# Lifestyle intervention for overweight patients with diabetes provides long-term benefits

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An intensive lifestyle intervention appears to help individuals with type 2 diabetes lose weight and keep it off, along with improving fitness, control of blood glucose levels and risk factors for cardiovascular disease, according to a report in the September 27 issue of *Archives of Internal Medicine*.

Improving blood glucose control and cardiovascular risk factors in patients with type 2 diabetes is critical in preventing long-term complications of the disease, according to background information in the article. Emphasis has been placed on screening and pharmacologic management of these parameters. "Lifestyle-based weight loss interventions are also recommended to improve glycemic control and risk factors, but the evidence supporting the efficacy of lifestyle approaches is limited to short-term studies of typically less than one year," the authors write.

The Look AHEAD (Action for Health in Diabetes) Research Group conducted a multicenter randomized clinical trial comparing the effects of an intensive lifestyle intervention to diabetes support and education among 5,145 overweight or obese individuals (average age 58.7) with type 2 diabetes. Of these, 2,570 were assigned to the lifestyle intervention, a combination of diet modification and physical activity designed to induce a 7 percent weight loss in the first year and maintain it in subsequent years. Participants were seen and contacted by phone at least monthly for all four years. The 2,575 individuals assigned to the diabetes support and education group were invited to three group

sessions each year focusing on diet, physical activity and social support.

On average, across the four-year period, individuals in the lifestyle intervention group lost a significantly larger percentage of their weight than did those in the diabetes support group (6.2 percent vs. 0.9 percent). They also experienced greater improvements in fitness, hemoglobin A1c level (a measure of blood glucose), blood pressure and levels of high-density lipoprotein (HDL, or "good" cholesterol). Individuals in the diabetes support group, on the other hand, experienced greater reductions in low-density lipoprotein (LDL, or "bad") cholesterol, owing to greater use of cholesterol-lowering medications in this group.

At the end of four years, the lifestyle intervention group maintained greater improvements in weight, fitness, hemoglobin A1c levels, systolic (top number) blood pressure and HDL levels. "Although the differences between the two groups were greatest initially and decreased over time for several measures, the differences between the groups averaged across the four years were substantial and indicate that the intensive lifestyle intervention group spent a considerable time at lower cardiovascular disease risk," the authors write.

"The critical question is whether the differences between groups in risk factors will translate into differences in the development of cardiovascular disease," they continue. "These results will not be available for several additional years. However, effects of the magnitude that we observed for fitness, HDL-C and hemoglobin A1c levels and blood pressure have been associated with decreased cardiovascular events and mortality in previous medication trials and observational studies. Moreover, there may be long-term beneficial effects from the four-year period in which intensive lifestyle intervention participants have been exposed to lower cardiovascular disease risk factors, as seen in other clinical trials."

**More information:** Arch Intern Med. 2010;170[17]:1566-1575.