



Nutrition for Family Living

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August, 2002 Topics

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The return of the fat vs. carbohydrate debate

A recent article in the New York Times Magazine has brought the topic of low fat vs. low carbohydrate diets to the public's attention... again. Some researchers blame low-fat diets for the rise in obesity rates during the past two decades, while others point out that there is not enough research indicating the proposed benefits of low carbohydrate diets outweigh the established risks.

Who's the good guy – carbohydrate or fat?

The article's basic premise is that obesity rates have increased tremendously since the mid-1980's when nutrition professionals began recommending low-fat diets for everyone as a way to reduce the risk of chronic disease. The authors blame the increased emphasis on carbohydrates and propose that the mechanism by which carbohydrates make people gain weight is related to the glycemic index of carbohydrate-rich foods. Glycemic index is a term that refers to how quickly a particular food makes blood sugar rise and promotes insulin secretion. Insulin causes cells to store energy. Proponents of this theory believe that carbohydrate-rich foods promote more insulin secretion leading to more energy storage, leading to obesity. There is also a theory that high-carbohydrate diets "wear out" the pancreas and lead to insulin resistance and diabetes.

Other researchers point out that there is no research to show that this is what actually happens. They say that the glycemic index is not a useful scale because it does not take into account other foods eaten at the same meal, or the amount of the food that's eaten. Glycemic index was never intended to be used to help people make food choices. Unlike low-carbohydrate diets, the health benefits of low-fat diets have been studied extensively. In fact, studies show that the individuals who are able to maintain their weight loss over time are the ones who consume MORE carbohydrates as part of a low-fat diet. No such comparable research exists on low-carbohydrate or high-fat or high-protein diets.

Neither the American Dietetic Association nor the American Diabetes Association recommend using the glycemic index as the basis of a weight-loss program. The American Diabetes Association position statement says that while different carbohydrates have different effects on blood sugar, the first priority is the total amount of carbohydrate rather than its sources. The American Heart Association has released an advisory warning against the use of high-protein diets for weight loss. This type of diet may cause short-term weight loss but the increased protein and fat, and decreased vegetables and fiber, may contribute to coronary heart disease, diabetes and stroke.



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What to recommend?

Nutrition and health science is always evolving. We know more today than we knew ten years ago, and ten years from now we will know even more about how nutrition can affect disease risk. The Dietary Guidelines for Americans and the Food Guide Pyramid were developed after extensive scientific research. They remain the basis for the USDA's recommendations.

The bottom line remains that weight loss is the result of using more calories than one consumes. The source of the calories is, for the most part, less important than the total number. There's more to good nutrition than calories, just as there's more to health and disease prevention than simply avoiding overweight. A varied diet based on whole grains, fruits and vegetables, lean meat and low-fat dairy products can provide all the important nutrients and fiber people need. Limiting "empty" calories from high-fat and high-sugar snacks and increasing physical activity will do more to help overweight Americans lose weight than any radical changes in the composition of their diets.

For further reading:

Taubes, Gary. "What if it's all been a big, fat lie?" *New York Times*, July 7, 2002.

Kava, Ruth. "But what if I don't WANT to eat like a caveman?" American Council on Science & Health, July 12, 2002 <http://www.HealthFactsAndFears.com/index.html>

Bowman SA and Spence JT. A comparison of low-carbohydrate vs. high-carbohydrate diets: energy restriction, nutrient quality and correlation to Body Mass Index. *J Am Coll Nutr*, June 2002.

The Fat vs. Carbohydrate Debate. Nutrition for Family Living, April 2000.

High Protein Diets Not Proven Effective and May Pose Health Risks. Nutrition for Family Living, November 2001.



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To answer your question... caffeine and hydration

Q: I've come across some conflicting advice on caffeinated beverages. Can you help me define the best way to present this concept? When considering fluid intake, does an 8-ounce cup of coffee really provide 8 ounces of fluid?

A: We've come across lots of advice on drinking more fluid after alcohol and caffeine-containing beverages, but very little in the way of definitive research to back up the recommendations. In speaking with a urologist a couple of years ago, we were told that caffeine increases water excretion rates, but that beverages with caffeine like coffee and soda more than make up for the extra volume of water that's lost. We'd say that losing half the water in a beverage with caffeine is a good "rule of thumb" – in other words, if someone drinks a 12-oz can of Mountain Dew they are probably getting the benefits of 6 oz of water. Alcohol is a little different. Alcohol is known to increase water excretion and the alcohol: water ratio in a particular beverage would be a factor (different for beer vs. wine vs. distilled liquor). To make it simple, I think it's ok to say that alcoholic beverages don't count toward the recommended water intake.

On a related note: a normal, healthy adult needs 8-10 cups of fluid a day for the basic functions of life and excretes about 6 cups of water in urine. A person's daily fluid requirement depends on how much water they lose due to exercise and hot weather as well as the number of calories they burn each day. An active man who burns 3,000 calories a day needs more than three quarts of fluid, while a sedentary woman might need half that. Staying hydrated is important for keeping body temperature under control and reducing stress on the heart and kidneys. If you're drinking enough fluid, you won't feel thirsty. Older adults and young children should be especially proactive about getting enough fluid because their bodies may not tell them they're thirsty until they've become dehydrated.



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FDA approves new non-nutritive sugar substitute neotame

The Food and Drug Administration today announced its approval of a new sweetener, neotame, for use as a general-purpose sweetener in a wide variety of food products, other than meat and poultry. Neotame is a non-nutritive, high intensity sweetener that is manufactured by the NutraSweet Company of Mount Prospect, Illinois.

Depending on its food application, neotame is approximately 7,000 to 13,000 times sweeter than sugar. It is a free-flowing, water soluble, white crystalline powder that is heat stable and can be used as a tabletop sweetener as well as in cooking applications. Examples of uses for which neotame has been approved include baked goods, non-alcoholic beverages (including soft drinks), chewing gum, confections and frostings, frozen desserts, gelatins and puddings, jams and jellies, processed fruits and fruit juices, toppings and syrups.

In determining the safety of neotame, FDA reviewed data from more than 113 animal and human studies. The safety studies were designed to identify possible toxic effects, such as cancer-causing, reproductive, and neurological effects. From its evaluation of the neotame database, the FDA was able to conclude that neotame is safe for human consumption.

New food additives, including new sweeteners, must be approved by FDA as safe before they may be marketed in the United States.

Watch next month's Nutrition for Family Living for a "For Your Use" article on artificial sweeteners.



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Family Day

"Family Day--A Day to Eat Dinner With Your Children" is a national effort to promote parental involvement as a simple, effective way to reduce youth substance abuse risk and raise healthier children. The Department of Public Instruction is promoting September 23 as "Family Day." Julie Allington is creating a flyer for parents with tips to encourage family meals. Family Day will be publicized with a letter from Superintendent Elizabeth Burmaster, and promoted by school PTO's and on a website: www.casacolumbia.org.

NutriNet News

The summer edition of NutriNet News will soon be available on the Nutrition Education Network website, <http://www.nutrisci.wisc.edu/nutrinet/>. Featured articles include a summary of results of the Child and Adult Care Food Program survey, which asked child care providers to rate practices and needs related to preventing childhood overweight; a summary of a report by the Hunger Task Force of Milwaukee about the state of school breakfast in Wisconsin; and a notice of a new federal partnership to promote healthier lifestyles. The Network Update includes preliminary information about the Network's 2003 campaign, *Walk, Dance, Play... Be active every day!*