

# Dieting beats exercise for diabetes prevention, combination is best

30 August 2011, By Carl Sherman



Lifestyle changes that include dieting to lose weight and exercise can help prevent type 2 diabetes, but researchers were uncertain which element contributes more. A new study suggests that, in postmenopausal women at least, dietary weight loss alone is effective while exercise alone is not effective, and both together are best of all.

"The effects seems to be additive," said Caitlin Mason, Ph.D., lead study author. "The women who did both diet and [exercise](#) together had the greatest weight loss and greatest improvement in insulin and blood sugar control." In light of the additional benefits of exercise, such as preserving muscle mass during weight loss, "a combined program is the way to go," said Mason, a postdoctoral fellow in public health sciences at the Fred Hutchinson Cancer Research Center.

For the study, which appears online and in the

October issue of the *American Journal of Preventive Medicine*, 439 inactive, overweight [postmenopausal women](#) were randomly assigned to participate in a dietary weight loss program, an aerobic exercise program, or a program that included diet and exercise, or were told not to change their eating or exercise patterns.

Participants received diet and exercise counseling in groups of eight to 15 women, rather than individually.

The researchers estimated the women's insulin resistance - which reflects how well or poorly the body metabolizes sugar - and their fasting blood sugar, when the study began and after 12 months. Increased insulin resistance and elevated [blood sugar](#) are signs that the risk of diabetes is high.

Insulin resistance improved significantly with diet and a bit more in the diet-plus-exercise group, but not with exercise alone, compared to women who made no changes. Exercise alone did improve fasting glucose, but only when it was elevated to begin with.

Women in the diet group lost an average of 8.5 percent of their initial body weight, while those who had diet plus exercise lost more than 10 percent. Improvement in insulin resistance was proportional to the amount of weight lost.

Jill Crandall, M.D., director of the Diabetes Clinical Trials Unit at the Albert Einstein College of Medicine, said she was "most impressed" by the magnitude of weight loss achieved in the study, "but the effect this will have on glucose metabolism or [diabetes](#) risk in the long run is a little hard to say from this paper."

One of the most useful things the study did was to show that "a group-based program could be very effective for [weight loss](#)," added Crandall, who has no affiliation with the study. From a public health

perspective, she said, "anything done in the group setting is more feasible."

She noted that strengthening exercise appears to have greater benefits for [insulin resistance](#) than aerobic exercise, and suggested that its inclusion in future studies might be "a desirable feature."

**More information:** Mason C, et al. Dietary weight-loss and exercise effects on insulin resistance in postmenopausal women. *Am J Prev Med* 41(6), 2011.

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