Wide-Sweeping Proposals To Improve Food Labeling

Source of Calcium

Light

Sugar Free

Low Calorie

Reduced Cholesterol

Low Sodium

Reduced Fat
Wide-Sweeping FDA Proposals to Improve Food Labeling
To help end confusion at the supermarket, FDA has proposed more than 20 food labeling rules covering nutrition information, serving sizes, descriptive terms, and health messages.

Living with AIDS: New Treatments Give Hope
Though this deadly disease remains unconquered, new drugs and other ways of fighting AIDS are giving those who have it more hope for longer survival.

A Burning Question: When Do You Need an Antacid?
Used according to directions and in moderation, over-the-counter antacids can help relieve occasional heartburn and indigestion symptoms. But improper use can cause irreparable harm to your heart, kidneys or bones.

Alaskan Dilemma: Native Food Preparation Fosters Botulism
Native Alaskans have for centuries prepared whale blubber and other fish in traditional ways. But these methods promote the growth of bacteria that cause botulism, a potentially fatal disease.

Drugs Helping People with Parkinson’s Disease
Combinations of drugs and modernization of old therapies are often improving the outlook for people suffering from this neurological ailment, while researchers continue to search for its cause.

Fluoride: Cavity Fighter on Tap
The levels of fluoride added to water supplies are safe and very effective in preventing tooth decay. But in areas where fluoride occurs naturally in water, people may need to be careful that this level of fluoride, combined with fluoride in toothpaste and other products, does not cause dental fluorosis.

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Inside Front Cover Photo: Parents should monitor how children use products containing fluoride. To find out why, see page 34.
Stent Approved for Unclogging Leg Arteries

An implantable tube-shaped device was approved Sept. 27, 1991, for unclogging iliac arteries in the pelvis when they are blocked with fibrous deposits called plaque. The iliac arteries supply blood to the legs, where severe blockage can lead to amputation.

FDA approved the Palmaz Balloon-Expandable Stent for use in some patients when balloon angioplasty has failed to unclog their iliac arteries.

In iliac balloon angioplasty, a balloon-tipped catheter is threaded through a puncture in the thigh to the iliac artery. When the balloon reaches the blockage, it’s inflated to compress the plaque against the artery walls. The balloon is then deflated, and the catheter withdrawn.

Implanting the Palmaz Stent also requires an angioplasty balloon. Collapsed over the deflated balloon at insertion, the device’s stainless-steel mesh “scaffold” expands with inflation of the balloon and then remains in place to hold the artery open after the balloon is removed.

Surgeons perform some 60,000 iliac balloon angioplasties each year, according to the stent’s manufacturer, Johnson & Johnson Interventional Systems Company, of Warren, N.J. One study showed that within six months, about 46 percent of these patients needed further treatment, such as repeat angioplasty, blood vessel surgery, or even amputation, the firm said. By contrast, the firm’s data on 202 patients implanted with the Palmaz Stent to treat iliac blockage after angioplasty showed that only 5 percent required further treatment during an 18-month follow-up.

On Feb. 5, 1991, the Center for Devices and Radiological Health had approved the device to treat blockages of major bile ducts when other techniques don’t work. The stent is named for its inventor, Julio Palmaz, M.D., of the University of Texas Health Science Center at San Antonio.

(For more about devices used to unclog arteries, see “Balloons, Lasers and Scrapers: Help for Hearts and Blood Vessels” in the April 1991 FDA Consumer.)

Some Teeth Whiteners Are Drugs

Teeth whiteners with bleach are not cosmetics and cannot continue to be marketed unless they receive FDA approval as drugs.

In letters sent to about 20 firms last fall, FDA stated that it regards as a drug any tooth whitener that uses a bleaching process to whiten teeth. The bleaching process changes the structure of teeth, and therefore meets the definition of a drug under the Food, Drug, and Cosmetic Act, the letters stated.

Firms that wish to continue marketing their tooth-bleaching products must now submit sound scientific evidence to FDA to prove that the products are safe and effective.

The main ingredient in tooth-bleaching products is peroxide, which has for years been used as an ingredient in certain oral health products, such as mouth rinses that remain in the mouth only briefly. But peroxides used in the tooth-bleaching process are often kept in the mouth for prolonged periods.

The safety of peroxides used in this manner has not been established. However, FDA is not aware of any significant adverse reactions from these products.

Many bleaching products come in the form of a gel that is applied to teeth with an applicator or dental guard and worn for several hours daily. Others may be toothpastes or rinses. Some are marketed exclusively to dentists, while others are sold directly to consumers.
Some tooth whiteners use a white pigment or abrasive rather than bleach, and FDA continues to regulate these products as cosmetics, not as drugs. The Food, Drug, and Cosmetic Act defines cosmetics as products that simply promote attractiveness or alter the appearance. A drug is defined as a product that alters the structure or function of the body.

