

Box 14-4

SOME NUTRITIONAL RECOMMENDATIONS FOR DIABETES^a

- Saturated fat intake should be < 10% of total calories.
- Substitute mono- and polyunsaturated fats for saturated fats.
- Cholesterol consumption should be < 300 mg/day.
- Monitor carbohydrate intake as a component of glycemic control.
- Vitamin or mineral supplementation provide no benefit without underlying deficiencies to people with diabetes compared with the general population.
- Avoid routine supplementation with antioxidants (eg, vitamins E and C and carotene).
- Eat ≥ 2 servings of fish/week (not commercially fried) for n-3 polyunsaturated fatty acids.
- Minimize trans fat intake.
- Use a variety of sources for carbohydrate (eg, fruits, vegetables, whole grains, low-fat milk).
- Foods with sucrose (table sugar) can substitute for other carbohydrates in the meal plan. However, this substitution should be kept to a minimum to avoid replacing more nutrient-rich carbohydrates with table sugar.
- Limit alcohol consumption to ≤ 1 drink/day for women and ≤ 2 drinks/day for men.
- If using insulin or insulin secretagogues, alcohol consumption increases risk for hypoglycemia.

^aIndividuals with diabetes and are pregnant or have comorbid disease may need other special dietary considerations.

Adapted and selected from Nutrition Therapy Recommendations for the Management of Adults with Diabetes. *Diabetes Care*. 2014;37(suppl 1):S120-S143.

Foot ulcers are a common complication of neuropathy and vascular disease among diabetic patients. Nerve damage diminishes sensation in the feet; thus, any damage to the feet such as cuts, bruises, or blisters may go unnoticed until significant damage has occurred. Poor circulation to the feet can diminish the rate of healing and exacerbate the problem. The majority of diabetes-related amputations of the lower extremities have foot ulcers as a precipitating complication. Consequently, patients with diabetes should undergo an annual comprehensive foot examination, examine their feet daily, wear shoes that fit properly, and immediately attend to any problems.

Nondrug Measures

Diet and exercise are the foundation of the nondrug measures to treat diabetes. Each of these factors can improve glycemic control as demonstrated by lower A1C, fasting glucose, and postprandial glucose, particularly in individuals with type 2 diabetes. Patients with type 2 diabetes are typically overweight or obese, but even modest weight loss can reduce insulin resistance in these patients. Appropriate diet

and exercise have also demonstrated improved cholesterol and blood pressure, which are factors linked to long-term complications. The ADA recommends that all individuals with diabetes should receive individualized medical nutrition therapy. Some nutritional recommendations for patients with diabetes are shown in Box 14-4.

Routine exercise is important for patients with either type 1 or type 2 diabetes, the goal being to reduce the risk for long-term complications, particularly macrovascular disease. Considering the disease process of type 2 diabetes, with long-term complications often beginning prior to diagnosis, the need for exercise as part of the diabetes management plan is very important. In addition, evidence demonstrates some benefits of exercise for type 2 diabetes regarding improved glycemic control (Box 14-5). For example, exercise improves the utilization of glucose by muscle, which contributes to glucose control. Prior to exercise, the existence of conditions such as hypertension, autonomic neuropathy, retinopathy, or peripheral neuropathy should be determined because they may pose some problems to be considered when planning the exercise regimen. Barring the existence of these problems, the level of exercise recommended by the ADA for people with diabetes is at least 150 minutes/week of moderate-intensity aerobic activity (50% to 70% of maximum heart rate). Resistance