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The full report is titled “Effect of Soybean Protein on Blood Pressure: A Randomized, Controlled Trial.” It is in the 5 July 2005 issue of *Annals of Internal Medicine* (volume 143, pages 1-9). The authors are J. He, D. Gu, X. Wu, J. Chen, X. Duan, J. Chen, and P.K. Whelton.

## Soybean Protein May Lower Blood Pressure

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

High blood pressure (hypertension) is one of the most common chronic conditions in adults. Hypertension strains the heart and harms blood vessels. It increases the risk for blindness, heart attack, heart failure, kidney problems, and stroke. Doctors often use drugs to lower blood pressure in people with hypertension. Diet also may affect blood pressure. For example, some studies show that limiting salt intake can lower blood pressure. Recently, a few small studies have suggested that eating soybean, a plant-based protein, could lower blood pressure. We do not know, however, whether regular dietary supplements of soybean significantly lower blood pressure.

### Why did the researchers do this particular study?

To see whether soybean protein lowers systolic and diastolic blood pressure.

### Who was studied?

302 Chinese adults 35 to 64 years of age with high-normal or mildly elevated blood pressure.

### How was the study done?

The researchers recruited people from 3 urban areas in the People’s Republic of China. All people had systolic blood pressure of 130 to 159 mm Hg, diastolic blood pressure of 88 to 99 mm Hg, or both. None was receiving drugs to lower blood pressure. Researchers randomly assigned participants to receive cookies containing 40 grams of either soybean protein or complex carbohydrate from wheat. The participants and the researchers did not know who received which type of cookie. Participants were told to eat the study cookies each day in place of a meal (usually breakfast) for 12 weeks. The researchers then compared changes in blood pressure between groups.

### What did the researchers find?

Soybean cookies reduced diastolic and systolic blood pressure by about 3 to 4 mm Hg more than did carbohydrate cookies. Both study groups reported few side effects, such as appetite changes and stomach discomfort.

### What were the limitations of the study?

The study duration was short. We do not know whether the findings apply to settings other than the People’s Republic of China. The soybean protein cookies contained protein and isoflavones, so we do not know the exact ingredient that reduced blood pressure.

### What are the implications of the study?

Soybean protein supplementation might help lower blood pressure in some people.