# THE RAMADAN FAST AND THE DIABETIC PATIENT

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Fasting in Ramadan is one of the five pillars of Islam.[1] From the time of puberty it is incumbent upon every Muslim to keep fast during the 29 - 30 days of the month of Ramadan. Based on the probability that fasting could have a deleterious effect on pregnancy, lactation and any severe illness, subjects with these conditions are exempt from this obligation provided a devout doctor has given such advice.[1,2] However, many a Muslim falling into this exempt category, which would include diabetes mellitus, is loath to take advantage of this concession. The reasons for such determination to keep fast are not difficult to gauge.

Perhaps a major factor influencing a diabetic to fast is his/her *taqwa* (God-consciousness). The patient may feel that he would not be discharging his duty as a Muslim, notwithstanding the fact that he is aware of the exemption granted in the event of such a disease. It is of relevance that many type 1 diabetic patients show such an inclination and therefore keep fast during Ramadan[3] (and M A K Omar — personal experience).

It should be noted that in addition to fasting Muslims engage in various other forms of devotion to a far greater degree in the month of Ramadan. The very thought of not fasting creates intense emotional turmoil, since such action would be tantamount to foregoing an integral part of devotion, and Muslims generally have a passionate desire to do their utmost in order to seek the nearness and pleasure of God at this time.

## DIABETES AND FASTING

Fasting during Ramadan is obligatory for every Muslim adult ('O You who believe! Fasting is prescribed to you as it was prescribed to those before you, that you may learn self restraint').[1] However, anyone suffering from illness that will be affected adversely by fasting is exempt ('But if any of you is ill . . .').[1] A diabetic patient could fall into this category; if he wishes to fast, therefore, several important criteria have to be met.

This treatise provides guidelines for medical personnel managing diabetic patients who request advice on fasting

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during Ramadan. It should be emphasised that where obvious contraindications are present, it behoves the doctor to advise firmly against fasting. The patient should be reminded of the Hadith (saying) of our Prophet (peace be upon him), which in essence says that the body has a right over you.

## CRITERIA FOR FASTING

Type 2 diabetic patients are permitted to fast, as the safety of this practice has been established in several studies.[4-6] However, their control should be satisfactory and none of the contraindications outlined below should be present.

Type 1 diabetic patients who are relatively stable, based on satisfactory fructosamine levels or glycated haemoglobin levels, may fast provided they undertake regular home blood glucose monitoring[3] (and M A K Omar — personal experience) and urine analysis for ketonuria if the blood glucose level is above 11 mmol/l, have none of the contraindications listed below, and are under the care of a physician with the necessary expertise in treating diabetes mellitus. Of relevance is an international consensus document on diabetes and Ramadan that specifically advised all insulin-treated diabetic subjects not to fast.[7]

## CONTRAINDICATIONS

Contraindications include the following: (*i*) all brittle type 1 diabetic patients, namely patients who show fluctuating blood glucose levels despite adherence to diet and advice on insulin regimen; (*ii*) poorly controlled type 1 or insulin-requiring type 2 diabetic patients; (*iii*) diabetic patients known to be non-compliant in terms of following advice on diet and oral hypoglycaemic agents or insulin; (*iv*) diabetic patients with uncontrolled hypertension, unstable angina or other serious complications; (*v*) diabetic keto-acidosis; (*vi*) pregnant diabetics; and (*vii*) intercurrent infections.

## EDUCATIONAL PROGRAMME FOR DIABETICS DURING RAMADAN

It is well recognised that patient education plays an important part in the management of diabetes mellitus. As part of overall education, a Muslim diabetic patient should be educated on special problems that may occur during fasting as well as any therapeutic adjustments that may become necessary. It would be appropriate for the patient to be assessed just before the month of Ramadan in order to assess physical well-being, diabetes control and suitability to keep fast (M A K Omar — personal experience). They should be advised to break their fast in the event of hypoglycaemia or hyperglycaemia.

