

Exercise Lowers Blood Pressure More When Combined With Weight Loss

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Hypertensive patients are routinely advised by their physicians that losing weight and exercising regularly are good for their blood pressure, but relatively few studies have looked to see how effective this combination really is. A study from Duke University recruited 133 sedentary and overweight men and women with mild hypertension to be randomly allocated to one of three groups. The first was a Control group, who had no intervention; the second was an Exercise Only group, who exercised three or four times a week for 45 minutes (jogging and bicycling); and the third was a Combined Treatment group, who in addition to the exercise, took part in weekly group sessions for instruction on weight loss. Each treatment lasted for six months. Blood pressure was measured both in the clinic and by 24-hour ambulatory monitoring at the beginning and end of the study. The average blood pressure for the whole group of patients at the start of the study was 141/93 mmHg, and the average body weight 202 pounds (a body mass index of 32.5).

The participants in the Combined Treatment group lost 7.8 kilograms (17 pounds), compared to 1.8 (4 pounds) in the Exercise Only group, and 0.7 (1.5 pounds) in the Control group. Clinic blood pressure fell by 7.4/5.6 mmHg (systolic/diastolic) in the Combined Treatment group, by 4.4/4.3 mmHg in the Exercise Only group, and 0.9/1.4 mmHg in the Control group. Similar changes were seen in the ambulatory blood pressure measurements. Blood glucose levels were also reduced in the Combined Treatment group.

Doctor's Comments

The results of this study confirm that the combination of an exercise program with a weight loss program is more effective than exercise alone for lowering blood pressure. Thus exercise on its own lowered the blood pressure by about 4 mmHg and the combination with weight loss by 7 mmHg. While these changes may not seem very big, for people with borderline hypertension they may be all that is needed to avoid needing blood pressure medications. There is also evidence that exercise and weight loss both help to prevent diabetes, which overweight people are particularly prone to and which can have devastating effects in combination with hypertension.

Source: *JA Blumenthal and colleagues. Exercise and weight loss reduce blood pressure in men and women with mild hypertension. Archives of Internal Medicine 2000; 160: 1947.*