



# FOOD, HEALTH, AND YOU

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## New Artificial

# FAT

## Generates Controversy

**A**

new fat substitute, for use in such snack foods as potato and tortilla chips, cheese puffs, and club crackers, has recently been approved by the Food and Drug Administration (FDA). The new ingredient looks and tastes like ordinary fat, but contains no calories because it passes through the digestive system without being absorbed.

Also known by its brand name Olean™, olestra is the first fat substitute that can withstand high cooking temperatures. Thus, it can replace fat in foods that are fried or baked. For example, a 1-ounce serving of regular potato chips contains 150 calories and 10 grams of fat, while a comparable serving of potato chips made with olestra has 70 calories and no fat. In numerous taste tests, consumers could not tell the difference between snacks

made with no-calorie olestra and those prepared with regular fat, even though the amount of fat and calories in the olestra-containing snacks was substantially reduced.

### Questions, Answers, and More Questions

Olestra is the most thoroughly tested new food ingredient ever approved by FDA. In evaluating the safety of olestra, FDA reviewed data from more than 150 animal and human studies spanning 25 years and costing the manufacturer more than \$200 million. These studies demonstrated that olestra did not cause overt health problems, such as cancer or birth defects. However, a number of scientists and consumer advocacy groups are concerned that the widespread use of olestra may have serious health consequences.

Because olestra's unusual chemical structure prevents it from being digested, it can produce intestinal discomfort, including abdominal cramps, bloating, and diarrhea. FDA believes that these symptoms are not medically significant, and that most people will not experience them because the amounts of olestra consumed will be small. Those who do develop symptoms can either cut back on foods containing olestra or simply avoid them.

Another disadvantage of the no-calorie fat is that it interferes with the body's ability to absorb and utilize vitamins A, D, E, and K. These are known as fat soluble vitamins because they are dissolved and transported by fat in the body. FDA is requiring that olestra be fortified with vitamins A, D,

# Fortifying Foods With Folic Acid May Help Prevent Birth Defects

The Food and Drug Administration (FDA) recently announced that folic acid, a B vitamin that helps prevent birth defects, will be added to many grain-based foods beginning in January, 1998. Foods mandated to be fortified with folic acid include enriched breads, rolls, buns, flours, corn meals, corn grits, farina, rice, and all enriched macaroni and noodle products. Some breakfast cereals already are fortified with folic acid.

Folic acid, also called folate, is important in the production of cellular genetic material and healthy blood. Folic acid is an essential vitamin for all people, but it is especially important for pregnant women. Each year in the United States, approximately 2,500 infants are born with birth defects resulting from a folate deficiency. These conditions, including spina bifida and anencephaly, affect the spinal cord or brain of the developing fetus and usually lead to paralysis or death.

Although genetics also play a key role in birth defects, some scientists believe that up to half of these disabilities can be prevented by an adequate intake of folic acid during the first 6 weeks of pregnancy—a time, unfortunately, in which many women are unaware that they are pregnant. Health professionals recommend that women of child-bearing age consume 400 micrograms (mcg) of folic acid each day. However, national surveys indicate that women of child-bearing age consume an average of only 230 mcg of folate daily. The decision to fortify grain products with folic acid is a public health measure designed to help all consumers, including pregnant women, obtain adequate amounts of folic acid. Similar pro-

grams, such as those that oversee the fortification of grain products with iron and salt with iodine, have prevented widespread deficiencies of hard-to-obtain nutrients.

In addition to getting folic acid by consuming foods that have been fortified with it, individuals can obtain this vitamin by taking supplements or by eating foods naturally rich in the substance, such as dark green leafy vegetables (spinach and romaine lettuce), asparagus, broccoli, brussels sprouts, beans, black-eyed peas, chickpeas, lentils, and citrus fruits and juices. Because many people do not regularly consume these foods, fortified grain products will provide an important dietary source of this vitamin. As with all nutrients, however, too much folic acid can be harmful. The folic acid intake for any individual should not exceed 1,000 mcg (1 milligram) per day. The levels to be added to grain products are designed to keep

the total intake of folate below 1 milligram per day.

To obtain more information on folic acid, contact the nearest Cooperative Extension Service office; addresses and phone numbers appear on page 4 of this newsletter. Additional free information on folic acid and birth defects is available in both English and Spanish through the March of Dimes at (800) 367-6630. ■

New fat  
(continued  
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E, and K to prevent the ingredient from "trapping" fat soluble vitamins from non-olestra foods that are eaten at about the same time as those containing the substance. All products made with olestra will carry a warning label regarding its drawbacks. However, FDA and the manufacturer are still deciding on the wording.

