

Found on Internet December 29, 2002

## "Spices kill bacteria and protect cells"

November 10, 2002

From the website "USA Weekend" at  
[http://www.usaweekend.com/02\\_issues/  
021110/021110eatsmart.html](http://www.usaweekend.com/02_issues/021110/021110eatsmart.html)

---**Turmeric vs. cancer.** The yellow spice turmeric, a constituent of curry powder, contains high concentrations of the potent antioxidant curcumin. New tests suggest curcumin helps stifle cancer. In test tubes, 80% of malignant prostate cells self-destructed when exposed to curcumin. Feeding mice curcumin dramatically slowed the growth of implanted human prostate cancer cells. It may do the same in breast and colon cancer cells, researchers say, speculating that curcumin blocks the activation of genes that trigger cancer. Bonus: Curcumin's anti-inflammatory activity reduces arthritic swelling and progressive brain damage in animals. In UCLA research, eating food laced with low doses of curcumin slashed Alzheimer's-like plaque in the brains of mice by 50%.



Found on Internet April 3, 2002

## "A Theory About How Our Bodies Age"

February 15, 1997

From the website "Alternative Medicine" at  
<http://www.altmedicine.com/Article.asp?ID=33>

It's called "the caramelization effect," or more scientifically, "glycation." It occurs when sugar and protein bind together under the body's own heat and gum up vital organs. But, according to the theory, cooked foods that are browned and caramelized--such as baked goods, glazed meats and roasted coffee--may also contribute to the effect.

According to Dr. Richard Bucala, of the Picower Institute, modifying our diets may stave off some of the aging effects. How? Avoid foods cooked at high temperatures for long periods of time. Don't fry potatoes; steam them instead. Cut down on baked goods, especially the crusts. Essentially, stick with boiling and steaming and avoid broiling, roasting and baking.

Glycation occurs at a faster rate in the body when blood sugar levels are elevated, as in diabetes, note doctors at the Picower Institute. And, they add, avoiding foods rich in "glycotoxins" may prove beneficial to people with vascular and kidney disease, high blood pressure and to the elderly.

NOTE: Curcumin, an extract of the spice turmeric (which gives curry powder its golden yellow color) and a naturally occurring anti-inflammatory agent, appears to cut down on the cross linking of tissue and glyucose. For that medical abstract, [click here](#). [This article follows below.]

Please direct comments and/or suggestions to [Frank Grazian](#)

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Found on Internet April 3, 2002

## **"Effect of Curcumin on the Advanced Glycation and Cross-linking of Collagen in Diabetic Rats"**

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From the website  
[http://www.ncbi.nlm.nih.gov/htbin-  
post/Entrez/query?uid=9973181&form=6&db=m&Dopt=b](http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?uid=9973181&form=6&db=m&Dopt=b)

A close association between increased oxidative stress and hyperglycemia has been postulated to contribute significantly to the accelerated accumulation of advanced glycation end products (AGEs) and the cross-linking of collagen in diabetes mellitus.

In the present work, we report the influence of curcumin, an efficient antioxidant, on the level of AGEs and the cross-linking of collagen in diabetic rats. Diabetic rats were given curcumin (200 mg/kg body wt) orally for a duration of 8 weeks. The antioxidant status in serum and the level of AGEs, cross-linking and browning of collagen in tail tendons and skin were investigated.

The oxidative stress observed in diabetic rats was reduced significantly by curcumin administration. Nonenzymic antioxidants such as vitamin C, vitamin E, and glutathione were maintained at near normal values in curcumin-treated diabetic animals. Similarly, the accumulation of lipid peroxidation products in diabetic serum was reduced significantly by

curcumin. Accelerated accumulation of AGE-collagen in diabetic animals, as detected by ELISA, was prevented by curcumin. Extensive cross-linking of collagen in the tail tendon and skin of diabetic animals was also prevented to a greater extent by curcumin treatment. A correlation between the level of AGEs and collagen cross-linking was noted, suggesting the involvement of advanced glycation in cross-linking. It was also noted that the preventive effect of curcumin on the advanced glycation and cross-linking of collagen was more pronounced than its therapeutic effect. However, the Maillard reaction fluorescence in both tail and skin collagen remained unaltered by curcumin.

This study confirms the significance of free radicals in the accumulation of AGEs and cross-linking of collagen in diabetes. It supports curcumin administration for the prevention of AGE-induced complications of diabetes mellitus.

PMID: 9973181 [PubMed - indexed for [MEDLINE](#)]

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Found on Internet April 3, 2002

**"Curry May Slow Alzheimer's':  
Turmeric is the Crucial Ingredient"  
Nov. 21, 2001**

From BBC Online at  
[http://news.bbc.co.uk/1/hi/english/health/newsid\\_1668000/1668932.stm](http://news.bbc.co.uk/1/hi/english/health/newsid_1668000/1668932.stm)

A spicy ingredient of many curries may be an effective treatment for Alzheimer's disease, say researchers. A team from the University of California at Los Angeles believes that turmeric may play a role in slowing down the progression of the neurodegenerative disease.

