

# Diabetes and fasting

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RAMADAN is the holy month for the Muslims. All healthy adult Muslims observe fasting from early dawn to sunset for 13-17 hours depending on the season and country. Malaysian Muslims observe Ramadan fasting with due respect, solemnity and enthusiasm.

In the world, approximately two billion Muslims constituting about 25pc of the total world population observe this month. Of the total 220 million diabetes patients in the world, 60 million adult Muslims are expected to observe Ramadan fasting.



Apart from the spiritual benefits of Ramadan fasting, there are a lot of health-related issues worth knowing by the diabetics and the people in general.

The scientific evidence proved that fasting by some categories of diabetics possesses different grades of health hazards that are not universally known by the common people. Even in the recent past the health-related guidelines for the diabetics during fast were confusing to the patients as well as the physicians.

Opinions, beliefs and speculations differ much among the physicians and patients. Health-related issues on Ramadan fasting for the diabetes were practised differently in different parts of the world.

The remnants of those beliefs, many of which are proved to be inaccurate, still exist within the diabetic patients and their families. Several of these issues are worth mentioning here to lessen confusions and uncertainties that will hopefully promote health of the diabetic patients during Ramadan fasting.

## **The potential hazards of fasting by the diabetics**

The most dreaded complications arising from fasting by the diabetics are dangerously low blood sugar (hypoglycaemia), very high blood sugar level (hyperglycemia) and dehydration (low fluid volume in the body).

Until associated with diseases of the heart, kidney and other parts of the body these three hazards are the main concern for the diabetics and their consultants during fasting. In pregnant women, the complications may affect the expectant baby in addition.

There is a worldwide trend by the Muslim diabetics to observe fasting in spite of potential health hazards because either of ignorance, confusing information, voluntarily ignoring the health hazards for spiritual benefits that sometimes lead to serious complications to the extent of losing lives. Very low blood sugar during fasting is potentially a deadly complication.

## **Planning to fast**

Though the ultimate decision to fast or not to fast is by the patient himself it is scientifically justified that there are three categories of diabetics on the basis of the likelihood of developing complications due to fasting.

A. Very high risk category: The diabetics who suffered or admitted in the hospital for acute complications (very low or high blood sugar, associated other illness) from diabetes anytime within the last three months, pregnant women, insulin requiring diabetes (type-1 and advanced type-2 diabetes), the patients whose blood sugar level goes up and down very often and the patients who are compelled to do very hard physical works.

B. High risk category: Uncontrolled blood sugar without acute complications, Mild to moderate kidney failure, diabetes with unstabilised psychiatric illness, patients living alone, heart disease, old age and patients who cannot perceive the symptoms of low blood sugar.

C. Less risk category: Otherwise healthy diabetics with good control of blood sugar, patients treated by metformin, short acting antidiabetic tablets and only on diet control.

Considering the gravity of the probable medical complications it is widely accepted that the following categories of diabetics should not fast.

1. Diabetics with wide fluctuations of blood sugar

2. Newly diagnosed diabetes with poor blood sugar

control

3. The diabetics who grossly and habitually ignore the advice of the doctors (highly noncompliant patient)

4. Diabetics with serious cardiac, renal and other systemic diseases

5. Diabetes with pregnancy

6. Very elderly diabetic with cognitive dysfunction

7. Diabetes with uncontrolled psychiatric disease

8. Diabetics who cannot understand the symptom of low blood sugar

9. Diabetes with uncontrolled epilepsy

## **Minimising complication during fasting**

In spite of all these limitations or risks many of the diabetics observe fasting even ignoring the doctor's advice. The following changes in medicine, diet and behaviour can lower the complications of fasting by the diabetics.

## **Pre-ramadan counselling**

It is highly recommended that every diabetics planning for fasting should consult their physician prior to beginning fasting. It is of tremendous benefit to avoid complications.

## **Modification of drugs**

Diabetics who observe fasting need modification of their treatment regimens.

Those who are on twice daily insulin should take their usual morning dose before breaking the fast (variously named as iftar, future, Buka Puasa, Sungkai) and their usual (pre-ramadan) evening dose before suhur (predawn meal/shehri). It is needed to decrease the dose to 2/3rd of their previous dose in before suhur meal. Those who are on tablet should change their drug. Long acting anti-diabetic for example glibenclamide should be replaced by short acting ones like repaglanide, gliclazide, etc. Total daily dose may need to be decreased by 30pc.

## **Diet and exercise**

During breaking the fast it is advisable to take starchy foods, vegetables and protein (if no kidney disease) and plenty of fluid. Taking sweet carbohydrates (refined carbohydrates) should be limited and too much of fat and fried food should be avoided. However, moderate amounts of all types of food can be taken. The principle is to divide the whole night time food into several small portions. Starchy carbohydrates, vegetables and protein are also good at suhur meal. The diabetics are encouraged to take suhur meal to avoid low blood sugar during the day time. Timing of exercise should be switched to night and the duration should be less.

## **Breaking the fast to avoid complications**

All diabetics should look for any symptom of hypoglycaemia like lightheadedness, tremulousness, sweating, palpitation, lack of concentration etc. But too much reliance on the symptoms of low blood sugar is not advisable. Measure the blood sugar level regularly. It is indicated to break the fast with some sugar/glucose/fruit juice immediately if blood sugar level drops below 3.5 mmol/L (65 mg%). High blood sugar exceeding 16 mmol/L (290 mmol/L) is also an indication for breaking the fast.

Managing diabetics who fast throughout the whole lunar month is challenging for the patient as well as the physician. Patients should have frequent follow-up by the consultant, family physician, dietician and regular self-blood glucose monitoring. Taking insulin and pricking the skin to measure blood sugar level do not harm fasting.

## **The day of Eid-UL-Fitr**

Diabetics need change of drug regimen to pre-Ramadan schedule on the day of Eid-UL-Fitr and should consume food in moderation keeping their blood sugar level within safe level.

All the patients and their family members are encouraged to keep close contact with their physicians and follow their instructions for successful completion of Ramadan fasting ending in Eid-UL-Fitr.

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