

NON - PHARMACOLOGICAL MANAGEMENT

Diabetes and diet in Ramadan

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Abstract

Ramadan, the month of fasting, is observed by Muslims all over the world. Fasting is obligatory for all healthy adult Muslims which amounts to refraining from eating and drinking from predawn to sunset. The dietary patterns therefore totally change. For people with diabetes, instead of taking 5-6 meals, it is reduced to 2 or 3 meals in 24 hours. Good glycaemic control can be accomplished by people with diabetes, maintaining appropriate diets. It is suggested that during Ramadan similar general dietary guidelines should be followed as those throughout the year. The pre dawn meal should be taken as late as possible, before the start of the fast and should have a high proportion of carbohydrates with fibre. The traditional sugar drinks and foods rich in fat taken at iftar should be avoided. The evening meal or dinner should be consumed as early as possible at iftar and contain whole wheat flour chapattis, vegetables and a meat dish. Salads increase the fiber intake. A glass of milk or fruit at bedtime will maintain normoglycaemia till suhur.

Keywords: Ramadan, Fasting, Suhur, High fibre.

What is Ramadan?

Ramadan is the ninth month of the Islamic calendar with a duration of 29-30 days. Fasting in Ramadan is obligatory for all adult healthy Muslims. The time period of fasting varies from around 10 to 20 hours depending on the geographical location and the time of the year.^{1,3}

Although the Quran has specifically exempted people with a medical condition from this duty many patients still insist on fasting. Our aim should be to provide people with diabetes with appropriate pre Ramadan educational counseling so that they can observe the Ramadan fasts safely.

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During fasting, a person must abstain from eating, drinking, taking oral medications and smoking from predawn to sunset, however, there are no restrictions on food or fluid intake between sunset and dawn. It usually consists of two main meals; a predawn meal (suhur and the sunset meal (iftar)).³

Traditions in Ramadan

Fasting in Ramadan causes a major change in the dietary patterns of individuals with diabetes in comparison to the rest of the year.³ Changes in meal timings also take place and a person takes 2-3 meals a day as opposed to the 5-6 meals that are suggested normally. People generally tend to over eat during this period and the diet is typically rich in carbohydrates and fats which may lead to post prandial hyperglycaemia as well as weight gain. It is a common misconception that since pakoras (fritter) are made of besan (gram flour), which is generally considered good for people with diabetes because of its low glycaemic index, eating them will cause no harm. Social gatherings such as iftar parties are quite common during Ramadan and result in over indulgence at Iftar. Fear of hypoglycaemia may also cause a person to overeat at suhur thus raising blood Glucose.

The Correct Diet in Ramadan

Benefits of Ramadan fasting can only be availed by people with diabetes — who can maintain appropriate diets. It is suggested that the diet during Ramadan should not differ from the general dietary guidelines for this group of people which are followed throughout the year. This includes people - on oral antidiabetic drugs as well as those on insulin.

- ◆ A healthy balanced diet and distribution of calories into 2-3 smaller meals during non fasting hours helps to prevent excessive rise in post meal blood glucose.³
- ◆ The pre dawn meal should be taken as late as possible before the start of the fast and should mainly consist of

