA1c reflects average blood glucose control over the preceding 2–3 months. Individualised targets should be set in partnership with your healthcare team.

Population	HbA1c Target
Most adults with T2D	≤ 7.0% (53 mmol/mol)
Younger adults / recently diagnosed	≤ 6.5% (48 mmol/mol)
Older adults / complex comorbidities	≤ 8.0% (64 mmol/mol)
Type 1 diabetes (adults)	≤ 7.0% (53 mmol/mol)
Pregnancy with pre-existing diabetes	≤ 6.5% (48 mmol/mol)

Targets should be individualised — more stringent targets may be appropriate for younger individuals without significant hypoglycaemia risk; less stringent targets are appropriate for older adults, those with limited life expectancy, or those with recurrent hypoglycaemia.

Blood Glucose Level (BGL) Targets

Timing	Target Range
Fasting / before meals	4.0–7.0 mmol/L
2 hours after meals	5.0–10.0 mmol/L

Blood Glucose Monitoring

Self-Monitoring of Blood Glucose (SMBG)
Using a glucometer to check blood glucose at home remains an important tool, particularly for people on insulin or those at risk of hypoglycaemia. Frequency and timing of monitoring should be tailored to the individual.

Continuous Glucose Monitoring (CGM)
CGM devices measure glucose in the interstitial fluid every few minutes, providing a continuous picture of glucose trends. CGM is particularly valuable for people with T1D, those on intensive insulin regimens, and those with hypoglycaemia unawareness.

Key CGM metrics include:
- **Time in Range (TIR):** The proportion of time glucose is within 3.9–10.0 mmol/L. A target of ≥ 70% TIR is recommended for most adults with diabetes
- **Time Below Range (TBR):** Target < 4% of time spent below 3.9 mmol/L
- **Time Above Range (TAR):** Target < 25% of time spent above 10.0 mmol/L

CGM Access in Australia
The Australian Government subsidises CGM for people with T1D through the **National Diabetes Services Scheme (NDSS)**. Eligibility criteria apply. Speak with your diabetes care team or NDSS for details.

Chapter 4: Lifestyle Management — Nutrition

Good nutrition is the cornerstone of diabetes management. There is no single "diabetes diet" — the best eating plan is one that meets your individual health goals, cultural preferences, and lifestyle.

Key Nutritional Principles

- **Achieve and maintain a healthy body weight** — Even modest weight loss of 5–10% of body weight can significantly improve blood glucose, blood pressure, and blood lipids
- **Choose carbohydrates wisely** — The amount and type of carbohydrate eaten affects blood glucose. Choose foods with a **lower Glycaemic Index (GI)** which cause a slower, steadier rise in blood glucose
- **Eat plenty of vegetables** — Aim for at least 5 serves of vegetables per day (particularly non-starchy vegetables)
- **Include lean protein** — Fish, legumes, tofu, eggs, skinless poultry, and lean meats support satiety and muscle health
- **Choose healthy fats** — Extra virgin olive oil, avocado, nuts, and seeds support cardiovascular health

- **Limit processed and ultra-processed foods** — These are often high in refined carbohydrates, added sugars, unhealthy fats, and sodium
- **Limit sugar-sweetened beverages** — Soft drinks, fruit juices, energy drinks, and flavoured milks cause rapid rises in blood glucose
- **Reduce sodium/salt intake** — To support healthy blood pressure (target < 5g salt per day)
- **Moderate alcohol consumption** — Alcohol can cause hypoglycaemia, especially in people on insulin or sulfonylureas

The Portion Plate Method

(Based on the Baker Heart & Diabetes Institute Portion Plate Guide)

The **Portion Plate** is a simple, practical tool to help plan balanced, diabetes-friendly meals without counting calories or carbohydrates.

How to build your plate:

½ of your plate — Vegetables (2 open hands)
Fill half your plate with non-starchy vegetables, either cooked or as a salad.
- Examples: capsicum, broccoli, carrot, spinach, eggplant, cucumber, tomato, zucchini, leafy greens
- Aim for variety and colour
- Raw or cooked — both count!

