

# Diabetes management in primary care during Ramadan



**RACGP**  
Royal Australian College  
of General Practitioners

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 illness has resolved. People with chronic illnesses, such as diabetes, are not obliged to fast and can donate to a charity as atonement; however, many still choose to fast.

Most people with type 2 diabetes can fast safely with appropriate medical advice and management before and during fasting. However, people with type 1 diabetes need special attention.<sup>1</sup> Pregnant women with diabetes are advised not to fast.<sup>1</sup>

Some Muslim people with diabetes might be more inclined to discuss fasting during Ramadan with their local imam rather than their general practitioner (GP); therefore, GPs may need to ask people specifically whether they intend to fast.<sup>1</sup>

The main concern for diabetes management during Ramadan is hypoglycaemia. Fasting can disrupt normal glucose homeostasis and lead to serious consequences. People who choose to fast should be warned of these complications. Regular monitoring of glucose may be required for people with diabetes using sulfonylureas, insulin or feeling unwell with or without hypoglycaemia.

People in the very high or high-risk groups shown in Box 1 should be actively discouraged from fasting during Ramadan.<sup>1</sup> This includes people at high risk of hypoglycaemia.

A post-Ramadan GP assessment is recommended.

## Taking oral glucose-lowering agents during Ramadan

Guidelines recommend therapeutic choices to help minimise the risk of hypoglycaemia during Ramadan.<sup>1,2</sup>

## Insulin use during Ramadan

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

People taking insulin should be instructed on self-monitoring of blood glucose and individual adjustment of insulin doses based on glucose goals discussed before commencing Ramadan.

People taking the long-acting basal insulin analogue glargine have been shown to be able to fast safely with no significant increases in hypoglycaemic episodes.<sup>1</sup> Rapid-acting (mealtime) insulin should be given at fast-breaking evening mealtimes.

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

People with type 2 diabetes on premixed insulin twice daily should reduce their morning breakfast dose by 25–50% and take the normal evening dose with their sunset fast-breaking meal.<sup>1</sup> 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 people 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, GPs should develop individualised plans for insulin use for each person.

### **Box 1. Risk categories for people with diabetes considering fasting during Ramadan<sup>1</sup>**

#### **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
- Unstable glycaemic management before the month of Ramadan
- Diabetic ketoacidosis episode or hyperosmolar hyperglycaemic state within three months before Ramadan
- Acute illness
- Pregnancy with pre-existing diabetes or gestational diabetes treated with glucose-lowering medication\*
- Poorly management type 1 diabetes
- Comorbidities such as chronic kidney disease (stage 4 or 5) or cardiovascular disease

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#### **High risk**

People with any of the following:

- Sustained poor glycaemic management
- Well-controlled type 1 diabetes
- Well-controlled type 2 diabetes on multiple-dose or mixed insulin
- Pregnancy with pre-existing diabetes or gestational diabetes managed 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

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#### **Low to moderate risk**

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

- Lifestyle interventions
- Metformin
- Dipeptidyl peptidase-4 inhibitors (DPP-4i)
- Glucagon-like peptide-1 receptor agonists (GLP-1RAs)
- Sodium–glucose cotransporter 2 inhibitors (SGLT2i) or thiazolidinediones (TZDs)
- Basal insulin

\*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.<sup>1</sup> This is particularly important when Ramadan falls in summer months, due both to the higher ambient temperature and the greater number of daylight hours.

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

## Insulin use during Ramadan

Information about fasting during Ramadan for people with diabetes and for imams can be found on the [Diabetes UK website](#).

The Australian Diabetes Society has developed a [position statement](#) for the management of diabetes during Ramadan for people living with both type 1 diabetes and type 2 diabetes, including medications for women who are pregnant.<sup>3</sup>

A Ramadan and diabetes factsheet developed by [Diabetes UK](#) is available in English, Arabic, Bengali, Gujarati and Urdu.

The [British Islamic Medical Association website](#) has useful information available, in particular a risk stratification table, which includes a summary by condition/disease.

## References

1. International Diabetes Federation and the Diabetes and Ramadan International Alliance. Diabetes and Ramadan: Practical guidelines 2021. International Diabetes Federation, 2021. Available at <https://www.daralliance.org/daralliance/idf-dar-practical-guidelines-2021/> [Accessed 23 September 2024].
2. Ali S, Davies MJ, Brady EM, et al. Guidelines for managing diabetes in Ramadan. *Diabet Med* 2016;33(10):1315–29. doi: [10.1111/dme.13080](https://doi.org/10.1111/dme.13080).
3. Baqar S, Sheen J, Andrikopoulos S, Ekinici EI. Position statement: Management of people with diabetes who choose to fast during Ramadan. Australian Diabetes Society, 2022. Available at: <https://www.diabetessociety.com.au/guideline/diabetes-and-ramadan-position-statement/> [Accessed 23 September 2024].