

Fasting and Diabetes from a Local and Global Perspective-Commentary

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ABSTRACT

Fasting is a common practice among people with diabetes (PWD). As healthcare providers we are in a position to assist those who choose to fast to manage their diabetes effectively. Diabetes self-management education for PWD is needed both prior and during the time of fasting to best metabolic control.

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Fasting and diabetes has been on my radar from a local perspective for years. As a dietitian many of my patients chose to fast with the goal to promote better health. Recently, my perspective on fasting became global as working with the managing diabetes during Ramadan initiatives.

In April 2016, International Diabetes Federation (IDF) and the Diabetes and Ramadan (DAR) International Alliance issued Diabetes and Ramadan Practical Guidelines that helps healthcare professionals to help people with diabetes (PWD) to be safe while fasting (1).

Besides Ramadan, fasting is also a spiritual aspect of many other religions as it accompanies a time of prayer, reflection and purification. Fasting can also be physiological when at sleep or skipped meals; overnight fasting for blood test or procedures; health related with cleanses or detoxifying; as well as unintended fast with a lack of appetite, skipping meals or financial barriers of food supply.

Many PWD integrate fasting into their disease management to achieve better clinical

outcomes (2,3). In some, it results in short-term improvements while in some it can be part of unhealthy relationship with food or eating disorder.

In diabetes care, the biggest priority for healthcare providers is to make sure that the fasting, if chosen by PWD is not creating any harm in short or long term. Therefore, it requires that as healthcare providers we know the physiological and psychological (not related to religion) aspects of fasting as well as clinical management of it.

From my own perspective, I have decided to fast during the Ramadan in order to experience how it feels. This way, I can better understand my patients. I had experienced the aspects of hunger, self-control, euphoria and the act of breaking the fast. All helped me to realize that fasting in isolation as a non-diabetes person and for non-religious purpose, is different as part of group religious ceremony. In other words, when Muslims fast, they are surrounded by others fasting within socially accepted norm. For me, it seemed to be

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experienced differently, as more challenging when I was the only person fasting among family, friends and community who were eating.

Coming up with the guidelines for managing diabetes during Ramadan is a first step to safe fasting for PWD. However, the aspect of fasting for nonreligious reasons is experienced and managed differently in many cases. Therefore, the next step is to study and examine short-term fasting and glycemic control for those on medication and insulin. More studies are needed that help to determine the effective medication dose management, timing of food, duration and breaking the fast. Also, it would be beneficial to learn from dietitians and nutrition professionals about strategies needed to help our patients to transition from fasting to healthy eating practices. This way, occasional fasting that is not religious based, does not lead to unhealthy relationship with food and eating disorders.

Some people change the kind of food they eat during fasting while some will eat what they typically would but at different times. Prolonged fasting in some fasting people causes overeating and consequently hyperglycemia. Helping PWD choose foods that optimize fasting can lead to establishing healthy meal planning in a long run, which include more slowly absorbed foods with lower glycemic index before the fast. Choosing these types foods will help to keep blood glucose levels more even during the course of the fast. When breaking the fast, the opposite is the case by including only small quantities of sugary and fatty foods.

Of course, testing blood glucose levels more often is essential as to identify hypoglycemia. Having a hypoglycemia/hyperglycemia management plan and anti-diabetic oral agents/insulin regimen established several weeks prior to fasting, will make the whole experience safe and more meaningful.

We want our patients to talk to us about their plan to fast. As healthcare providers, we do not need to understand the religion but assess the convictions and clinical management of fasting. It is important to ask about previous fasting experience usual eating patterns, restricting food, bingeing, purging, manipulating insulin/medication, blood glucose control, exercising patterns, herbal and supplement management.

The additional complexity happens when

fasting is part of eating disorder among PWD. It requires collaboration among members of a healthcare team to address various aspects of a patient's health. Dietitians and psychologists both are vital parts of this team. Nutrition counseling focuses on addressing disordered fasting, eating behaviors and beliefs about food, weight, and exercise. The challenge is addressing carbohydrate intake while being sensitive of glucose and weight management which is often contraindicated in individuals who are obsessed with food and body size.

Choosing effective consulting/communication strategy is important as eating disorders are not about food, calories, weight, or vanity but related to unresolved emotional issues. The immediate goal is to stabilize the glucose control and symptom management. The long-term goal is to regain metabolic balance, correct malnutrition and, restore the patient to a normal weight. Engaging family members living with a PWD might be needed in case of manipulation of insulin/medication intake. If a patient uses an insulin pump, switching to single injections often is recommended.

When providing nutrition recommendations and support for PWD, is best to focus on holistic and long-term healthy eating practices that will contribute to not only improved health but also healthier relationship with food. Minimize the desire to "diet" as a temporary strategy to see food as a means to manipulate weight or psychological state of mind that defines a PWD as a failure because they cannot control what they eat. What works well is a "non-diet" approach that includes all food groups and does not exclude needed nutrients and desirable foods. Dieting can contribute to distorted eating habits that can lead to eating disorders or ongoing failures in attempts to control unrealistic expectations.

Some commonly used approaches to establish healthy eating patterns include eating at consistent times, intuitive eating, mindfulness, portion control and including all of the food groups. Frequent communication with the dietitian on the progress of eating healthy and fasting is needed. Referral to psychologists might also be indicated as many distortions in fasting and eating occur with anxiety, depression, obsessive-compulsive disorder, bipolar disorder, borderline personality disorder, and posttraumatic stress

disorder that require appropriate psychological interventions.

In summary, here are some main considerations for PWD who fast:

1) Safety first, that involves the comprehensive medical and behavioral assessment before going on a fast. Set up a strategy related to medication, nutrition, and hydration, monitoring blood glucose and avoiding health emergencies.

2) Assessment and management of health risks such as hypoglycemia and hyperglycemia. Dehydration can raise the risk for serious complications among susceptible people, especially those with kidney or heart diseases.

3) Effective strategies for breaking the fast and knowing when to quit. Ending a fast if hypoglycemia or hyperglycemia occurs as well as treating it.

In summary, there are many benefits of fasting and it can be done safely for PWD when consulting with skilled and competent healthcare providers. Clinicians need to understand that while fasting, the body undergoes many processes like brain increases neurotrophic factors, improving cognitive function, while also

being able to function under stress, causing an increase in stress resistance. Other functions include decreased IGF-1, and leptin in the blood. Increase in ketone bodies, adiponectin, and ghrelin. The liver and muscles increase insulin sensitivity, while fat cells undergo lipolysis and reduced inflammation. The intestines reduce food intake and also reduce cell proliferation. Fasting also reduces the resting heart rate, blood pressure, and increase stress resistance.

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