¼ of your plate — Lower GI Carbohydrate (fist size)
A quarter of your plate should contain a lower GI carbohydrate source.
- Examples: pasta or noodles (½–1 cup cooked), long grain or basmati rice (½–1 cup cooked), sweet potato (100–200g), corn (1 cob), grain or wholemeal bread (1–2 slices), legumes or lentils (½–1 cup cooked)
- Lower GI carbohydrates cause a gentler, more gradual rise in blood glucose compared to high GI options

¼ of your plate — Lean Protein (palm size)
The remaining quarter of your plate should contain a lean protein source.
- Examples: lean beef, lamb or pork (150g raw), skinless chicken or turkey (150g raw), fish or seafood (170g raw), tofu (170g), 2 large eggs, legumes or lentils (1 cup cooked)
- Protein slows digestion and helps you feel full for longer

Small amounts of Healthy Fats
Include a small serve of healthy fat with your meal.
- Examples: 1 tablespoon extra virgin olive oil (for cooking or dressing), ½ an avocado, 1 tablespoon nuts or seeds

Practical Tips for Portion Control

- Use a plate no wider than **25cm** — most standard dinner plates are larger, which makes it easy to overeat
- If your plate is larger than 25cm, use an entrée-sized plate instead
- Bulk up recipes by adding extra non-starchy vegetables
- Choose a smaller main serve and add a side salad
- Choose water as your main drink with meals

Sample Meal Ideas Using the Plate Method

- Chicken, steamed broccoli/carrots/beans + ½ cup basmati rice
- Grilled salmon, mixed salad + quinoa
- Tofu stir-fry with Asian vegetables + hokkien noodles
- Lentil and vegetable soup with grain bread
- Egg and vegetable omelette with sourdough toast
- Spaghetti bolognese (lean beef/lentils) with side salad

Low Carbohydrate and Mediterranean Eating Patterns

Research supports a range of eating patterns for people with diabetes. Two well-studied approaches include:

Low Carbohydrate Diet: Reducing total carbohydrate intake can lead to improvements in blood glucose, HbA1c, and weight. Various levels of carbohydrate restriction have been studied. Discuss with your dietitian or diabetes educator if this approach is suitable for you — medication adjustments are often required.

Mediterranean Diet: Emphasises vegetables, fruits, legumes, wholegrains, fish, extra virgin olive oil, and nuts, with moderate dairy and limited red meat. Strong evidence supports benefits for cardiovascular health, blood glucose, and overall wellbeing in people with T2D.

Working with a Dietitian

An Accredited Practising Dietitian (APD) with expertise in diabetes can provide personalised nutrition advice. You may be eligible for a **Medicare-rebated** dietitian consultation through a GP Management Plan or Team Care Arrangement. Contact Dietitians Australia at **dietitiansaustralia.org.au** to find an APD near you.

Chapter 5: Lifestyle Management — Physical Activity

(Based on the NDSS Physical Activity Fact Sheet, Version 4.0.0-r1, June 2025)

Regular physical activity is one of the most important things you can do to improve your general health and manage your diabetes. **Some activity is better than none at all** — even light activity at a slow pace provides health benefits.

Benefits of Physical Activity for Diabetes

Physical activity helps lower blood glucose levels by enabling muscles to use glucose as fuel. Additional benefits include:

- Reducing the risk of heart disease and stroke
- Lowering blood fats (cholesterol and triglyceride levels)
- Helping to lower blood pressure
- Supporting weight loss and healthy weight maintenance
- Slowing age-related loss of muscle mass
- Preventing osteoporosis
- Reducing the risk of falls
- Increasing strength, power and balance
- Improving mood and mental wellbeing
- Improving circulation in the lower limbs

Types of Physical Activity

Aerobic Exercise
Any activity involving large muscle groups sustained for more than a few minutes. It gets your heart and lungs working harder.
- **Moderate intensity examples:** brisk walking, cycling, swimming, dancing, aerobic classes
- **Light aerobic alternatives** (if moderate/vigorous is not suitable): yoga, lawn bowls, walking up stairs
- Moderate intensity = effort of 3–4 out of 10: you can still hold a conversation

Resistance Exercise
Working your muscles against a load or resistance to build strength.
- **Bodyweight examples:** squats, wall push-ups, sit-to-stand exercises
- **Equipment examples:** dumbbells, resistance bands, machine weights, or household items (cans, water bottles)
- Talk to an **Exercise Physiologist** or physiotherapist about a resistance program suited to your needs

How Much Exercise?

