

Can Antioxidants Affect Risk for Parkinson Disease?

Vitamins E and C may be associated with risk, but the evidence remains limited.

To determine whether risk for future Parkinson disease (PD) diagnosis was reduced with increased dietary antioxidant intake and total nonenzymatic antioxidant capacity (NEAC), researchers examined data from 43,865 men and women (aged 18–94 at baseline) in the Swedish National March Cohort linked to the National Health Registries. The authors collected information on intakes of dietary vitamin E, vitamin C, and beta-carotene and determined NEAC on a food-frequency questionnaire. The investigators adjusted dietary exposure variables for energy intake and employed a multivariable Cox proportional hazard regression model.

During a mean follow-up of 17.6 years, 465 incident cases of PD occurred. Baseline vitamin E consumption was inversely associated with risk for PD during follow-up (hazard ratio for highest vs. lowest tertile, 0.68; 95% confidence interval, 0.52–0.90; *P* for trend, 0.005), as was vitamin C (HR, 0.68; 95% CI, 0.52–0.89; *P* for trend, 0.004). Neither beta-carotene intake nor NEAC was associated with PD risk.

COMMENT

These authors found that vitamins E and C may be important in lowering PD risk. The study had limitations. The questionnaire for food frequency, although validated, was used only at baseline, leaving it unclear whether supplement use was continued. In addition, the study results conflict with those of previous investigations into vitamins and PD risk. Although these findings are intriguing, I am not currently recommending prophylactic vitamin E and vitamin C for those at risk for PD (e.g., families with genetic mutations).

— **Michael S. Okun, MD**

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At the time we reviewed this paper, its publisher noted that it was not in final form and that subsequent changes might be made.