

NURSES' HEALTH STUDY 2

VITAMIN C SUPPLEMENT...DECREASE RISK CATARACTS



To examine prospectively the association between dietary intake of vitamins C and E, carotene, and riboflavin and cataract extraction in women, a prospective cohort study²¹ beginning in 1980 with eight years of follow up took place in 11 states of the United States, with female registered nurses who were 45 to 67 years of age. 50,828 women were included in 1980 and others were added as they became 45 years of age. The main outcome measure was incidence of extraction of senile cataracts. The results were as follows: 493 cataracts were extracted during 470,302 person years of follow up. Intake of carotene and vitamin A was inversely associated with cataract: in multivariate analyses, women in the highest fifth of total vitamin A intake (excluding supplements) had a 39% lower risk of cataract relative to women in the lowest fifth (relative risk 0.61; 95% confidence interval 0.45 to 0.81). Neither riboflavin nor dietary vitamins E or C were associated with cataract in a multivariate analysis. Among specific food items spinach (rather than carrots, the greatest source of beta carotene) was most consistently associated with a lower relative risk. The risk of cataract was 45% lower among women who used vitamin C supplements for 10 or more years (relative risk 0.55 (0.32 to 0.96)), but no association was noted for multivitamin intake. Those in the two highest quintile for vitamin C intake received 152-209 mg from food alone, and 229-705 mg from food and supplements combined. Therefore vitamin C intake from supplements ranged between 77-496 mg per day. In conclusion, dietary carotenoids, although not necessarily beta carotene, and long term vitamin C supplementation ranging between 77-496 mg per day may decrease the risk of cataracts severe enough to require extraction.

²¹ Hankinson SE, et al. Nutrient intake and cataract extraction in women: a prospective study. *BMJ* 1992;305(6849):335-9.