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The Effects of Whey Zoonutrient Powder Alone and Combined with a Green Phytonutrient Powder on Heart Rate Variability and Pre-Hypertension and Stage I Hypertension

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INTRODUCTION

The purpose of this study was to determine the effect of zoonutrient (whey based) and phytonutrient (fruit and vegetable based) nutritional supplementation on the reduction of blood pressure and improving heart rate variability in pre-hypertensive and hypertensive subjects.

Pre-hypertension and hypertension are both significant health risks for cardiovascular and renal diseases. Recent studies have shown potential benefits of both dietary and nutraceutical approaches to blood pressures greater than 120 / 80. Studies have found that whey-derived peptides may act as zoonutrients that reduce blood pressure. Diets rich in phytonutrients from fruits and vegetables, as the Diet Against Systolic Hypertension (D.A.S.H.), both reduce blood pressure and have a general salubrious effect on cardiovascular health.

In this study we test the effect two dietary supplement drink powder mixes on blood pressure. The first product is a whey based product, rich in dairy peptides and protein sub-fractions (zoonutrients). The second is a phytonutrient enriched, high antioxidant powdered drink mix composed of green foods, fruits, vegetables, green and white tea with herbs and spices. Both drink mixes incorporated a liposome delivery purported to assist bioavailability.

MATERIAL AND METHODS

Sixty otherwise healthy male and female pre-hypertensive or hypertensive subjects from a chiropractic college were recruited. Pregnant female, those taking prescription medications or similar supplements were excluded.

SUBJECT ASSIGNMENT

Subjects were assigned into one control and two experimental groups by random numbers. The control group of subjects was the control group consuming 500 mg calcium per day. The second group took 2 servings (36 gm) of the whey based zoonutrient supplement a day.

