



# FOOD, HEALTH, AND YOU

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## Food and Headaches

**H**eadaches are one of the most common physical ailments. There are about a dozen different types of headaches, including tension-type headaches and migraine headaches. Each year, 157 million workdays are lost because of migraine headaches alone. According to Richard Lipton, M.D., coordinator of the Headache Unit at New York City's Montefiore Medical Center, headaches may be triggered by a variety of factors, such as stress, odors, and changes in weather, altitude, hormone levels, and sleep patterns. There also is a relationship between headaches, particularly migraines, and food.

Researchers have identified a number of foods that seem to be associated with headaches. These include alcoholic beverages (especially red wine); aged cheeses, such as cheddar and Swiss; pickled or marinated foods; vinegar; soy sauce; chocolate and cocoa; yogurt; sour cream; baked products made with yeast; nitrite-containing foods, such as hot dogs and luncheon meats; various types of beans; and certain fruits, including bananas, avocados, figs, papayas, raisins, plums, and citrus fruits.

Although most people can eat these foods with no adverse effects, some individuals develop mild headaches or even severe migraines after consuming them. Researchers are not sure why this

happens, but they believe that certain food and beverage components may constrict or dilate blood vessels in the brain or alter brain chemicals known as neurotransmitters. One such food component, tyramine, occurs naturally in certain fruits and in some aged or fermented foods.

Additionally, skipping a meal or fasting often results in a headache. Headaches also are known to occur among routine coffee drinkers who suddenly

withdraw from caffeine. (Gradually cutting down on coffee or other caffeinated beverages can help prevent this problem.)

Researchers do not yet know how often headaches are induced by the foods we eat. Part of the reason for this is that food may be just one of a combination of factors responsible for triggering a headache. For example, if a person has not slept well the previous night and is under much stress, eating cheddar cheese may result in a headache. However, if this person were relaxed and well rested, the same

food may have no effect. Researchers have observed that food is usually not associated with recurring headaches. Alan Leviton, M.D., a researcher at Children's Hospital in Boston, says "When we examine individuals with frequently recurring and disabling headaches, food is rarely implicated. More often than not, behavioral factors are responsible."

Ironically, headaches may sometimes serve a useful function. Just as fainting causes the body to become horizontal, which restores blood to the brain, having a headache causes a person to realize that the body is being stressed in some way or that a person's ability to cope with stress is being overwhelmed, calling for a change in behavior. Doctors suggest

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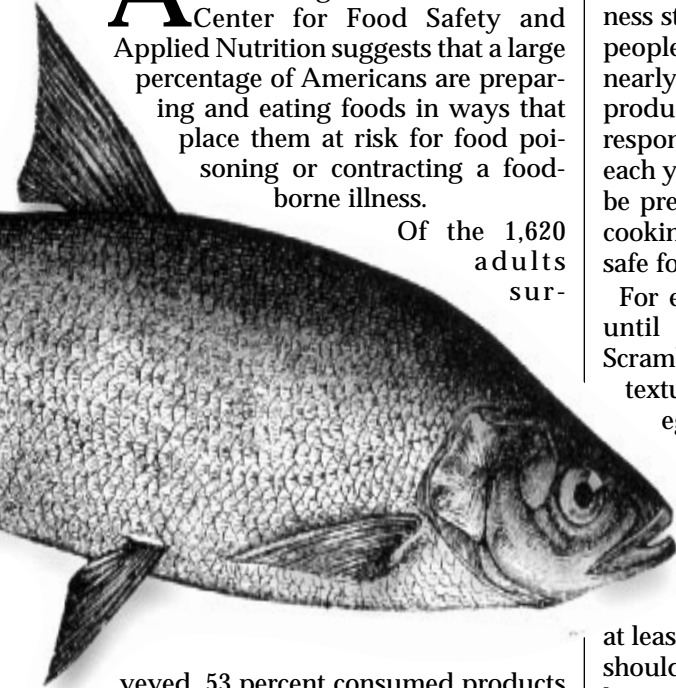


# Prepare With Care



A recent survey by the U.S. Food and Drug Administration's Center for Food Safety and Applied Nutrition suggests that a large percentage of Americans are preparing and eating foods in ways that place them at risk for food poisoning or contracting a foodborne illness.

Of the 1,620 adults surveyed,



53 percent consumed products containing uncooked eggs, 23 percent ate undercooked hamburgers (pink in the middle of the patty), and 17 percent ate raw clams or oysters. In addition, about 25 percent of the respondents reported that they did not wash their cutting boards with soap and water after preparing different kinds of raw foods. Men between the ages of 18 to 39 were most likely to report eating raw or undercooked animal foods. The survey also suggested that many young children frequently eat foods containing raw eggs, such as homemade, unbaked cookie batter.

