

Abstract

Stroke. 2008 Sep;39(9):2449-56.

Dietary calcium intake and risks of stroke, its subtypes, and coronary heart disease in Japanese: the JPHC Study Cohort I

Umesawa M, Iso H, Ishihara J, Saito I, Kokubo Y, Inoue M, Tsugane S; JPHC Study Group: Hanaoka T, Inoue M, Sobue T, Ogata J, Baba S, Mannami T, Kokubo Y, Okayama A, Miyakawa K, Saito F, Koizumi A, Sano Y, Hashimoto I, Miyajima Y, Suzuki N, Nagasawa S, Furusugi Y, Sanada H, Hatayama Y, Kobayashi F, Uchino H, Shirai Y, Kondo T, Sasaki R, Watanabe Y, Kishimoto Y, Takara E, Kinjo M, Fukuyama T, Irei M, Matsushima S, Natsukawa S, Watanabe S, Akabane M, Konishi M, Okada K, Tominaga S, Iida M, Ajiki W, Sato S, Yamaguchi M, Matsumura Y, Sasaki S, Tsubono Y, Iso H, Honda Y, Sugimura H, Kabuto M, Yasuda N, Kono S, Suzuki K, Takashima Y, Maruyama E.

Epidemiology and Prevention Division, Research Center for Cancer Prevention and Screening, National Cancer Center, 5-1-1 Tsukiji, Chuo-ku, Tokyo 104-0045, Japan.

BACKGROUND AND PURPOSE: Although it has been hypothesized that a high intake of dietary calcium may reduce the risk of cardiovascular disease (CVD), no prospective studies have been conducted to examine the specific association between calcium intake and incidence of stroke or coronary heart disease among Japanese with a low average calcium intake.

METHODS: To investigate the association between calcium intake and risk of CVD, a total of 41,526 Japanese men and women age 40 to 59 years without a history of CVD or cancer and who had completed a food consumption frequency questionnaire were enrolled in this study. The subjects were followed up from 1990 to 1992 to 2003, and after 533,692 person-years of follow-up, 1321 incident cases of stroke (664 ischemic, 425 intraparenchymal hemorrhage, and 217 subarachnoid hemorrhage) and 322 of coronary heart disease were documented.

RESULTS: Total calcium intake showed an inverse association with the risk of total stroke; the multivariable hazard ratio and 95% CIs for the highest versus the lowest quintile were 0.70 (95% CI, 0.56 to 0.88; P for trend=0.02). Dairy calcium intake was inversely associated with risks of total and ischemic stroke with respective multivariable hazard ratios (95% CIs) of 0.69 (0.56 to 0.85; P for trend=0.007) and 0.69 (0.52 to 0.93; P for trend=0.05). Dietary calcium intake was not significantly associated with risk of coronary heart disease.

CONCLUSIONS: Dietary calcium intake, especially calcium from dairy products, was found to be associated with a reduced incidence of stroke among middle-aged Japanese.

PMID: 18635855