

Abstract

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Dietary folate intake and incidence of ovarian cancer: the Swedish Mammography Cohort.

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BACKGROUND: Mounting evidence suggests that a low intake of the water-soluble B vitamin folate is associated with breast and colorectal carcinogenesis, especially among alcohol drinkers. However, epidemiologic data specifically linking folate intake to ovarian cancer risk are limited.

METHODS: We examined the association between dietary folate intake (i.e., folate from food sources) and the incidence of total epithelial ovarian cancer and its subtypes by analyzing data from the Swedish Mammography Cohort, a population-based prospective cohort of 61 084 women, aged 38-76 years, who, at baseline (i.e., from 1987 to 1990), were cancer-free and had completed a food-frequency questionnaire. Through June 30, 2003, 266 incident cases of invasive epithelial ovarian cancer were diagnosed. We used Cox proportional hazards models to estimate multivariable relative risks (RRs) of ovarian cancer with 95% confidence intervals (CIs). All statistical tests were two-sided.

RESULTS: Overall, dietary folate intake was weakly inversely associated with total epithelial ovarian cancer risk (RR for highest versus lowest quartile of intake = 0.67, 95% CI = 0.43 to 1.04; P(trend) = .08). Among women who consumed more than 20 g of alcohol (approximately two drinks) per week, there was a strong inverse association between dietary folate intake and total epithelial ovarian cancer risk (RR for highest versus lowest quartile of intake = 0.26, 95% CI = 0.11 to 0.60; P(trend) = .001), but among women who consumed 20 g or less of alcohol per week, there was no such association (RR for highest versus lowest quartile of intake = 1.00, 95% CI = 0.59 to 1.70; P(trend) = .80). The absolute risk of epithelial ovarian cancer for the lowest three quartiles versus the highest quartile of folate intake was 8 per 100 000 person-years (95% CI = 0 to 16 per 100 000 person-years) overall and 26 per 100 000 person-years (95% CI = 10 to 42 per 100 000 person-years) among those who consumed more than 20 g of alcohol per week. The association between dietary folate intake and cancer risk did not vary substantially among subtypes of epithelial ovarian cancer.

CONCLUSION: A high dietary folate intake may play a role in reducing the risk of ovarian cancer, especially among women who consume alcohol.

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