Abstract Body:

Introduction: Current dietary guidelines recommend eating a variety of fruits and vegetables. However, based on nutrient composition, specific fruits and vegetables may be more or less beneficial for weight maintenance.

Hypothesis: Fruits and vegetables with a higher fiber content or lower glycemic load are more strongly associated with weight maintenance and even weight loss, in part through mechanisms related to increased satiety.

Methods: We examined the association between increased consumption of fruits and vegetables and change in body weight among participants <65 years of age from three large prospective cohort studies: 41,608 women in the Nurses' Health Study (NHS) I, 20,143 men in the Health Professionals Follow-up Study, and 67,533 women in the NHS II. Beginning in 1986, these associations were examined during 24 years of follow-up within 4-year time intervals, adjusting for simultaneous changes in other lifestyle factors such as diet, smoking, and physical activity.

Results: Increased consumption of one serving per day of several types of fruits was inversely associated with weight gain over 4 years, for example -1.11 lbs (95% CI, -1.43 to -0.80 lbs) for berries and -0.96 lbs (95% CI, -1.20 to -0.72 lbs) for apples/pears.

Increased consumption of several vegetables was also inversely associated with weight gain, for example -2.15 lbs (95% CI, -2.58 to -1.73 lbs) for tofu/soy and -1.18 lbs (95% CI, -1.73 to -0.64 lbs) for cauliflower. On the other hand, increased consumption of some vegetables was positively associated with weight change, for example corn (1.69 lbs; 95% CI, 0.90 to 2.48 lbs) and peas (0.81 lbs; 95% CI 0.16 to 1.46 lbs).

The magnitude of weight change associated with increased consumption of high fiber vegetables (-0.37 lbs; 95% CI -0.48 to -0.27 lbs) was larger than that for low fiber vegetables (-0.13 lbs; 95% CI -0.23 to -0.02 lbs). Increased consumption of low glycemic load vegetables was associated with a greater magnitude of weight change, -0.37 lbs (95% CI, -0.63 to -0.11 lbs), compared to high glycemic load vegetables, -0.01 lbs (95% CI, -0.14 to 0.11 lbs). In contrast, weight change associated with fruit consumption did not vary by fiber content or glycemic load.

Conclusions: Increased consumption of total fruits and vegetables was inversely associated with weight change over 4 years, however we found wide-ranging associations for specific foods, partly due to the fiber content and glycemic load of vegetables but not fruits.