Type	Recommendation
Moderate aerobic	At least 30 minutes, every day of the week (210 min/week)
Vigorous aerobic	40–45 minutes, at least 3 days/week (125 min/week)
Resistance training	2–3 sessions per week
Sitting	Minimise; break up long periods of sitting as often as possible

You can combine moderate and vigorous activity to meet your weekly targets. Short blocks of exercise can be joined together — e.g. 15 minutes walking + 15 minutes cycling = 30 minutes.

Getting Started

- **Check with your doctor** before starting any new exercise program
- Start slowly and gradually build up duration and intensity
- Plan exercise like an appointment — set specific days and times
- Exercise with a friend, family member, or group for motivation and accountability
- Use an activity tracker or step-counting device to monitor daily movement
- Look for opportunities to stand rather than sit throughout the day

Special Considerations for People with Diabetes

Blood Glucose Monitoring During Exercise
- Check blood glucose before and after exercise, and during exercise if lasting longer than 30 minutes
- Blood glucose levels may remain lower for up to 48 hours after exercise
- Brief vigorous exercise may temporarily raise blood glucose — this is normal and typically resolves within 1–2 hours

Hypoglycaemia (Low Blood Glucose) During Exercise
- If you are taking insulin or certain glucose-lowering medications, you may be at risk of hypoglycaemia (blood glucose < 4.0 mmol/L) during or after exercise
- If your pre-exercise blood glucose is between 4–7 mmol/L, you may need extra carbohydrate before, during, or after activity
- Always carry fast-acting carbohydrates (e.g. jelly beans, glucose tablets, or gels) when

exercising
- Treat any hypo before resuming exercise

High Blood Glucose and Exercise
- If blood glucose is > 15 mmol/L and you are unwell, avoid exercise until glucose is back in range
- If you have Type 1 diabetes and blood glucose is > 15 mmol/L, check for ketones before exercising — exercise with high ketones can be dangerous and may lead to diabetic ketoacidosis (DKA)

Foot Care During Exercise
- If you have peripheral neuropathy (nerve damage in the feet), talk to a podiatrist before starting or increasing exercise to reduce the risk of foot ulcers and injuries
- Wear well-fitting, supportive footwear
- Check your feet before and after exercise for blisters, cuts, or sores

If You Experience During Exercise:
Stop exercising immediately and consult your doctor if you experience: chest pain, unusual breathlessness, nausea, dizziness, or severe muscle/joint pain. Leg pain during exercise may indicate reduced blood flow (peripheral vascular disease) — rest until it settles, then speak with your doctor.

Finding Support for Physical Activity

- **NDSS Ready, Set, Go — Let's Move:** Free online program at ndss.com.au
- **Exercise Physiologist:** Find an accredited exercise physiologist at essa.org.au/find-aep
- **Medicare rebate:** Ask your GP if you are eligible for a Medicare rebate to see an exercise physiologist through a GP Management Plan or Team Care Arrangement

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Chapter 6: Managing Type 2 Diabetes — Treatment Approach

A Stepped, Individualised Approach

The management of Type 2 diabetes is individualised and follows a stepped approach guided by Australian guidelines including the **Australian Diabetes Society T2D Treatment Algorithm** and the **RACGP Diabetes Management in General Practice** guidelines.