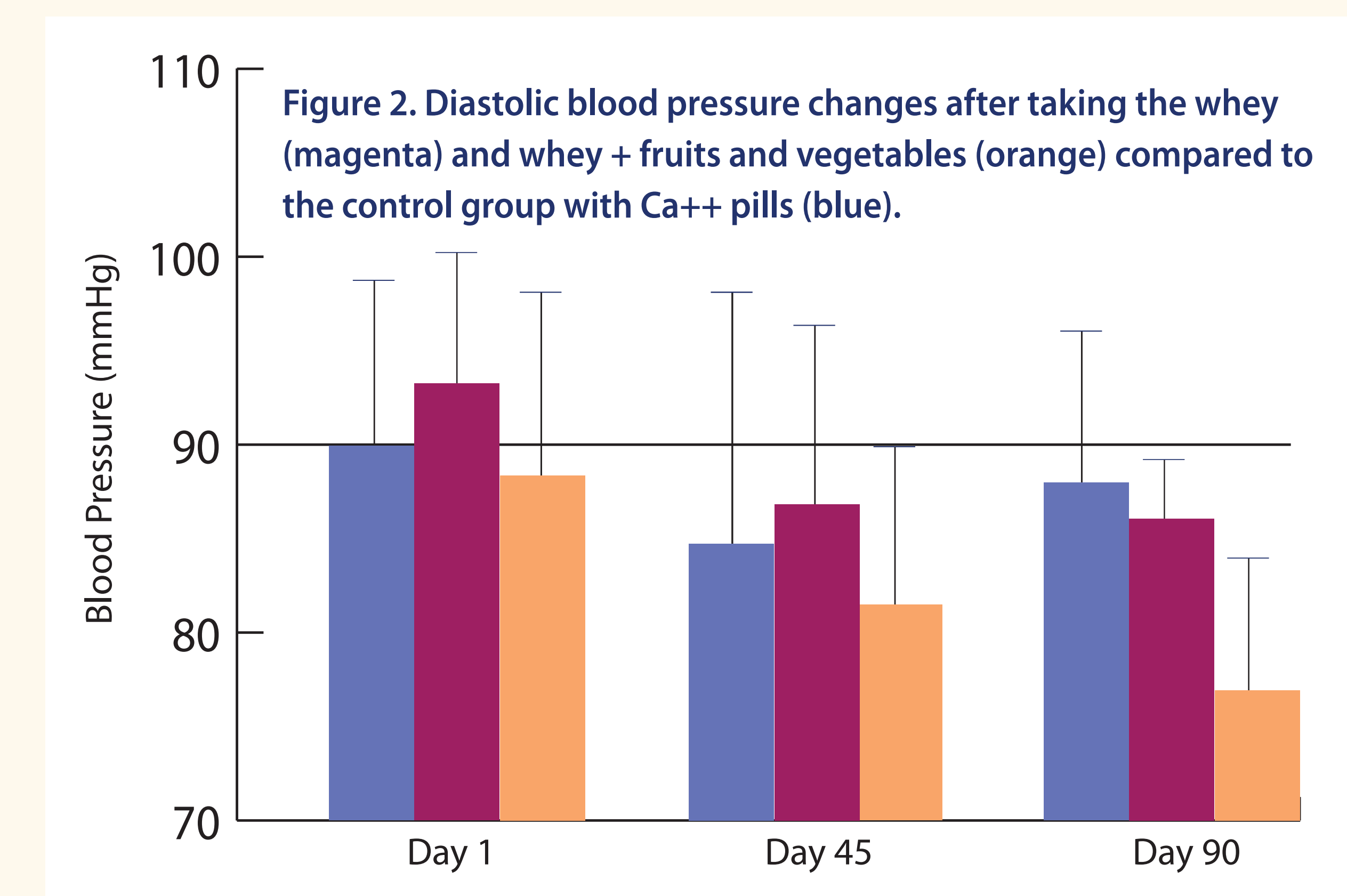
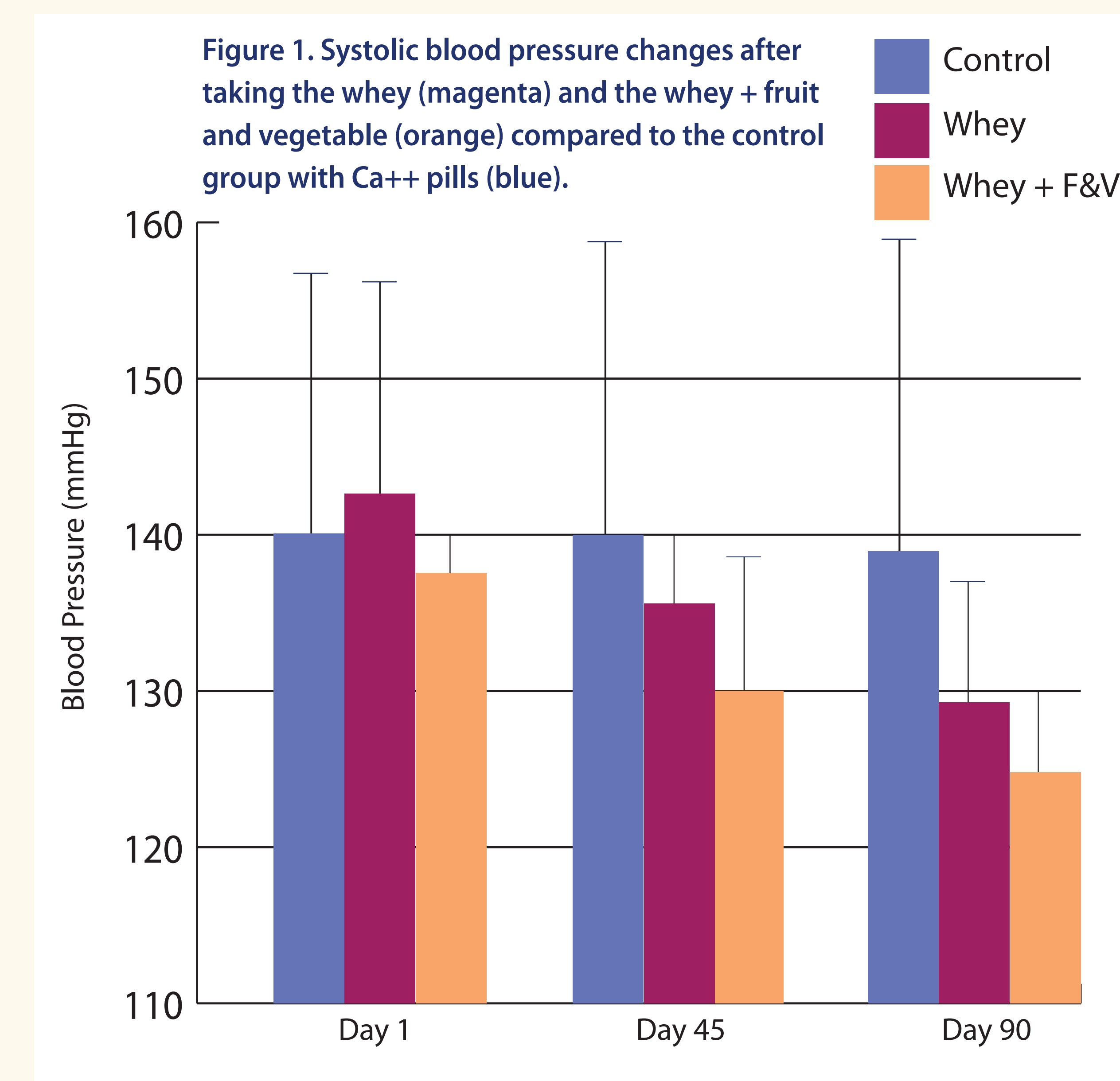
The third group took 2 servings each of the whey based (36 gm) and the phytonutrient fruit and vegetable based (24 gm) drink mixes with water. All subjects were giving a three months supply of the nutritional supplement free of charge.

