

## Broccoli May Reverse Blood Vessel Damage in Diabetes

Consuming broccoli may reverse the damage caused by diabetes to blood vessels, according to a new study.<sup>1</sup> Currently, 8% of Americans suffer from diabetes and two out of three diabetics will die from heart attack or stroke, conditions that have been linked to blood vessel damage.<sup>2</sup>

Scientists subjected human endothelial cells, which line vessel walls, to the broccoli compound sulforaphane after the cells had been exposed to high glucose levels. Hyperglycemia significantly increases levels of reactive oxygen species and other inflammatory compounds that harm human cells.<sup>1</sup>

The researchers found sulforaphane activated the compound nrf2, which protected the cells from damage by increasing levels of antioxidant and detoxifying enzymes. They also recorded a 73% reduction of reactive oxygen species molecules in cells exposed to sulforaphane.<sup>1</sup>

These findings build upon the established health benefits of consuming cruciferous vegetables (such as broccoli, cauliflower, and Brussels sprouts), and give scientists a potential mechanism by which vascular damage in diabetics may be controlled. Clinical studies on the benefits of broccoli for diabetics are planned.

—Michael J. Hall, ND

1. Xue M, Qian Q, Antonysunil A, Rabbani N, Babaei-Jadidi R, Thornalley PJ. Activation of NF-E2-related factor-2 reverses biochemical dysfunction of endothelial cells induced by hyperglycemia linked to vascular disease. *Diabetes*. 2008 August 4.
2. Available at: <http://www.diabetes.org/heart-disease-stroke.jsp>. Accessed August 28, 2008.

## Complementary Medicine Used by 61% of Cancer Survivors

More than half of US cancer survivors report using complementary medicine therapies, according to a study from the American Cancer Society.\*

The study used data on 4,139 cancer survivors gathered from across the United States. Patients were interviewed at 10 to 24 months after the diagnosis of any one of 10 common types of cancer and were asked about their use of up to 19 types of complementary medicine.

The top five alternative-medicine practices among survivors were prayer (61%), relaxation (44%), faith/spiritual healing (42%), nutritional supplements/vitamins (40%), and meditation (15%). Overall, women were more likely than men to use every type of complementary medicine studied. Patients most likely to use complementary medicine were also younger and white, had higher levels of education and income, and had a more advanced cancer stage at diagnosis. Among the cancer types, breast and ovarian cancer survivors were the most likely to use complementary medicine.

These findings indicate that many patients find complementary therapies an important aspect of comprehensive cancer care.



—Laura J. Ninger, ELS

\* Gansler T, Kaw C, Crammer C, Smith T. A population-based study of prevalence of complementary methods use by cancer survivors: a report from the American Cancer Society's studies of cancer survivors. *Cancer*. 2008 Sept 1;113(5):1048-57.

## Goji Berry Juice Enhances Energy, Well-Being

Drinking goji berry juice for 14 days improves well-being, mental performance, and gastrointestinal function compared with placebo in a recent study.\* Goji berry (*Lycium barbarum*) has been used in Asia since ancient times for its benefits against aging and for vision, kidney, and liver function.

Thirty-five healthy adults were randomly assigned to take a standardized preparation of 120 mL/day goji berry juice (17 subjects), equivalent to 150 grams of fresh fruit, or matching placebo drink (18 subjects). Before and after supplementation, subjects rated various symptoms of fatigue, memory, mental acuity, sleep, and physical health.

After two weeks, the supplemented group expressed significantly better energy level, sleep quality, mental focus, mental acuity, calmness, happiness, and overall health, as well as better gastrointestinal function, compared with baseline. They indicated lower levels of fatigue and stress. In the placebo group, the only significant improvements were reduced heartburn and greater happiness.

—Laura J. Ninger, ELS

\* Amagase H, Nance DM. A randomized, double-blind, placebo-controlled, clinical study of the general effects of a standardized *Lycium barbarum* (goji) juice, GoChi™. *J Altern Complement Med*. 2008 May;14(4):403-12.

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