

## Medical Guidelines

## Abridged Ramadan Guidelines for Diabetic Patients

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Rehman AU. Abridged Ramadan Guidelines for Diabetic Patients. J Pak Soc Intern Med. 2022;3(1):82-83

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Millions of Muslims with diabetes want to fast during the holy month of Ramadan. It is the duty of healthcare professionals to guide them so that they can have this great spiritual experience without putting themselves at undue risk. These brief guidelines, mostly based on expert opinion, are developed by Pakistan Society of Internal Medicine (PSIM). They are primarily intended to provide brief and easy-to-access practical information to Primary Care Physicians and do not replace the individualized judgment.

1. Major physiological changes during fasting.
  - a. Prolonged hours of food and water deprivation.
  - b. Changes in the meal timings.
  - c. Changes in the meal composition.
  - d. Changes in the sleep pattern and circadian rhythm.
2. Potential risks of fasting:
  - a. Hypoglycaemia
  - b. Dehydration
  - c. Hyperglycaemia
  - d. Diabetic ketoacidosis
3. People with diabetes who can fast safely
  - a. Most type 2 diabetic patients who are on medications that are known not to cause hypoglycaemia or have got their medication adjusted by their physicians prior to Ramadan can fast safely.
4. Patients with diabetes who should not fast (due to high risk to their health). They must consult their physicians if they strongly desire to fast.
  - a. Type 1 diabetes requiring multiple injections of insulin.
    - b. People with history of frequent hypoglycaemias
    - c. People with hypoglycaemia unawareness
    - d. People with significant kidney disease
    - e. People with significant liver disease
5. When should blood glucose be tested\* and what action should be taken?
  - a. Before Sehri
    - i. < 100 mg/dl; skip morning dose of medication
    - ii. 100-130; continue usual medication.
    - iii. > 130; Can fast today but should up titrate the night medication.
  - b. At approximately 2-4 pm
    - i. < 70; break the fast
    - ii. 70-130; monitor glucose hourly till iftar or as per symptoms
    - iii. > 130 mg/dl; no action needed.
  - c. Whenever symptoms are suggestive of hypoglycaemia
    - i. < 100; break the fast and consume carbohydrate.
    - ii. 70-130; break the fast if patient is known to have symptomatic hypoglycaemia at higher sugar level.
    - iii. > 130; consider other possible causes of symptoms.
6. Non-Insulin medication
  - a. Metformin monotherapy
    - i. Once daily (standard or XR preparations), should be taken at iftar.
    - ii. Twice daily, should be taken at Sehri and Iftar.
    - iii. Thrice daily, morning dose should be

- taken with Sehri, afternoon and night dose should be taken together at iftar.
- b. Acarbose can be safely continued with Sehri and Iftar.
  - c. DPP4i (sitagliptin and vildagliptin) monotherapy can be safely continued as once or twice daily.
  - d. Metformin and DPP4i combos can be safely continued twice daily. XR formulation are best taken at iftar.
  - e. SGLT2 inhibitors (empagliflozin and dapagliflozin) can be continued but should be taken at iftar to bring the peak diuretic effect during non-fasting period.
  - f. Metformin and SGLT2 inhibitor combination may be continued twice daily if patient does not have too much diuresis during the day. Otherwise, morning dose of combo may be replaced with metformin alone.
  - g. GLP1-RA (liraglutide and dulaglutide) should be continued without any alteration.
  - h. Sulfonylureas: Older generation (Glibenclamide) have the potential of causing severe and prolonged hypoglycaemia and should be discontinued during Ramadan. Second generation SU (glipizide XR and glimepiride) are less likely to cause hypoglycaemia but should be given as OD at iftar.
7. Insulins
- a. Basal insulin (NPH, glargine and detemir) can be continued at Iftar. Dosage should be adjusted according to pre-Sehri plasma glucose.
    - i. Increase basal insulin by 4 unit if glucose >130.
    - ii. Continue same dose of basal insulin if fasting glucose level is 90-130.
    - iii. Reduced basal insulin by 20% if fasting sugar is 70-90. Example (30-20%=24)
  - b. PreMix insulins (human and analogues)
    - i. Pre-Ramadan morning dose should be taken at Iftar and half of Pre-Ramadan night dose can be taken at Sehri.
  - c. Free-Mix insulins (NPH and Regular mixed prior to injection)
    - i. Pre-Ramadan morning and evening doses can be swapped. If previous control was particularly good, Sehri dose may be further reduced to half.
8. Food: High glycaemic index foods should be avoided especially at Iftar. Sugary drinks may be consumed in small quantities at Iftar (max one glass). Non sweetened or artificially sweetened drinks can be consumed as desired. Patient can open fast with dates and small snack and take his medication. After Namaz he may take his Iftar meal.
9. Up titrate your medication and insulin if you are likely to indulge in extra carbohydrate intake during Eid festivity.