NHS
Greater Glasgow and Clyde

CLINICAL GUIDELINE

Diabetes, Management During Ramadan

A guideline is intended to assist healthcare professionals in the choice of disease-specific treatments.

Clinical judgement should be exercised on the applicability of any guideline, influenced by individual patient characteristics. Clinicians should be mindful of the potential for harmful polypharmacy and increased susceptibility to adverse drug reactions in patients with multiple morbidities or frailty.

If, after discussion with the patient or carer, there are good reasons for not following a guideline, it is good practice to record these and communicate them to others involved in the care of the patient.

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RAMADAN AND DIABETES

Background and General Principles

The religious obligation of fasting for the 29 or 30 days of Ramadan, the 9th month of the Muslim calendar is for every mentally and physically healthy adult Muslim. Adulthood is determined as the onset of menarche in a female and first seminal discharge in a male (or age 14.5 years if these have not occurred by this age). As the timing of Ramadan is based on the lunar calendar, Ramadan falls

~11 days earlier annually. Therefore, over a period of ~35 years, Ramadan passes through all four

seasons; i.e. shorter fasts in the winter months and longer fasts in the summer. Thus, the fasts will stretch to up to 20 hours in Glasgow in the summer. Typically the onset of dawn is 1.5-3 hours before sunrise, and is astronomically or mathematically calculated depending on the preferred methodology used by one's local mosque. Owing to the temperate location of Scotland, valid difference of opinion exists in relation to the onset of the fast in summer months.

For the Muslim fasting primarily involves the abstaining from food and conjugal relations. The use of medication is dependent on the route the medication is consumed. As a general rule, all forms of oro-nasal medication that results in the medication going below the throat is not permitted. Difference in scholarly opinion exists in relation to permissibility of the use of ear and eye drops. Use of subcutaneous, intramuscular or intravenous medication generally does not invalidate the fast, although there is difference in scholarly opinion if the drug/purpose is used for nutrition. Use of inhalers is primarily not allowed, although some scholars may permit their use. The use of topical medication is permitted and checking ones capillary blood glucose also does not invalidate the fast.

The above restrictions are lifted out with the hours of fasting. However it is common practice to have one meal (known as suhur or sehri) just before dusk and another (known as iftar) after sunset. The size of such meals and consumption of other meals will vary, particularly in relation to the duration of the fasting period.

Breaking the fast and exemptions for fasting

Islam permits, and indeed supports, those with appropriate ailments to break or be exempted from fasting, the two main options being:

- Making up the missed fast when health permits them to do so—either when the illness is no longer present, such as in acute illness, or when the illness is not worsened by fasting at another point in time in relation to chronic illness.

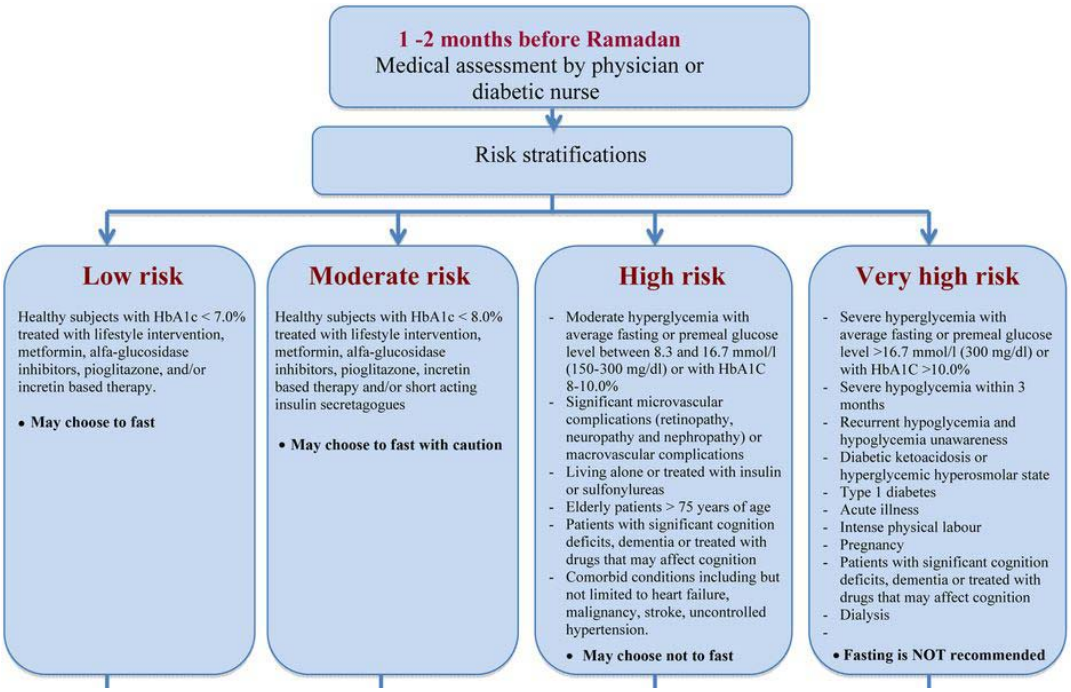
- An exemption from fasting in those whose illness will not permit them to keeping fasts indefinitely, this being replaced by a requirement to feed the poor.

