

Diet and Weight Control for Diabetes

Weight Control for Type 2 Diabetes:

The American Diabetes Association recommends that patients aim for a small but consistent weight loss of ½ - 1 pound per week. Most patients should follow a diet that supplies at least 1,000 - 1,200 kcal/day for women and 1,200 - 1,600 kcal/day for men.

Even modest weight loss can reduce the risk factors for heart disease and diabetes. There are many approaches to dieting and many claims for great success with various fad diets. They include calorie restriction, low-fat/high-fiber, or high protein and fat/low carbohydrates. Some evidence suggests that people may respond differently to specific diets depending on whether their weight is overly distributed around the abdomen.

Here are some general weight-loss suggestions that may be helpful:

- Start with realistic goals. When overweight people achieve even modest weight loss they reduce risk factors in the heart. Ideally, overweight patients should strive for 7% weight loss or better, particularly people with type 2 diabetes.
- A regular exercise program is essential for maintaining weight loss. If there are no health prohibitions, choose one that is enjoyable. Check with a doctor about any health consideration. [For more information, see *In-Depth Report #29: [Exercise](#)*.]
- For patients who cannot lose weight with diet alone, weight-loss medications such as orlistat (Alli, Xenical) and sibutramine (Meridia) may be considered. Sibutramine should not be used by patients with high blood pressure or kidney or liver problems.
- For severely obese patients, weight loss through bariatric surgery can help in produce rapid weight loss and improve insulin and glucose levels in people with diabetes.

Even repeated weight loss failure is no reason to give up.

Calorie Restriction

Calorie restriction has been the cornerstone of obesity treatment. Restricting calories in such cases also appears to have beneficial effects on cholesterol levels, including reducing LDL and triglycerides and increasing HDL levels.

The standard dietary recommendations for losing weight are:

- As a rough rule of thumb, 1 pound of fat contains about 3,500 calories, so one could lose a pound a week by reducing daily caloric intake by about 500 calories a day. Naturally, the more severe

the daily calorie restriction, the faster the weight loss. Very-low calorie diets have also been associated with better success, but extreme diets can have some serious health consequences.

- To determine the daily calorie requirements for specific individuals, multiply the number of pounds of ideal weight by 12 - 15 calories. The number of calories per pound depends on gender, age, and activity levels. For instance a 50-year-old moderately active woman who wants to maintain a weight of 135 pounds and is mildly active might need only 12 calories per pound (1,620 calories a day). A 25-year old female athlete who wants to maintain the same weight might need 25 calories per pound (2,025 calories a day).
- Fat intake should be no more than 30% of total calories. Most fats should be in the form of monounsaturated fats (such as olive oil). Avoid saturated fats (found in animal products).

Exercise

Aerobic exercise has significant and particular benefits for people with diabetes. Regular aerobic exercise, even of moderate intensity (such as brisk walking), improves insulin sensitivity. People with diabetes are at particular risk for heart disease, so the heart-protective effects of aerobic exercise are especially important.

Exercise Precautions for People with Diabetes. The following are precautions for all people with diabetes, both type 1 and type 2:

- Because people with diabetes are at higher than average risk for heart disease, they should always check with their doctors before undertaking vigorous exercise. High-intensity (not high-impact) exercises are best for people who are cleared by their doctors. For people who have been sedentary or have other medical problems, lower-intensity exercises are recommended.
- Strenuous strength training or high-impact exercise is not recommended for people with uncontrolled diabetes. Such exercises can strain weakened blood vessels in the eyes of patients with retinopathy. High-impact exercise may also injure blood vessels in the feet.
- Patients who are taking medications that lower blood glucose, particularly insulin, should take special precautions before embarking on a workout program: Monitor glucose levels before, during, and after workouts (glucose levels swing dramatically during exercise). Avoid exercise if glucose levels are above 300 mg/dl or under 100 mg/dl.
- Inject insulin in sites away from the muscles used during exercise; this can help avoid hypoglycemia.
- Drink plenty of fluids before and during exercise; avoid alcohol, which increases the risk of hypoglycemia.
- Insulin-dependent athletes may need to decrease insulin doses or take in more carbohydrates prior to exercise, but may need to take an extra dose of insulin after exercise (stress hormones released during exercise may increase blood glucose levels).

- Wear good, protective footwear to help avoid injuries and wounds to the feet.
- Some blood pressure drugs can interfere with exercise capacity. Patients who use blood pressure medication should consult their doctors on how to balance medications and exercise. Patients with high blood pressure should also aim to breathe as normally as possible during exercise. Holding the breath can increase blood pressure.

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