FDA’s warning letter gives manufacturers 15 days to notify the agency of the steps they are taking to comply with the law. The letter warns of possible regulatory action—including seizure and injunction—against manufacturers who fail to comply.

Hairy Cell Leukemia Treatment Approved

The drug Nipent (pentostatin) was approved Nov. 11, 1991, for treating patients seriously ill with hairy cell leukemia who do not respond to conventional treatment with alpha interferon.

The drug had in August 1988 been granted treatment IND status (which allowed it to be released to desperately ill patients before complete information on safety and effectiveness was available) and was being distributed through the National Cancer Institute’s cancer treatment centers throughout the United States. In July of 1991, an FDA advisory committee evaluated data from the clinical trials and recommended Nipent’s approval.

Hairy cell leukemia primarily affects adults, but is also seen in some children. It is associated with anemia, bone marrow suppression, enlargement of the spleen, and infection. The disease, which is life-threatening and difficult to treat, affects about 2,500 patients in the United States, with about 500 to 600 new patients being diagnosed each year.

Nipent is a derivative of the fungal organism Streptomyces antibioticus, the microorganism from which many antibiotics, including tetracycline, are derived. It is manufactured by the Warner-Lambert Company, Ann Arbor, Mich.

Injuries from Misuse of Patient Restraints

Safety vests, lap and wheelchair belts, and body holders used in protective patient restraint have caused serious injuries when misused, according to FDA. The agency recently sent a special warning to health professionals to make sure these devices are used properly.

Misuse of the devices in health-care facilities and patients’ homes has led to fractures, burns and strangulations. To reduce the risk of injury or death, FDA recommends following manufacturers’ instructions carefully, monitoring patients frequently, and keeping accurate patient records on the use of and problems with the devices.

Anyone who knows of injuries or deaths associated with restraint devices should report the information—including the product’s full name, model and serial numbers, and the manufacturer’s name and address—to the FDA Problem Reporting Program operated by the U.S. Pharmacopoeia. The toll-free number is (1-800) 638-6725. (In Maryland, call collect 301-881-0256.)
Children’s Chicken Meal Recalled

Consumers were asked to return containers of a chicken meal for children to the place of purchase because some of the packages contained lumps of chicken that are difficult to swallow.

Last October, the U.S. Department of Agriculture announced the voluntary recall of “Table Time Chicken & Stars Microwave Meal for Children” by the product’s manufacturer, Beech-Nut Nutrition Corporation of St. Louis.

The problem was discovered when the company began receiving reports of children choking, gagging, and spitting out lumps of chicken from the product, according to William J. Hudnall, a deputy administrator of USDA’s Food Safety and Inspection Service. Because of the potential choking hazard, the agency urged consumers not to eat the product or feed it to children and to return unopened packages to the place of purchase.

The product was distributed to wholesalers and retailers in at least 21 states and possibly more. The suspect product can be identified by “EST P-6817” inside the USDA inspection seal on the label and by a two-line production code stamped on the bottom of the container. The first line of the production code is “FEB93” preceded by the numbers “08,” “09,” “14,” “15,” or “19.” The second line is “18G0885” followed by one of the letters A through H. Only containers with these production codes were included in the recall.

Consumers with questions may phone a toll-free USDA hot line at (1-800) 535-4555 from 10 a.m. to 4 p.m. EST Monday through Friday. At other times, callers can hear a recorded message. In the Washington, D.C., metropolitan area the number is (202) 447-3333.

Pesticide Report

More than 97 percent of the foods produced in the United States or imported from other countries have no pesticide residues, or the levels detected are well within federally permitted limits, according to FDA’s fourth annual report on the agency’s pesticide monitoring programs.

The findings are based on the testing of 19,146 food samples from all 50 states and Puerto Rico, and imported foods from 92 countries. The foods included produce, grains, and dairy products. The 1990 findings are up 1 percent from the previous year’s 96 percent.

The analytical methods used in the monitoring programs can detect residues of 268 pesticides. A total of 108 pesticides were actually detected in the 1990 sampling.

Among the report’s key findings:
- Of 8,879 domestic products tested, 60 percent had no detectable residues, and 38 percent had residues well below legally permitted limits. The 2 percent that were in violation either had residues that exceeded tolerance levels set by the Environmental Protection Agency or residues of a pesticide not allowed on the particular food.
- Of the 10,267 imported foods tested, 64 percent had no detectable residues, nearly 32 percent had residues below the permitted limits, and 4.3 percent were in violation.

The 1990 study marks the first year in which aquaculture (fish farming) was reported on separately. Because seafood consumption has increased by 25 percent over the last five years, FDA collected 172 samples of aquaculture-produced fish, including catfish, crawfish, trout,
1991 Enforcement Actions

During fiscal year 1991, FDA referred 292 legal actions to the U.S. Department of Justice.

