

"It's my grandson! Quick, get out the quilt!"

## Leafy Greens Help Brains Stay Sharp as We Age

Folate, a B vitamin found in foods like leafy green vegetables and citrus fruits, may protect against cognitive decline in older adults. The research was conducted by scientists at the Jean Mayer U.S. Department of Agriculture (U.S.D.A) Nutrition Research Center on Aging at Tufts University.

A team led by Katherine L. Tucker, Ph.D., at Tufts, studied a group of Boston-area men who were members of the ongoing Normative Aging Study. Dr. Tucker and her colleagues found that men who obtained more folate in their diets showed less of a decline in verbal fluency skills over the course of three years compared with men with lower dietary folate intakes.

High dietary and plasma folate levels also appeared to be protective against declines in another category of cognitive skills known as spatial copying. To test this, the participants (50 to 80 years of age) were asked to copy various shapes and figures. Their drawings were then assessed for accuracy.

The men took a series of cognitive tests at the beginning of the study period and then repeated those tests three years later. The researchers compared their first and second scores and reviewed their responses to dietary questionnaires. They also took blood samples in order to see whether nutrient levels in the diet and the blood were related to changes in cognitive performance.

In an earlier study with the same subjects, the Tufts research team had observed that high homocysteine levels were associated with lower cognitive test scores. Elevated homocysteine levels pose a risk for cardiovascular disease. Because folate supplementation helps to reduce homocysteine, it was thought that this might explain folate's beneficial effects. In the current study, however, the effects of folate were independent of its impact on homocysteine, which turned out to be more strongly associated with tests of memory.

Dr. Tucker said, "Unlike our prior work with this population, in which we observed an association between low folate levels and lower cognitive test scores at one point in time, this study looks at the effects of these nutrients over time. That is an important step in establishing causality."

(Source: *American Journal of Clinical Nutrition*, October 2005.)

## Potassium-Rich Foods Protect Muscles

The typical American diet generates tiny amounts of acid each day. As people age, a mild metabolic acidosis develops. It may increase slowly over time, and it appears to trigger a muscle-wasting response.

Researchers looked at links between lean body mass and diets relatively high in potassium-rich, alkaline-residue-producing fruits and vegetables to see whether these foods influenced lean tissue mass. They conducted a cross-sectional analysis on a subset of about 400 men and women 65 years of age or older who had completed a three-year osteoporosis-intervention trial.

Physical activity, height, weight, and the percentage of lean body mass were measured at the start of the study and at three years. Urinary potassium levels were assessed at the start of the study, and dietary data were collected at 18 months.

The results indicated that volunteers with potassium-rich diets could expect to have 3.6 more pounds of lean tissue mass than volunteers with half the higher potassium intake. According to the study's authors, this almost offsets the 4.4 pounds of lean tissue that healthy men and women 65 and older typically lose in a decade.

(Source: *Agricultural Research*, October 2009.)

## Cutting Protein and Calories May Prolong Life

A new study, led by Luigi Fontana and John Holloszy at Washington University in St. Louis, suggests that cutting down on beef and other protein-laden foods might prolong life. These researchers are investigating how nutritious, calorie-restricted diets affect people. No one knows whether restricting calories in people can prolong life, but cutting calories by 25 percent or more from the diets of rodents, dogs, worms, and other animals has been shown to extend longevity.

From the same study group, members of the Calorie Restriction Society voluntarily followed a calorie-restricted diet for years. The participants showed improved cardiovascular health compared with people of the same age who eat 20 to 39 more calories.

In their latest study, eating a high-nutrition, minimal calorie diet did not result in obtaining all the benefits from calorie restriction found in rodents. However, restricting proteins along with calories seemed to imitate the full effect seen in other animals.

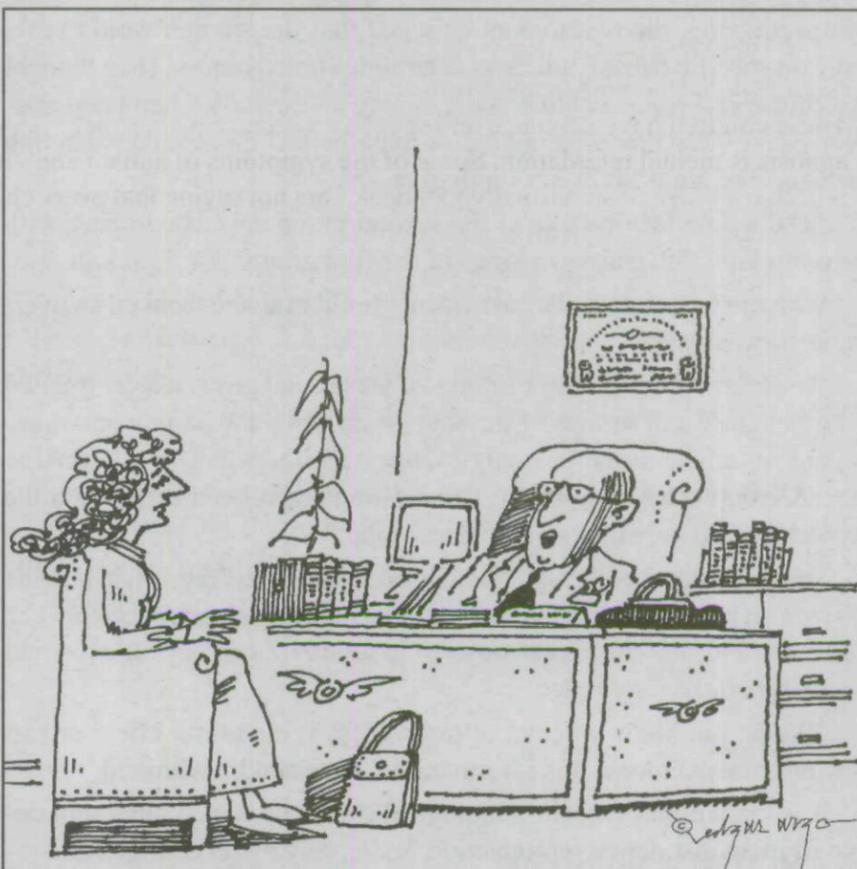
This new study focused on the diet's effect on amounts of insulin-like growth factor (IGF-1). IGF-1 stimulates cells to grow, and higher levels have been linked to cancer. A key step in slowing down the aging process might be to lower the level of the growth factor. IGF-1 levels did not decline in people who followed a calorie-restricted diet.

Slightly lower levels of IGF-1 were found in vegans, who do not eat meat, milk, eggs, or other animal products. Even though their diets were higher in calories, vegans did not have all the cardiovascular benefits offered by a calorie-restricted diet. Vegans obtained only about 10 percent of their calories from protein, whereas the calorie-restricted group received about 25 percent from protein.

In this study, six members of the Calorie Restriction Society agreed to lower their protein consumption to slightly below the recommended daily intake. The IGF-1 blood levels dropped by an average of 25 percent. Caloric restriction works differently in people from the way it does in rodents; restricting protein consumption is important to achieve maximal health benefits, according to Dr. Fontana.

It is not clear whether IGF-1 is as important for longevity in humans as it is in rodents. Rodents often die of cancer, whereas people die more often of heart disease.

(Source: *Aging Cell*, October 2008.)



"...Sure, I can tell you how to prevent getting old...you can lie about your age...you can smoke...and you can drive drunk..."

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