In recent years, health experts have been warning consumers about the dangers of eating raw or partially cooked animal products. Some foods that have been linked to pathogenic (disease-causing) bacteria are eggs (*Salmonella enteritidis*), ground beef (*E. coli* 0157:H7), poultry (*Campylobacter jejuni*), and oysters (*Vibrio vulnificus*).

The Centers for Disease Control and Prevention estimates that foodborne illness strikes between 6.5 and 81 million people each year, has an annual cost of nearly \$8 billion (for medical costs, lost productivity, and lost earnings), and is responsible for about 9,000 fatalities each year. Most foodborne illnesses can be prevented, however, by thoroughly cooking animal products and following safe food handling recommendations.

For example, eggs should be cooked until the yolk and white are firm. Scrambled eggs also should have a firm texture. (Do not use recipes in which eggs remain raw or only partially cooked.) Ground beef for hamburgers and meat loaf should be cooked until no pink meat remains and the juices are clear. This means the temperature on the inside should reach

at least 160 °F and the color of the meat should be brown or gray. Patties and loaves made with ground poultry should be cooked to 165 °F and until no longer pink. Fresh poultry should be cooked to 180 °F, until the center of the meat is no longer pink and the juices are clear. Most common finfish, such as cod, halibut, flounder, and orange roughy, should be cooked until they flake readily with a fork. Eating raw or partially cooked oysters is not advised, especially for young children, people over the age of 65, pregnant women, individuals with a weakened immune system or who have received an organ transplant, and others who are at high risk for developing foodborne illness.

Preserved, precooked meat products, such as hot dogs, also should be heated before serving because of the potential threat of *Listeria monocytogenes*, a pathogenic bacterium that can grow in the refrigerator.

Here are some other food safety tips from the U.S. Department of Agriculture (USDA):

- Always wash hands thoroughly in hot soapy water before preparing foods and after handling raw meat.
- Do not let raw meat or poultry juices touch ready-to-eat foods, either in the refrigerator or during preparation.
- Wash utensils and plates that have touched or held raw animal products with hot, soapy water before using them for cooked foods.
- Wash counters, cutting boards, and other surfaces that raw meats have touched.
- Keep the inside of your refrigerator clean.

If you have questions about food safety, call your county Extension office or USDA's toll-free Meat and Poultry Hotline at 1-800-535-4555. In the Washington metropolitan area, the hotline number is 202-720-3333. ■

Sources: *Food Chemical News*. 1994. November 28: 8-9. Food Marketing Institute and American Meat Institute. *A Consumer Guide to Safe Handling and Preparation of Ground Meat and Ground Poultry*. Washington, DC.

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that people who frequently experience severe headaches keep a headache diary or log over several months to help identify foods, feelings, activities, or situations that seem to be related to the onset of headaches.

Regular exercise and relaxation techniques, such as yoga and meditation, are good strategies for combating headaches. Of course, eliminating foods suspected of causing headaches is also advisable. Over-the-counter pain relievers, however, should be taken only as needed. Doctors caution that overuse of aspirin and other pain relievers sometimes worsen pain by causing severe and frequent "rebound" headaches after the medication is stopped. ■

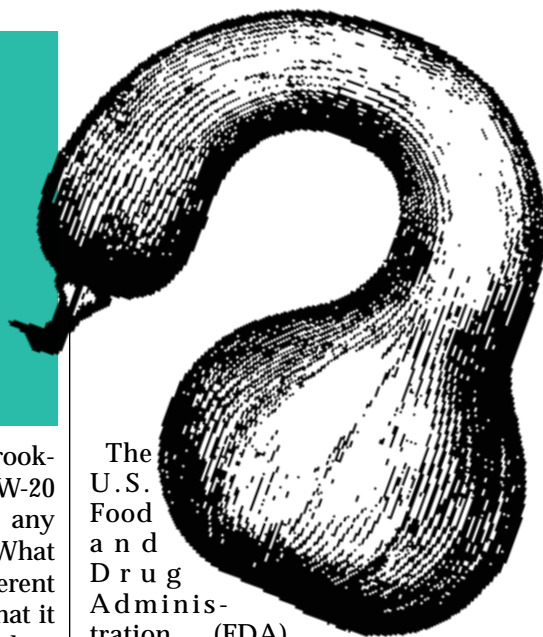
Source: International Food Information Council. 1994. *Food Insight*. November/December.

