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Self-reported dietary intake of potassium, calcium, and magnesium and risk of dementia in the Japanese: the Hisayama Study.

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Abstract

OBJECTIVES: To investigate whether higher intake of potassium, calcium, and magnesium reduces the risk of incident dementia.

DESIGN: Prospective cohort study.

SETTING: The Hisayama Study, in Japan.

PARTICIPANTS: One thousand eighty-one community-dwelling Japanese individuals without dementia aged 60 and older.

MEASUREMENTS: A 70-item semiquantitative food frequency questionnaire was used to assess potassium, calcium, and magnesium intakes. Hazard ratios (HRs) for the development of all-cause dementia and its subtypes were estimated using Cox proportional hazards model.

RESULTS: During a 17-year follow-up, 303 participants experienced all-cause dementia; of these, 98 had vascular dementia (VaD), and 166 had Alzheimer's disease (AD). The multivariable-adjusted HRs for the development of all-cause dementia were 0.52 (95% confidence interval [CI] = 0.30-0.91), 0.64 (95% CI = 0.41-1.00), and 0.63 (95% CI = 0.40-1.01) for the highest quartiles of potassium, calcium, and magnesium intake, respectively, compared with the corresponding lowest quartiles. Similarly, the HRs for the development of VaD were 0.20 (95% CI = 0.07-0.56), 0.24 (95% CI = 0.11-0.53), and 0.26 (95% CI = 0.11-0.61) for the highest quartiles of potassium, calcium, and magnesium intake, respectively. There was no evidence of a linear association between these mineral intakes and the risk of AD.

CONCLUSION: Higher self-reported dietary intakes of potassium, calcium,

and magnesium reduce the risk of all-cause dementia, especially VaD, in the general Japanese population.

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Higher dietary intakes of potassium, calcium and magnesium are associated with a reduced risk of developing vascular dementia. [Evid Based Ment Health. 2013]

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