Treatment decisions are based on:
- Cardiovascular and kidney disease risk or established disease
- HbA1c and glycaemic control
- Body weight and weight management goals

- Risk of hypoglycaemia
- Individual preferences, tolerability, and access
- Comorbidities and other medications

Lifestyle as the Foundation

Lifestyle modification — healthy nutrition, regular physical activity, weight management, smoking cessation, and limited alcohol — is the foundation of all T2D management and should be reinforced at every clinical encounter.

Glucose-Lowering Medications

A range of glucose-lowering medication classes are available. Your doctor, pharmacist, or diabetes educator will work with you to identify the most appropriate medication(s) for your individual situation. Medication choices are guided not just by blood glucose lowering, but also by additional benefits including:

- **Heart protection** — Some medication classes have proven benefits in reducing heart attack, stroke, and cardiovascular death in people with established cardiovascular disease
- **Kidney protection** — Certain medications slow the progression of diabetic kidney disease
- **Weight management** — Some medications support weight loss, which is an important goal for many people with T2D
- **Hypoglycaemia risk** — Some medications carry a low risk of causing low blood glucose (hypoglycaemia), making them safer for certain individuals

Key Medication Classes in T2D (Overview)

Medication Class	How It Works (Overview)	Notable Benefits
Metformin	Reduces glucose production by the liver	Long-established first-line agent; weight neutral
SGLT-2 Inhibitors	Cause kidneys to excrete excess glucose in urine	Heart & kidney protective; weight loss
GLP-1 Receptor Agonists	Mimic a gut hormone that lowers glucose after meals	Significant weight loss; heart protective
DPP-4 Inhibitors	Enhance natural glucose-lowering gut hormones	Well tolerated; weight neutral; low hypo risk

Medication Class	How It Works (Overview)	Notable Benefits
GIP/GLP-1 Receptor Agonists	Dual gut hormone action	Greater weight loss than single GLP-1 agents
Sulfonylureas	Stimulate the pancreas to produce more insulin	Inexpensive; widely available
Insulin	Replaces or supplements the body's own insulin	Can be used at any stage; highly effective

Your healthcare team will discuss which medication(s) are appropriate for you, including how to take them, what to expect, and how to monitor for any side effects.

The Role of the CDE Pharmacist

A **Credentialed Diabetes Educator (CDE) Pharmacist** plays a vital role in T2D management, including:
- Medicines review and optimisation
- Medication education and adherence support
- Blood glucose monitoring education (glucometer and CGM)
- Hypoglycaemia prevention and management
- Insulin initiation and titration support
- Coordination with GPs and the broader diabetes care team

Chapter 7: Managing Type 1 Diabetes

Overview

Type 1 diabetes requires **lifelong insulin therapy** as the pancreas produces no insulin. Management focuses on matching insulin to food, activity, and life, while minimising hypoglycaemia and maintaining quality of life.

Insulin Delivery Options

Multiple Daily Injections (MDI)
The most common insulin regimen, involving a long-acting (basal) insulin once or twice daily plus rapid-acting (bolus) insulin with each meal. MDI requires carbohydrate counting and dose adjustment based on blood glucose readings, meals, and activity.

Insulin Pump Therapy (CSII)
A small wearable device that delivers a continuous infusion of rapid-acting insulin subcutaneously. The pump replaces the need for multiple daily injections and allows for very precise insulin delivery adjustments.

Advanced Hybrid Closed Loop (AHCL) / Automated Insulin Delivery (AID)
The most advanced technology currently available, combining an insulin pump with a CGM sensor and algorithm to automatically adjust insulin delivery in response to real-time glucose readings. These systems significantly reduce the burden of diabetes management and improve time in range.

CGM Access for T1D in Australia
People with T1D are eligible for subsidised CGM through the **NDSS**. Subsidised systems include flash glucose monitors (e.g. Libre) and real-time CGM devices. Eligibility criteria apply — speak with your diabetes care team.

