

Acrylamide in Food – What Does It Mean?

In April of this year, results of a Swedish study were released indicating that acrylamide was found in various starch based food products such as potatoes, breads and rice when they were cooked in temperatures above 120°C either through baking or frying. Following the release of the Swedish study, other studies have subsequently been released supporting the original findings.

What is acrylamide?

Acrylamide is a chemical and is commonly used in the manufacture of plastics. It has been shown to be carcinogenic (cancer causing) in laboratory animals but research on the effects in humans is limited and inconclusive.

What was the focus of the Swedish study?

The study looked for the presence of acrylamide in a variety of Swedish foods including protein-rich (meats, fish, soy) and carbohydrate-rich foods (potatoes, potato chips, french fries, beet root, soft breads and crisp-breads prepared by a number of heating methods such as frying, microwaving, baking and boiling.)

What were their results?

The level of acrylamide in boiled and raw foods was below the level of detection. In other foods, the level of acrylamide formation increased as heating increased.

What has been the reaction from other health organizations?

In response to the results of the Swedish and other studies, the World Health Organization (WHO) and United Nations Food and Agriculture Organization (FAO) held a meeting June 25-27 to review these studies and offer their own conclusions. The WHO/FAO meeting concluded that no studies of the relationship between acrylamide and cancer have been done and that much more study is needed before any recommendations for dietary changes could be considered.

Do bakery products contain acrylamide?

Because there is no information available on North American foods at this time, BAC is working with Health Canada, and is participating in an industry working group including USFDA and the North American scientific community, to identify appropriate research and recommendations to consumers and food producers.

What should consumers do?

Health Canada is not recommending any dietary changes for consumers because of these studies. Health Canada is continuing to advise Canadians to follow the dietary guidelines as outlined in Canada's Food Guide to Healthy Eating which includes five to 12 servings of grain based products per day. This position is supported by the World Health Organization.

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We're Fat: So Now It's Blame It on Bread

We are seeing more and more media coverage on the escalation of obesity in our society. While the figures may vary, the percentage of overweight or obese people within North America has definitely been on the rise over the past 20 years.

For those who may be thinking that this is more an American problem, think again. While the figures and methods of calculations may vary, you can put the percentage of Americans overweight or obese at around 60% with Canadians close behind.

Now let me stop here and say that I agree that weight gain and obesity are a growing (no pun intended) problem for North Americans. We "super size" our meals way too often either at home or when we eat out. As for exercise, well that annual promise to work out regularly is usually good from January 1 to maybe mid February. Simply put we are taking in more calories that we are using up.

Our being overweight leads to a whole list of serious health problems including heart disease and diabetes. It costs us a lot of money in health care, something that we cannot readily afford.

So we are fat and by all accounts appear to be getting

fatter. So in the eternal struggle to assess blame there are those now saying the new nutritional bad boys are carbohydrates. You see, eating carbohydrates actually makes you hungry therefore requiring you to eat more, say those advocating this theory.

The carbohydrates are bad theory has been reported in a variety of North American media. Including the Toronto Star and National Post. In July the New York Times ran a multi-page story "What if it has all been a big fat lie?" which asserted that our society's weight gains are all caused by carbohydrates such as bread and pasta.

I must admit I was struggling with trying to put this issue into perspective for members and provide a response to these newest accusations. However I soon realized that this wasn't necessary as one of my American association colleagues had already done so in a brilliant response to the New York Times article. So I would now like to share with you that letter.



Paul Hetherington
President & CEO
Baking Association
of Canada

July 9, 2002

Letters to the Editor
New York Times
229 West 43rd Street
New York, NY 10036

Dear Editor:

We were disappointed that Gary Taube's article in the July 7 issue, "What if it has all been a big fat lie?" made the confusion surrounding the obesity/diet issue even more confusing to the public. Delving into all of the theories and hypotheses of dieting — without peer-reviewed, published studies — served only to be sensational and certainly not provide any evidence-based recommendations.

