

Plant-Based Diet May Help Control Weight

Consuming more plant foods and fewer animal products may help individuals control their weight, according to a new study funded in part by ARS.

The study was led by nutritional epidemiologist P. K. Newby at the Jean Mayer USDA Human Nutrition Research Center on Aging at Tufts University in Boston, Massachusetts, and Alicja Wolk at the Karolinska Institute in Stockholm, Sweden.

The researchers examined the health records of more than 55,000 healthy women participating in the Swedish Mammography Cohort. They looked at the body mass index (BMI) of semi-vegetarians (who eat some meat, dairy, and eggs), lacto-vegetarians (who consume milk but not meat or eggs), vegans (who consume no animal products), and omnivores (who eat all foods).

BMI is a common measurement used to determine whether a person is at a healthy weight, overweight, or obese. A BMI of 18.5 up to 25 refers to a healthy weight, a BMI of 25 up to 30 refers to overweight, and a BMI of 30 or higher refers to obese.

All the vegetarian women had a lower risk of being overweight or obese than did the omnivorous women. Specifically, the prevalence of overweight or obesity (BMI over 25) was 40 percent among omnivores, 29 percent among both semi-vegetarians and vegans, and 25 percent among lacto-vegetarians. All three vegetarian groups had about half the risk of overweight or obesity as omnivores.

“The omnivorous women were significantly heavier than any of the three vegetarian groups and also had a significantly higher BMI,” says Newby. “Even among the vegetarians who consume some animal products, our results suggest that self-identified vegetarians of any kind have a lower risk of overweight and obesity than do omnivorous women.”

The study was limited to older women and did not adjust for physical activity. The authors noted that other research shows that vegetarians of all ages and both sexes are leaner than omnivores. Another large study found that differences in BMI among vegetarian groups remained significant when adjusted for physical activity and other lifestyle factors.

The study suggests that plant-based diets are inversely related to obesity. “All the vegetarian groups had higher intakes of fruit, vegetables, and fiber and lower intakes of fat and protein,” says Newby.

You can check your BMI by using one of several online, federal BMI calculators, such as the one on the National Heart, Lung, and Blood Institute’s website: nlhbisupport.com/bmi/.—By **Rosalie Marion Bliss**, ARS.

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Adequate Copper Saves Bones During Weight Loss

Part of the overall efforts of researchers to help reduce obesity rates in the United States is to look carefully at the physiological changes that take place during weight loss.

A human study headed by scientists at ARS’s Grand Forks (North Dakota) Human Nutrition Research Center has shown specific findings about the importance of adequate amounts of copper during the process of losing weight.

The researchers reported that, based on a carefully controlled human nutrition research study, the copper requirements of women while losing weight exceed the current recommended levels for the participants’ age range.

When people, particularly obese people, go on weight-loss diets, they often lose calcium from their bones. ARS physiologist Henry C. Lukaski presented the findings in abstract form at a meeting sponsored by the American Society for Clinical Nutrition. Lukaski is assistant director of the center.

Some of the women in the study received daily supplements of 3 milligrams (mg) of copper, and the others received supplements of only 1.23 mg. Both levels exceeded the current Dietary Reference Intake (DRI) for copper for women older than 19, which is 0.9 mg.

All participants, who ranged in age from 25 to 35 years old, were then put on a weight-loss diet. During the diet, the researchers tracked the participants’ loss of calcium with isotopes. The study showed that the women who took 3 mg of copper retained more calcium in their bones than women fed 1.23 mg of copper and also maintained their pre-weight-loss bone-mineral density.

“The higher copper intake appears to have helped those participants retain more calcium,” says Lukaski.

The study suggests that during weight loss, the current DRI for copper may not be adequate.

Good sources of copper include green vegetables, mushrooms, seafood, liver, nuts, seeds, wheat bran, cereal, and whole grains. For a list of foods that are good sources of copper, go to www.nal.usda.gov/fnic/foodcomp/Data/SR17/wtrank/wt_rank.html and click on “copper.” The list will sort foods in descending order by copper content in terms of common household measures.—By **Rosalie Marion Bliss**, ARS.

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