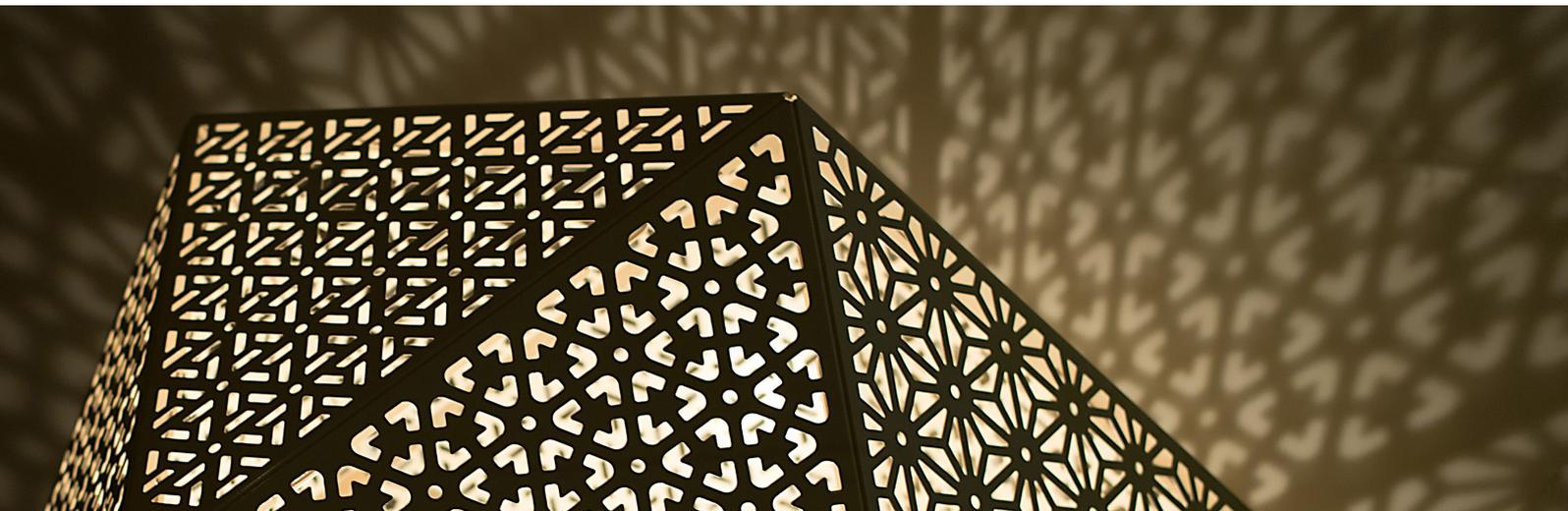


Diabetes management during Ramadan



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 flu 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.¹ Pregnant women with diabetes are advised not to fast.¹

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.¹

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.¹ 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.^{1,2}

Insulin use during Ramadan

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

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

People with type 2 diabetes who are taking the long-acting basal insulin analogue glargine have been shown to be able to fast safely with no significant increases in hypoglycaemic episodes.¹ Rapid-acting (mealtime) insulin should be given at fast-breaking evening mealtimes.

If patients lose weight due to fasting, they may need a reduction in their basal insulin dose in the second half of Ramadan.

Patients 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.¹ If they develop postprandial hyperglycaemia as a result of the larger-than-usual sunset meal (*iftar*), 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, and additional rapid-acting insulin given to cover the *iftar* meal. Patients who have an additional evening meal before bedtime, when *iftar* is early, might also require rapid-acting insulin.

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

Box 1. Risk categories for people with diabetes considering fasting during Ramadan¹

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
- Diabetic ketoacidosis episode or hyperosmolar hyperglycaemic state within three months before Ramadan
- Acute illness
- Pregnancy with pre-existing diabetes or gestational diabetes mellitus (GDM) treated with glucose-lowering medication*
- Poorly controlled type 1 diabetes
- Comorbidities such as chronic kidney 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
- Treatment with drugs that may affect cognitive function
- Work or other activities that require intense physical labour

Moderate–low risk

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

- Lifestyle interventions, metformin, dipeptidyl peptidase-4 (DPP-4) inhibitors, glucagon-like peptide-1 (GLP-1) receptor agonists, sodium glucose co-transporter 2 (SGLT2) inhibitors or thiazolidinediones, basal insulin

*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, patients should take care to avoid hypoglycaemia and dehydration.¹ This is particularly important when Ramadan falls in summer months, both due to the higher ambient temperature and the greater number of daylight hours.

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

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

References

1. International Diabetes Federation and the Diabetes and Ramadan International Alliance. Diabetes and Ramadan: Practical guidelines. Brussels: International Diabetes Federation, 2016.
2. Ali S, Davies M, Brady E, et al. Guidelines for managing diabetes in Ramadan. *Diabet Med* 2016;33(10):1315–29.