- 21 Injunctions
- 61 Criminal cases
- 167 Seizures
- 43 Prosecutions

shrimp, and 13 other species. All were in compliance with standards.

EPA establishes pesticide tolerance levels for foods. FDA is responsible for ensuring that they are not exceeded (except in the case of meat, poultry, and certain egg products, which are under the jurisdiction of the U.S. Department of Agriculture).

Copies of the report, “Residues in Food—1990,” can be obtained by writing to FDA, HFF-420, 200 C St., S.W., Washington, D.C. 20204.

Misconceptions Hamper Diet Improvements

Misconceptions about good nutrition are keeping more than half of Americans from improving their diets, according to a recent nationwide survey.

The survey, sponsored by The American Dietetic Association (ADA), Kraft General Foods, and the Good Housekeeping Institute, found that, while 79 percent of the people surveyed feel nutrition is important, only 44 percent say they are doing everything they can to eat a...
healthy diet. The survey’s findings are based on telephone interviews of 1,000 American adults.

According to the survey, 77 percent believe there are “good” foods and “bad” foods. This misconception, says the ADA, may discourage people by leading them to believe that healthy eating means eliminating favorite foods. Actually, the ADA explains, “good nutrition means balancing choices from the major food groups throughout the day, and any food can fit into a healthy diet if eaten in moderate amounts.”

When questioned about the need to reduce dietary fat, 45 percent of those surveyed say they are very careful about the amount of fat they eat. However, only 7 percent knew that 30 percent or less of daily calories should come from fat. In addition, 17 percent believe that all fat should be eliminated from the diet, a goal that the ADA says is unattainable and undesirable.

On the positive side, when asked which foods they purchase to improve their diets, 40 percent said vegetables were their first choice, and 27 percent picked fruits.

To make nutrition information more available, the ADA’s National Center for Nutrition and Dietetics started a toll-free hot line on Dec. 1. Registered dietitians are available to answer questions Monday through Friday from 10 a.m. to 5 p.m. (Eastern time). Callers can hear recorded messages at other times. The hot line number is (1-800) 366-1655.

FDA Pubs

Two “backgrounders” and three reprints of FDA Consumer articles—two in Spanish—are newly available.

The backgrounders are “Monosodium Glutamate (MSG)” (No. BG 91-7.1) and “Food Labeling Reform: A Progress Report” (No. BG 91-4.2).

The reprints are “Planning a Diet for a Healthy Heart” (Spanish version, FDA 91-2220S), “The Unwelcome Dinner Guest: Preventing Food-Borne Illness” (Spanish version, FDA 91-2244S), and “Questions About Your Medicine? Go Ahead—Ask” (FDA 91-3166).

To order single copies, write to the Food and Drug Administration, HFE-88, 5600 Fishers Lane, Rockville, Md. 20857, or call (301) 443-3170. To order up to 100 copies of reprints, or negatives, write to FDA, HFI-40, at the same address. All orders should include title and publication number.
Studies Begin on Drug Derived From Chinese Cucumber

Studies have begun to test the effectiveness of a drug derived from the Chinese cucumber plant in fighting the AIDS virus.

Genelabs Inc. of Redwood City, Calif., manufactures the drug GLQ223, which is a purified form of the protein trichosanthin, obtained from the Chinese plant. In laboratory tests, the drug killed cells that were infected with the virus and also blocked virus production.

The drug has successfully gone through phase I clinical testing, which determines safety. The phase II trial for effectiveness will last one year, and will involve 120 patients at six to eight academic and community-based health-care centers throughout the United States.

In 1989, FDA investigated an unauthorized study—sponsored by Project Inform, an AIDS activist group—in which people with AIDS were treated with a trichosanthin-based preparation imported from China without FDA permission. Meetings between the agency, Project Inform, and other parties (including Genelabs) resulted in establishment of properly designed, FDA-authorized studies. (See "Compound Q," on the AIDS Page of FDA Consumer's March 1990 issue.)

Drugs Free for Needy Patients

Some AIDS patients who cannot afford certain medications may now be able to obtain them free from drug manufacturer Burroughs Wellcome Co.

Burroughs, which has been supplying the drug zidovudine (commonly called AZT) to needy patients since 1987, in September announced that it is making three more of its products available to such patients.

The firm said its assistance program is not designed to provide for a patient's long-term needs, but to provide free medicine on a temporary basis until the patient can secure financial assistance from other sources, such as state or federal programs.

Patients who cannot obtain such assistance would continue to receive Burroughs' medications at no cost.