# Genetically Engineered Vegetables Are Here

**A** new variety of yellow crookneck squash known as ZW-20 looks and tastes just like any other yellow crookneck squash. What makes this particular squash different from other varieties, however, is that it is able to resist two infectious plant viruses that frequently damage squash, cucumbers, and their relatives.

The new squash has this ability because it was produced through genetic engineering, a technique in which the genetic material (genes) of living cells is altered to produce new substances or perform new functions. The ZW-20 squash produces specific proteins found in the plant viruses. When the squash produces these proteins, the proteins act as a vaccine, preventing the squash from becoming infected with the harmful viruses. Because the viruses normally are spread by insects such as aphids, commercial growers who routinely use pesticides to control insect pest populations would need fewer pesticides to grow ZW-20.

The ZW-20 squash, which was developed by the Asgrow Seed Company (a subsidiary of the Upjohn Co.), is expected to arrive on grocery shelves this spring. It will not, however, be the first commercially available vegetable developed through genetic engineering. The Flav'r Savr™ tomato is already being sold in many supermarkets. Scientists at Calgene Inc. produced the tomato in which the enzyme responsible for softening was "turned off," allowing the tomato to remain on the vine during ripening and to produce more flavor without becoming too soft to be shipped.



The U.S. Food and Drug Administration (FDA) and U.S. Department of Agriculture closely monitor the development of genetically engineered foods, paying particular attention to concerns about safety. In 1992, FDA determined that genetically engineered foods are not inherently less safe than foods developed by conventional means. Through research, the agency found nothing intrinsically dangerous about taking a gene from one organism and inserting it into another, which is the principle behind the genetically engineered foods.

In most cases, therefore, genetically engineered foods are not regulated differently than other new foods, nor do they require special labels. There are exceptions, however, such as if a genetically engineered food contains a substance to which people are known to be allergic or if FDA believes the new food is significantly different than the traditional food having the same name. Companies developing genetically engineered foods also must demonstrate that the nutrition of the product is not adversely affected and that natural toxins known to be present in the conventional food are not significantly elevated in the new food.

During 1994, 486 field tests of new genetically engineered crops were launched in the United States. Thus, it appears likely that new food products produced through biotechnology will begin flooding the American marketplace within the next few years.

What are consumers likely to see in the future? Some genetically engineered foods on the horizon include strawberries and peaches with improved texture; fruits and vegetables containing increased levels of vitamins and other nutrients; corn and soybean oils with reduced saturated fat; and a variety of disease- and drought-resistant crops. ■

Sources: *CNI Nutrition Week*. 1994. 24(17):3. *Genetically Engineered Fruits and Vegetables*. 1994. NCR #551. Washington, DC: Extension Service-USDA.

## MARVELOUS MORSELS

- The most popular ice cream topping in the United States is hot fudge, followed by chocolate fudge, caramel, butterscotch, and strawberry.
- A total of 546 new cookie products were introduced into the U.S. market during 1993.
- Sales in the United States of low-fat cakes, cookies, and other foods made with fat substitutes totaled nearly \$4 billion in 1994.
- Residents of the United States have tripled their consumption of dried red pepper during the past 20 years, thanks to the growing popularity of Mexican and other ethnic cuisines.

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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 exercise lower high blood pressure (hypertension)?

**A:** Yes, especially if blood pressure is only mildly elevated, meaning that the systolic reading (upper number) is between 140 and 159 and the diastolic reading (lower number) is between 90 and 99. Research indicates that people with mild hypertension who exercise 5 to 6 days a week for 30 to 40 minutes can lower both their systolic and diastolic pressures by an average of 10 points each within 3 months. Although people with severe

hypertension usually require medication, experts say that regular exercise can reduce or eliminate the need for blood pressure medicines. As always, check with your physician before starting an exercise program.

## EXTENSION CORNER

• The Howard County Extension office is offering two program on nutritious eating: "Eating Light, Eating Right" (three classes held on May 9, 16, and 23, from 7 to 9 p.m. in Elkridge, Maryland) and "Heart Healthy Eating," (one class held on May 24 from 12:30 to 2 p.m. in Columbia, Maryland). To register, call the Howard County Extension office at (410) 313-2707.

• Visit the Frederick County Extension office on May 8 from 7 to 8 p.m. to learn about the current recommendations for canning, freezing, and drying produce; time-saving equipment; and free fact sheets on these topics. For information, call the Frederick County Extension office at (301) 694-1596.

• Experience how pleasurable learning can be at Extension's Education Vacation, June 13 through 16, at Washington College in Chestertown, Maryland. Call your local Extension office for information or write to Education Vacation, 2309 Computer Science Building, College Park, MD 20742-2451.

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