Appropriate ailments can also include old age, a condition which is stable, but through fasting, the condition can adversely affect health or increase the risk of doing so. This also includes the abstaining from the use of medication which can cause the aforementioned. Whilst the default is for pregnant and breastfeeding mothers to fast, if there is any concern or risk to mother or baby, then fasts can and should be broken and not kept.

It is important that people with diabetes recognize the nature of their ailment so as to determine whether they would be expected to make up the fast at a later date when safe or appropriate to do so, or else feed a poor person for missed fasts if such an opportunity is not foreseen.
Thus people with diabetes thus need a thorough assessment, as the type of diabetes, regular treatment, acute issues, complications/comorbidities, social and lifestyle factors to determine what is best for them.

Risk stratifying patients

In general, safe fasting and feasting is usually possible for the majority of people with type 2 diabetes if they follow medical advice. The flow diagram below provides general guidance on risk stratifying patients and advice on fasting status. Although people with type 1 diabetes are advised not to fast, they should be considered on a case by case basis if on a basal bolus insulin regime, have good control, have had and follow appropriate education principles pertaining to self-management.



Adapted from BMJ Open Diabetes Research and Care 2015;3:e000108

Whilst the above is a useful guide, individual patient circumstances (including favourable circumstances) need to be considered and this should be discussed fully with the patient (and where appropriate their family). Factors such as concordance with medication ability and reliability for the patient to monitor blood glucose, access to specialist advice during the month and language barriers, role of driving (especially if no insulin and sulphonylureas) also need to be considered.

Seasonal factors should not be overlooked (table below), particularly in the summer months and may influence a decision to temporarily abstain from fasting/consider fasting in the winter months. This may be of particular relevance to those on basal bolus insulin, bd insulin and sulphonylureas.

Risk	Impact of long fasts
Dehydration	Will be exacerbated by heat
Diabetic ketoacidosis	More likely if glycaemic control is poor before the onset of Ramadan
Hyperglycaemia	Will making fasting more difficult if thirst becomes a significant symptom. If hyperglycaemia is significant, then this can ultimately lead to diabetic ketoacidosis and dehydration
Hypoglycaemia	More likely in patients on insulin and insulin secretagogues; and patients in whom lifestyle changes have not been fully considered/ anticipated when modifying regime for Ramadan

Risks to be considered during longer fasts

Advising your patient and religious sensitivities

Ultimately the decision to fast or not rests with the patient. It is worthwhile noting that the majority of Muslims adhere to one of 4 legal schools when it comes to rulings relating to religious actions and obligations. However some Muslims may opt to follow another legal school (or no legal school) particularly when faced with a degree of hardship when in situations where there are complexities involved. Thus if one legal school does not permit the use of ear drops whilst another one does, it would be considered valid for a patient to follow such an opinion. Not all patients are aware of these aspects and therefore this should be mentioned to them, in case they wish to explore.

In general, if a doctor feels it is in a patient's best interest not to fast and the decision has been based on a thorough assessment of all the medical and religious factors, then from a religious perspective, the patient is at the very least recommended to follow this advice, while some scholars may deem this verging on obligatory for some patients. Some patients may only accept such advice from a Muslim doctor knowledgeable enough in the clinical aspects of the case, although the logistics of achieving may not be plausible. In such a circumstance where it is not plausible, the patient should be advised to speak to a religious authority whom they trust conveying the clinical advice and reasoning given to them, so that they can explore their options. Finally it may be appropriate for a patient to be given a list of questions to ask their imam or scholar if the doctor needs further information to help facilitate any medical opinion that needs to be reached

It should be recognised that patients can find it difficult for social and religious reasons not to fast. It is therefore important that you:

- Reassure them that due to their ailment they are not contravening the Islamic Law (the Shar'iah), but actually correctly following it.

- Highlight that the maintenance of good health is imperative in Islam even during Ramadan.

