

Sweet Cravings in Diabetes: Desserts that are not so Sinful

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Abstract

Desserts form an important and integral part of South East Asian cuisines and are often associated with festive eating and celebrations. Since most desserts are high in caloric content and contain refined carbohydrates and saturated or trans-fats, their consumption poses obvious challenges in diabetic individuals. Meals should not only meet the biological needs of an individual but should also be palatable, appealing and retain their hedonistic aspects of taste, smell and visual appeal. While remaining within the principles of medical nutrition therapy, desserts can be incorporated into meals with use of whole grains, low fat dairy or yoghurt, fruits, vegetables and pulses as their primary ingredients. Intake of free sugars can be minimized by using non-nutritive sweeteners, soluble fiber, condiments and spices. In this article, we focus on ways to encourage healthy eating among diabetics while still retaining pleasurable foods such as desserts.

Keywords: Desserts, healthy desserts, nutrient-dense food, festive eating, diabetes.

Introduction

Desserts include a sweet course usually served at the end of a meal. For long, desserts have been associated with celebrations and festivities and feasting is considered incomplete without the sweet servings. This is particularly true for South East Asian cultures including India, which was home to the invention of refined sugar granules from sugarcane juice approximately 2000 years ago.¹ In fact, the word 'sugar' has its origin from Sanskrit 'Sharkara' and its vernacular 'Shakker' that was later adapted as 'Shakar' in Arabic. It was from South Asia that the use of cane sugar spread to the rest of the world. In the medieval period, sugar was expensive and was considered a fine spice and synonymous of fine dining, till large scale industrial production began later. Since long, sweets have formed an integral component of South Asian cuisine and were considered worthy of foods served to the Gods.

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Table-1: Healthy Desserts - What to expect?

1. Low to moderate caloric intake per serving
2. Low glycaemic index and load
3. Nutrient-dense
4. Higher in MUFA and PUFA, less saturated or trans-fat
5. Higher protein content by incorporation of dairy
6. Source of prebiotics and fiber
7. Acceptable, accessible and affordable

Desserts and Medical Nutrition Therapy

The prime focus of medical nutrition therapy (MNT) in diabetics is to promote and support healthy eating patterns, emphasizing on a variety of nutrient-dense foods, in appropriate portion sizes to improve overall health. However, while food consumption primarily serves a homeostatic purpose for the body, i.e. maintenance of adequate energy stores and nutrient requirements, the hedonistic aspects of eating cannot be overlooked.² Adherence to medical nutrition therapy is highly unlikely if it is not palatable and pleasurable. Food should not only meet the biological requirements of an individual but should be socially and culturally acceptable and psychologically appealing in terms of visual appeal, taste and flavour.

The problem with most desserts is that they are high calorie foods with high content of simple sugars and saturated or trans-fats, are not nutrient dense and do not promote satiety. Therefore, they pose an obvious problem for individuals living with diabetes and have often been considered the Forbidden Fruit. However, contrary to popular belief, desserts can be incorporated into the meal planning of diabetic individuals by modifying their composition to include nutrient-dense ingredients while preserving the hedonistic features of taste, texture and appearance.⁵ Table 1 enlists some principles which can guide dessert planning for diabetics.

Characteristics of a Healthy Dessert

A healthy dessert, if created thoughtfully keeping in mind the core principles of MNT, can be incorporated into a balanced meal by utilizing ingredients from various food groups including cereals, pulses, dairy, fruits and even vegetables.

The strategies that be utilized to satisfy the sweet tooth while still retaining the nutritive value of food and avoiding glycaemic excursions include the following:

1. Choice of main ingredient - desserts based on fruits, complex cereals/ whole grains, pulses, low fat dairy,⁷ vegetables.
2. Healthy Cooking Techniques - baking, steaming, freezing, roasting.
3. Non-nutritive sweeteners - Non-nutritive sweeteners can be used in place of sucrose, such as sucralose, stevioside or aspartame.⁸ In addition, addition of soluble fiber such as amylase-rich starch and dextrans has also been associated with less postprandial glycaemic excursions.⁸ A small amount of simple sugar when added to a mixed meal occasionally has not been associated with worsening of glycaemic control.⁴ However, use of sugars should be minimized⁹ Spices and condiments that minimize the use of sugar and enhance flavour - cardamom, cinnamon, nutmeg, saffron, vanilla, ginger, black pepper, red chilli, dried fruits, dates, citrus, raisins, nuts.
5. Foods rich in Prebiotics - prebiotics include dietary fiber that is fermented by intestinal bacteria and stimulates growth and activity of intestinal microflora. These include inulin and fructo-oligosaccharides, wheat dextrin and polydextrose.³ Desserts based on fruits, whole grains and yoghurt can be a good source of prebiotics.
6. Portion control - Use smaller serving plates or bowls along with smaller forks and spoons for desserts. When consuming desserts as a part of a meal, it should be exchanged for another food serving keeping in mind the caloric and macronutrient balance of the meal. e.g. Yoghurt or dairy-based dessert can be substituted in place of curd, cereal-based dessert should be substituted in place of a regular serving of cereal.
7. Presentation and appeal - decorating desserts with fresh fruits, nuts and raisins increases their visual and olfactory appeal.

Table-2: Healthy Dessert Strategies and Options Based on Main Ingredients.

	Options within the Food Group	Tips to enhance flavor and nutritive value	Options/ Examples
Fruit Based Desserts	Citrus fruits, guava, pomegranate, pineapple, strawberry, papaya, banana, mango, grapes, blueberry, watermelon, figs.	Mix multiple fruits. Slice, dice or sliver fruit pieces. Use high fiber fruits to reduce GI. Use fruits with high water content to increase satiety. Combine fruits with other ingredients like nuts, yoghurt, cheese or chocolate desserts. Avoid use of high sucrose or fructose-based syrups.	Fruit salad. Frozen grapes. Baked or frozen yoghurt with fruits. Fruit based shakes. Chocolate brownies or cakes with a side of fruits. Apple pudding/ kheer. Raspberry pie.
Dairy-Based Desserts	Yoghurt/ curd Low fat milk Low fat cheese/ paneer	Prefer boiling, steaming or baking. Dairy can be combined with whole grains, fruits, vegetables and dark chocolate. Add dates, raisins, nuts. Add condiments and spices to enhance flavor.	Milk pudding/ kheer with fresh fruits. Fruit or vegetable pudding or kheer. Baked or frozen yoghurt with fruits. Chocolate cheese cake with fruits.
Cereal-Based or Pulse-Based Desserts	Whole wheat flour, broken wheat or bulgur, semolina (suji), rice. Fiber-rich pulses such as Bengal gram.	Use whole grains instead of refined cereals. Prefer boiling, steaming or baking. Add dates, raisins, nuts etc. Serve cereal or pulse flakes instead of making balls (laddu) to avoid use of shortening agents such as ghee.	Kheer or pudding with fruits or vegetables. Yoghurt with fruits and muesli. Whole wheat or semolina cakes with side of fruits.
Vegetable-Based Desserts	Bottle gourd, cucumber, beetroot, carrots, pumpkin, sweet potato, fennel, lemon, rhubarb.	Traditional desserts can be modified to incorporate high-fiber vegetables. Prefer steaming, boiling or baking.	Pumpkin pie Pudding or kheer made with pumpkin, bottle gourd, carrot. Carrot or pumpkin halwa cooked with very little ghee.
Chocolate-Based Desserts	Dark chocolate instead of milk or white chocolate	Dark chocolate can be added to several dairy- or cereal-based desserts. Prefer baking or frozen desserts. Avoid high sucrose syrups based on chocolate.	Chocolate pudding with fruits. Frozen or baked yoghurt with chocolate. Chocolate cheese cake with fruits and nuts. Chocolate gelato with fruits and nuts.

Dessert Planning in Diabetics

Some of the main ingredients that can be used to cook nutritious desserts include fruits, vegetables, cereals, pulses, low fat dairy such as yoghurt or cheese and dark chocolate. These are enlisted in table 2.

Summary

Food consumption in individuals living with diabetes does not have to be a mundane, puritanistic ritual. Desserts should no longer be considered forbidden in diabetes. The pleasure of eating desserts can be retained with the use of nutrient-dense ingredients from various food groups and cooking styles that lead to less glycaemic excursions or other metabolic abnormalities. Whole grains, fruits, vegetables and low fat dairy-based desserts can be modified to retain their nutritive value and still satisfy the senses.

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