The pharmaceutical company, headquartered at Research Triangle Park in North Carolina, is now providing the drugs trimethoprim-sulfamethoxazole (Septra) for a certain type of pneumonia common in AIDS patients; acyclovir (Zovirax) for herpes infections; and pyrimethamine (Daraprim) for toxoplasmosis, an infection that damages the central nervous system.

Patients who are eligible for the drugs receive a voucher from their physicians, which they present to the pharmacy to obtain the medicines.

Physicians can enroll patients in the company's HIV Patient Assistance Program by calling (1-800) 722-9294.
Wide-Sweeping FDA Proposals to Improve Food Labeling

by Judith E. Foulke

Today’s nutrition-conscious consumers look to food labels for information they need to make wise choices, but, in the words of Health and Human Services Secretary Louis W. Sullivan, M.D., “Consumers need to be linguists, scientists, and mind readers to understand the many labels they encounter.” To remedy this situation, the Food and Drug Administration, with the support of the Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture, has embarked on a major effort to improve the format and content of food labels.

On Nov. 8, 1991, the agency proposed regulations covering topics such as nutrition information, serving sizes, descriptive words called “descriptors,” and health messages.

FDA Commissioner David A. Kessler, M.D., has stated that “the goal is simple: a label the public can understand and count on—that would bring them up-to-date with today’s health concerns. It is a goal with three objectives: First, to clear up confusion; second, to help us make healthy choices; and third, to encourage product innovation, so that companies are more interested in tinkering with the food in the package, not the words on the label.”

The new changes will address today’s public health priorities, in which conditions linked at least in part to diet, such as heart disease and cancer, have replaced beriberi, pellagra, scurvy, and other diseases caused by dietary deficiencies that afflicted past generations.

The label reform effort began in 1989 when FDA published an advance notice of proposed rule-making and, with FSIS, held nationwide hearings to find out what consumers and industry wanted to see on food labels. Early in 1990, the agency began publishing proposals for new regulations. The proposals called for extensive changes in the information that would be allowed or required on food labels. Labels would have to give reliable information by which shoppers could judge a food’s nutritional value and on which health professionals could depend to help their patients choose healthy diets.

Nutrition Labeling and Education Act

At about the same time the proposals were being published, the Nutrition Labeling and Education Act of 1990 (NLEA) became law. The legislation gives FDA’s labeling initiative a solid legal base and an accelerated timetable.

FDA continued its rule-making by publishing during the summer of 1991 proposals on:

• the listing of certified color additives
• the listing of ingredients in “standardized” foods such as ketchup and peanut butter
• the labeling of fruit and vegetable juices
• the display in grocery stores of nutrition information on the 20 most popular raw fruits, vegetables, and types of fish.

Then, in November 1991, FDA announced 20 more proposed rules, one final rule, and two notices. These:

• stated that nutrition information would be required for virtually all packaged foods and spelled out the conditions for its use
• defined descriptors such as “light” and “low-fat”
• approved certain health claims
• covered the technical provisions that tie the program together.

These November proposals dealt with the content of the label. Early in 1992, FDA will propose a regulation to revise the format of the nutrition label to help consumers better understand and use the nutrition information. USDA also has proposed changes in the labeling of meat and poultry, which it regulates.

Industry and consumers who wish to comment on the proposals have 90 days after their publication in the Federal Register to do so. In accord with the NLEA timetable, FDA expects that by Nov. 8, 1992, all of the proposals (revised as necessary based on public comments) will be published as final rules. The new labels will be required on all packaged foods that are produced beginning May 8, 1993, and the newly labeled products will begin to appear on store shelves later that year.

Here are brief summaries of the FDA proposals published so far:

Mandatory Nutrition Labeling

Among the proposals announced in November 1991 is one covering the labeling of a food’s nutrient content. (It had originally been published July 19, 1990, but was reissued to bring it in line with the provisions of the NLEA.) Manufacturers have been voluntarily providing information on nutrient content on some food labels for many years. FDA has required this information only on fortified foods and those for which nutrition claims are made, but such infor-
mation has never been required across the board. As a result, only about 60 percent of processed foods have provided such information.

The November proposal would make nutrition information mandatory on processed foods that are meaningful sources of nutrients; that is, on virtually all packaged foods. Excluded would be most spices, small packages (generally those no larger than a package of Life Savers), restaurant food, and food produced by small businesses (those with food sales of less than $50,000 a year and total sales of less than $500,000 a year).

List of Nutrients

Under the November 1991 proposal, the nutrients that must be listed would change to keep pace with the nation’s changing health concerns. The amount per serving of these nutrients would have to be shown: total calories, calories derived from fat, total fat, saturated fat, cholesterol, total carbohydrates, complex carbohydrates, sugars, dietary fiber, protein, sodium, vitamins A and C, calcium, and iron. Thiamine, riboflavin and niacin would become optional listings because the U.S. population generally does not suffer from diseases related to deficiencies of these commonly available B vitamins.