- Inform them that religious leaders have strongly advised that those with health conditions seek professional advice and comply with this before fasting

- Remind them that the chronically ill may substitute fasting by providing food each day for the “poor”. This act of generosity instead of fasting (called fidya) does not diminish a patient’s reward from God and that patients should not forget about the other voluntary acts out with fasting that they can continue to participate in during the month e.g. the congregation night prayer and giving in charity.

Dietary Advice

Hydration

Limitation of fluid intake and prolonged fasts during the summer months pose a risk of dehydration. Fasting individuals should drink sufficient water after opening their fast and before beginning the next fast to prevent dehydration and caffeine containing drinks should be avoided to prevent diuresis.
Many patients will opt to pray the voluntary night (tarweeh) prayer either in the mosque or at home. This can involve prolonged periods of standing in a warm environment. Therefore patients should carry additional fluid with them to consume between prayers, so as to not miss out on replenishing stores in the narrow tom-frame in the summer fasts. As a general rule, two litres should be consumed during the non-fasting window, but medical advice should be sought/provided if this guidance needs modification based on lifestyle (e.g. strenuous work) or comorbidities (e.g. heart failure or kidney disease)

Diet

Fasting individuals should follow a healthy balanced diet. Slow energy release foods should be consumed such as wheat, oats, lentils, barley, semolina, beans and rice before and after fasting

Fibre-rich foods are also digested slowly. These include bran, cereals, whole wheat, grains and seeds, potatoes with the skin, vegetables and almost all fruit

Foods to avoid are those that contain refined carbohydrates (sugar and white flour), fatty foods (cakes, biscuits, chocolates and sweets such as Indian mithai) as well as high-fat cooked foods (such as parathas, oily curries and greasy pastries).

Dates, which are the traditional food to be consumed when opening the fast can be consumed, but an excessive quantity should be avoided, particularly if other sugar-rich foods are being consumed at the same time.

Cooking methods involving deep frying and excessive use of oil should be avoided and instead a healthier approach of shallow frying, grilling or baking should be adopted.

Modifying/titrating ant-diabetic medication

General guidance is available in relation to oral medication as well as injectable therapies in a number of consensual, clinical studies and expert opinion papers. It has to be recognized that the evidence base is small and ever evolving. Further, owing to the multiple patient- and fasting-specific factors, these papers do not replace clinical judgment.

Local/national guidance is currently under review/in progress, howver the following table provides a useful summary of what papers to refer to in relation to type of medication a patient is on.

Drugs	Guidance/Paper	Link
Metformin Sulphonylureas Glitazones DPP IV inhibitors	Management of people with diabetes wanting to fast during Ramadan Recommendations for management of diabetes during Ramadan: update 2015	http://www.bmj.com/content/340/bmj.c3053?panels_ajax_tab_trigger=&sso= http://drc.bmj.com/content/3/1/e000108
SGLT2 inhibitors	Recommendations for management of diabetes during Ramadan: update 2015 Use of SGLT2 inhibitors during Ramadan: a survey of physicians' views and practical guidance	http://drc.bmj.com/content/3/1/e000108 http://www.bjd-abcd.com/index.php/bjd/article/view/121
GLP-1 Agonists	Recommendations for management of diabetes during Ramadan: update 2015	http://drc.bmj.com/content/3/1/e000108
Insulin	Management of people with diabetes wanting to fast during Ramadan Recommendations for management of diabetes during Ramadan: update 2015 Summer–winter switching of the Ramadan fasts in people with diabetes living in temperate regions	http://www.bmj.com/content/340/bmj.c3053?panels_ajax_tab_trigger=&sso= http://drc.bmj.com/content/3/1/e000108 http://onlinelibrary.wiley.com/wol1/doi/10.1111/j.1464-5491.2011.03519.x/full

Finally it should not be overlooked that a patient may have another ailment that makes fasting inappropriate/unsafe, thus a full past medical history should be sought and discussion with /re feral to appropriate other specialists or the GP should be undertaken for such patients.

Local expertise

Dr Nazim Ghouri, Consultant Diabetologist (Queen Elizabeth University Hospital and Gartnavel General Hospital) has experience in advising and managing patients with diabetes and general medical problems in the context of Ramadan, having published on the subject and spoken at Diabetes UK on this topic. He is also religiously knowledgeable in the legal rulings and has access to local scholars if the need arises to seek further religious guidance.

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Mrs Samina Ali, Prescribing support pharmacist was involved in the critiquing and revision of this latest version

The following web resources are accurate useful for patients wanting more information on Ramadan and diabetes:

http://www.communitiesinaction.org/Ramadan%20Health%20and%20Spirituality%20Guide.pdf

https://www.diabetes.org.uk/ramadan