The 1998 issue of the Journal of the National Cancer Institute published the article, "Improving Public Understanding: Guidelines for Communication Emerging Science on Nutrition, Food Safety and Health." An advisory panel of journalists and scientists convened by the Harvard School of Public Health and the International Food Information Council developed these guidelines.

Mr. Taube should have followed these guidelines and asked himself the following questions:

- Will your communication enhance the public's understanding of diet and health?
- Are the study findings put into context?
- Have the study findings been peer-reviewed?
- Have you disclosed the important facts about the study (i.e., research design, methods of data collection and analysis, number of subjects, and limitations or shortcomings)?
- Have you disclosed all key information about the study's funding?

Mr. Taube's answer to all of these questions would have to be "no." He even acknowledges most of the stud-



Judi Adams, M.S., R.D.
President, Wheat Foods Council

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ies that show high-fat diets are safe and effective have not even been published. What does that tell the reader about their validity?

On the other hand, the health benefits of complex carbohydrates are well documented and supported by scientific research. Consider these facts:

Fact: A recently released U.S. Department of Agriculture (USDA) study, “A Comparison of Low-Carbohydrate vs. High-Carbohydrate Diets: Energy Restriction, Nutrient Quality, and Correlation to Body Mass Index,” showed participants on high-carbohydrate diets consumed 300 fewer calories per day than those on very low-carbohydrate diets. The study, based on food intake data from 10,014 adults across the United States, also showed adults who ate high-carbohydrate diets were more likely to be in the normal weight range, with the lowest average body mass index. Additionally, high-carbohydrate diets were indicated to be more nutritious than low-carbohydrate diets, providing greater intake of vitamins A, C, carotene, and folate, and the minerals calcium, magnesium, and iron. (Source: *USDA Agricultural Research Service, Journal of the American College of Nutrition, June 2002.*)

Fact: Researchers at the University of Colorado, the University of Pittsburgh, and Brown University routinely collected data on a group of people comprising the National Weight Control Registry (NWCR). To be eligible for inclusion in the registry, an individual has to have lost a minimum of 30 pounds (13.6 kg) and maintained the weight loss a minimum of one year. On average, the 3,000+ registrants have lost 71 pounds (32.4 kg) and kept the weight off for more than six years. According to researchers, strategies previously identified that contribute to their success are eating a low-fat, high-carbohydrate diet, monitoring food intake and body weight, and maintaining high levels of physical activity. (Source: *Wyatt H, Grunwald G, Mosca C, et al. Long-term weight loss and breakfast in subjects in the National Weight Control Registry. Obesity Research. 2002; 10:78-82.*)

Fact: Many European countries, such as Italy and France, whose citizens consume more bread and pasta than Americans, have a much lower incidence of obesity than the United States. Despite the anecdotal information provided by Taubes, Italy’s incidence of overweight and obesity is only 37 per cent compared to the U.S.’s 61 per cent. France is only 31 per cent. (Source: *Institute of European Food Studies, Trinity College, Dublin, 1999.*)

Fact: A study published in the *Journal of the American Dietetic Association* (1980) looked at the consequences of a high-protein, low-carbohydrate diet. The research subjects followed Dr. Atkins’ Diet Revolution. Subjects’ total cholesterol and “bad” cholesterol (LDL-C) levels increased, while “good” cholesterol (HDL-C) levels decreased. These changes were particularly alarming in the women subjects, whose LDL shot up nearly 33 per cent. The authors concluded that “diets, such as this (Dr. Atkins’ Diet Revolution), may increase the long-term risk of arteriosclerosis” — a disease characterized by sudden spurts in the growth of fat and cholesterol-loaded deposits that clog arteries, which may lead to heart disease. (Source: *Journal of the American Dietetic Association, 1980.*)

Fact: Data collected through MEDLINE showed a cumulative number of 1,543 published English-language, scientific studies had linked fat and cholesterol to the increased risk of heart disease. (*FoodReview, Spring 2002, USDA, Economic Research Service.*)