The study began with a baseline test of blood pressure and weight. All tests were performed prior to taking the supplement and all tests were repeated once a month for three months. Thirty-seven subjects (6 female) were recruited and thirty-two (5 female) completed the study. It was noted in an early data analysis that the data had reached statistically significant level.

RESULTS

After taking the supplement for 90 days, both the systolic and diastolic blood pressure decreased significantly in the whey and whey + fruits and vegetables groups. No significant changes were observed in the control group (Figure 1, 2). The systolic blood pressure decreased from 141.0 ± 11.8 mmHg to 126.6 ± 7.2 mmHg ($P < 0.05$) and the diastolic blood pressure decreased from 92.8 ± 6.2 mmHg to 84.6 ± 9.4 mmHg ($P < 0.05$) in the whey group. The systolic blood pressure decreased from 136.3 ± 3.1 mmHg to 125.4 ± 5.1 mmHg ($P < 0.05$) and the diastolic blood pressure decreased from 88.5 ± 7.6 mmHg to 74.6 ± 7.7 mmHg ($P < 0.05$) in the whey + fruit and vegetables group. No significant blood pressure decrease was observed in the control group (systolic blood pressure from 139.7 ± 14.2 to 137.9 ± 19.0 mmHg and the diastolic blood pressure from 89.8 ± 6.9 to 87.0 ± 7.7 mmHg) ($P > 0.05$).

After taking the supplement for 90 days, body weight was increased significantly in the control group from 190.9 ± 20.9 pounds to 196.3 ± 23.3 ($P < 0.05$). The body weight in the whey group and the whey + fruits and vegetables group did not show significant changes ($P > 0.05$).



CONCLUSION

After taking the whey based and whey + fruit and vegetable based powdered drink mix supplements for 90 days, both the systolic and diastolic blood pressures decreased significantly. The results compare favorably to those garnered with any one common prescription blood pressure medication or by following the D.A.S.H. II diet. The body weight was increased in the control group but not in the two treatment groups. Further study in a larger and perhaps more diverse population is warranted.