

Ramadan and Diabetes Mellitus

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Physicians working in Muslim countries and communities commonly face the difficult task of advising people with diabetes on the safety of fasting as well as recommending the dietary and drug regimens to be followed during Ramadan. The lack of adequate literature on this subject makes it all the more difficult to answer these questions. To judge correctly whether to medically permit a person with diabetes to fast, it is essential for physicians to have an in-depth understanding of the effect of Ramadan fasting on the Pathophysiology of diabetes mellitus.¹

Most people have no significant change in their blood glucose control.² In some people with diabetes, serum glucose concentration may fall or rise. This variation may be due to the amount or type of food consumption, regularity of taking medications, gorging after the fast is broken, or decreased physical activity. In most cases, no episode of acute complications (hypoglycaemia or hyperglycaemia) occurs in subjects under medical management; only a few cases of biochemical hypoglycaemia without clinical hazards have been reported.³ In general, HbA1c values show no change or even improvement during Ramadan. Only three studies have reported slight increases in glycated haemoglobin levels.⁴ However, one report has emphasized the same increase in non fasting patients as in fasting individuals.⁵ whereas another has shown a return to initial levels immediately after the month of Ramadan.⁶ The amount of fructosamine, insulin, and C-peptide have also been reported to show no significant change before and during Ramadan fasting.⁷

Type 1 and 2 diabetic subjects, intending to fast in Ramadan, should be given instructions one to two months before the advent of the fasting period.

The diabetic person has to be made aware of the risks involved. The category of risk (Very high risk, High risk, Moderate risk and Low risk) according to ADA guideline, published in 2010, should be discussed.⁸ At times the

opinion of religious scholars can be sought. Both opinions will have a greater impact.

South Asia is a Muslim dominated region, with over 50% Muslim population, most of whom desire to fast. Most of the adult diabetic subjects have Type 2 diabetes. However many of them lack appropriate diabetes education. A large number are not aware of the risks of prolonged fasting in Ramadan especially if they are on medication. The Diabetic Association of Bangladesh and Bangladesh Endocrine Society have started an awareness campaign on Diabetes and Ramadan which has been very beneficial.

To have a better knowledge on the pathophysiological changes in Ramadan fasting, it is recommended that a multicentre international controlled clinical trial be employed. This will assess the effect of differences in gender, race, physical activity, food habits, sleep-patterns, and other important variables on the physiological and pathological changes during Ramadan fasting. The results will help to formulate a more comprehensive guideline on all aspects of "Ramadan Fast" especially in people with diabetes.

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