

# Ramadan, fasting and diabetes care



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Al-Arouj M, Bouguerra R, Buse J et al (2005) Recommendations for management of diabetes during Ramadan. *Diabetes Care* 28: 2305–11

BBC (2010) Interfaith calendar: Ramadan [online]. BBC, London. Available at: <http://tinyurl.com/37wvmvl> (accessed 16.06.10)

Salti I, Bénard E, Detournay B et al (2004) A population-based study of diabetes and its characteristics during the fasting month of Ramadan in 13 countries: results of the epidemiology of diabetes and Ramadan 1422/2001 (EPIDIAR) study. *Diabetes Care* 27: 2306–11

For more information on caring for people with diabetes who are planning to fast during Ramadan, please go to: <http://tinyurl.com/SB-ramadan>

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Ramadan is the Muslim month of fasting, worship, self-discipline, austerity and charity, and is one of the five pillars of Islam. It takes place in the ninth lunar month of the Islamic calendar and is linked to the sighting of the new moon.

Although people with diabetes are considered to be exempt fasting during Ramadan, many devout Muslim people will wish to demonstrate their faith by fully observing this religious duty. Fasting lasts for 29–30 days and occurs between dawn and sunset. No food or drink can be consumed during daylight hours.

The exact timing of Ramadan varies each year; this year it is expected to fall between 12 August and 10 September (BBC, 2010). When Ramadan falls during the summer months it can become an increasing challenge for healthcare professionals as people will be fasting for considerably longer periods of time. It is therefore essential to provide intensive education prior to fasting (Salti et al, 2004). In addition, medical assessment of people wanting to fast should be undertaken 1–2 months prior to fasting, and should include the following points:

- What is the person's current treatment regimen?
- Has the person's health been good in the past year?
- Are blood glucose levels generally well controlled?
- Does the person present with any complications?
- Has the person ever previously experienced health problems during Ramadan?

Any changes in diet or medication regimen should be made during this assessment to ensure that the person is on a stable regimen when fasting begins (Al-Arouj et al, 2005).

During Ramadan there are two main meals: the Iftar (taken after sunset) and the Sehri (pre-dawn meal – also known as Sohur, Suhur or Suhoor). When there are longer gaps between meals and a larger than normal amount of food is consumed, people with diabetes can experience large fluctuations in blood glucose levels, including hypo- and hyperglycaemia, as well as dehydration. The risks of hypoglycaemia are particularly increased if the person is on insulin or a sulphonylurea (SU), and hyperglycaemia can occur if eating larger portions of food at Iftar or Sehri.

The American Diabetes Association has published recommendations for the management of people with diabetes during Ramadan (Al-Arouj et al, 2005), and it is believed that an updated version of this is due out soon. Although no UK-specific guidelines currently exist, at Enfield PCT we give the following advice regarding diabetes care during Ramadan.

Who should not fast during Ramadan?

- People recently diagnosed with diabetes.
- People with poor glycaemic control.
- People with hypoglycaemia unawareness.
- People with unstable epilepsy.
- Older or frail people.
- People with a history of diabetic ketoacidosis.
- People with recurrent infections.
- People with complications, especially renal disease.
- Anyone who has had previous problems during fasting.

People taking metformin alone should be able to fast safely as the risk of hypoglycaemia is low. The timing of the doses should be modified to reflect eating patterns. If metformin is taken twice daily, it should be taken with meals; if taken three times a day, this regimen may need adjustment.

SUs have variable action profiles – some come in slow- or modified-release preparations, while others act more quickly – which can have implications for the risk of hypoglycaemia. Al-Arouj et al (2005) recommend that their use should be individualised and used with caution. At Enfield, we recommend that if SUs are used, they are taken with the largest meal of the day (usually Iftar), and if taken twice daily, the largest dose should be taken with the largest meal.

For people taking thiazolidinediones, no change in dosage is required. Similarly, for people receiving dipeptidyl peptidase-4 (DPP-4) inhibitor therapy, there is no need to change regimen. Twice-daily glucagon-like peptide-1 (GLP-1) receptor agonists can be taken at Iftar and Sehri; once-daily GLP-1 receptor agonists can be taken at the normal time.

People on insulin therapy may be advised not to fast during Ramadan, especially those with type 1 diabetes. However, if people choose to fast, blood glucose monitoring should be carried out pre- and 2 hours post-meal, as well as at different times throughout the fast.

If once-daily insulin is prescribed, it is best to take this at the usual time. For those on twice-daily premixed insulin, it may be more appropriate to change to a basal-bolus regimen to ensure that there is enough insulin to cover meals, as well as having a longer-acting insulin to provide cover throughout the day. If the choice is made not to alter a twice-daily premixed insulin regimen, the largest dose should be taken with the largest meal and the smaller dose at dawn. ■

Table 1. General advice for diabetes care during Ramadan.

- Advise people to plan their meals carefully and to not skip meals.
- People should avoid overeating at Iftar or Sehri as this can lead to hyperglycaemia.
- Reinforce the importance of taking medication regimens as prescribed.
- Ensure that people know how to check their blood glucose levels and understand what blood glucose levels should be maintained.
- Ensure that people with type 1 diabetes know how to check for ketones in the urine if blood glucose levels are particularly high (>14 mmol/L).
- Encourage people to take on plenty of fluids, which need to be sugar-free.
- Ensure that people know who to contact in an emergency or if unwell.