Nutrition information would be presented in quantitative amounts—for example, 4 grams of fat—or as percentages of certain dietary reference values, stated as “Percent of Daily Value.”

The terms for some nutrients would be simplified. For example, “saturated fat” would be used rather than “saturated fatty acids.” The proposal allows for a more simplified nutrition labeling format when more than half of the required nutrients are present in insignificant amounts.

Vitamin and Mineral Supplements

Another November proposal would require a modified form of nutrition labeling for vitamin and mineral supplements. The label would have to show the quantitative amount and percent of the daily value of all vitamins and minerals, and the quantitative amount of calories and food components—fat, carbohydrates, or dietary fiber, for example—present in more than insignificant amounts. The amounts would be those in one unit of the supplement (one pill or tablet, for example). Where label directions say to take more than one unit per day, the information also would have to be given for the total number of units to be taken in one day.

Serving Sizes

In order to help consumers fully understand and compare nutrition listings, serving sizes need to be uniform, consistent across product lines, and closer to the amounts people actually eat. Currently, food companies are free to determine the size of a serving and the units of measure. In November 1991, FDA reproposed a regulation on serving sizes that it had originally issued on July 19, 1990. The reproposal is based on comments received on the earlier proposal, a public meeting, and a 1990 nutrition report by the National Academy of Science’s Institute of Medicine.

The reproposal would require the nutrition content on labels to be based on the serving or portion size customarily consumed by an average person over the age of 4, and it must appear in common household and metric measures, such as 1 cup (240 milliliters). Special portion sizes for infants and children from 1 to 3 years of age would have to be shown when products are formulated specifically for those groups.

The proposal includes standard reference amounts for 131 categories of food. From these, manufacturers will calculate serving sizes in common household measures. Any package that contains less than two servings would be considered a single-serving container. For example, the proposed standard serving size for a soft drink is 8 ounces. So a 12-ounce can would be considered a single serving, and its nutrient content would have to be declared on the basis of the contents of the entire can. Any description such as “low sodium” also would have to be based on the entire contents of the can.

Defining Descriptive Terms

Currently, marketers may use the FDA-defined terms “low,” “reduced” and “diet” to describe levels of calories in a food and “free,” “low,” “very low,” and “reduced” to describe the level of sodium. Descriptive claims are not defined for other nutrients.

Now, in its November 1991 proposals, FDA has developed a “dictionary” for food producers, marketers and consumers to consult for consistent and uniform definitions on an expanded list of terms. FDA has proposed definitions for nine core terms, called descriptors or nutrient content claims, that could be used to describe a food if the food meets that definition. These nine are: free, low, high, source of, reduced, light (or lite), less, more, and fresh. These nine terms have also been given specific definitions when used with certain nutrients. (See accom-
panying article.) The proposals would also permit the use of certain synonyms for these nine core terms. The list of nutrients for which descriptors can be used is expanded to include all nutrients required to be listed on the label.

Also, if a food is labeled with a descriptor for a certain nutrient but that food contains other nutrients at levels known to be less healthy, the label would have to bring that to consumers’ attention. For example, if a food making a low-sodium claim is also high in fat, the label must state “see back panel for information about fat and other nutrients.”

Other Definition Issues
A percent of the daily value or quantitative amount of a vitamin or mineral may be specified on the label without further definition (for example, “Orange juice—60 milligrams of vitamin C in every glass”).

Products that are prepared meals (TV dinners or entrées, for example) may not use the term “reduced.” Such products can be called “low calorie” only if they contain no more than 105 calories per 100 grams.

Implied claims (for example, “contains no tropical oils”) can lead a consumer to assume that a nutrient is absent or present in a certain amount. FDA is not proposing definitions for such claims at this time, but is asking for comments on how to draw a line between implied nutrient content claims and ingredient claims, the criteria for evaluating whether implied claims are appropriate and not misleading, and information on specific implied claims.

Nutrient Claims for Substitutes of Standardized Foods
Many consumers, heeding the advice of current nutrition experts, would like to buy foods that contain less fat than what is in certain “standardized” foods such as butter, cheese, and sour cream. But if, for example, a company wanted to make a low-fat sour cream, current regulations governing standards of identity would not allow using the term “sour cream” on the label if the product is low fat. The product would have to be called “imitation sour cream” or “low-fat sour cream substitute,” names that clearly have negative connotations.

To correct this, FDA, in its November proposals, gives general requirements for substitutes for standardized foods—foods similar to the standardized products but with different amounts of certain nutrients. Food producers would be able to reduce the fat in sour cream, for example, and not have to call it “imitation” or “substitute,” but simply “low fat.”

