

Managing risks and other impacts of type 2 diabetes

Recommendations

Recommendation	Reference	Grade*
Sick days		
Patients should be educated to develop a sick day management plan after initial diagnosis. This plan should be reviewed at regular intervals	1 Australian Diabetes Educators Association, 2016	None provided
Assist in the development of a sick day care plan and preparation of a home sick day management kit for patients to use during episodes of sickness	1 Australian Diabetes Educators Association, 2016	None provided
Planned surgical procedures		
Patients receiving sodium glucose co-transporter 2 (SGLT2) inhibitors should cease this medication at least three days prior to surgery or procedures that require one or more days in hospital and/or 'bowel preparation', including colonoscopy, to prevent diabetic ketoacidosis (DKA) in the peri-operative period. For day procedures, SGLT2 inhibitors may be ceased just for the day of the procedure	2 Australian Diabetes Society, 2020	Consensus
*Refer to ' Explanation and source of recommendations ' for explanations of the levels and grades of evidence.		

Insurance and advocacy

Insurance can be an area difficult to navigate for people with diabetes and other chronic conditions. [Diabetes Australia](#) and other advocacy organisations can provide advice about rights, responsibilities and other tips regarding:

- private health insurance
- life and disability insurance
- income protection
- travel insurance.

Immunisations

Recommended vaccines for people with type 2 diabetes are as follows.

- **Influenza** – annual vaccination is recommended for people with chronic conditions, including diabetes, that require regular medical follow-up or have required hospitalisation in the past year.³
- **Diphtheria, tetanus, pertussis** – for all adults aged ≥65 years if they have not had one in the previous 10 years.
- **Hepatitis B** – consider for travellers to hepatitis B–endemic areas.
- **Herpes zoster** – consider for ages 70–79 years (available for free in this age group under the National Immunisation Program).

- **Pneumococcus** – diabetes is considered a ‘Category B’ condition for increased risk of invasive pneumococcal disease. It is recommended that all adults with type 2 diabetes receive three lifetime doses of the 23-valent pneumococcal polysaccharide vaccine (23vPPV), as follows:³

1. first dose at around age 18 years, or at time of diagnosis of type 2 diabetes
2. second dose 5–10 years later
3. third dose at least five years later or at age 65 years, whichever is later.

Children who have received four doses of 13-valent pneumococcal conjugate vaccine (13vPCV) are recommended to receive two lifetime doses of 23vPPV.

Sick days

‘Sick days’ are periods of minor illness (due to other causes) of around 1–4 days’ duration that require changes to a person’s usual diabetes self-management.

People with diabetes require careful individualised management during these periods to prevent:

- hyperglycaemic and hypoglycaemic emergencies
- hyperosmolar hyperglycaemic state
- diabetic ketoacidosis (DKA).

A warning regarding use of sodium glucose co-transporter 2 (SGLT2) inhibitors and DKA: SGLT2 inhibitors carry a small but definite risk of DKA, sometimes without significantly raised blood glucose levels (euglycaemic DKA).² Patients should be periodically warned that the chance of developing DKA (which can be euglycaemic) is low, but advised of the symptoms and told to present to an emergency department if they develop any of these symptoms. They should inform treating doctors that they are taking an SGLT2 inhibitor. Risk factors and warning signs should be incorporated into their management plan.²

General practices and general practitioners (GPs) should consider routinely incorporating sick day plans in patients’ documented management plans.

The Australian Diabetes Educators Association (ADEA) has developed clinical guiding principles for health professionals and a consumer resource on sick day management.^{1,4}

Patient information is also available from state and territory diabetes organisations.

In practice

A clear and specific action plan for management of sick days (Table 1) ensures that patients can either self-manage or have access to their healthcare team for advice and early intervention, supervision and support.

Action plans should be updated regularly (at least once during the annual cycle of care) and provided to patients and their support people.

Sick day management should be tailored to the individual patient and involve the following.

- Identify the underlying cause, and treat as appropriate. Underlying causes include:
 - intercurrent illnesses, infections (eg skin, urinary tract and chest infections), trauma, acute myocardial infarction and stroke
 - use of medications such as corticosteroids.

- Increase self-monitoring of blood glucose (SMBG), if required by individual circumstances (eg patients at risk of hypoglycaemia or using insulin). Refer to the [NDSS](#) website for necessary forms.
- Ensure continuity of advice and accessibility – provide telephone access or after-hours support.
- Review medications – refer to Table 1.

