Spotlight

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Acrylamide and Esophageal Cancer

Lin *et al*.
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Studies in rodent models have found that acrylamide exposure poses a risk for several types of cancer, prompting the International Agency for Research on Cancer to classify acrylamide as a probable human carcinogen in 1994. Human studies, however, were inconclusive. When, in 2002, Swedish researchers detected high contents of acrylamide in heat-processed, carbohydrate-rich foods, such as French fries, potato crisps and coffee, a possible association between cancer and dietary acrylamide intake attracted renewed interest.

Since the rapid and largely unexplained increase in incidence of esophageal adenocarcinoma during the past few decades went hand in hand with an increasing popularity of French fries and potato chips, Lin *et al.* decided to take a closer look at a possible connection between the two. Their Swedish nationwide, population-based case-control study included 189 cases of esophageal adenocarcinoma, 262 cases of gastroesophageal junctional carcinoma and 820 control subjects. The researchers assessed the participants' diet over the last 20 years with validated food-frequency questionnaires covering the habitual intake of 63 foods and beverages.

Among participants in the highest quartile of acrylamide exposure compared to the lowest, the adjusted risk of all esophageal tumors combined was increased by 23 percent, particularly among overweight or obese persons. Further studies will be necessary to validate a possible connection between dietary intake of acrylamide and an increased cancer risk.