One other potentially serious problem is that olestra reduces the absorption of carotenoids. Carotenoids, a group of beneficial compounds found in fruits and vegetables, are associated with a reduced risk of cancer, heart disease, and an age-related disorder of the eye called macular degeneration. The long-term effects of olestra on carotenoids, and perhaps other beneficial plant chemicals, is unknown. Because many people in the United States do not eat enough fruits and vegetables, and therefore have a low dietary intake of carotenoids, olestra may aggravate the health problems noted above.

In view of these safety concerns, FDA is requiring that the manufacturer monitor consumption of olestra and conduct additional studies on its long-term effects. The agency will review these studies within 30 months in a meeting of its Food Advisory Committee.

### An Uncertain Future

Will olestra help people lose weight? John Foreyt, Ph.D., director of the Nutrition Research Clinic at Baylor College of Medicine, believes that consumers may find it easier to adopt a low-fat diet if they can choose olestra versions of some of



their favorite foods. "While Olean™ won't single-handedly solve our dietary fat problem," Foreyt says, "consumers can come out ahead on both fat and calories if they substitute fat-free snack chips and crackers made with Olean™ for their current snacks."

Critics predict, however, that olestra is unlikely to lower the incidence of obesity or to improve the nutritional habits of Americans. A variety of low-calorie foods have been available in grocery stores for many years, yet obesity is increasingly prevalent in the United States because many people consume too many calories and get too little exercise. Although government and health agencies urge food manufacturers to develop more low fat food products, such products still contain calories.

FDA's initial approval of olestra is only for snack chips and crackers, but it is possible that olestra eventually will be used in many other foods, including french fries, home cooking oils, and pastries. Products containing olestra will be test-marketed before they are sold in grocery stores. The manufacturer has not yet determined when olestra-containing foods will become available in Maryland. ■

## MARVELOUS MORSELS

- Alitame, a new artificial sweetener awaiting FDA approval, is 2,000 times sweeter than table sugar. The average cost of bringing a new food additive, such as an artificial sweetener, to market in the United States is more than \$20 million.
- In 1995, 89 percent of American adults consumed some type of low-calorie, sugar-free, or reduced-fat product on a regular basis; in 1994, this figure was 83 percent.
- By the year 2005, food eaten away from home is expected to account for almost half of an individual's total food expenses. In the United States, the food most commonly eaten out is pizza.

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Address comments about this newsletter to Food, Health, and You, Department of Nutrition and Food Science, 3306 Marie Mount Hall, University of Maryland, College Park, MD 20742. Kindly direct questions on specific food and nutrition topics to your local Extension office.

If you do not receive this newsletter by mail and would like to, contact your county or Baltimore City Extension office. For information on upcoming programs on food and nutrition, or to arrange a program for your group or organization, contact your Extension home economics agent. Phone numbers of Extension offices are listed on page 4 of this issue.



**Q:** Can supplements of beta-carotene help prevent chronic diseases?

**A:** In three recently reported scientific studies involving tens of thousands of people and lasting as long as 12 years, beta-carotene supplements failed to reduce the risks of either cancer or heart disease. In two of the studies, the risk of lung cancer actually rose significantly in subjects taking beta-carotene supplements.

Although these studies demonstrated that beta-carotene supplements are not beneficial, scientists believe that fruits and vegetables that contain beta-carotene and related compounds do impart many health benefits and are an important part of a good diet.

## EXTENSION CORNER

•The Anne Arundel County Extension office is sponsoring two free workshops on using the latest research-based techniques to preserve vegetables and fruits at home. The sessions will be held on May 21 from 10 a.m. until noon at the Anne Arundel County Extension Office in Glen Burnie and on May 23 from 7 to 9 p.m. at the Heritage Center Chesapeake Room in Annapolis. To register or for more information, please call (410) 222-6758 or (301) 970-8250, extension 6758.

•The Frederick County Extension office is offering two meal-related programs: Fresh Spring Salads, May 22 from 7:30 to 8:30 p.m., will describe how to prepare nutritious and innovative salads as main courses or side dishes; Cooking with Herbs, June 12 from 7:30 to 8:30 p.m., will explain ways to use herbs to enhance flavor and increase the amount of healthy plant chemicals in your meals. Class size is limited to 36 participants, but another class may be scheduled on June 13 if there is enough demand. The programs are \$3.00 each, which covers food samples and literature. To register or for more information, call (301) 694-1594, extension 1599.

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