Key Principles of T1D Management

- Insulin is **life-sustaining** — doses should never be stopped without medical guidance
- Regular HbA1c and CGM review with your diabetes care team (every 3 months)
- Sick day management planning — knowing when and how to adjust insulin and when to seek emergency care during illness
- Hypoglycaemia awareness training and prevention strategies
- Carbohydrate counting and insulin-to-carbohydrate ratio guidance from a diabetes dietitian
- Psychological support — living with T1D carries a significant mental health burden; psychosocial support is an essential component of care

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Chapter 8: Protecting Your Heart & Kidneys

Why Cardiovascular & Kidney Health Matters in Diabetes

Diabetes is a major risk factor for cardiovascular disease (CVD) and chronic kidney disease (CKD). The **Cardiovascular-Kidney-Metabolic (CKM) syndrome** framework highlights the close inter-relationship between these conditions, which share common risk pathways and require integrated management.

- People with T2D have **2–4 times the risk** of cardiovascular disease compared to those without diabetes
- **1 in 3 people** with diabetes will develop some degree of diabetic kidney disease (diabetic nephropathy)

- Early identification and treatment of cardiovascular and kidney risk can significantly reduce the risk of serious events

Blood Pressure Management

- Target blood pressure for most people with diabetes: **< 130/80 mmHg**
- Lifestyle measures (reduced salt, regular activity, healthy weight, limiting alcohol) are foundational
- Most people with diabetes and hypertension will require medication — commonly ACE inhibitors or ARBs, which also provide kidney protection

Lipid Management

- People with T2D are at increased cardiovascular risk and most will benefit from lipid-lowering therapy
- Target LDL cholesterol varies based on individual cardiovascular risk — discuss your target with your doctor
- Statins are the cornerstone of cardiovascular risk reduction in diabetes

Kidney Monitoring

Regular monitoring for diabetic kidney disease includes:
- **Urine Albumin-to-Creatinine Ratio (uACR):** Detects early kidney damage (microalbuminuria); yearly for all people with diabetes
- **eGFR (estimated Glomerular Filtration Rate):** Measures kidney function; yearly for all people with diabetes
- Early abnormalities should prompt medication review and optimisation

Smoking Cessation

Smoking dramatically increases the risk of both cardiovascular and kidney disease in people with diabetes. **Stopping smoking is one of the most impactful steps** a person with diabetes can take to reduce their risk of serious complications. Speak with your doctor or pharmacist about cessation support options.

Chapter 9: Diabetes Complications & Prevention

Regular Monitoring — Your Annual Cycle of Care

People with diabetes should receive a comprehensive review at least annually. The following checks are recommended:

Check	Frequency
HbA1c	Every 3–6 months (or as directed)
Blood pressure	Every visit
Fasting lipid profile	Annually
Kidney function (eGFR + uACR)	Annually
Foot examination	Annually (or more frequently if at risk)
Eye examination (retinal)	Every 2 years (T2D); annually (T1D or if abnormalities)
Weight / BMI	Every visit
Dental review	Annually
Immunisations (flu, pneumococcal)	As recommended
Mental health / wellbeing screening	Annually

Eye Health (Diabetic Retinopathy)

Diabetic retinopathy is the leading cause of preventable blindness in working-age Australians. Regular retinal screening allows early detection and treatment before vision is affected. Good blood glucose and blood pressure control significantly reduce the risk of retinopathy developing or progressing.

Kidney Health (Diabetic Nephropathy)

Diabetic nephropathy can progress silently. Early detection through uACR and eGFR testing, combined with optimal blood glucose and blood pressure management, can significantly slow progression and reduce the risk of kidney failure.

Nerve Health (Diabetic Neuropathy)

Diabetic neuropathy most commonly affects the feet and legs (peripheral neuropathy), causing numbness, tingling, or pain. It can also affect the autonomic nervous system (causing symptoms such as dizziness, digestive issues, or bladder problems). Regular foot examinations and good glucose control are key preventive strategies.

Foot Care

The diabetic foot requires special attention. Up to 85% of diabetes-related lower limb amputations are potentially preventable.