Special considerations

Different patient groups have different considerations for sick day management.

Type 2 diabetes managed with diet alone

- For worsening glycaemia, consider the introduction of medication and symptomatic management of hyperglycaemia.
- Patients with type 2 diabetes may have impaired body immune mechanisms that will make recovery slower.
- In addition, patients may become dehydrated because of the osmotic diuresis.

Type 2 diabetes managed with oral or non-insulin glucose-lowering medication

- Worsening glycaemia may require urgent review by the GP or referral to a specialist diabetes service or hospital emergency department, or contact with an endocrinologist.
- Insulin may be temporarily required for persistent and extreme symptomatic hyperglycaemia (≥ 15 mmol/L), which may also require hospital admission.
- In patients with nausea, vomiting and/or diarrhoea:
 - consider stopping metformin and glucagon-like peptide-1 receptor agonists (GLP-1 RAs) temporarily. Metformin may aggravate these symptoms, and GLP-1 RAs may aggravate nausea or vomiting. There may be a risk of acute renal impairment due to dehydration
 - review and cease SGLT2 inhibitors, metformin and GLP-1 RAs if acute gastrointestinal illness is present, as these medicines may further aggravate dehydration and hypovolaemia.
- Note that DKA/euglycaemic DKA should be considered in patients who are taking SGLT2 inhibitors if they display abdominal pain, nausea, vomiting, fatigue or metabolic acidosis.²

Type 2 diabetes managed on insulin

- All patients should be [self-monitoring blood glucose](#), have adequate [pen needles](#) and advised to seek an urgent review by their GP or health professional when unwell or if their blood glucose is >15 mmol/L on two consecutive SMBG readings, as per the action plan.
- Blood glucose monitoring should be increased to every 2–4 hours if unwell. Patients may need to increase their morning intermediate or long-acting insulin dose by 10–20% if the glucose reading remains elevated, and, depending on further blood glucose levels, modify subsequent doses of short-acting insulin during the day. For people on ultra-long-acting basal insulins, including glargine U300 or degludec insulins, GPs may need to seek advice from an appropriate specialist regarding dose adjustment, as dose changes may take 4–7 days for effect. Advice on the additional use of oral agents and GLP-1 RAs is listed in Table 1.

- Additional blood ketone testing (with appropriate self-monitoring equipment) may be incorporated if there are symptoms suggestive of ketosis (eg nausea, vomiting, shortness of breath or fruity odour, abdominal pains, altered consciousness), there is a history of DKA, or if the patient is using an SGLT2 inhibitor. This should be a documented strategy in the patient's sick day management plan.
- Note that many patients are only on basal insulin or a premixed insulin. These patients require appropriate medical advice, and may need acute medical advice or prescription for additional rapid-acting insulin to use as a supplemental insulin dose.¹ If uncertain, consult an appropriate specialist.
- Patients with gastrointestinal upset who are not eating, but who feel well and continue their usual activities, may need to reduce their insulin according to SMBG readings (especially rapid-acting insulin) to avoid hypoglycaemia.

For more information, refer to the ADEA's clinical guiding principles for sick day management 2016.¹

Table 1. Action plan for management of sick days in people with type 2 diabetes^{1,4}

Commence action plan	Commence: <ul style="list-style-type: none"> • when patient starts to feel unwell, or • if blood glucose >15 mmol/L on two consecutive readings
Frequency of blood glucose monitoring	Monitor 2–4-hourly, or more frequently if blood glucose is low
Medication	Continue insulin or diabetes medications, but assess use of metformin, SGLT2 inhibitors (dapagliflozin, ertugliflozin and empagliflozin) and GLP-1 RAs, which may require cessation if vomiting or dehydration is a concern
Food and water intake	<ul style="list-style-type: none"> • There is increased risk of hypoglycaemia from insulin and sulfonylureas if appropriate intake of meals is not maintained • Patients should try to maintain their normal meal plans if possible • Fluid intake (eg water or oral rehydration solutions) should be increased to prevent dehydration • Advise about alternative, easy-to-digest foods like soups if the patient cannot tolerate a normal diet (some non-diet soft drinks may provide essential carbohydrate in this situation) • If vomiting or diarrhoea, SGLT2 inhibitors and metformin should be ceased • If illness is causing loss of appetite and marked reduction of carbohydrate intake, SGLT2 inhibitors should be ceased • If blood glucose >15 mmol/L, use non-glucose-containing fluids • If blood glucose <15 mmol/L, use oral rehydration solutions (may contain glucose) if needed • If unable to tolerate oral fluids and blood glucose continues to drop, advise patient to attend medical care
Seek assistance	Individuals and support people need to assess whether the person is well enough or able to follow the plan; if they are not well enough, they should call for help or attend hospital
<i>GLP-1RAs, glucagon-like peptide-1 receptor agonists; SGLT2, sodium glucose co-transporter 2</i>	