### Diet

Dietary principles should be reinforced. It is common practice in most Muslim communities to consume large quantities of fried foods and carbohydrates during the time of breaking fast or later (after the *tarawih* (night) prayers). Moreover, sweet foods rich in fat, sugar and evaporated milk solids are often taken at these times. Diabetic patients should be advised as to the effects such foods could have on diabetics control. While it would be a rather drastic step to forbid such foods, small amounts may be allowed to improve compliance in general.

## TYPE 2 DIABETIC PATIENTS

The safety of fasting in those with type 2 diabetes mellitus has been clearly shown.[4-6] However, quite often dosage adjustments of an oral hypoglycaemic agent that the patient may be taking become necessary.

If a patient is on chlorpropamide it should be stopped, and a shorter-acting preparation substituted. If the person is on a second/third-generation sulphonylurea (e.g. glibenclamide, gliclazide, glipizide or glimeperide), it should only be taken on breaking fast in the evening (*iftaar*) and not at *suhur* (dawn). If on tolbutamide or a biguanide (metformin), then the morning dose may also be taken if the patient is on a twice-daily regimen, with the proviso that the smaller dose should be taken at *suhur* (before dawn). If on a combination of sulphonylurea and biguanide then the latter only should be taken at *suhur*, with the rest at *iftaar*.

## TYPE 1 DIABETIC PATIENTS/INSULIN-REQUIRING TYPE 2 DIABETIC PATIENTS

Type 1 diabetic patients are generally advised not to fast because of possible hypoglycaemia or problems with control[3,7] (and M A K Omar — personal experience). However, such advice is often not followed. Of interest in this regard is a recent study that established the safety of fasting in relatively stable type 1 diabetic patients.[3]

If possible such patients should be put on a basal bolus regimen, i.e. short-acting insulin before meals with a long-acting insulin at bedtime (M A K Omar — personal experience). This should be the ideal regimen if they wish to fast. While fasting they should take short-acting (regular) insulin before the *suhur* and *iftaar* meals, with an intermediate-acting insulin (e.g. Protaphane or Humulin L) at 10 p.m. However, if they are unwilling to change and are on the conventional twice-daily insulin regimen, then during Ramadan they should take the usual evening dose of short-acting insulin only at dawn with no intermediate-acting insulin, and in the evening the usual morning dose of short-acting and intermediate-acting insulin should be taken.[3]

Premixed insulins (e.g. Actraphane) are best avoided because of the likely risk of hypoglycaemia in the afternoon.

Type 2 diabetes with secondary failure (insulin-requiring) should follow the same regimen as outlined for type 1 diabetic patients (M A K Omar — personal experience).

## Home blood glucose monitoring

Home blood glucose monitoring, now regarded as an important prerequisite in the management of insulin-treated diabetic patients, should be mandatory in insulin-treated patients wishing to fast. In this way a close watch could be kept on overall control as well as hypoglycaemic episodes that may require insulin dose adjustments. Diabetic patients should be advised that neither the pinprick required to do home blood glucose monitoring or injecting oneself with insulin will break the fast.[3,8]

## Assessment of diabetics before, during and after Ramadan

It is important for each diabetic to be assessed before Ramadan. In addition to a physical examination, a glycated haemoglobin or fructosamine level should be estimated and a critical evaluation of home blood glucose monitoring should be undertaken (M A K Omar — personal experience). If it is found that the patient can fast, then advice on diet and modification of drug or insulin therapy should be given (M A K Omar — personal experience). The patient must be informed that in order to ensure satisfactory control further adjustments may be necessary during Ramadan on the basis of blood glucose estimations.

During Ramadan control should once again be assessed on the basis of home blood glucose monitoring as well as clinic-based tests. Enquiry should be made with regard to hypoglycaemic episodes or very high blood glucose levels and appropriate dose adjustments should be made or the patient may be advised to discontinue fasting.

After Ramadan the patient's therapeutic regimen will have to change back to what it was previously, and an overall evaluation will be required.

**References**


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