Daily foot care habits:
- Inspect your feet daily — look for blisters, cuts, redness, or swelling
- Wash and dry feet thoroughly, including between the toes
- Moisturise the tops and soles of feet (not between the toes)
- Wear well-fitting, supportive shoes — avoid going barefoot
- Never use sharp instruments to cut corns or calluses; see a podiatrist
- See a podiatrist regularly, especially if you have neuropathy or circulation problems

High-risk foot signs requiring urgent review:
- New or worsening ulcer, wound, or blister
- Redness, warmth, swelling, or pus
- Loss of sensation in the feet
- Foot pain at rest or at night

Hypoglycaemia (Low Blood Glucose)

Hypoglycaemia occurs when blood glucose drops below **4.0 mmol/L**. It is most common in people taking insulin or sulfonylureas.

Symptoms: Shakiness, sweating, dizziness, hunger, confusion, rapid heartbeat, pallor

Treatment — The 15:15 Rule:
1. Take **15 grams of fast-acting carbohydrate** immediately (e.g. 6–7 jelly beans, 3 glucose tablets, ½ cup regular soft drink, 1 tablespoon honey)
2. Wait 15 minutes and recheck blood glucose
3. If still below 4.0 mmol/L, repeat
4. Once blood glucose is back in range, have a small snack containing carbohydrate and protein if your next meal is more than 30 minutes away
5. If the person is unconscious or unable to swallow — **call 000 immediately**

Sick Day Management

Illness, infection, or surgery can cause blood glucose levels to rise significantly, even if you are not eating normally. Never stop glucose-lowering medications or insulin without medical advice during illness.

Key sick day rules:
- Monitor blood glucose more frequently
- Stay well hydrated with water and sugar-free fluids
- If blood glucose is very high or you have symptoms of DKA (nausea, vomiting, abdominal pain, fruity breath), seek urgent medical attention
- Have a sick day management plan prepared in advance with your diabetes care team

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Chapter 10: Special Populations

Older Adults

Managing diabetes in older adults requires a more individualised, person-centred approach. Key considerations include:

- **Less stringent glycaemic targets** are appropriate for frail older adults, those with significant comorbidities, or limited life expectancy to reduce hypoglycaemia risk
- **Falls and hypoglycaemia** are particularly dangerous in older adults — medication review is essential
- **Cognitive function, functional status, and quality of life** should guide management decisions, not just HbA1c
- **Polypharmacy** is common — regular medicines review by a pharmacist is strongly recommended
- **Frailty assessment** should inform treatment intensity
- **Multidisciplinary care** involving GPs, pharmacists, diabetes educators, dietitians, and allied health is especially important

Pregnancy & Gestational Diabetes (GDM)

- GDM is diagnosed between **24–28 weeks gestation** using an Oral Glucose Tolerance Test (OGTT)
- Management includes medical nutrition therapy (MNT), blood glucose monitoring, and — if targets are not achieved with diet alone — medication
- Women with pre-existing T1D or T2D require more intensive pre-conception planning and antenatal management with a specialist team

- After delivery, all women with GDM should have an **OGTT at 6–12 weeks post-partum** to exclude persisting diabetes, and **3-yearly screening** thereafter
- GlycoMedix supports women post-GDM with ongoing lifestyle support and diabetes risk reduction planning

Paediatrics & Young Adults

Children and adolescents with T1D require specialist paediatric diabetes care. Transition from paediatric to adult services is a vulnerable period — careful planning and support are essential.

Type 2 diabetes in children and adolescents is an emerging concern in Australia, often associated with obesity and metabolic syndrome, and requires a family-centred approach to management.

Aboriginal & Torres Strait Islander Peoples

Aboriginal and Torres Strait Islander peoples experience significantly higher rates of T2D and diabetes complications, often at a younger age. Culturally safe, community-led care is essential. Key considerations:

- Screening from **18 years of age** (regardless of risk factors)
- Community-controlled health organisations (CCHOs) play a central role in delivering culturally appropriate diabetes care
- Social determinants of health (housing, food security, access to services) must be addressed alongside clinical management
- Culturally appropriate health education, including in language where possible

Perioperative Diabetes Management

People with diabetes undergoing surgery require careful management of blood glucose before, during, and after the procedure to reduce the risk of infection, poor wound healing, and other complications. Discuss your diabetes medications with your doctor and anaesthetist before any procedure.

