This Just In: No Link Between Acrylamide and Breast Cancer

By ACSH Staff — March 18, 2005

For nearly three years, consumers have been warned about potential health risks from acrylamide, a chemical formed when foods containing high levels of carbohydrate are cooked at high temperatures (frying or baking, for example). Since its discovery in food by Swedish scientists, acrylamide has provided alarmist groups like the Center for Science in the Public Interest (CSPI) with a new focus for their bogus health scares [1]. But, as ACSH has reported [2], there is no reason to consider the levels of acrylamide found in foods a risk to human health. This scare was just another example of the misguided assumption that if a high dose of a chemical causes cancer in animals, exposure to even trace levels of that chemical will cause cancer in humans (see ACSH's book America's War on "Carcinogens" [3]). In the case of acrylamide, high doses increased the risk of mammary (breast) tumors in rats.

A study published in the March 16, 2005 edition of the Journal of the American Medical Association (JAMA) bolsters the legitimacy of ACSH's position. Swedish scientists studied the occurrence of breast cancer in over 43,000 women, aged thirty-nine years on average. The women were followed from 1991 through 2002; they completed a food frequency questionnaire at the start of the study, and their intake of acrylamide was determined from these data.

Researchers divided the participants into five categories based on the quantity of acrylamide typically ingested per day and compared the occurrence of breast cancer among the groups. Overall, 667 cases of breast cancer occurred in these women during the course of the study. There was no significant difference in the risk of breast cancer relative to the typical amount of acrylamide the women consumed, even though the women in the highest consumption group ate about three times as much acrylamide as did those in the lowest group.

This study design was prospective -- that is, the women's diets were determined before any of them developed breast cancer. Importantly, the dietary data were collected long before anyone knew that acrylamide might be found in foods, thus the participants' food selections could not have been biased by the news about acrylamide.

In their discussion, the authors noted, "we believe that these results exclude a significant public health risk of breast cancer associated with dietary intake of acrylamide."

While good scientific procedure requires that these results be confirmed by other investigators, the results certainly help deflate exaggerated concerns about supposed risk to human health from acrylamide.

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