

Lifestyle Intervention Can Prevent Diabetes Onset for at Least a Decade

Lifestyle changes slowed development of diabetes in a large cohort study.

In 2002, the Diabetes Prevention Program (DPP) reported that, compared with placebo, intensive lifestyle intervention or metformin in 3200 overweight adults with impaired glucose metabolism lowered the incidence of diabetes during 3 years by 58% and 31%, respectively ([JW Gen Med Feb 19 2002](#)). To determine the long-term effects of these interventions, the researchers enrolled most patients who had completed the DPP into the 6-year unblinded DPP Outcomes Study (DPPOS). During a 1-year bridge period, all patients were offered a 16-session lifestyle curriculum, similar to that used in the DPP. All patients then received quarterly lifestyle-reinforcement sessions. Patients initially randomized to lifestyle intervention received eight additional lifestyle support sessions annually, and those initially randomized to metformin continued to receive twice-daily open-label metformin.

During the 6-year DPPOS follow-up, the incidence of newly diagnosed diabetes was similar in all three groups. No rebound occurred in diabetes incidence in the lifestyle and metformin groups during follow-up — rather, extension of the lifestyle intervention to metformin and placebo recipients seemed to lower incident diabetes in those groups. The net relative reduction in diabetes incidence during the full 10 years was 34% in the lifestyle group and 18% in the metformin group compared with the placebo group. All three groups recorded small mean weight losses (1–2.5 kg) during 10 years.

Comment: This study demonstrates that lifestyle interventions can lower diabetes incidence for many years. Additional follow-up will determine whether these interventions also attenuate microvascular-neuropathic outcomes and diabetes-related mortality.

— [Bruce Soloway, MD](#)

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Diabetes Prevention Program Research Group. 10-year follow-up of diabetes incidence and weight loss in the Diabetes Prevention Program Outcomes Study. *Lancet* 2009 Nov 14; 374:1677.