

# Clinical Update

## **Vitamin E, Lutein May Fight Cataracts**

**A randomized trial is needed to confirm the findings, experts say**

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Antioxidants such as vitamin E and lutein could lower a woman's risk of sight-robbing cataracts, new research suggests. The new observational study included more than 35,000 women aged 45 and older.

"The data suggests that those people who consumed diets higher in lutein/zeaxanthin or total vitamin E may have a lower risks of cataracts," said lead author William G. Christen, an epidemiologist at Brigham and Women's Hospital and Harvard Medical School, Boston.

Participants who consumed the largest amounts of lutein/zeaxanthin -- found in many vegetables -- had an 18 percent lower risk of developing cataracts than the group who consumed the least. The group who consumed the most vitamin E from both food and supplements had a 14 percent lower risk.

The study, published in the January issue of Archives of Ophthalmology, found that vitamin E obtained from food alone was not enough to reduce the risk significantly.

The lutein/zeaxanthin combination is most abundantly found in spinach, broccoli, kale, eggs, corn, and peas, Christen explained. He added, however, that it's too soon to be making specific food recommendations. Supplement manufacturers have recently added lutein to multivitamins, but a clinical trial is needed to determine a definite benefit from the compound, Christen explained.

Cataracts, a clouding of the eye's lens, afflicts many elderly adults. In fact, by age 80, more than half the population will have developed cataracts, according to the U.S. National Eye Institute (NEI). Cataracts can reduce the sharpness of vision or add a brownish tint to vision. According to the institute, smoking, alcohol use, diabetes and prolonged exposure to sunlight increase the risk of cataracts.

The new findings are based on a follow-up of female health professionals who participated in the multi-faceted Women's Health Study. At the beginning of the study, data was collected on the amount of lutein/zeaxanthin and vitamin E in each participant's diet, including their history of supplement use. Medical records were checked to verify the self-reports of cataracts from the more than 2,000 women who said they had developed cataracts.

The new study doesn't claim that lutein/zeaxanthin can prevent cataracts, only that it seems that it may delay their formation, the researchers stressed.

How might the nutrients ease or slow cataracts? Lutein/zeaxanthin are pigments, so they might "absorb harmful radiation coming into the eye from UV radiation," Christen speculated. "They may act as antioxidants as well," preventing cellular damage thought to be caused by free radicals.

Other studies, conducted in both men and women, have looked at the impact of lutein/zeaxanthin and/or vitamin E on cataracts, Christen said. But he said the new 10-year study is one of the longest so far. That's important, he said, because cataracts develop over time. "It appears that we are coming to a critical point

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where the data are strong enough to suggest a need for a clinical trial" looking at the antioxidants' potential impact on eye health, Christen said.

For its part, the NEI is currently is recruiting subjects from 50 to 85 years of age for a clinical trial on the ability of lutein/zeaxanthin and another antioxidant nutrient, fish oil, to reduce age-related cataracts and macular degeneration. Dr. Emily Y. Chew is leading that study, which she said will be a randomized, controlled trial looking at whether lutein/zeaxanthin, fish oil or a combination of lutein/zeaxanthin plus fish oil are effective.

Chew praised Christen's work as being "another piece of the puzzle that looks toward lutein being helpful." However, while lutein may appear protective in observational studies, that may not pan out in a stricter randomized trial, she said.

John J. McNeil, an Australian epidemiologist who has studied vitamin E and cataracts, agreed that a randomized clinical trial would be more reliable because "observational studies involving nutrients have a mixed record of reliability -- mainly because dietary patterns are so easily confounded by other aspects of lifestyle."

Several randomized clinical studies on vitamin E and cataracts -- including one of his own -- have had disappointing results, added McNeil, who heads the department of epidemiology and preventative medicine at Monash University in Melbourne.

Dr. Richard Bensinger, a spokesman for the American Academy of Ophthalmology, said he regards Christen's findings as "soft data," since it "wasn't designed to control for all the variables in diet and women."

For example, he said the study could not monitor the women's previous intake of food. That means that the researchers had to make assumptions about the amount of carotenoids in specific foods, although they can vary greatly based on how and where they were cultivated, he said.

