Managing diabetes during fasting – a focus on Buddhist Lent

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Ritual fasting is an essential part of many major faiths. Lent in Christianity, Ramadan in Islam, Yom Kippur in Judaism, or the Navratras in Hinduism – fasts vary in duration and in degree. Some ritual fasts pose challenges to the physical health and fitness of those following the ritual, which are significant in people with diabetes, who have metabolic disorders and use treatments that impair their capacity to fast for long periods of time. With growing numbers of people affected by diabetes worldwide – and as that population grows older, enjoying greater life expectancy with ever-improving diabetes management – the number of people with diabetes wishing to observe religious fasts also looks set to increase. Tint Swe Latt and Sanjay Kalra look at special management issues in the context of Buddhist ritual fasting.
With some 500 million devotees worldwide, Buddhism is a major world faith. It is the principal religion in many Asian countries, including Myanmar, Sri Lanka, Thailand, Laos, Cambodia, Vietnam, Taiwan, Mongolia and Bhutan. Many people in India and China also follow Buddhism. All these countries are reporting substantial increases in the number of people with diabetes. Buddhism, then, like the other major world religions, has been unable to escape the impact of the diabetes pandemic.

Buddhism’s rainy retreat
Devout Theravada Buddhists observe a fast lasting three lunar months every year during the rainy season. This fast, known as Vassa (‘rainy retreat’), is referred to in English as ‘Buddhist Lent’ and in Myanmar as War Dwin. The fast is characterized by a 12-hour period (from noon to midnight) of fasting followed by a 12-hour period in which the fast is broken. The three-month duration of the fasting period, as well as these 12-hourly cycles of fasting and feasting, make observing Vassa a tricky task for the devout. It calls for physical and emotional strength, as well as sustained social support, to complete the fast successfully. This is especially true for people with diabetes, who face specific challenges related to blood glucose control.

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Surprisingly, however, Buddhist Lent has not been the focus of research into diabetes-related health issues relating to the fast. Perhaps for this reason, many healthcare professionals are not aware of the particular needs and challenges facing people with diabetes who wish to observe Vassa.

Acute complications – hypoglycaemia provoked by delaying meals and hyperglycaemia due to snacking and the intake of very calorie-rich foods – are likely to occur more frequently during fasts. Hypoglycaemia might be noticeable for the person fasting only with subtle symptoms, such as difficulties practising meditation. This is a delicate issue for devout Buddhists, and must be approached with care and sensitivity. With a fast period occupying a quarter of each year, it is likely that chronic complications, both macro- and microvascular, are exacerbated by prolonged periods of fasting, as a consequence of poor blood glucose control.

Sensible, practical guidance is required for nutrition, physical activity, meditation practices and drug therapy throughout the fasting period. Following informed advice will help to ensure a positive experience, safeguarding physical health and emotional and social wellbeing.

Preparing for Vassa
People who plan to follow the fast should receive counselling and education before Vassa begins. People must know about the potential side effects of fasting with diabetes, and the steps needed to prevent them – including the need for the intensive supervision of diabetes during the fasting period. This is where healthcare providers should be proactive, encouraging people to discuss the issues prior to fasting.

People should review their medical history and undergo a full physical examination with a view to ensuring a complication-free fast. Elective procedures, such as cataract surgery, should be performed well before the fast or postponed for three months to avoid the increased risk of peri-operative complications secondary to poor blood glucose control.

Hypoglycaemia awareness
It is crucial that people with diabetes who wish to observe Buddhist Lent be fully aware of the signs and symptoms of hypoglycaemia, and of how to prevent and manage it. Awareness training should focus on the subtle symptoms of hypoglycaemia in the brain (neuroglycopenia), such as difficulty in praying; adrenaline-related complaints, such as trembling; as well as general symptoms, like headaches.