Chapter 11: Your Diabetes Care Team & Support Resources

Building Your Diabetes Care Team

Optimal diabetes management is a **team effort**. Your care team may include:

Team Member	Role
General Practitioner (GP)	Coordinates overall care; prescribes medications; annual cycle of care
Credentialed Diabetes Educator (CDE)	Self-management education; BGM and CGM education; insulin support
CDE Pharmacist	Medicines review; medication education; insulin initiation
Accredited Practising Dietitian (APD)	Personalised nutrition advice; meal planning
Exercise Physiologist	Tailored exercise prescription
Endocrinologist / Diabetes Specialist	Complex diabetes management; technology initiation
Podiatrist	Foot assessments and care
Ophthalmologist / Optometrist	Retinal screening and eye care
Psychologist	Diabetes distress, mental health support
Pharmacist	Medicines management; medication reviews; NDSS registration

About GlycoMedix

GlycoMedix – Integrating Diabetes & Medication Care was established to provide expert, integrated diabetes and medication management support for people living with diabetes and the healthcare professionals who care for them.

Services provided by GlycoMedix include:
- Comprehensive Diabetes Medication Reviews (HMR/RMMR)
- Insulin initiation and titration support
- CGM training and interpretation
- GP Practice CDE Pharmacist consultations
- Diabetes self-management education and support (DSMES)
- HbA1c and blood glucose monitoring guidance
- Medicines management for complex diabetes and polypharmacy

GlycoMedix works collaboratively with GPs, specialists, and allied health professionals to provide seamless, evidence-based, person-centred diabetes care.

Credentialed Consultant Pharmacist (MRN: P824980)
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Key Australian Resources

Resource	Contact
National Diabetes Services Scheme (NDSS)	ndss.com.au
Diabetes Australia	diabetesaustralia.com.au
Australian Diabetes Society (ADS)	diabetessociety.com.au
RACGP Diabetes Resources	racgp.org.au
Baker Heart & Diabetes Institute	baker.edu.au
Dietitians Australia	dietitiansaustralia.org.au
Exercise & Sports Science Australia (ESSA)	essa.org.au/find-aep
Australian Diabetes Educators Association (ADEA)	adea.com.au
Podiatry Australia	podiatry.org.au
Foot Forward	footforward.org.au
Healthdirect (find local services)	healthdirect.gov.au

NDSS — Your Gateway to Support

The **National Diabetes Services Scheme (NDSS)** is an Australian Government initiative, administered by Diabetes Australia. It provides:
- Access to subsidised diabetes products (insulin syringes, pen needles, lancets, blood glucose test strips, CGM sensors)
- Free information, resources, and fact sheets
- Online education programs including **Ready, Set, Go — Let's Move** (physical activity program)
- Access to NDSS programs and services in your state/territory
- NDSS Helpline: **1800 637 700** | ndss.com.au

A Final Word

Living well with diabetes is absolutely achievable. With the right knowledge, the right support team, and the right tools, people with diabetes can lead full, active, and healthy lives.

At **GlycoMedix**, we are committed to providing expert, evidence-based, compassionate diabetes and medication care — empowering our patients and supporting our clinical partners to achieve the best possible outcomes.

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Credentialed Diabetes Educator (CDE00029108)

GlycoMedix – Integrating Diabetes & Medication Care

References: Australian Diabetes Society T2D Treatment Algorithm; RACGP Diabetes Management in General Practice (2024); Baker Heart & Diabetes Institute Portion Plate Guide; NDSS Physical Activity Fact Sheet (Version 4.0.0-r1, June 2025); NDSS Annual Cycle of Care; ADA Standards of Care in Diabetes 2026; KDIGO 2022 Diabetes in CKD Guideline; Diabetes Australia Position Statements.

This ebook is intended as an educational resource only and does not replace individualised medical advice. Always consult your diabetes healthcare team for personalised management.