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The Effect of Fruit and Vegetable Powder Mix on Hypertensive Subjects

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Study funded by BioPharma Scientific, which developed, manufactures and distributes the green phytonutrient powdered drink mix used in this study.

ABSTRACT

CONTEXT:
Diets high in fruits and vegetables, like the DASH Diet, have been shown to help lower pre-hypertension and stage 1 hypertension.

OBJECTIVE:
This research was designed to study the effects of a fruit and vegetable powder mix on cardiovascular health as determined by blood pressure and heart rate variability (HRV).

SETTING:
A college with subjects taken from the faculty and student population.

SUBJECTS:
Forty subjects were recruited in the study via a school-wide e-mail notification and through personal contacts. All study procedures were approved by the Institutional Review Board (IRB).

DESIGN:
Randomized treatment (20) and control group (20), no placebo.

INTERVENTION:
24 gm daily high antioxidant green fruit and vegetable phytonutrient powdered drink mix for 90 days.

MAIN OUTCOME MEASURES:
Blood pressure, weight and heart rate variability measured day 0, 30, 60 and 90.

RESULTS:
After taking the supplement for 90 days, both the systolic and diastolic blood pressure decreased significantly. The systolic blood pressure decreased from 140.4±17.7 mmHg to 128±14.2 mmHg, (12.4 mmHg) and the diastolic blood pressure decreased from 90.2±7.7 mmHg to 83.1±7.4 mmHg (7.1 mmHg). Subject's body weight did not change significantly in the experimental group from 193.5±31.1 to 194±31.3. The body weight in the control group showed an increase from 175.9±27.4 to 178±29.9, but it was not significant.

The heart rate did not show any statistically significant changes. Time domain analysis of HRV showed an increase in SDNN and RMS-SD but did not reach statistical significance. Frequency analysis of HRV found an increase in the Total Power, but it did not reach a significant level.

CONCLUSION:
It was concluded that taking the nutritional supplement for 90 days reduced blood pressure significantly, not related to weight loss. The HRV was not affected by the supplement over the three months period.

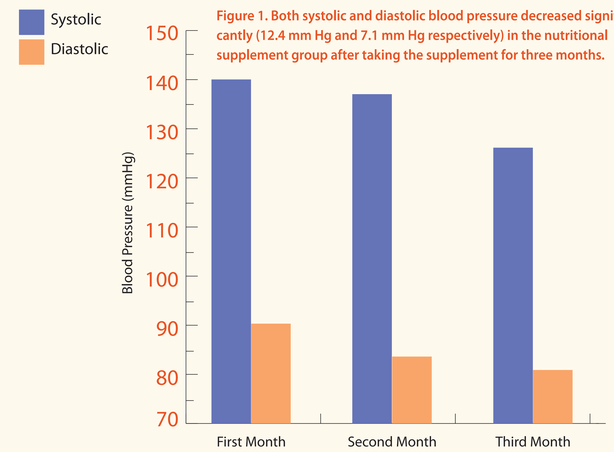

Figure 1. Both systolic and diastolic blood pressure decreased significantly (12.4 mm Hg and 7.1 mm Hg respectively) in the nutritional supplement group after taking the supplement for three months.

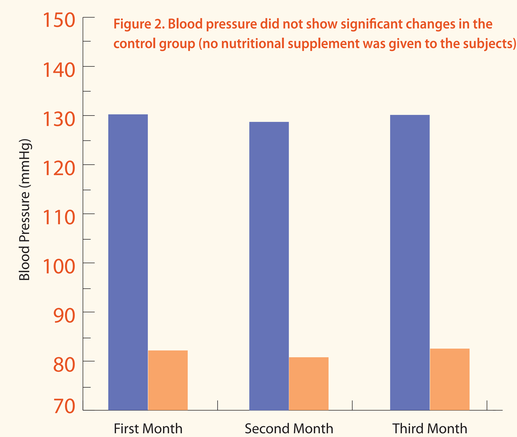

Figure 2. Blood pressure did not show significant changes in the control group (no nutritional supplement was given to the subjects).