Time spent in outdoor light is associated with the risk of dementia: a prospective cohort study of 362094 participants

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Abstract

Background: Few epidemiological studies in the adult population related these outcomes to daytime sunlight exposure.

Method: Data were from a prospective cohort of 362094 UK Biobank participants. Questionnaire survey was conducted to investigate how many hours the participants spent outdoors on typical summer and winter days. Restricted cubic spline (RCS) was performed to explore the potential nonlinear relationship between sunlight exposure and the risk of dementia.

Result: More specifically, we prefer to describe this nonlinear relationship with J shape, the lowest risk at three change points (1.5 hours/day on average, 2 hours/day in summer, and 1 hour/day in winter). Since for sunlight exposure, a marked increase in risk was observed at low exposure, but a relatively slow elevation in risk at higher exposure.

Conclusion: There is a J-shaped correlation between outdoor sunlight exposure time and dementia risk.