



## DIABETES & HORMONE CENTER OF THE PACIFIC

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### The "Diabetic" Diet

by

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Popular misconceptions about nutrition and diabetes include the idea that a "diabetic diet" is a "sugar free diet"; or that refined sugar is "bad" and "natural sweeteners" are "good". Can "non-sugar" foods be eaten in any amounts? Can a person with diabetes "cheat" every once in a while? What IS a "diabetic diet"? Because so many questions and misunderstandings exist, it is important for a person with diabetes to be able to understand the fundamentals of nutrition, one of several essential elements of successful diabetes management.

There is actually no such thing as a single "diabetic diet". The diet that a person with diabetes follows to help manage his or her blood sugar levels is based on the same nutrition principles that any healthy person, with or without diabetes, should follow for good health. When a person with diabetes sees a Registered Dietitian for nutrition counseling, the goal is to create a nutrition plan. This will help the person manage his or her blood sugar levels, reduce the risk of heart disease and other diet-related conditions, maintain a healthy weight, as well as meet the person's nutritional, lifestyle, social, and cultural needs.

The energy that we get from foods, measured in calories, comes from three types of nutrients: fats, proteins, and carbohydrates. Any food that provides calories will raise blood sugar. When foods are digested, they are broken down into the body's basic fuel-- glucose, a type of sugar. The glucose is absorbed by the bloodstream, and is then known as blood glucose or blood sugar. In a person without diabetes, insulin is released by the pancreas after a meal or snack to allow the glucose in the blood to get into the body's cells, where it is burned for energy. This brings the level of glucose in the blood back down to the normal range. If insulin is not produced or is not working properly, the glucose can not enter the cells to be used, and it builds up in the bloodstream. This results in high blood sugar, and this condition is known as diabetes.

Although all foods that provide calories are converted into glucose by the body, certain nutrients have a more direct effect on the blood's glucose level. Fats in foods are eventually digested and converted into glucose, but this can take up to 6 to 8 or more hours after a meal, and the release of glucose into the blood is v e r y s l o w ... Protein in foods (such as meats, poultry, fish, eggs, soy and other beans, and milk) takes about 3 to 4 hours after a meal to "show up" as blood glucose.

Carbohydrates, on the other hand, take only about half an hour to an hour after a meal to be turned into blood glucose. The word "carbohydrate" actually means "sugars and starches." Chemically, a starchy food is just a "chain" of glucose molecules. In fact, if a starchy food like a soda cracker is held in the mouth for a few minutes, it will start to taste sweet as the digestive enzymes in the saliva begin to break the starch down into its glucose parts.

Any food that is high in any type of carbohydrate will raise blood glucose levels soon after a meal. Whether a food contains one ounce of sugar (natural or refined) or one ounce of starch, it will raise blood glucose the same amount, because the total amount of CARBOHYDRATE is the same. Although a glass of fruit juice and the same amount of sugary soda may seem like a "good" versus "bad" choice, each will raise blood glucose about the same amount. This information regarding the amount of carbohydrate in different foods is the center of a nutrition management tool for people with diabetes called Carbohydrate Counting. Foods high in carbohydrates include starches such as rice, pasta, breads, cereals, and similar foods; fruits and juices; vegetables; milk and milk products; and anything made with added sugars, such as candies, cookies, cakes, and pies.

The goal of a diabetes nutrition plan is to provide a mixture of fats, carbohydrates, and proteins at each meal at an appropriate calorie level to both provide essential nutrients as well as create an even release of glucose into the blood from meal to meal and from day to day. A Registered Dietitian assesses the nutritional needs of a person with diabetes and calculates the amounts of fat, protein, carbohydrate, and total calories needed per day, and then converts this information into recommendations for amounts and types of foods to include in the daily diet. The total number of meals and snacks and their timing throughout the day can differ for each person, based on his or her nutritional needs, lifestyle, and the action and timing of medications.

Overall, a nutrition plan for a person with diabetes includes 10 to 20 percent of calories from protein, no more than 30 percent of calories from fats (with no more than 10 percent from saturated fats), and the remaining 50 to 60 percent from carbohydrates. Carbohydrate foods that contain dietary fiber are encouraged, as a high fiber diet has been associated with decreased risks of colon and other cancers. For people with high blood cholesterol levels, lower total fat and saturated fat contents may be recommended. Sodium intake of no more than 3000 mg per day is suggested; for people with high blood pressure, sodium should be limited to 2400 mg per day or as advised by a physician.

One "diabetic diet" definitely does not fit all. In fact, ANY food can fit into the diet of someone with diabetes, with the help and guidance of a Registered Dietitian. Managing blood glucose levels does not have to mean giving up favorite foods, sweets, or restaurants and fast foods. Each person with diabetes has very different nutritional and personal needs, making ongoing assessment and counseling with a Registered Dietitian an essential element of successful diabetes management.

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### [Return to Diabetes Page](#)

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Your comments are welcomed. For medical questions consult your physician.

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