Nutrition
While fasting, devout Buddhists are allowed to drink liquids, they cannot consume solids or alcohol during the 12 hours of fasting. People tend to drink high-calorie liquids, such as fruit juice, soya milk and soft drinks, as well as green tea and water. Many people in Asia add unrefined sugar (known widely as ‘jaggery’). During the hours of fasting, people are allowed a small snack after midnight, a normal serving of breakfast and a large lunch before noon. People with diabetes should be encouraged to eat small frequent meals while feasting, and...
drink low- or medium-calorie liquids at short intervals during the hours of fasting.

The nutritional and pharmacological management of diabetes should be planned at the same time. Drug therapy should be tailored to facilitate each person’s dietary plan, while nutritional and exercise habits should be reviewed regularly and modified where necessary. Low-calorie drinks, such as green tea, soya milk, and freshly squeezed fruit juices should be encouraged. People should avoid large portions of calorie-rich drinks, like sugar-sweetened soft drinks and processed juices, although small amounts may be used in specific situations. Certain low-calorie food supplements, which can be mixed with water or milk, may be an option.

Meals can be modified to reduce caloric content and glycaemic index. Boiled rather than fried noodles, for example, will contribute to improved blood glucose control. Whole grains and rices, complex carbohydrates with a reduced glycaemic index, are always the preferred option.

Physical activity and meditation
Vassa is an important time for meditation, which can be practised while walking and/or sitting. Choosing walking meditation can help improve general health and use calories, may help avoid hyperglycaemia.

As mentioned earlier, hypoglycaemia can impair the quality of meditation, which can be distressing for devout Buddhists. Simple advice to drink a small glass of fresh juice before prayer can help to enhance the experience.

Oral medications
The emphasis while choosing a pharmacological therapy for diabetes during Buddhist Lent must be on safety and tolerability. Each case has to be considered individually and a bespoke regimen agreed by the person with diabetes and his or her diabetes healthcare provider. While medicines that act only by improving insulin sensitivity such as metformin should not cause problems with reduced caloric intake, all insulin secretagogues and exogenous insulin risk causing hypoglycaemia. Regimens should be tailored to the food plan the fasting person with diabetes will undertake. In general terms, long-acting drugs, such as glibenclamide, should be avoided during Vassa. Repaglinide, low-dose sulfonylureas with a reduced tendency for hypoglycaemia (glimperide, gliclazide) and gliptins should be considered instead. Oral medications prescribed as a once-daily dose can be taken in the morning. If a twice-daily dose is required, giving two-thirds of the dose in the morning may be considered. We have found using a sustained-release preparation of metformin taken before noon can be effective.

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The relative advantages and disadvantages of various classes of drugs have been discussed in detail by international bodies recently, and new guidelines and clinical recommendations were published this year.1-3 These can be used to inform a selection of the appropriate drug therapy during Buddhist Lent.

Insulin
In order for people with type 1 diabetes to keep the fast, regular glucose monitoring is essential to ensure safety and general wellbeing. Insulin therapy might need to be modified during Vassa. Properly managed basal-bolus regimens where the basal insulin is enough to control endogenous glucose production and fast acting insulin is taken just before any carbohydrate containing meal should work, but doses may need adjusting, especially if the usual doses of the basal regimen are not evenly divided. We have found using insulin analogues with their reported relatively reduced risk of hypoglycaemia, helpful. Insulin regimens should be tailored according to each person’s specific dietary pattern. We have found that using basal or premixed insulin, given once daily, before the main meal of the 24 hour period may be enough for many people with type 2 diabetes. Safety, convenience and tolerability should remain the goals throughout.

Final points
Given the large and growing numbers of people observing Vassa around the world, there is an increasing need for practical, culturally appropriate information on the precautions and specific management strategies to be adopted while fasting. More attention and research needs to be focused on the interaction between diabetes, nutrition and religions. Guidelines that provide appropriate management strategies for diabetes during Vassa will help countless people enjoy a fulfilling fasting experience.