Planned surgical procedures

People with diabetes should be seen several weeks before surgery for an assessment of glycaemic control and anaesthetic suitability, including their cardiovascular disease risks, and any treatment modifications instituted and stabilised from the time of referral before proceeding to surgery.

Attaining glycaemic control (ie a glycated haemoglobin [HbA1c] approaching 7%, or 53 mmol/mol) in the pre-operative period has been shown to result in fewer complications and shorter hospital stays after surgery.⁵ A patient with an HbA1c of $\geq 9\%$ (75 mmol/mol) may need to have their surgery delayed until glycaemic management is optimised.⁵

Pre-operative care is the same for minor and major surgery. For prolonged procedures, blood glucose levels should be monitored intra- and post-operatively for several days.

Insulin may be required post-operatively for some people with type 2 diabetes.

Further information can be found in the Australian Diabetes Society's [Peri-operative diabetes management guidelines](#).

Rural GPs who perform operations and GPs who administer anaesthetics should refer to these guidelines.

In practice

Ceasing medication before surgery

Appropriate written instructions should be given to the patient beforehand.

Patients who are prescribed oral glucose-lowering medications **except** SGLT2 inhibitors, and patients on injectable GLP-1 RAs:

- can continue their diabetes medications on the day prior to surgery (be aware that gastric emptying is affected by GLP-1 RAs)
- should omit their oral glucose-lowering medications on the morning of surgery, irrespective of whether they are on the morning or afternoon list.

SGLT2 inhibitors should be ceased at least three days prior to surgery and procedures that require one or more days in hospital and/or require bowel preparation, including endoscopy/colonoscopy (two days prior to and the day of the procedure), to prevent DKA in the peri-operative period.² Other glucose-lowering medications may need to be increased in this period.²

For day procedures (including gastroscopy), SGLT2 inhibitors may be ceased just for the day of procedure. However, fasting before and after the procedure should be minimised.

Further advice on SGLT2 inhibitor use in the peri-operative period can be found in the Australian Diabetes Society's [alert](#) regarding SGLT2 inhibitors and DKA risk during surgery.

Insulin requires individualised advice as follows, and is usually not completely omitted (never withhold basal insulin):

- Long-acting insulin – continue as usual (including morning doses)
- Short-acting insulin – omit rapid/short-acting insulin if not eating. Depending on timing of procedure
 - morning: withhold short-acting insulin (and all oral glucose-lowering medication)
 - afternoon: take half the normal morning rapid/short-acting dose in the morning before a light breakfast
- Premixed insulin – take one-third to half of the usual morning dose

People taking intermediate-acting insulin who are booked for afternoon procedures or on prolonged fasting may need a reduced dose. Seek specialist endocrinology and anaesthetic advice before planned procedures.

Patients on a multiple daily insulin regimen might require peri-operative glucose infusion and the associated close blood glucose monitoring. Many hospitals have a protocol or working plan that should be followed for the individual patient in that service.

Recommencing oral medication

Patients on oral glucose-lowering medication, with the exception of SGLT2 inhibitors, can generally recommence medications when they are able to eat meals. Specific advice is available in Australian Diabetes Society's *Peri-operative diabetes management guidelines*.

SGLT2 inhibitors should only be recommenced post-operatively when the patient is eating and drinking normally or close to discharge from hospital. People who have had day surgery should only recommence SGLT2 inhibitors once they are on full oral intake. It may be prudent to delay recommencement for another 24 hours; however, this must be balanced against risk of hyperglycaemia.²

Metformin can generally be recommenced 24 hours after major surgery, provided there has been no deterioration in serum creatinine.⁵ For patients pre- and post-operatively using metformin and SGLT2 inhibitors, maintenance of hydration and carbohydrate intake is important.

