

Abstract

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Vitamin C Intake and the Risk of Gout in Men: A Prospective Study

K. Choi, MD, DrPH; Xiang Gao, MD, PhD; Gary Curhan, MD, ScD

Division of Rheumatology, Department of Medicine, Arthritis Research Centre of Canada, Vancouver General Hospital, University of British Columbia, Vancouver, Canada; Channing Laboratory and Renal Division, Department of Medicine, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts; and Departments of Epidemiology and Nutrition, Harvard School of Public Health, Boston.

BACKGROUND: Several metabolic studies and a recent double-blind, placebo-controlled, randomized trial have shown that higher vitamin C intake significantly reduces serum uric acid levels. Yet the relation with risk of gout is unknown.

METHODS: We prospectively examined, from 1986 through 2006, the relation between vitamin C intake and risk of incident gout in 46 994 male participants with no history of gout at baseline. We used a supplementary questionnaire to ascertain the American College of Rheumatology criteria for gout. Vitamin C intake was assessed every 4 years through validated questionnaires.

RESULTS: During the 20 years of follow-up, we documented 1317 confirmed incident cases of gout. Compared with men with vitamin C intake less than 250 mg/d, the multivariate relative risk (RR) of gout was 0.83 (95% confidence interval [CI], 0.71-0.97) for total vitamin C intake of 500 to 999 mg/d, 0.66 (0.52-0.86) for 1000 to 1499 mg/d, and 0.55 (0.38-0.80) for 1500 mg/d or greater ($P < .001$ for trend). The multivariate RR per 500-mg increase in total daily vitamin C intake was 0.83 (95% CI, 0.77-0.90). Compared with men who did not use supplemental vitamin C, the multivariate RR of gout was 0.66 (95% CI, 0.49-0.88) for supplemental vitamin C intake of 1000 to 1499 mg/d and 0.55 (0.36-0.86) for 1500 mg/d or greater ($P < .001$ for trend).

CONCLUSIONS: Higher vitamin C intake is independently associated with a lower risk of gout. Supplemental vitamin C intake may be beneficial in the prevention of gout.