More Evidence That Antioxidants May Delay Cataract Formation

Commentary by Lisa B. Arbisser, MD

A new study appearing in the January issue of the Archives of Ophthalmology finds that a higher intake of the carotenoids lutein and zeaxanthin can reduce the risk of developing cataracts by 18 percent; while vitamin E was associated with a 14 percent reduction.

Researchers in this study obtained detailed dietary information from 35,551 women (average age 53.5), using food frequency questionnaires (FFQ). The women were cataract free at baseline.

After 10 years of follow-up, 2,031 women developed cataracts. When the participants were split into five groups based on the amount of lutein and zeaxanthin they consumed, those in the group who consumed the most (about 6,716 micrograms per day) had an 18 percent lower chance of developing cataracts than those who consumed the least (1,177 micrograms per day). The one-fifth who consumed the most vitamin E from food and supplements-about 262.4 milligrams per day-were 14 percent less likely than the one-fifth who got the least (4.4 milligrams per day).

No relationship was observed between cataract risk and intakes of other carotenoids and antioxidants, including beta-carotene, beta-cryptoxanthin, lycopene, and alpha-carotene.

Although laboratory and animal studies support the hypothesis that antioxidants may protect lens proteins to prevent cataract development, epidemiologic studies in humans have been inconsistent and there have been no randomized trials. While this latest observational study is encouraging, it doesn't provide the level of evidence required to make a public health recommendation advocating vitamin supplementation for cataract prevention.

But we may know more soon. Randomized trials investigating the role of Vitamin E in cataract prevention are underway, and the National Eye Institute (NEI) is now 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.

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