Patients undergoing colonoscopy

For colonoscopy preparation, ColonLYTELY or Glycoprep, rather than Fleet or PhosphoPrep, should be used in patients with renal impairment, who may become severely hyperphosphataemic with phosphate preparations.⁶

The dietary modifications that are advised for colonoscopy preparation might alter glucose management and hypoglycaemic risks; instruction on appropriate SMBG testing may be required. It is also essential to avoid excessive carbohydrate restriction during the bowel preparation period if the patient has been using SGLT2 inhibitors.

On preparation days and day of procedure, commence SMBG and withhold all oral medications. Note that SGLT2 inhibitors should be ceased three days before colonoscopy and only recommenced when the patient is eating and drinking normally.²

Basal and/or rapid-acting insulin should be managed as above.

Premixed insulin should be managed as follows.

- On the day of bowel preparation, reduce premixed dose by half for all doses.
- On the day of procedure, arrange a morning procedure and use half usual dose and glucose infusion.

Driving

Diabetes is identified as one of the medical conditions that may impair driving ability. Impairment can be caused by:

- unexpected hypoglycaemia for drivers on insulin or sulfonylureas (main hazard)
- sensory or end-organ complications, particularly reduced vision or reduced sensation in the feet
- other comorbidities, such as sleep apnoea and cardiovascular problems.

Drivers with diabetes must meet specific national standards to ensure that their health status does not increase the risk of a crash. However, GPs should be aware that there are variations to these standards in individual states and territories, and should check with the relevant transport authority.

In practice

National medical standards for private and commercial licensing, and a flowchart to assist with the management of diabetes and driving, are found in section 3.3.2 of 'Austroads' and the National Transport Commission's *Assessing fitness to drive*. This document was updated in 2016, with a number of changes to the assessment criteria regarding drivers with diabetes. Note that HbA1c measurements are not used to assess fitness to drive, and, for clarity, all references to HbA1c have been removed from the updated criteria.⁷

Private licences

People taking glucose-lowering medications other than insulin do not necessarily require a conditional licence; however, they must have a medical review by their treating doctor every five years.⁷

A person on glucose-lowering medication other than insulin is **not** fit to hold an unconditional licence if they:

- have end-organ complications that may affect driving, as defined by the national medical standards, or
- have had a recent 'severe hypoglycaemic event', defined as 'an event of hypoglycaemia of sufficient severity such that the person is unable to treat the hypoglycaemia themselves and thus requires an outside party to administer treatment'.⁷

In this case, a conditional licence may be granted as long as the following are achieved:

- any end-organ effects are satisfactorily treated
- the person is following a treatment regimen that minimises the risk of hypoglycaemia
- the person experiences early warning symptoms (awareness) of hypoglycaemia or has a documented management plan for lack of early warning symptoms
- any recent 'severe hypoglycaemic event' has been satisfactorily treated.

People on insulin may have a conditional licence, requiring a two-yearly review. This must be granted as outlined in the national medical standards, with similar criteria as above.

Commercial licences

People with diabetes on any form of glucose-lowering therapy, including insulin, may be granted a conditional commercial licence. Specialist referral is required.

This licence is subject to yearly specialist review; if the person is on metformin alone, this review may be carried out by the treating GP, by mutual agreement with the treating specialist. The initial recommendation of a conditional licence must, however, be based on the opinion of a diabetes specialist.

Severe hypoglycaemia

The minimum period of time before returning to drive after an episode of severe hypoglycaemia is generally six weeks. A specialist's assessment and agreement is required for all licensing categories.

Patient education and resources

The National Diabetes Service Scheme's (NDSS's) consumer booklet *Driving and diabetes* provides a checklist and offers advice for people with diabetes to ensure that they have safe blood glucose levels before they drive.

The importance of taking extra precautions to maximise road safety and reduce risks of road accidents caused by hypoglycaemic incidents is highlighted and should be actively promoted.

For example, drivers are required to perform a blood glucose check before they drive and again during the journey, if driving for more than two hours.

Diving

People with type 2 diabetes, including those who use medication, can participate in recreational scuba diving. They must be otherwise qualified to dive and meet several criteria as outlined in [consensus guidelines](#) for recreational diving with diabetes that were developed in 2005.

When evaluating persons with diabetes for medical fitness to dive, first ensure that no other exclusionary conditions (eg epilepsy, pulmonary disease) exist.