The finding may help to explain why rates of Alzheimer's are much lower among the elderly in India than in their Western peers. Previous studies have found that Alzheimer's affects just 1% of people over the age of 65 living in some Indian villages.

**Vindaloos**

"Drugs with similar properties could potentially be used as preventative treatments for Alzheimer's disease," [says] Dr Richard Harvey.

Turmeric is found in everything from mild Kormas to the hottest Vindaloos. The crucial chemical is curcumin, a compound found in the spice.

Alzheimer's is linked to the build up of knots in the brain called amyloid plaques. Turmeric reduced the number of these plaques by a half. The researchers also found that turmeric had other health benefits. It aids digestion, helps fight infection and guards against heart attacks.

In the study, middle aged and aged rats were fed a diet rich in curcumin. All the rats received brain injections of amyloid to mimic progressive Alzheimer's disease.

Not only was there less evidence of plaque build up in the curcumin-fed rats, they also outperformed rats on normal diets when carrying out maze-based memory tests.

Curcumin also appeared to reduce Alzheimer's-related inflammation in the brain tissue. Researcher Dr Sally Frautschy said the compound had potential as a treatment for the prevention of Alzheimer's disease - particularly in tandem with anti-inflammatory drugs such as ibuprofen.

Dr Richard Harvey, director of research at the Alzheimer's Society, said: "Curcumin has both anti-oxidant and anti-inflammatory properties. Drugs with similar properties could potentially be used as preventative treatments for Alzheimer's disease."

However, Dr Harvey warned that it could be many years before such drugs were made widely available.

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Found on Internet April 13, 2002

## **"Curry Spice Could Slow Alzheimer's, Study Shows"**

By E. J. Mundell NEW YORK (Reuters Health)

From the website

[NutriTeam: Curcumin](#)

Diets rich in curcumin--a compound found in the curry spice turmeric--may help explain why rates of Alzheimer's disease are much lower among the elderly in India compared with their Western peers. Alzheimer's disease is characterized by the buildup of amyloid protein "plaques" within the brain. In studies in rats, curcumin "not only reduces the amyloid, but also reduces

the (brain's) response to the amyloid," according to researcher Dr. Sally Frautschy of the University of California, Los Angeles.

She presented her findings Thursday at the annual meeting of the Society for Neuroscience in San Diego, California. Previous studies have noted that elderly individuals living in Indian villages appear to have the lowest incidence of Alzheimer's disease in the world, with just 1% of those aged 65 and older contracting the degenerative brain condition. The reasons for this low incidence remain unclear, however. Frautschy speculated that curcumin found in curry could provide a clue to this puzzle since the compound has "a long history of dietary and herbal medicinal use" and is also a powerful antioxidant and anti-inflammatory agent.

In her study, Frautschy fed middle-aged (9 months old) and aged (22 months old) rats diets rich in curcumin. All of the rats had received brain injections of amyloid to mimic progressive Alzheimer's disease. "Curcumin reduced the accumulation of beta-amyloid and the associated loss of proteins" in the synapses, or gaps, between individual brain cells, Frautschy reported. "Synapses connect nerve cells and are crucial for memory," the California researcher explained. Keeping synapses free of plaque is important because "their loss correlates well with memory decline in Alzheimer's." This type of memory preservation may have been reflected in the fact that rats fed curcumin also performed much better in memory-dependent maze tests compared with rats on normal diets, according to Frautschy. Curcumin also appeared to reduce Alzheimer's-related inflammation in neurologic tissue. Because "a combined anti-inflammatory and antioxidant approach will be useful for Alzheimer's prevention or treatment," Frautschy speculates that curcumin could be especially valuable in the fight against the disease, especially in combination with anti-inflammatory drugs like ibuprofen. Her team is hopeful they will soon receive funding for clinical trials to investigate curcumin-ibuprofen combination therapy.

Curcumin may not be the only compound in the kitchen spice rack able to ward off Alzheimer's. In an interview with Reuters Health, Frautschy said that "chemicals from rosemary (rosmarinic acid) and ginger (vanillin and zingerone, also high in Indian diets) have similar structure and should be tested."

Curcumin may be ordered direct from [Nutriteam](#) at \$24.95 for 180 capsules (500 mg).



Found on Internet May 14, 2002

## "Uses of Turmeric"

From the website

<http://www.turmeric.8m.com/uses.html>

Turmeric contains a variety of bioactive substances called curcuminoids. The most active component is curcumin, an orange-yellow volatile oil that includes three curcuminoids: turmerone, atlantone, and zingiberone. Research shows that turmeric and its curcuminoids have a number of beneficial properties: (1) good antioxidant activity, comparing well with vitamin C, vitamin E, and superoxide dismutase; (2) anti-inflammatory activity that is comparable to steroidal and nonsteroidal drugs; (3) anticancer properties influencing all the steps of cancer formation: initiation, promotion, and progression; (4) protects the cardiovascular system by lowering serum cholesterol and inhibiting platelet aggregation; (5) protects the liver by several mechanisms; (6) in vitro and in vivo studies show curcuminoids can help with HIV in a number of ways, including acting as biological response modifiers, resulting in significant increases in CD-4 and CD-8 counts.

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