

Advice to the Diabetic Patient who wants to FAST during the Holy month of Ramadan:

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This article includes:

1. General issues and advice to the patient during Ramadan fasting (sawm)
2. Specific advice to the physician, and patients regarding education and diabetic treatment adjustments before the start of Ramadan.
3. Which patients should avoid fasting and who should be more careful during the fast?
4. References.

1. General issues and advice to the Diabetic patient during Ramadan

- One has to understand that the Type 1 and Type 2 (insulin dependent & non-insulin dependent) diabetes are different and that some of the Type 2 diabetic patients also require insulin treatment.
- Most of the Type 2 diabetics should be able to fast without much problem but will need some adjustment in their treatment by their doctor.
- Type 1 diabetics can also fast but need pre Ramadan assessment by their doctor / diabetic nurse specialist and advice on insulin regimen change or dose alteration
- All diabetic patients should contact their doctors and diabetic specialist nurse to inform them about their intentions to fast, well before Ramadan begins, for an early diabetic assessment, treatment adjustments and dietary advice.
- Good effects of Ramadan fasting on individuals are self-regulation, self-training, self discipline, increase inner peace and tranquillity. These may have beneficial effects in improving long term poor diabetic control, weight reduction, dietary habits improvement and stopping bad habits like smoking.
- Monitor your diabetes regularly during the fast especially during the early days. Check your blood sugar before Sehri (pre-dawn meal), 3 hours after Sehri, before Iftar (breaking fast at sunset) and 3 hours after the Iftar, this monitoring will help you in making adjustments to your drug and insulin intakes.
- Delay your sehri meal till the latest time and break your fast at the earliest time.
- Avoid very sugary foods like sweet meat, sweet drinks and eat fresh fruit
- Your fast does not break by checking blood glucose or by insulin injection.

- If you are experiencing hypoglycaemic symptoms then it is advisable to break the fast and make up for it after Ramadan.

2. Specific advice to the physicians and patients, regarding education and diabetic treatment adjustments before Ramadan starts.

Education:

The Principles of pre-Ramadan patient review is:

- assessment of physical well being
- assessment of metabolic control
- adjustment of the diet protocol for Ramadan fasting;
- adjustment of the drug regimen e.g. change long-acting hypoglycaemic drugs to short-acting drugs to prevent hypoglycaemia
- encouragement of continued proper physical activity and preferably afternoon sleep
- recognition of warning symptoms of dehydration, hypoglycaemia and other possible complications.

Teaching topics should include:

- Home glucose monitoring.
- Checking urine for ketones.
- Teach how to take pulse, temperature and look for skin infection.
- They should be on special alert for any colicky pain, a sign for renal colic, or hyperventilation, a sign of dehydration and early Ketoacidosis.
- Where and when to seek medical help from if in any trouble.

General dietary guidelines to control blood glucose levels during Ramadan:

- Limit the amount of sugary foods taken at Iftar and Sehri dinner afterwards.
- Fill up on starchy foods such as pasta, rice, chapatti, couscous and bread.
- Include fruits, vegetables, lentils (dal) and yoghurt in your meals at Iftar and Sehri.
- Try to have the meal at Sehri just before sunrise, not at midnight. This will spread out your energy intake more evenly and result in more balanced blood glucose when fasting.
- Choose sugar-free drinks or water to quench your thirst at Iftar, use an intense sweetener where needed, e.g. Canderel, Sweetex, Hermesetas.
- Limit fried foods such as paratha, puri, samosas, chevera, pakoras, katlamas, fried kebabs and Bombay mix to one portion. Measure the amount of oil used in cooking (use 1–2 tablespoons for a four-person dish).

Advice on changes in the diabetic treatment during fasting:

This may depend on the quantity of food consumed at the time of Sehr and Iftar and the duration of the fast, as it varies whether Ramadan falls during the summer or winter months.

1. Patients on 'diet alone treatment'

People whose diabetes is controlled by diet and physical activity alone should be able to fast safely. However, food and drink at the break of fast should be carefully thought out, using low-calorie drinks limiting sweets and fried foods.

2. Patients on Oral (tablets) treatment:

Metformin.

These patients should be able to fast safely, there being no danger of hypos (low blood sugar level) on Metformin alone (monotherapy). However, they should be aware of the need to change the timing of their tablets during Ramadan as follows;

- Full dose should be taken at Iftar and half of normal dose at Sehri. If blood sugars are high on monitoring then take the same dose as before Ramadan at Sehri and Iftar but don't take any during the day.
- Consider a lower dose or even stopping for the duration of the fast, if the blood sugar levels are in the normal range or if the patient feels unwell on Metformin.
- Use low-calorie drinks and limit sweets.