According to the proposal, a substitute food must be nutritionally equivalent to its standardized counterpart. It must contain the ingredients used in the standardized food; calories or fat may be reduced, but the food must contain the same amount of fat-soluble vitamins as the standardized food.

A separate proposal concerns butter. Butter, by standard, cannot contain less than 80 percent milk fat by weight. This proposal would allow the use of terms such as “light” for butter if the product has less fat and fewer calories but is otherwise nutritionally equivalent to regular butter. It must contain cream or milk, or both.

Health Claims
The NLEA provided, for the first time, the specific statutory authority to allow food labels to carry claims about the relationship between the food and specific diseases or health conditions. This represents a major shift in labeling philosophy. Until 1984, a food product making such a claim on its label was treated as a drug and considered misbranded unless the claim was backed up by an approved new drug application.

FDA has examined the scientific evidence on 10 relationships between nutrients and the risks of certain diseases. Of the relationships considered, these four are currently supported and would be allowed on labels:
- calcium and osteoporosis
- sodium and hypertension
- fat and cardiovascular disease
Nutrient Claim Definitions

Here are the proposed definitions for nutrient content claims:

Free and Low
- **Free**: an amount that is "nutritionally trivial" and unlikely to have a physiological consequence
- **Calorie Free**: fewer than 5 calories a serving
- **Sugar Free**: less than 0.5 grams per serving
- **Sodium Free** and **Salt Free**: less than 5 milligrams of sodium a serving
- **Low**: would allow frequent consumption of a food "low" in a nutrient without exceeding the dietary guidelines. Per serving and per 100 grams (a little less than half a cup) of food, these amounts would be defined as:
  - **Low Sodium**: less than 140 milligrams per serving and per 100 grams of food
  - **Very Low Sodium**: less than 35 milligrams per serving and per 100 grams of food
  - **Low Calorie**: less than 40 per serving and per 100 grams of food

A food that is normally free of or low in a nutrient may make such a claim, but the claim must indicate that the condition exists for all similar foods—for example, "Fresh spinach, a low-sodium food."

High and Source of
- **High** and **Source of**: are intended to emphasize the beneficial presence of certain nutrients, not to characterize levels of nutrients that increase the risk for chronic diseases. "High" is 20 percent or more of the dietary reference values. "Source of" is 10 to 19 percent of these values. Any high-fiber claim for a food containing more than 3 grams of fat per serving and per 100 grams of the food must be accompanied by a declaration of total fat.

Relative Terms
- **Reduced, Light, Less, and More**: Use of these terms must be accompanied by information about the food that is the basis for comparison—the identity of the comparable food, the percentage (or fraction) by which the referenced food has been modified, and the amount of the nutrient that is the subject of the claim.
- **Reduced**: may be used for sodium only if the food contains no more than half the sodium of the comparison food. Reduced may be used for calories, however, if the referenced food has been reduced by one third.
- **Less**: may be used to describe nutrients if the reduction is at least 25 percent.
- **Light**: may be used on foods that contain one-third fewer calories than a comparable product. Any other use of the term light must specify if it refers to the look, taste or smell; for example, "Light in color."
- **More**: could be used to show that a food contains more of a desirable nutrient, such as fiber or potassium, than does a comparable food. To use the term more, a food must contain at least 10 percent more of the given nutrient than the comparable food.

Definitions Related to Fat And Cholesterol
- **Fat Free**: less than 0.5 grams of fat per serving, providing that it has no added fat or oil ingredient.
- **Low Fat**: 3 grams or less of fat per serving and per 100 grams of the food.
- **(Percent) Fat Free**: may only describe foods that meet FDA’s definition of “low fat.”
- **Reduced Fat**: no more than half the fat of an identified comparison. To avoid trivial claims, the reduction must exceed 3 grams of fat per serving.
- **Low in Saturated Fat**: may be used to describe a food that contains 1 gram or less of saturated fat per serving, and not more than 15 percent of calories from saturated fat.
- **Reduced Saturated Fat**: no more than 50 percent of the saturated fat than the food with which it’s compared. Foods with a reduction of 25 percent or greater may have a comparative claim using the term “less.” If “reduced saturated fat” or a comparative claim is used, it must indicate the percent reduction and the amount of saturated fat in the food with which it’s compared. The reduction of saturated fat must exceed 1 gram.
- **Cholesterol Free**: less than 2 milligrams of cholesterol per serving and 2 grams or less saturated fat per serving.
- **Low in Cholesterol**: 20 milligrams or less per serving and per 100 grams of food, and 2 grams or less of saturated fat per serving.
- **Reduced Cholesterol**: 50 percent or less of cholesterol per serving than its comparison food. Foods with reductions in cholesterol of 25 percent or more may bear comparative claims using the term “less,” but both “reduced cholesterol” and comparative claims must be fully explained, and the reduction in cholesterol must exceed 20 milligrams per serving.

