Abstract


Serum vitamin D and the risk of Parkinson disease.

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OBJECTIVE: To investigate whether serum vitamin D level predicts the risk of Parkinson disease.

DESIGN: Cohort study.

SETTING: The study was based on the Mini-Finland Health Survey, which was conducted from 1978 to 1980, with Parkinson disease occurrence follow-up through the end of 2007. During the 29-year follow-up period, 50 incident Parkinson disease cases occurred. Serum 25-hydroxyvitamin D level was determined from frozen samples stored at baseline. Estimates of the relationship between serum vitamin D concentration and Parkinson disease incidence were calculated using the Cox model.

PARTICIPANTS: Three thousand one hundred seventy-three men and women, aged 50 to 79 years and free of Parkinson disease at baseline.

MAIN OUTCOME MEASURE: Parkinson disease incidence.

RESULTS: Individuals with higher serum vitamin D concentrations showed a reduced risk of Parkinson disease. The relative risk between the highest and lowest quartiles was 0.33 (95% confidence interval, 0.14-0.80) after adjustment for sex, age, marital status, education, alcohol consumption, leisure-time physical activity, smoking, body mass index, and month of blood draw.

CONCLUSIONS: The results are consistent with the suggestion that high vitamin D status provides protection against Parkinson disease. It cannot, however, be excluded that the finding is due to residual confounding and further studies are thus needed.

PMID: 20625085