

Title of Intervention: The Diabetes Prevention Program (DPP)

Website: <http://diabetes.niddk.nih.gov/dm/pubs/preventionprogram/>

Intervention Strategies: Supportive Relationships, Environments and Policies

Purpose of the Intervention: To decrease the incidence of Type 2 diabetes by improving diet and exercise

Population: Individuals with impaired glucose tolerance (IGT) at high risk for diabetes

Setting: Clinical centers; health care facility-based

Partners: DPP Lifestyle Resource Core, clinical centers

Intervention Description:

- **Supportive Relationships:** Case managers, called Lifestyle coaches, were assigned to each participant. Lifestyle coaches were dietitians or individuals who had at least a Master's degree training in exercise physiology, behavioral psychology or health education. Lifestyle coaches delivered core curriculum, helped set weight loss and physical activity goals, conducted maintenance sessions and collected data. The Core curriculum was structured to ensure that all participants were taught the same basic information about nutrition, physical activity and behavioral self-management. They were also taught about weight loss and had sessions that focused on psychological, social and motivational challenges involved in maintaining healthy lifestyle behaviors in the future. Healthy eating habits were encouraged. The program addressed problem solving and strategizing to deal with eating out, stress and lapses. All materials were also made available in Spanish. Participants and coaches had face-to-face sessions at least once every two months and were contacted by phone at least once between visits. Participants received a 'toolbox' of strategies to help them achieve and maintain their lifestyle goals. Toolboxes included problem-solving strategies and reinforcements.
- **Environments and Policies:** Each clinical center was required to offer supervised physical activity sessions at least two times per week throughout the trial.

Theory: Social Cognitive Theory

Resources Required:

- **Staff/Volunteers:** DPP Interventions Committee included nutritionists, behavioral psychologists, exercise physiologists, nurses, and physicians; lifestyle coaches
- **Training:** Staff training
- **Technology:** Database
- **Space:** Counseling space, activity space
- **Budget:** \$100 per participant per year was available for implementing toolbox strategies; lab tests to identify impaired glucose tolerance = \$139
- **Intervention:** DPP Lifestyle Intervention Manual of Operations, DPP Protocol, DPP Lifestyle Balance Participant Notebook
- **Evaluation:** Telephones

Evaluation:

- **Design:** Randomized controlled trial
- **Methods and Measures:**
 - Data entry system of DPP allowed access to lifestyle progress reports for individual participants as well as summary data of each center's overall performance.
 - Centers were required to hold team meetings at least once per month to review their progress.

Outcomes:

- **Short Term Impact:** Not measured
- **Long Term Impact:** Waist circumference, triglyceride concentration, blood pressure, fasting plasma glucose concentration and serum insulin concentration significantly decreased. Two years after the

intervention, weight loss was still significantly greater. The cumulative incidence of diabetes was lower in the intervention group and remained that way at least two years later.

Maintenance: Not mentioned

Lessons Learned: Changes in lifestyle can prevent Type 2 diabetes in those who are at high risk for the disease.

Citation(s):

The Diabetes Prevention Program (DPP): description of lifestyle intervention. *Diabetes Care*. Dec 2002;25(12):2165-2171.

Molitch ME, Fujimoto W, Hamman RF, Knowler WC. The diabetes prevention program and its global implications. *J Am Soc Nephrol*. Jul 2003;14(7 Suppl 2):S103-107.

Tuomilehto J, Lindstrom J, Eriksson JG, et al. Prevention of type 2 diabetes mellitus by changes in lifestyle among subjects with impaired glucose tolerance. *N Engl J Med*. May 3 2001;344(18):1343-1350.