All claims of cholesterol content are prohibited when a food contains more than 2 grams of saturated fat per serving. The label of a food containing more than 11.5 grams of total fat per serving or per 100 grams of the food must disclose those levels immediately after any cholesterol claim.

Fresh
- **Fresh**: can only be linked to raw food, food that has not been frozen, processed or preserved.
- **Freshly**: with a verb such as “prepared,” “baked” or “roasted” may be used if the food is recently made and has not been frozen or heat processed or preserved.

Adding approved waxes or coatings, using approved pesticides after harvest, or applying a mild chlorine wash or mild acid to raw produce would not prohibit the use of the term “fresh.”

Terms such as “fresh frozen” and “quickly frozen” are also defined. ■

—J.F.
fat and cancer

Two other claims—fiber and heart disease, and fiber and cancer—require additional comment and review.

The proposal would not allow claims of preventive benefits of folic acid with neural tube defects, antioxidant vitamins with cancer, zinc with immune function in the elderly, or omega-3 fatty acids with heart disease.

Proposals for the general requirements for health claims set forth a number of definitions to clarify their meanings. One of the most significant defines the nutrient levels that would disqualify a health claim. Disqualified are those foods that contain more than 11.5 grams of fat, 4 grams of saturated fat, 45 milligrams of cholesterol, or 360 milligrams of sodium per amount commonly consumed, per labeled serving size, and per 100 grams of the food.

Ingredient Labeling

FDA has always required the ingredients of packaged foods to be listed on the labels. But certain common foods such as mayonnaise, macaroni and bread, made according to “standard” recipes set by FDA, have been exempt from the requirement to list all their ingredients. FDA now considers listing of all ingredients necessary even for standardized foods, mainly because many of today’s consumers, unlike their parents or grandparents, don’t know what these foods are made of. Therefore, a proposal published June 21, 1991, would require the listing of all ingredients in standardized foods. The proposal also would require:

- the listing of all sweeteners together in the ingredient list, under the collective term “sweeteners,” when more than one sweetener is used in a product. Following the collective term, each sweetener would be listed in parentheses in descending order of predominance by weight.
- identification of caseinate as a milk derivative when used in foods that claim to be nondairy, such as coffee whiteners, because some people with milk allergies use nondairy products
- use of a uniform format if a processor chooses to declare ingredients by percent of content
- declaration of sulfites used in standardized foods because some people are allergic to these preservatives
- declaration of protein hydrolysates, used in many foods as flavors and flavor enhancers. Most importantly, for consumers with religious or cultural dietary requirements, the food source of the additive would have to be identified.
- FDA also plans to require that the flavor enhancer monosodium glutamate (MSG) be declared on the label whether it is added as a separate ingredient or as a component of protein hydrolysates.

Juice Labeling

The percentage of actual fruit or vegetable juice would be required to appear on the label of all juice beverages, whether full strength or diluted, according to a proposal published July 2, 1991. Beverages made from several juices that identify individual juices on the labels would have to declare the percentage of each of the identified juices.

Raw Produce and Fish Labeling

In another proposal published July 2, 1991, and made final in November 1991, FDA identified the 20 most frequently consumed raw fruits, raw vegetables, and types of raw fish and provided guidelines for grocery stores to make available nutrition information on these 60 foods close to where they are displayed for sale. Initially, this information would be displayed voluntarily. If not, regulations would be written to make the display mandatory. (USDA is also developing similar arrangements for raw meat and poultry.)

Public Education

As FDA moves forward with its food labeling initiative, it is also developing a major public education campaign to inform consumers how to get the most from the new food label. FDA Commissioner David A. Kessler, M.D., said, “FDA will do everything possible to promote the use of the food label to improve the collective diet—and with it the health—of the entire nation.” Commissioner Kessler has stated that the new food label “can—and will—do more than provide accurate and useful information about food. It will increase consumer awareness of nutrition, of what actually makes up the food we eat every day, of how much of the various components make up a healthy diet.

“It is not our business to tell people what to eat. But it is very much our business to ensure that people who wish to make sound dietary choices have the best and most accurate information available—and available to them in the most accessible form.”

Judith E. Foulke is a staff writer for FDA Consumer.
Living with AIDS: New Treatments Give Hope

by Rebecca D. Williams

Last summer, Jim Nichols of Arlington, Va., reflected on the first time he heard about AIDS. It was in 1981, and AIDS was the punch line of jokes. "You don't hear them anymore because of the devastation," he said. "I mean that was when maybe a hundred people had died. But I didn't believe it could happen to me."

