Treating Diabetes with Diet

Peggy K. Yen, RD, MPH

Readers who have worked with patients for more than 20 years remember when physicians ordered an “ADA diet” for their patients with diabetes. These diets, created by the American Diabetes Association, had specific calorie levels, usually an estimate based on the patient’s weight. Carbohydrate intake was restricted, and no sugar or sugar-sweetened foods were allowed.

With increased recognition of the cardiovascular complications of diabetes, diet prescriptions for this population later became lower in fat and more liberalized in carbohydrates, although sugars were still to be avoided. More recently, long-term care (LTC) institutions have used “no concentrated sweets” or “no simple sugars” to describe an expanded diabetic diet that limits sucrose, found in table sugar, but allows a variety of starches or complex carbohydrates.

Current medical nutrition therapy (MNT) for diabetes goes further in the liberalization process, recognizing that recommendations must be science-based. MNT is the term dietitians use to describe nutrition-related health services. A work group on nutrition principles and recommendations for treating diabetes recently published evidence-based guidelines that contain specific guidance for older adults.¹ The goal of MNT for older people with diabetes is to meet their nutrition and psychosocial needs and keep blood glucose, blood pressure, and blood lipids as close to normal ranges as possible. Special considerations for older adults with diabetes are related to weight and carbohydrate intake.

WEIGHT LOSS

Older adults with diabetes in LTC institutions often are underweight. Even if being overweight is a contributing factor to diabetes, weight loss should be considered carefully because a restrictive diet in older adults may lead to nutrient deficits. Providing adequate nutrition is a major goal of care of patients in LTC institutions.

SUGAR

Clinical research shows that table sugar, or sucrose, does not increase blood sugar more than an amount of starch that is equal in calories. This means that sugar and sugar-containing foods can be allowed as part of a diabetic diet. They don’t promote hyperglycemia and can be included in the diet as a part of counted carbohydrates.

MNT for patients with diabetes involves counting carbohydrates to ensure consistent distribution of a specified amount every day. If sucrose-containing foods are added to the usual carbohydrate allowance rather than substituted, patients need to cover the “extra” carbohydrates with insulin or medication, depending on their particular treatment regimen.

Because sugar does not need to be restricted in older people with diabetes, “no concentrated sweets” and “no simple sugars” diets are not recommended in LTC. According to the expert opinion of the work group on MNT for diabetes, no evidence indicates these diets are any better at helping patients maintain blood glucose control than regular diets.

Fructose, sometimes called fruit sugar, is another sugar that older adults may shy away from based on their experience with ADA diets. According to the work group report, some evidence shows that fructose actually lowers postprandial blood sugar when substituted for other carbohydrates, either starch or sugar. Older patients may have been told not to eat fruit for snacks or at certain times of the day. If an older diabetic patient has a meal plan that includes a carbohydrate snack, the choice can be fruit, whole wheat bread, or a lollipop, as long as the amount of carbohydrate is the prescribed amount. Just as in nondiabetic patients, however, empty calories from...
candy and soda won’t provide the nutrients needed for good health and should not be encouraged.

DIETARY RESTRICTIONS

Regular diets that have no restrictions on the type of foods allowed are recommended for older patients with diabetes in LTC facilities, as long as consistency in the amount and distribution of carbohydrate is maintained. Most cycle menus in institutions follow a similar pattern for each meal and snack throughout the cycle. This means that the dinner menu on any given day will have approximately the same amount of carbohydrate as other dinners in the cycle. This pattern provides the consistency in carbohydrate, sugar, or starch recommended for good blood glucose control. Consistency of carbohydrate is defined as a variation of ±15 grams.

Dietary restrictions on elderly residents with diabetes in health care facilities can make meals unappealing and may lead to weight loss and inadequate nutrient intake. The ADA’s position paper on liberalized diets for LTC outlines the nutrition research showing that older adults in institutions “eat better when they are given a less restricted diet of ‘regular’ foods rather than an energy-controlled diet.” Polypharmacy, sensory loss, and eating disability interfere with the dietary intake of many older adults; adding unnecessary restrictions only compounds the problem.

GLYCEMIC INDEX

Glycemic index (GI) is a measure of the blood glucose raising or glycemic effect of a food compared with a reference food, usually glucose or white bread. The reference food is arbitrarily assigned a GI value of 100. To determine the GI of a food, subjects eat a specified amount of it, and their blood sugar response is measured and compared with the reference food. The greater the rise in blood sugar, the higher the GI.

Some health professionals have suggested that diabetic patients should choose primarily low GI foods and avoid high foods as a way to control blood sugar. Choosing foods based on their GI is likely to be confusing to older diabetic patients. For example, watermelon has a higher GI than a peach (70 versus 28); cornflakes have a higher GI than All Bran cereal (84 versus 42).

Table 1 lists the GI of several foods. Older adults with long experience using food exchanges may find it difficult to switch to a system in which foods in the same group are not equal in value. A database on GI for more foods also is needed because the number of foods tested is still small, and GI data are limited.

The work group on treatment of diabetes found no clear benefit of a low GI diet for diabetes, suggesting, “Although the use of low glycemic index food may reduce postprandial hyperglycemia, there is not sufficient evidence of long-term benefit to recommend general use of low glycemic index diets in type 2 diabetes patients.”

The total amount of carbohydrate is more important than the source or type. Foods grouped in the familiar exchange lists make it easier for older diabetic patients to substitute one food for another.

REFERENCES


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Table 1. Glycemic Index of Common Carbohydrate-Containing Foods

<table>
<thead>
<tr>
<th>Food</th>
<th>Glycemic Index</th>
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<tbody>
<tr>
<td>Cheerios</td>
<td>83</td>
</tr>
<tr>
<td>Jelly beans</td>
<td>80</td>
</tr>
<tr>
<td>Cream of wheat</td>
<td>66</td>
</tr>
<tr>
<td>Banana</td>
<td>53</td>
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<tr>
<td>Basmati rice</td>
<td>50-60</td>
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<tr>
<td>Canned baked beans</td>
<td>48</td>
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<tr>
<td>Whole milk</td>
<td>27</td>
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