

Abstract

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Calcium supplementation and risk of dementia in women with cerebrovascular disease.

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OBJECTIVE: To determine whether calcium supplementation is associated with the development of dementia in women after a 5-year follow-up.

METHODS: This was a longitudinal population-based study. The sample was derived from the Prospective Population Study of Women and H70 Birth Cohort Study in Gothenburg, Sweden, and included 700 dementia-free women aged 70-92 years. At baseline in 2000-2001, and at follow-up in 2005-2006, the women underwent comprehensive neuropsychiatric and somatic examinations. A CT scan was performed in 447 participants at baseline. Information on the use and dosage of calcium supplements was collected. Dementia was diagnosed according to DSM-III-R criteria.

RESULTS: Women treated with calcium supplements (n = 98) were at a higher risk of developing dementia (odds ratio [OR] 2.10, 95% confidence interval [CI] 1.01-4.37, p = 0.046) and the subtype stroke-related dementia (vascular dementia and mixed dementia) (OR 4.40, 95% CI 1.54-12.61, p = 0.006) than women not given supplementation (n = 602). In stratified analyses, calcium supplementation was associated with the development of dementia in groups with a history of stroke (OR 6.77, 95% CI 1.36-33.75, p = 0.020) or presence of white matter lesions (OR 2.99, 95% CI 1.28-6.96, p = 0.011), but not in groups without these conditions.

CONCLUSIONS: Calcium supplementation may increase the risk of developing dementia in elderly women with cerebrovascular disease. Because our sample was relatively small and the study was observational, these findings need to be confirmed.

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