Fact: Taubes points out the percentage of fat from calories has dropped only because we are consuming more calories. Actual fat consumption has not dropped. Americans are eating more calories from carbohydrates, protein, and fat now than in the 1950s. The average increased daily consumption is 500 calories more than 50 years ago. Between the 10 years from 1984 to 1994, we increased our consumption to 340 more calories per day. (Source: *University of California at Berkeley Wellness Newsletter, January 2002; USDA, ERS, FoodReview, 1999.*)

Fact: Neither the American Diabetes Association nor the American Dietetic Association recommend following the glycemic index as a weight-loss program. In fact, the American Diabetes Association position statement acknowledges that although various starches do have different glycemic responses, from a clinical perspective, first priority should be given to the total amount of carbohydrate consumed rather than the source of carbohydrate. Recently, authors of Tufts University Health and Nutrition Letter noted many healthful foods have higher glycemic indices than foods that are less nutritionally desirable. For example, carrots have a higher glycemic index than jellybeans. Additional reasons for lack of support for the glycemic index as a diet plan include inconsistency from one glycemic index table to the next, and the fact that combined foods have a much different rank than a single food. People tend to eat meals, not single foods, so until every combination of foods and the glycemic index can be calculated, knowing the glycemic index of a food is not practical information that can be

used in real life. (Source: *Journal of the American Medical Association*, January 2002.)

Fact: On April 25, 2002, the American Kidney Fund (AKF) issued a warning stating the organization has long suspected high-protein diets negatively impact health, but they now have research to support their concerns. According to AKF Chairman Paul Crawford, M.D., “Increased protein intake leads to a buildup of nitrogen in the blood. The nitrogen ends up at the kidney in the form of urea, where it needs to be cleaned from the blood and gotten rid of in the urine. The resulting increase in urination can cause dehydration, further straining the kidneys.” Taking care of the kidneys is important since there is no cure for kidney failure. (Source: *American Kidney Fund*, April 25, 2002.)

Fact: The American Heart Association’s (AHA) Nutrition Committee released a scientific advisory warning against the use of high-protein diets for weight loss. The AHA said there is no scientific evidence the diets, including Atkins’, Zone, Stillman, Protein Power, or Sugar Busters, lead to long-term weight loss. According to the AHA, these popular diets may cause short-term weight reduction due to fluid loss from eliminating carbohydrates, but the increased consumption of animal protein, which is high in saturated fat, and the decrease in consumption of vegetables and fiber, which contain essential nutrients and help reduce cholesterol, can contribute to coronary heart disease, diabetes, and stroke. For sustained weight loss and long-term cardiovascular health, the AHA recommends a daily dietary balance of about 15 per cent of calories from protein, 30 per cent from fat, and 55 per cent from carbohydrates — combined with regular exercise, such as 30 minutes of brisk walking every day. (*American Heart Association*, October 2001.)

Fact: According to the Centers for Disease Control (CDC), only 22 per cent of Americans meet the CDC definition for regular physical activity, contrary to insinuations that the “leisure exercise mania” is providing ample calorie-burning exercise. (Source: *Centers for Disease Control*, 2001.)

If we would lower ourselves to using theories to support our biases, we could blame obesity on Dr. Atkins. His diet, first published in 1972, has sold millions of copies and purportedly millions of Americans are on his high-protein/high-fat diet. During that time, obesity has increased exponentially. No one can blame obesity on the Food Guide Pyramid. Only a few Americans follow the Food Guide Pyramid, a far cry from the 61 per cent who are overweight or obese.

The bottom line — obesity has become an American epidemic, and an epidemic that needs careful evaluation and a solution. Americans are experts at playing the “blame game.” First, we blamed fat and now carbohydrates and even the food industry. Perhaps it is time we stop blaming others and decide to cut down on our total caloric intake and increase our physical activity.

