

The Effects of Lifestyle Changes on Long-Term Blood Pressure Control

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The full report is titled “Effects of Comprehensive Lifestyle Modification on Diet, Weight, Physical Fitness, and Blood Pressure Control: 18-Month Results of PREMIER. A Randomized Trial.” It is in the 4 April 2006 issue of *Annals of Internal Medicine* (volume 144, pages 485-495). The authors are P.J. Elmer, E. Obarzanek, W.M. Vollmer, D. Simons-Morton, V.J. Stevens, D. Rohm Young, P.-H. Lin, C. Champagne, D.W. Harsha, L.P. Svetkey, J. Ard, P.J. Brantley, M.A. Proschan, T.P. Erlinger, and L.J. Appel, for the PREMIER Collaborative Research Group.

What is the problem and what is known about it so far?

Lifestyle changes, such as exercising to lose weight and following a healthy diet, are at least as important as drugs for treating chronic diseases like diabetes, high cholesterol, and hypertension. Research has shown that lifestyle changes can reduce blood pressure for up to 6 months. Most people have difficulty maintaining lifestyle changes for longer periods of time. It is not known whether the benefits of a healthy lifestyle for blood pressure control are more durable than medication.

Why did the researchers do this particular study?

To see whether people can maintain lifestyle changes that lower blood pressure for 18 months.

Who was studied?

810 generally healthy adults with borderline or mild hypertension.

How was the study done?

The researchers randomly assigned participants to 3 groups. In one group, participants were given repeated lifestyle change counseling over time with specific goals for how much weight to lose, how much to exercise, and how much salt and alcohol to include in their diet. In another group, participants received the same counseling and guidance as those in the first group, but were also given specific goals for increasing the amount of fruits and vegetables and low-fat dairy products and decreasing the amount of fat in their diet. A third comparison group only received general advice to lose weight, increase physical activity, and maintain a healthy diet. Eighteen months after starting the study, the researchers compared the average weight, diet, and blood pressure of participants in each of the groups.

What did the researchers find?

Participants who were given specific goals for diet and exercise lost more weight and had better diets after 18 months than those who were not given specific guidance. They were also less likely to have hypertension. There was no difference in blood pressure levels between the 2 groups that received different kinds of guidance about how to improve their diet.

What are the limitations of the study?

The study applied only to patients with borderline or mild hypertension who were not taking drugs to control their blood pressure. Blood pressure control is important because it reduces heart and blood vessel disease. The study was not designed to evaluate the effect of improving diet and exercise on such diseases.

What are the implications of the study?

For at least 18 months, people with borderline or mild hypertension can maintain a healthy diet and level of physical activity that improves their blood pressure.