Suhur



**Vegetable Omelette
2 Bread Slices
1 Cup Tea without Sugar
360 kcalories**



**1 Roghni Roti
1/2 Cup Yogurt
1 Kabab
1 Cup Tea without Sugar
507.4 kcalories**

Iftar



**1 Khajoor
1 cup Dahibarey with Chana Chat
200 Kcalories**

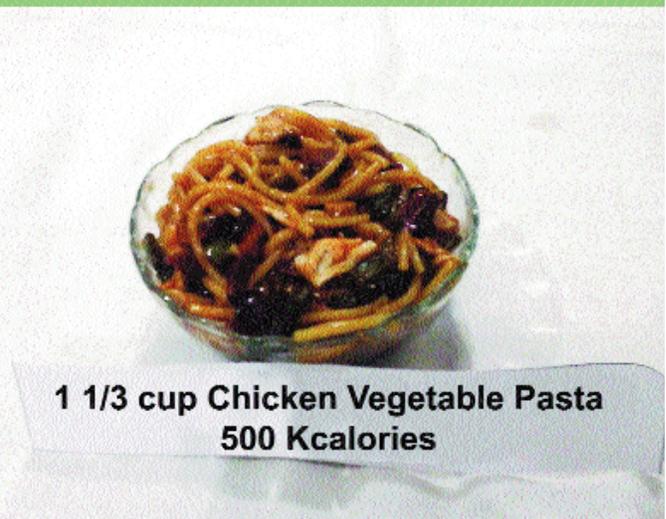


**Pinch of salt
1 Cup Fruit chat
100 kcalories**

Dinner



**1 cup Tossed salad
Kofta curry
1 1/2 Chapati
511.6 kcalories**



**1 1/3 cup Chicken Vegetable Pasta
500 Kcalories**

Bed Time

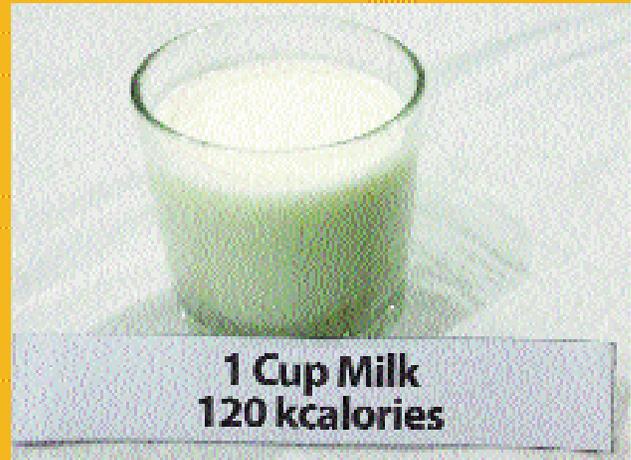
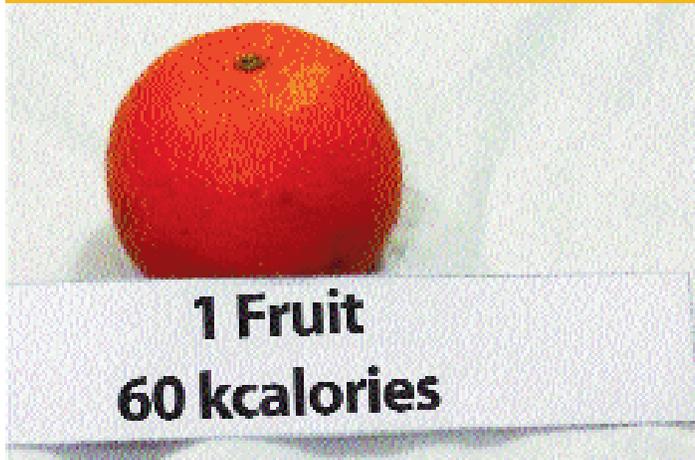


Table: Menu choices for suhur and iftar.

	Menu 1	Kcal	Menu 2	Kcal	Menu 3	Kcal
Suhur	1 1/2 Chapatti 2-3 ounces Mince 1/2 C Yogurt/ 1C Lassi 1 C Tea without sugar	480 kcalories	Vegetable Omelette 2 Bread Slices 1 Cup Tea without sugar	360 kcalories	1 Roghni Roti 1 Kebab 1/2 Cup Yogurt 1 Cup Tea without sugar	507.4 kcalories
Iftar	1 Khajoor (Date) 1/2 c Kidney Beans with Vegetable	255 kcalories	1 Khajoor (Date) 1 Cup Dahibarey with Chana Chat (Chickpeas)	200 kcalories	Pinch of Salt 1C Fruit Chat 3 Vegetable Pakoras	180 kcalories
Dinner	Onion & Cucumber rings 1 1/2 Chapatti 2 oz Chicken Vegetable curry 1 Fruit	540 kcalories	1 Cup Tossed Salad Kofta curry (Mince balls) 1 1/2 Chapatti 1 Fruit	521 kcalories	1 1/3 cup Chicken Vegetable Pasta	500 kcalories
Bedtime	1 Cup Milk	120 kcalories	1 Cup Milk	120 kcalories	1 Cup Milk	120 kcalories
Total Kcalories		1395 kcalories		1201 kcalories		1307 kcalories

complex carbohydrates to prevent acute rise in blood glucose and prevent rapid stomach emptying.

- ◆ Complex carbohydrates include whole grain cereals, semolina, vegetables such as beans and lentils and fruits etc.
- ◆ High calorie foods rich in refined carbohydrate and high fat foods such as samosa (baked pastry with savoury filling), pakoras (fritters), spring rolls, pehni (sweetened thread like noodles), paratha (fried flat bread), jalebis (deep fried sweetened flour pretzels) should be avoided.
- ◆ Eating dates traditionally marks the end of a fast but they are very rich in sugars. A portion of 1-2 dates may however not raise blood glucose.
- ◆ It is advisable to have the evening meal or dinner as

early as possible at Iftar. This should comprise of whole wheat flour chapattis, vegetables and a meat dish. Salads should be taken to increase the fibre intake.

- ◆ A late night snack with a glass of milk or a portion of fruit will maintain normoglycaemis till the Suhur meal.
- ◆ It is suggested that non calorie fluid intake be increased during non fasting hours.
- ◆ Avoid caffeine-based drinks such as tea, coffee and cola. Caffeine is a diuretic and stimulates — water loss through urination.

Consideration for Special Populations

Apart from the basic guidelines individuals with specific conditions should take their medical condition

in consideration

◆ Diabetics with mild renal insufficiency must remember fasting can cause dehydration thus compromising the kidney function further. When breaking the fast, they should avoid high-potassium and phosphorous diets (such as dates, apricots, fried food, nuts, cheese, soft juices and drinks, tea, coffee). Moreover, they should drink up to 1-2.5 L of water in order to re-hydrate themselves, but avoid drinking too much as it can lead to fluid overload.⁴

◆ Fasting in diabetics has shown to worsen dyslipidaemia as shown by several studies. It is advisable to limit fat intake to control cardiovascular disease risk factors.⁵

◆ Pregnancy is a physiological state with particular nutritional requirements for growth of the developing foetus. Gestational Diabetes poses a great challenge in meeting these needs. Inadequate calorie intake, excessive carbohydrate restriction can lead to ketosis which is associated with adverse outcomes to the foetus. Due to the change of schedule in Ramadan and prolonged starvation, attention should be given to not to skip bedtime snack which can be taken after or in between tarweeh, and take suhur as late as possible. The general dietary guidelines remain the same.⁶

Physical Activity During Fasting

Apart from consuming a calorie dense diet, there is often a decrease in physical activity. Normal levels of exercise

during Ramadan should be undertaken however the duration and intensity of exercise should be modified i.e. 2 hours after sunset.³ It is prudent to avoid exercise in the final few hours of the fast when the risk of hypoglycaemia is maximal particularly in insulin-treated patients.² If Tarawih prayers are performed they should be included in a person's daily exercise regimen.

In conclusion, fasting can be accomplished in people with diabetes with proper education individually prior to Ramadan. Approaching the fast with discipline and maintaining a balanced diet is the key to successful fasting.

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