The physiological demands of diving must then be considered. People with diabetes are at higher risk than the general diving population of medical complications such as myocardial infarction, angina and hypoglycaemia.

The Australian Diabetes Society has [recommendations](#) for people with insulin-treated diabetes, regarding suitability for diving, scope of diving and blood glucose management on the day of diving.

Travel

People with diabetes can travel safely, provided a few extra precautions are taken and the travel is planned.

Those not using insulin generally have few problems during travel. The stress of travel may increase blood glucose levels slightly. The decreased activity experienced in a long plane trip, together with the amount of food given en route, often results in increased blood glucose levels. These should return to normal once a more usual lifestyle has been resumed at the destination.

Patients should ideally have a medical consultation at least six weeks before the proposed travel, particularly if they are on insulin. This allows time to assess control and alter management as required. Patients might benefit from referral to a credentialled diabetes educator to go through their travel plans and help prepare a detailed travel management plan, including sick day management.

Before travelling, patients should:

- check routine immunisation status and other medical conditions
- obtain a covering letter from their doctor (refer below)
- pack extra food (if allowed by customs) and double the quantity of supplies of medication and monitoring equipment, dividing them between checked-in and carry-on luggage in case one is lost or stolen (it is not advisable to pack extra insulin in checked-in luggage, as insulin exposed to extreme temperatures of the cargo hold will lose efficacy)
- get advice about special insurance
- familiarise themselves with Australian/other air security guidelines (refer below).

Travelling by air: Security guidelines

Australian air authorities stipulate the following security guidelines. If the patient is not using an Australian carrier, it is advisable for the patient to check with the chosen airline for applicable security guidelines.

- All diabetes supplies that include testing equipment, insulin and glucagon delivery devices (eg syringes, pen needles, insulin pump consumables) carried on board must be in the hand luggage of the person who has diabetes and whose name appears on the airline ticket.
- The traveller's name should appear on the insulin and/or glucagon prescription labels.
- It is advisable to carry legible prescriptions for all medications. The prescriptions must include the traveller's name, name and type of medication, and contact details of attending medical practitioner.
- The NDSS card is accepted as primary proof that a person with insulin-treated diabetes needs to carry with them their diabetes equipment such as insulin pen, pump, syringes, needles and glucagon kit. Supplementary photographic proof of identity such as a driver's licence may also be requested.
- It is advisable to carry a letter from the attending medical practitioner that outlines medical diagnoses, prescribed medications, whether insulin is used and, if so, the delivery device/s. The letter must stress the importance of the patient having to carry medications with them and include the frequency of dosage. For those using an insulin pump, the letter must stress the need for the pump to be worn at all times.
- Some international regulations set limits on fluid containers that may be personally taken on board aircraft. People with diabetes who need to carry supplies of insulin are exempt. They will be required to present the insulin at the security point and carry proof of their condition and need for insulin.
- People wearing electronic devices to monitor blood glucose levels or to infuse insulin should check with the airline as to whether these devices can be operated during the flight.

Rights of people with diabetes during security check

People with diabetes who use an insulin pump are not required to remove their pump at the security point. If the security staff request this, the person with diabetes has the right to request access to a private consultation room, which security staff are required to provide. People with diabetes are also entitled to make this request if discussion about their condition is required.

For more information about travel and diabetes, consult the travel advice on the websites of [Diabetes Australia](#) and the [Department of Home Affairs](#).

Diabetes management during Ramadan

Fasting during Ramadan is one of the five pillars of Islam, and all healthy adult Muslims are obliged to refrain from eating and drinking from sunrise to sunset during this lunar month. The fast may last 11–19 hours, depending on where and at what time of year Ramadan occurs. People with an acute illness such as influenza may postpone fasting to other days when their acute illness has resolved. People with chronic illnesses such as diabetes are not obliged to fast, and are able to donate to a charity as atonement; however, many still choose to fast.

Some Muslim patients with diabetes might be more inclined to discuss fasting during Ramadan with their local imam rather than their GP; GPs may therefore need to ask patients specifically if they intend to fast.⁸

The main concern for diabetes management during Ramadan is hypoglycaemia. Fasting can disrupt normal glucose homeostasis and lead to serious consequences. Patients who choose to fast should be warned of these complications.

People in the 'very high' or 'high' risk groups shown in Box 1 should be actively discouraged from fasting during Ramadan.⁸ This includes people at high risk of hypoglycaemia.

