

Lutein zeaxanthin vitamin E eyed for cataracts

By Stephen Daniells 15/01/2008-

A higher intake of the carotenoids lutein and zeaxanthin, as well as vitamin E, could reduce the risk of developing cataracts by about 15 per cent, suggests a new study.

Over 35,000 women took part in the study, which showed that a high intake of the two carotenoids reduced the risk of cataracts by 18 per cent, while vitamin E was associated with a 14 per cent reduction, reports the study in the *Archives of Ophthalmology*.

"The results of the present study add to the growing body of observational evidence that suggests a possible beneficial effect of lutein/ zeaxanthin in delaying cataract formation," wrote lead author William Christen from Brigham and Women's Hospital and Harvard Medical School.

"Lutein and zeaxanthin are the only carotenoids detected in the human lens, and the presence of oxidation products of lutein and zeaxanthin in the lens further supports a functional role for xanthophylls in maintaining lens clarity."

The study adds to an ever-growing body of science supporting the role of lutein and zeaxanthin for eye health, with the majority supporting their role against age-related macular degeneration, the leading cause of legal blindness for people over 55 years of age in the Western world, according to AMD Alliance International.

"The oxidative hypothesis of cataract formation posits that reactive oxygen species can damage lens proteins and fibre cell membranes and that nutrients with antioxidant capabilities can protect against these changes," wrote the authors, led by William Christen in background information in the article.

The researchers recruited 39,876 female health professionals (average age 53.5) and obtained detailed dietary information from 35,551, using food frequency questionnaires (FFQ).

After following the women for 10 years, 2031 cases of cataract were confirmed. By quantifying intakes of lutein and zeaxanthin into five groups, the researchers report that women with the highest average intake (6716 micrograms per day) had an 18 per cent lower risk of developing cataracts than women with the lowest average intake (1177 micrograms per day).

Moreover, women with the highest average vitamin E intake from food and supplements (262.4 milligrams per day) were 14 per cent less likely to develop cataracts than women with the lowest average intake (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.

"In conclusion, these prospective data from a large cohort of female health professionals indicate that higher intakes of lutein/zeaxanthin and vitamin E are associated with decreased risk of cataract," the authors write.

"Although reliable data from randomized trials are accumulating for vitamin E and other antioxidant vitamins, randomized trial data for lutein/zeaxanthin are lacking. Such information will help to clarify the benefits of supplemental use of lutein/zeaxanthin and provide the most reliable evidence on which to base public health recommendations for cataract prevention by vitamin supplementation."

Source: *Archives of Ophthalmology*

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"Dietary Carotenoids, Vitamins C and E, and Risk of Cataract in Women - A Prospective Study"

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