No Effect of High Dose Antioxidants on Cataract in AREDS

In addition to investigating the effects of antioxidants on AMD, the AREDS trial also evaluated the formulation’s effect on age-related lens opacities. High dose vitamin C, vitamin E, and beta-carotene had no apparent impact on the 7-year risk of development or progression of age-related lens opacities or visual acuity loss.


AREDS Analysis: Multi-Vitamin Use Delays Cataract

A prospective cohort analysis of AREDS found that consistent use of a multi-vitamin and mineral supplement may delay the progression of lens opacities. The risk of development of, or progression to, any cataract was reduced by 16% in regular multi takers. For nuclear cataract, a 25% risk reduction was observed in the multi-supplement users. There was a similar reduction in risk of cortical lens events, although significance was not reached. No beneficial effect was seen for posterior subcapsular opacities.


Reduced Likelihood of Cataract Surgery with Higher Lutein Intake

Data from the large Nurses’ Health Study showed a reduced likelihood of cataract surgery with increasing intakes of lutein and zeaxanthin. Similarly, the Health Professionals Follow-Up Study reported a trend toward lower risk of cataract surgery in men consuming more of these carotenoids. These findings are consistent with those from a follow-up to the Beaver Dam Study (2001), and the Longitudinal Study of Cataract (1998).


Vitamin E, Lutein Intake Associated with Reduced Cataract Risk

Information on antioxidant nutrient intake from food and supplements was obtained from over 35,500 female health professionals who were free of a diagnosis of cataract. A total of 2031 cases of cataract were confirmed during a mean 10 years of follow-up. Women with the highest daily intake of lutein and zeaxanthin, averaging about 6.7 mg, had an 18% lower risk of developing cataract compared to women consuming the least, or a mean of 1.2 mg a day. Comparing women in the extreme quintiles for vitamin E from food and supplements combined, a 14% risk reduction was noted. Those in the highest quintile consumed a mean of 262 mg vitamin E daily, while those in the lowest quintile consumed an average 4.4 mg.


Long Term Multi Use Clinically Decreases Nuclear Opacity Risk

The NEI-supported Italian-American Clinical Trial of Nutritional Supplements and Age-Related Cataract, is a 13-year study designed to evaluate whether multi use can affect the development or progression of lens opacities in a well-nourished population. Participants assigned to the multi were 34% less likely to experience a nuclear opacity. The multi group was also 22% less likely to experience a cortical event, although the difference from placebo did not reach statistical significance. In contrast, those in the multi group (which contained no lutein or zeaxanthin) had a higher risk of posterior subcapsular events.

**Long-Term Vitamin C Supplement Use Reduces Nuclear Cataract Risk**
A study conducted by Tufts University and Harvard Medical School reports that women consuming the highest levels of vitamin C had about a 60% lower risk of developing nuclear cataract than those with the lowest intake levels. In addition, women who took vitamin C supplements for 10 years or more had a similar reduction in risk for nuclear cataract.


**Reduced Nuclear, Cortical Cataract Risk Linked to Multi, B-Vitamins**
The relationships between vitamin supplement use and the three major types of cataract were investigated in participants of the Blue Mountains Eye Study. The authors concluded that long-term use of multivitamins, B vitamins and vitamin A supplements was associated with reduced prevalence of either nuclear or cortical cataract. A strong protective influence on cortical cataract from folate or vitamin B12 supplements was also observed.


**Lutein Clinically Shown to Slow Cataract in Pilot Study**
This double-blind pilot trial tested the effects of supplemental lutein (about 7 mg), vitamin E (100 IU) or placebo on the visual function of cataract patients over the course of 2 years. Both visual acuity and glare sensitivity improved in the lutein group. Clinical examination showed that cataracts did not progress in four of five patients in the lutein group, and in only one of five among placebo subjects.


**Antioxidant Mix Slows Cataract in 3 Year, Double-Blind Study**
This multi-national controlled trial was conducted to examine whether an antioxidant mixture (vitamins C, E and beta-carotene) could slow the progression of early age-related cataract over a three year period. A statistically significant reduction in opacification was found in the group getting vitamins, versus those in the placebo group. In short, antioxidant supplements produced a modest but potentially important slowing of cataract progression.

REACT group. The Roche European American Cataract Trial (REACT): A randomized clinical trial to investigate the efficacy of an oral antioxidant micronutrient mixture to slow progression of age-related cataract. *Ophthalmic Epidemiology* 9:49-80, 2002.

**Cortical Cataract Risk Reduced with Long-Term Vitamin C Intake**
Tufts researchers found that for women under 60, daily vitamin C intake of 360 mg or more reduced the risk of developing cortical cataract compared to intakes less than 140 mg. The use of vitamin C supplements for at least 10 years reduced the risk for this type of cataract by 60%.