A post-Ramadan GP assessment is recommended.

Taking oral glucose-lowering agents during Ramadan

Guidelines have recommended therapeutic choices to help minimise risk of hypoglycaemia in Ramadan.^{8,9}

Insulin use during Ramadan

People taking insulin who wish to fast during Ramadan should have renal and liver function tests ordered, as both renal and hepatic impairment may precipitate or prolong hypoglycaemia in people with diabetes.

People taking insulin should be instructed on SMBG and individual adjustment of insulin doses based upon glucose goals discussed before commencing Ramadan.

People taking long-acting basal insulin analogue glargine have been shown to be able to fast safely with no significant increases in hypoglycaemic episodes.⁸ Rapid-acting (mealtime) insulin should be given at fast-breaking evening mealtimes.

If weight loss occurs due to fasting, patients may need a reduction in basal insulin dose in the second half of the Ramadan period.

Patients with type 2 diabetes on premixed insulin twice daily should reduce the morning breakfast dose by 25–50% and take the normal evening dose with their evening meal.⁸ If postprandial hyperglycaemia develops as a result of the larger-than-usual sunset meal (iftar), which breaks the day's fast, then consider changing the premixed insulin to 50:50 (for patients on 30:70 or 25:75 premixed insulin). Alternatively, the premixed insulin dose can remain the same, with additional rapid-acting insulin given to cover the iftar meal. Rapid-acting insulin might also be required for people who have an additional evening meal before bedtime, when iftar is early.

Because eating patterns can vary significantly from person to person during Ramadan, individualised plans for insulin use should be developed for each person.

Box 1. Risk categories for people with diabetes who are considering fasting during Ramadan⁸

Very high risk

People with any of the following:

- Severe or recurrent episodes of hypoglycaemia in the three months before Ramadan
- History of recurrent hypoglycaemia
- History of hypoglycaemic unawareness
- Poor glycaemic control before the month of Ramadan
- DKA episode or hyperosmolar hyperglycaemic state within three months before Ramadan
- Acute illness
- Pregnancy with pre-existing diabetes or GDM treated with glucose-lowering medication*
- Poorly controlled type 1 diabetes
- Comorbidities such as chronic kidney disease (stage 4 or 5) or cardiovascular disease

High risk

People with any of the following:

- Sustained poor glycaemic control
- Well-controlled type 1 diabetes
- Well-controlled type 2 diabetes on multiple-dose or mixed insulin
- Pregnancy with pre-existing diabetes or GDM controlled by diet only*
- Chronic kidney disease stage 3 or lower
- Stable macrovascular complications
- Comorbid conditions that present additional risk factors
- Diabetes and performing intense physical labour
- Treatment with drugs that may affect cognitive function

Moderate–low risk

People with well-controlled type 2 diabetes treated with one or more of the following:

- Lifestyle interventions
- Metformin
- DPP-4 inhibitors
- GLP-1 RAs
- SGLT2 inhibitors or thiazolidinediones
- Basal insulin

DKA, diabetic ketoacidosis; DPP-4, dipeptidyl peptidase-4; GDM, gestational diabetes mellitus; GLP-1 RAs, glucagon-like peptide-1 receptor agonists; SGLT, sodium glucose co-transporter 2

*Note that it is not advised for pregnant women to fast, and they are considered exempt from fasting during Ramadan if they wish.

Exercising and diet during Ramadan

Regular or light exercise is allowed during Ramadan and should be encouraged. However, care should be taken to avoid hypoglycaemia and dehydration.⁸ This is particularly an issue when Ramadan falls in summer months, due both to the higher ambient temperature and the greater number of daylight hours.

Patients should try to divide their daily calories between the breakfast (suhour) meal and iftar. They should endeavour to eat well-balanced, low-glycaemic-index foods that are high in fibre, such as fruits and vegetables.

Diabetes UK has information about fasting during Ramadan for people with diabetes and for imams.

Resources

Sick day management

The **ADEA** has a [resource](#) for patients regarding sick day management.

Surgery

The **Australian Diabetes Society** has published the [Peri-operative diabetes management guidelines](#).

Driving

The **NDSS** has published the [Driving and diabetes](#) consumer booklet.

Diabetes and Ramadan

The **International Diabetes Federation** has published [Diabetes and Ramadan: Practical guidelines](#).

Diabetes UK has [information about fasting during Ramadan](#) for people with diabetes and for imams.

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