

Diet-exercise combo doesn't cut heart risks in type 2 diabetes patients

June 25 2013, by Brenda Goodman, Healthday Reporter



But study of overweight patients found lifestyle changes may prevent complications such as kidney failure, eye damage.

(HealthDay)—Weight loss accomplished from diet and exercise does not appear to cut the risk of heart problems for people with diabetes, a new study finds.

Lifestyle changes have long been the bedrock of treatment for [type 2 diabetes](#). Doctors advise patients to eat carefully and stay active to help control blood sugar and cut the risk of long-term complications, which include at least a doubling in the risk for heart attacks and strokes.

But the new study, published online June 24 in the *New England Journal of Medicine*, suggests that the benefits of diet and exercise may be more limited than previously believed.

Even so, researchers say, people with diabetes shouldn't give up on their efforts to eat less and move more. Additional findings from the study being presented at an [American Diabetes Association](#) meeting in Chicago show that lifestyle changes may have benefits beyond the heart, including lowering the risks for [kidney failure](#) and [eye damage](#) that may lead to blindness.

For the trial, researchers split more than 5,000 adults with type 2 diabetes into two groups. The first group was assigned to lose weight by exercising and cutting calories. They were given a goal to eat between 1,200 and 1,800 calories a day and to complete at least 175 minutes of moderate-[intensity exercise](#) each week.

To speed [weight loss](#), participants used shakes and [snack bars](#) to substitute for as many as two meals each day. If they hadn't lost 10 percent of their initial weight by six months, they could also take the fat-blocking drug orlistat, which is sold over the counter as Alli, for a short time.

The other comparison group met three times each year for group counseling sessions. They were given lessons about the importance of using exercise, diet and social support to help manage the condition.

All participants were overweight and between 45 and 75 years of age. Their average starting weight was about 220 pounds. Most had been living with diabetes for at least five years.

Both groups lost weight, and, for the most part, managed to keep it off.

But the weight loss was modest. After one year, people in the diet-and-exercise group had lost about 8 percent of their starting weight, or about 18 pounds. Although they regained some of that over the next eight years, they still managed to keep off a 6 percent loss, or about 14 pounds

on average. The comparison group shed about 10 pounds during the study, a difference of about 2.5 percent between the two groups.

But the group that ate less and moved more had just as many heart attacks, strokes, heart-related deaths and hospitalizations for chest pain as those in the comparison group.

The results between the two groups were so similar that last fall researchers stopped the trial about four years earlier than originally planned for "futility."

The researchers said there may be several reasons they didn't see a difference in [heart problems](#) between the two groups. One was the relatively modest weight loss.

"And perhaps that's not enough to see this difference," said study author Rena Wing. "Maybe you need larger weight losses." Wing is director of the Weight Control and Diabetes Research Center at Miriam Hospital, which is affiliated with Brown University in Providence, R.I.

Studies have shown that bariatric surgery, which typically leads to more dramatic weight loss as well as to significant changes in metabolic chemistry, may have more pronounced benefits for people with diabetes, though "it also has more risks," Wing said.

Participants in the new study were relatively healthy when it started. Their average hemoglobin A1C level, a measure of how well patients control their blood sugar over time, was 7.2 in the lifestyle-change group and 7.3 in the control group. The goal for most people with diabetes is an A1C level under 7, said Dr. Minisha Sood, who heads the diabetes committee at Lenox Hill Hospital in New York City. "These people were pretty near their goal A1C," Sood said.

She said diet and exercise may have bigger heart benefits in patients who aren't as well controlled.

In addition, the comparison group took more heart-protective medications, particularly cholesterol-lowering statins, than the diet-and-exercise group. The comparison group had lower average LDL, or "bad" cholesterol throughout the study, which may mean that diet and exercise works about as well as drugs to protect the heart, not that lifestyle changes don't work at all.

Indeed, the rate of heart events two years into the study was lower than the researchers had anticipated, leading them to adjust the main goals of the study to include a more controversial measure of heart disease—episodes of chest pain serious enough to cause hospitalization. Chest pain episodes were similar between the two groups, and may have diminished the study's ability to detect differences in more serious events like heart attacks and strokes.

One expert said stopping the study early may have had an impact on the results.

"My impression is that the trial was stopped too soon," said Dr. Frank Sacks, a professor of cardiovascular disease prevention at the Harvard School of Public Health. Sacks has seen the study, but was not involved in the research. "This can produce an underestimate of the effect of treatment."

The bottom line is that weight loss may not be enough to protect people with diabetes from heart disease, although it may have important benefits that go beyond the heart.

Study author Wing, however, said researchers found many other reasons doctors should continue to recommend diet and exercise for their

patients. These findings were not part of the main outcomes of the *NEJM* study but were presented at the diabetes meeting.

Some of the most important improvements were related to the havoc diabetes can inflict on the smallest blood vessels in the body. These microvascular complications of [diabetes](#) can damage the kidneys, which often leads to dialysis, and damage to the retina of the eye, which can cause blindness.

"Intensive lifestyle intervention reduced the risk of chronic kidney disease by 31 percent," Wing said. "So we had a very, very marked effect on the development of high-risk chronic kidney disease. We also showed a benefit in terms of self-reported eye disease."

People who made lifestyle changes also had less serious depression, and they had better physical function than people in the comparison group. Because they needed fewer medications and went to the hospital less often than people in the control group, they saved money on their medical care—about \$600 a year, or \$5,000 over the course of the study.

"That's pretty remarkable," said Sood at Lenox Hill Hospital, who will continue to recommend [lifestyle changes](#) that lead to weight loss, although her reasons for doing so will shift slightly. "Now we have data to show that quality of life, depression and other complications will improve."

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Citation: Diet-exercise combo doesn't cut heart risks in type 2 diabetes patients (2013, June 25)
retrieved 26 April 2024 from

<https://medicalxpress.com/news/2013-06-diet-exercise-combo-doesnt-heart-diabetes.html>

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