Obviously, you might assume that I am biased because I work for the grains industry. In that case, throw out everything I have stated and use your common sense: Look at Asia and consider their extremely high carbohydrate diets. Why is it the obesity rates in China (less than 15 per cent), Republic of Korea (22 per cent), Thailand (20 per cent) and Japan (less than 3 per cent) are far lower than in the United States (61 per cent)? (Source: *The Asia-Pacific perspective: Redefining obesity and its treatment*. WPRO, WHO, Int. Assn for the Study of Obesity, Int. Obesity Task Force, 2000.)

Here’s to accurate nutrition information,

Judi Adams, M.S., R.D.

President, Wheat Foods Council

The Wheat Foods Council is a national, US based nonprofit organization formed to help increase awareness of dietary grains as an essential component to a healthy diet

And here’s to you Judi!

Paul Hetherington

President & CEO

Baking Association of Canada

Ontario Packing Law Passed

In May, the Ontario government passed Bill 90, "An Act to promote the reduction, reuse and recycling of waste. This new law puts the responsibility on the company for recovering (or paying to have recovered) its own packaging.

In order to comply with the law, businesses may either set up their own recovery system or participate in an industry funding organization (IFO) which will have that responsibility. The Ministry of the Environment is currently establishing the Waste Diversion Organization, which in turn will approve the various IFOs.

Each IFO will establish a fee or levy to be paid by participating companies. An IFO for the Blue Box community programs (in which most food packing is recycled) will be one of the firsts to be established and is anticipated to begin operating early next year. Members wishing more information on Bill 90 can visit the Ontario Legislative Assembly web site www.on-tla.on.ca.

BAC Board Undertaking Strategic Plan Review

The Board of Directors is reviewing the Association's strategic plan beginning this fall. According to BAC Co-Chair Jack Kuyer, "We have completed the plan we established in 1997 with the vast majority of objectives met. It's now time for members and the Board to establish a direction for the next five years. Upon completion copies of the plan will be made available to members.

Mark Your Calendar

for the
2004 edition of

Bakery Showcase
May 16 – 18, 2004

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Toronto, Ontario, Canada

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For more information, or to receive a course application, please contact Ann Tipton in the BAC office @ 1-888-674-2253 ext. 21 or visit our web site: www.bakingassoccanada.com



Chapter Meeting Tuesday October 8, 2002

Valhalla Inn

1 Valhalla Inn Road
Toronto, Ont.
416-239-2391

Cocktails: 5:00 p.m.
Dinner: 6:00 p.m.
Presentation: 7:00 p.m

CASH BAR

PRE-REGISTER AND SAVE!

*Register before October 3
and pay only*

\$25.00 per member
\$30.00 per non-member.

Register at the door and pay

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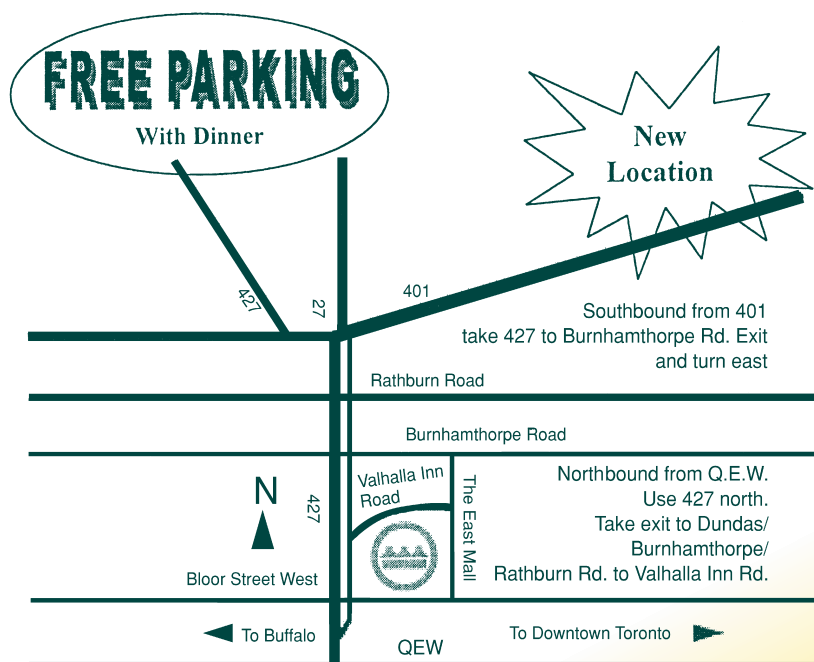
CONSUMER BEHAVIOR IN-HOME AND OUT-OF-HOME FOR BAKERY PRODUCTS

