

Am J Clin Nutr. 1991 Jan;53(1 Suppl):352S-355S.

Epidemiologic evidence of a role for the antioxidant vitamins and carotenoids in cataract prevention.

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The relationship between antioxidant nutrient status and senile cataract was examined in 77 subjects with cataracts and 35 control subjects with clear lenses. Subjects with low (below the 20th percentile) and moderate (20th-80th percentiles) plasma nutrient and nutrient intake levels of vitamin C, vitamin E, and carotenoids were compared with subjects with high levels (above the 80th percentile). The odds ratio (OR) of cortical (CX) cataract among subjects with low plasma carotenoid levels was 7.2 (P less than 0.05) and the OR of posterior subcapsular (PSC) cataract for persons with low plasma vitamin C was 11.3 (P less than 0.10). Low vitamin C intake was associated with an increased risk of CX (OR = 3.7, P less than 0.10) and PSC (OR = 11.0, P less than 0.05) cataract. Subjects who consumed fewer than 3.5 servings of fruit or vegetables per day had an increased risk of both CX (OR = 5.0, P less than 0.05) and PSC cataract (OR = 12.9, P less than 0.01).