

A potential cancer-causing compound called acrylamide forms as a result of the chemical changes that occur in foods when they're baked, fried, or roasted.

## **A prospective study of dietary acrylamide intake and the risk of endometrial, ovarian, and breast cancer**

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*Cancer Epidemiology, Biomarkers, and Prevention*. 2007 Nov; **16** (11): 2304–2313. [PMID 18006919](#).\* [doi:10.1158/1055-9965.EPI-07-0581](#).

**BACKGROUND:** Acrylamide, a probable human carcinogen, was detected in various heat-treated carbohydrate-rich foods in 2002. The few epidemiologic studies done thus far have not shown a relationship with cancer. Our aim was to investigate the association between acrylamide intake and endometrial, ovarian, and breast cancer risk.

**METHODS:** The Netherlands Cohort Study on diet and cancer includes 62,573 women, aged 55-69 years. At baseline (1986), a random subcohort of 2,589 women was selected using a case cohort analysis approach for analysis. The acrylamide intake of Subcohort members and cases was assessed with a food frequency questionnaire and was based on chemical analysis of all relevant Dutch foods. Subgroup analyses were done for never-smokers to eliminate the influence of smoking, an important source of acrylamide.

**RESULTS:** After 11.3 years of follow-up, 327, 300, and 1,835 cases of endometrial, ovarian, and breast cancer, respectively, were documented. Compared with the lowest quintile of acrylamide intake (mean intake, 8.9 mug/day), multivariable adjusted hazard rate ratios (HR) for endometrial, ovarian, and breast cancer in the highest quintile.

**CONCLUSIONS:** We observed increased risks of postmenopausal endometrial and ovarian cancer with increasing dietary acrylamide intake, particularly among never-smokers. Risk of breast cancer was not associated with acrylamide intake.

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