

Antioxidant vitamins and nuclear opacities: the longitudinal study of cataract.

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OBJECTIVE: The association of antioxidant nutrients and risk of nuclear opacification was evaluated in the Longitudinal Study of Cataract. **DESIGN:** Nutritional data were collected at baseline on the 764 participants, which included assessment of dietary intake, use of vitamin supplements, and plasma levels of vitamin E. Ophthalmologic and other data were collected at baseline and at yearly follow-up visits, including lens photographs, which were graded using the Lens Opacities Classification System III protocol. **MAIN OUTCOME MEASURES:** Analyses examined whether the nutritional factors at baseline were related to increases in nuclear opacification at follow-up. The MULCOX2 approach, an extension of the Cox regression model, was used. Results are presented as relative risks (RRs) and 95% confidence intervals. **INTERVENTION:** Intervention was not applicable. **RESULTS:** The risk of nuclear opacification at follow-up was decreased in regular users of multivitamin supplements (RR = 0.69; 0.48-0.99), vitamin E supplements (RR = 0.43; 0.19-0.99), and in persons with higher plasma levels of vitamin E (RR = 0.58; 0.36-0.94). **CONCLUSIONS:** In regular users of multivitamin supplements, the risk of nuclear opacification was reduced by one third; in regular users of vitamin E supplements and persons with higher plasma levels of vitamin E, the risk was reduced by approximately half. These results are similar to those obtained in our earlier case-control study. Because these data are based on observational studies only, the results are suggestive but inconclusive. The possible effect of nutritional supplements on the lens requires confirmation by ongoing clinical trials.

MeSH Terms:

- Adult
- Aged
- Antioxidants/administration & dosage*
- Case-Control Studies
- Cataract/blood
- Cataract/epidemiology*
- Cataract/prevention & control
- Dietary Supplements*
- Female
- Humans
- Lens Nucleus, Crystalline*
- Longitudinal Studies
- Male
- Middle Aged

- Nutritional Status
- Research Support, U.S. Gov't, P.H.S.
- Risk Factors
- Vitamin E/blood
- Vitamins/administration & dosage*

Substances:

- Antioxidants
- Vitamins
- Vitamin E

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