SPEAKER: MR. JIM ROBINSON

- ◆ What are the current and future trends for the Baking/Foodservice Industry?
- ◆ How Breads/Sweets/Snacks \$ Sales are performing within the Food Industry
- ◆ What is the average purchase amount for baked goods while eating out?

If you would like to know the answer to these questions and many more then plan to attend this exciting presentation focused on the Baking Foodservice Industry

Jim Robinson is the Vice President – Foodservice for NPD Group Canada – a leading provider of market intelligence to the Food Community.





ONTARIO CHAPTER MEETING NOTICE

Registration Form

October 8, 2002

Consumer Behavior In & Out of Home

For Bakery Products

ATTENDEE INFORMATION

Please note all registrations received after October 3 will require a credit card payment. No refunds will be given.

Please list names of all attendees: (attach separate sheet if necessary)

Name _____ Company _____

Name _____ Company _____

Name _____ Company _____

Name _____ Company _____

Name _____ Company _____

Name _____ Company _____

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To have receipt mailed to you, please complete the following:

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Are you a New Member? Are you new to our meetings? Please check the box below and let us know!

Yes I am new to BAC!

PAYMENT INFORMATION

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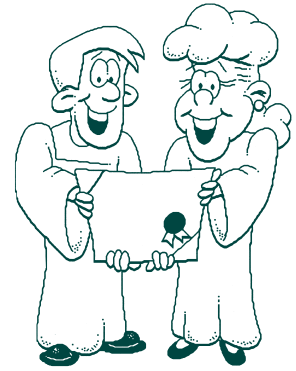
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Congratulations To Our Most Recent Correspondence Course Grads!



Peter Aspinall	Canada Bread	Bakery Technology I
Andy Jorge	The TDL Group	Food Hazard Control
Danny Lukic	Tim Hortons	Bakery Technology I
Kate Moffat-Lynch	Puratos	A Foundation for Sanitation
Greg Payne	Canada Bread	Bakery Technology II
Rayla Reid	Ashcroft Bakery	Bakery Technology II
Rayla Reid	Ashcroft Bakery	Bakery Technology III
John Roach	Canada Bread	Bakery Technology II
Terry Scott	Eastern Bakeries	Operating A Successful Bakery
Kelly Thompson	Student	Bakery Technology II
William Todd	Del's Pastry	Bakery Technology I
Nadir Zaki	Weston Bakeries	Food Hazard Control

For information on correspondence courses for baking industry employees and the Certified Bakery Specialist (CBS) program, please contact ext. 21 at the BAC office or check out our website at www.bakingassoccanada.com.

A warm welcome to our newest members

- | | |
|--|---|
| Bill Coleman - Western Wholesale | J M Smith - United Canadian Malt |
| Joe Fanelli - Maple City Bakery Ltd. | Janet Traub - Bee-Bell Health Bakery Inc. |
| Diana Middleton - Careerline Tech Center | Tommy Um - Bagel Brigade |
| Nasar Farooq Sajid - Tradesperson | |

For membership information, please contact ext. 21 at the BAC office

BAKING ASSOCIATION OF CANADA UPCOMING EVENTS

Atlantic Chapter
Golf Tournament Tuesday September 10, 2002
Ontario Chapter
Golf Tournament Tuesday September 10, 2002
Business Meeting Tuesday Oct. 8, 2002
Business Meeting Tuesday Nov. 12, 2002
Christmas Social Tuesday Dec. 10, 2002
Alberta Chapter
Alberta members take note that the next meeting will be held in Calgary this October. Meeting notices will be mailed directly to members