Glitazones (Rosiglitazone and Pioglitazone).

These medications can be taken with or without food at the same time each day (at Seher and Iftar) and there is no need to change the dose.

Sulphonylureas (including combination of sulphonylureas and metformin or sulphonylurea and glitazone).

- If on Glibenclamide, think about changing to a quick-acting sulphonylurea (eg Tolbutamide, Gliclazide, Glipizide) for the Ramadan fast, to be taken once a day before the break of fast meal.
- If blood sugar is lowish then take half of the usual morning dose at Sehri time and full usual morning dose at Iftar, this reverse in order of time of intake of medicine is because of a higher food intake at Iftar and lesser food intake at Sehri due to the oncoming fast of the day.
- Chlorpropamide or Glimepiride would be safe providing there is some dose reduction to allow for their long-acting nature.

Repaglinide and Nateglinide

Repaglinide or nateglinide may be particularly useful for fasting because of its short action and it can be taken when eating at Iftar only or at Iftar and Seher. These have been shown to be safe and help with glycaemic control during Ramadan compared with sulphonylureas.

3. Patients on Insulin:

People who treat their diabetes with insulin are of two types.

a. They have Type 2 Diabetes and may be taking insulin and tablets together or insulin only.

b. Type 1 diabetes.

Those with Type 1 diabetes with poor control, hypo unawareness, frequent hypo and high blood sugar, severe kidney and eye complications and those who are prone to frequent diabetic ketoacidosis are advised not to fast.

Advice to patients with Type 2 diabetes on insulin treatment is as follows:

- It is very important not to stop taking insulin during Ramadan.
- Consider a lower dose (1/2 to 1/3rd of normal morning dose) at Sehri and usual full morning dose at Iftar time. (as a general rule)
- Consider changing from pre-mix insulin to long-acting insulin (eg; Isophane, detemir or glargine) to avoid higher risk of hypos at mid-day/mid-fast, either at Sehri or at Iftar.
- Pre-meal, short acting insulin analogues (Lispro and Novo-Rapid) are useful for fasting because they allow people to inject during or just after their break of fast meal, and give a lower risk of hypoglycaemia during the night. These have been shown to help with glycaemic control during Ramadan compared with regular human insulin.
- Where possible, take rest during the day to help avoid lowering of blood glucose levels.

Advice to the patient with Type 1 diabetes on insulin treatment is as follows:

- Patients with brittle diabetes (with poor control, hypo unawareness, frequent hypo and high blood sugar, severe kidney and eye complications and those prone to frequent diabetic ketoacidosis are at a high risk of developing severe complications and are advised not to fast).
- Regular blood glucose checks, especially pre sehri, 3 hours after Sehri, pre Iftar and 3 hours after Iftar, it will help in adjusting their insulin dose if needed.
- Recommended regimen could be; long acting basal insulin like Ultralente, Glargine or Detemir (In place of Isophane), at Sehri or Iftar and giving short acting insulin analogue (Lispro or humalog) 20-30% of the usual

morning dose at Sehri and usual full morning dose at Iftar, to avoid hypoglycaemia at mid day.

- Where possible, take rest during the day to help avoid low blood glucose levels.
- These patients should have a fast and easy access to their local specialist diabetic nurse and physicians and they should be aware of the situation before hand.

Which diabetic patients should avoid fasting:

It should be remembered that in the end of the day it is the choice of the patient to fast or not. If they are just told not to fast as a general rule and are not advised properly according to some guidance, then the results could be more disastrous as some will chose to fast and may end up with complications and still hesitate to contact their doctors!

The following patients are better off not fasting in Ramadan and should rather pay Al-fidyah (recompense i.e. feeding a poor person for each missed day);

1. Patients with brittle Type 1 diabetes (with poor control, hypo unawareness, frequent hypo and high blood sugar, severe kidney and eye complications patients with poorly controlled hypertension, unstable angina and those prone to frequent diabetic ketoacidosis)
2. Patients with poor diabetic control who are non compliant in terms of following the advice and treatment.
3. Pregnant Type 1 diabetic patients and those on insulin treatments with Type 2 diabetes. (Diet control pregnant women with Type 2 diabetes may fast if they wish).
4. Very elderly patients on insulin (Type 1 or Type 2) who have any degree of alertness problem.
5. Children under the age of puberty.
6. Those with learning disabilities, acutely ill, very old and frail
7. Breast feeding mothers with Type1 or Type 2 on insulin.

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