Additional Scientific Research

Diabetes is one of the fastest growing health problems facing the nation, with nearly 26 million children and adults in the United States living with the disease. Another 79 million, or one in three American adults, have pre-diabetes, which puts them at high risk for developing type 2 diabetes. Diabetes is a leading cause of adult blindness, kidney failure, lower limb amputations and premature death. Obesity is also a major risk factor of type 2 diabetes.

Research has shown that by losing about 7% of your body weight or about 15 pounds for someone who weighs 200 pounds, diabetes may be delayed or prevented. Weight loss is also helpful in the management of type 2 diabetes. Two particular aspects of the Nutrisystem D program – the use of a structured, portion-controlled meal plan and low-glycemic index foods – are particularly relevant to managing weight in persons with diabetes. Below are brief descriptions of, and links to, research on the effects of these approaches on weight loss and disease-related outcomes.

**Benefits of Using a Portion-controlled Diet in Persons with Diabetes:**

A randomized trial of improved weight loss with a prepared meal plan in overweight and obese patients: impact on cardiovascular risk reduction.

> This trial compared standard dietary instruction and the use of a portion-controlled meal plan among persons with cardiovascular disease and diabetes. The portion-controlled intervention plan simultaneously provided the simplicity and nutrient composition necessary to maintain long-term compliance, as well as sustained weight loss and reduced cardiovascular risk.

Use of portion-controlled entrees enhances weight loss in women.

and

Use of packaged entrees as a part of a weight-loss diet in overweight men: an 8-week randomized clinical trial.
Hannum SM et al. Diabetes, Obesity and Metabolism 2006; 8:146-155. [Link](#) to abstract.

> In separate studies of overweight women and men, consumption of portion-controlled entrees resulted in greater losses of weight and fat and greater reductions in cardiovascular disease risk factors than consumption of a self-selected weight loss diet. Accurate portion control is an important factor in weight loss success, and use of packaged entrees is an effective method of achieving this.

**Glycemic Index and Glycemic Control in Persons with Diabetes:**

The use of low-glycaemic index diets in diabetes control.

> This meta-analysis of randomized controlled trials, which included participants with type 1 and type 2 diabetes, found a significantly greater reduction (of 0.4%) in HbA1c with low-GI diets, compared with high-GI diets. This finding, in combination with greater reductions in fructosamine and glycated albumin, suggests that lowering the GI of the diet may contribute to improved glycemic control in diabetes.
Targeting dietary fat or glycemic load in the treatment of obesity and type 2 diabetes: a randomized controlled trial.

Participants received lifestyle modification treatments that taught either a low-fat or low-glycemic load (also low-GI) diet but were otherwise identical. Despite similar weight losses, the low-glycemic load group achieved a significantly greater reduction in A1c, suggesting a weight-loss independent effect of consuming a low-glycemic load or low-glycemic index diet.

Glycemic Index and Risk of Metabolic Disease:

Meta-analysis of the health effects of using the glycaemic index in meal-planning.

This meta-analysis of 16 randomized trials found that low-GI diets significantly reduced HbA1c by 0.27, total cholesterol by 12.7 mg/dl, and tended to reduce LDL-cholesterol in type 2 diabetic subjects by 5.8 mg/dl compared with high-GI diets. The authors concluded that these results support the use of the GI as a scientifically based tool to enable selection of carbohydrate-containing foods to reduce total cholesterol and to improve overall metabolic control of diabetes.

Glycemic index, glycemic load and chronic disease risk – a meta-analysis of observational studies.

Low-GI and/or low-GL diets are independently associated with a reduced risk of certain chronic diseases. In diabetes and heart disease, the protection is comparable with that seen for whole grain and high fiber intakes. The findings support the hypothesis that higher postprandial glycemia is a universal mechanism for disease progression.

Dietary glycaemic index and glycaemic load in relation to the risk of type 2 diabetes: a meta-analysis of prospective cohort studies.

This meta-analysis of 13 studies, each including between 1833 and 91,249 people and 4 to 14 years of follow-up found that the risk of type 2 diabetes was significantly related to dietary GI and GL. The authors concluded that reducing the intake of high-GI foods may bring benefits in diabetes prevention.

Meta-analysis of dietary glycemic load and glycemic index in relation to risk of coronary heart disease.

This meta-analysis of 8 prospective studies, which included over 220,000 participants, found that women who consumed a high GI diet were at significantly greater risk of developing coronary heart disease. Some evidence, in need of further study, suggests that the unfavorable effects may be more pronounced in overweight and obese patients.