



# DEMO NOTES

## Acrylamide in cooked carbohydrates

### DON'T PANIC!

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A 2002 Swedish study reported that carbohydrates exposed to high heat developed previously unknown levels of acrylamide, a chemical compound that is suspected of being linked to cancer.

Up until then, acrylamide had only been found, and only been studied, as a by-product of plastic production found in the water supply. Laboratory animals given relatively high, persistent, levels of acrylamide in drinking water showed neurological damage, genetic mutation and increased cancer. However, according to the authors of the Swedish study, "Epidemiological studies in man have not shown a correlation between exposure to acrylamide and increased cancer rate. These studies have been criticised because the number of studied persons was too low considering the expected effect."

The Swedish study did **not** address the health effects of acrylamide. The entire focus of the study was on testing levels of acrylamide in foods. It's also important to note that the researchers developed and used an entirely new testing method, and that they applied that method to a relatively small sample of foods. Further testing by a group working the World Health Organization will provide more data.

The next step will be studies of the health effects of acrylamide in food. Since no one was aware of acrylamide in food until 2002, no studies have been completed. The Swedish researchers noted that blood tests indicate about the same level of acrylamide in everyone tested, and that the only people tested with higher levels were the victims of an industrial accident.

The World Health Organization has formed a network to address these issues. In the meantime, they continue to recommend no particular change in diet.

In June 2005, the Environmental Law Foundation filed suit with the State of California asking that certain potato chip manufacturers be required to add Prop. 65 warnings to the labels of their products.

Bottom line from the Co-op perspective: whole grains have proven health benefits, and I'd strongly suggest that everyone keep consuming them. French fries and potato chips have proven health risks, and were the high scorers as far as acrylamide content, so I'd strongly suggest that everyone limit their consumption of those items. (Note that food cooked by boiling, including rice and potatoes, did not develop acrylamide.)

The actual study, rather than the media hype, can be found at the Swedish National Food Administration site at:

[http://www.slv.se/templates/SLV\\_DocumentList.aspx?id=4529](http://www.slv.se/templates/SLV_DocumentList.aspx?id=4529)

The World Health Organization page on acrylamide can be found at

<http://www.who.int/foodsafety/chem/chemicals/acrylamide/en/>

Below is a table from that site showing some of the testing results.

**Table 1**

*New results added April 26, 2002. These results are from new samples of some of the products that in the earlier material showed a relative high concentration of acrylamide, thereby increasing the median figures.*

Food group	Acrylamide concentration ( $\mu\text{g}/\text{kg}$ )		Number of samples
	Median	min-max	
Potato crisps	1200	330-2300	14
French fries	450	300-1100	9
Biscuits and crackers	410	<30-650	14
Crisp breads	140	<30-1900	21
Breakfast cereals	160	<30-1400	15
Corn crisps	150	120-180	3
Soft breads	50	<30-160	20
Various fried foods (pizza, pancakes, waffles, fish fingers, meatballs, chickenbits, deep fried fish, vegetarian schnitzel and cauliflower gratin)	40	<30-60	9