Nichols, 42, died of AIDS last October. While he did not survive his battle with the AIDS virus, he lived longer with it—six years—that many physicians thought possible a decade ago when AIDS was first reported in the United States. Nichols worked long after his diagnosis, volunteered with the National Leadership Coalition on AIDS, and, until six months before his death, gave speeches to school and business groups about living with AIDS.

Though AIDS is still incurable and fatal, thanks to better clinical care and new drugs, two of which were recently approved by FDA, people infected with the AIDS virus are living twice as long as they were 10 years ago.

Scientific Knowledge Grows

Scientists have learned a great deal about AIDS since it was first reported to the national Centers for Disease Control in 1981. "People tend to concentrate on the negative things about the epidemic—what we don't know—and there are certainly a large number of negative things and things we don't know about this epidemic," says Randolph Wykoff, M.D., director of FDA's Office of AIDS Coordination.

"But, on the positive side, there have been tremendous advances in knowledge in the past few years," Wykoff says. "Everything we know about AIDS today—clinical, therapeutic, social, and viral—has been learned in the last 10 years."

At the beginning of the epidemic, no one knew what was destroying the immune systems of otherwise healthy young men, making way for opportunistic infections and cancers.

But two years after the first reported cases, the cause was identified: a newly discovered retrovirus. It was eventually called the human immunodeficiency virus, or HIV.

Like all viruses, HIV is ultramicroscopic, smaller than a wavelength of visible light, and much smaller than its disease-causing cousins, bacteria. Viruses are not technically "alive," since they cannot reproduce on their own. Instead, they borrow the genetic material of other living cells to make copies of themselves, and, in the case of HIV, wreak havoc on their hosts.

Retroviruses were once thought to cause disease only in plants and animals, and therefore they attracted little attention from researchers. But as AIDS spread, scientists began researching retroviruses in depth, especially HIV.

They have mapped out the genes of HIV and discovered which parts of it are constant and which parts are variable.

They have researched how the virus replicates inside the body and how different types of cells can act as reservoirs.

They have explored the various ways HIV attacks and destroys CD4 cells, the white blood cells critical to the body's immune system. A normal adult has 800 to 1,200 CD4 cells in a microliter of blood (one-millionth of a liter), while people with HIV infection lose all of their CD4 cells over time as their ability to produce them diminishes.

But, for all the advances in the basic science of this virus, there is still no cure or vaccine for HIV. A number of lingering mysteries about the virus confound the efforts of researchers, clinicians, and people with AIDS.

For one, HIV has a latency period that can last from a few months to at least 10 years. Why do some people get sick right away, while others stay healthy? Are there genetic, behavioral or viral factors that determine this?

And no one knows exactly how much of the virus it takes to infect a person. Why do some people get infected after one sexual contact, while others have many exposures to the virus and never get infected?

As Anthony Fauci, M.D., director of the National Institute for Allergy and Infectious Disease, said during his yearly "AIDS Update" speech to fellow scientists, "Despite enormous scientific advances, I don't think there's any chance..."
The Changing Face of AIDS

U.S. AIDS cases have risen each year since the disease was first reported to the national Centers for Disease Control in 1981. CDC’s definition of AIDS has also changed over the years. At first, a person had to have certain opportunistic infections to be counted as having AIDS. Beginning in early 1992, however, CDC has proposed that the definition of AIDS be expanded to include a CD4 cell count of below 200. CDC estimates the change may increase the number of AIDS cases by 40 percent by 1995.

Top: Despite earlier diagnosis, improved medical care, and an increased number of therapeutic agents, over half of all people with AIDS die within two years of their diagnosis. By September 1991, there had been a total of 195,718 cases of AIDS reported, with 126,059 deaths. These figures include Guam, Puerto Rico, the U.S. Pacific Islands, and the U.S. Virgin Islands.

Middle: AIDS is not a disease exclusively affecting Gay men. The proportion of new AIDS cases in IV drug users and other segments of the population continues to rise.

Bottom: The rate of growth of the AIDS epidemic among women is more rapid than among men. In 1990, nearly 48 percent of the women who contracted AIDS were IV drug users, while nearly 34 percent had sex with high-risk or HIV-infected men. Although heterosexual transmissions account for only about 5 percent of all U.S. AIDS cases, the number of those cases rose about 40 percent between 1989 and 1990.

(Source: Centers for Disease Control)
when I come back next year I’ll be telling you all the problems are solved.”

**Important New Drugs**

Despite the unknowns about HIV, FDA has approved a number of important drugs for AIDS therapy in the past decade. Two drugs combat the virus itself: five treat infections brought on by a weakened immune system, two are anticancer drugs, and one drug treats anemia, a side effect of both HIV infection and certain anti-retroviral therapies.

Until recently, the only FDA-approved drug to combat the virus itself was Retrovir (zidovudine, or AZT). Retrovir was approved by FDA five years ago. As an anti-retroviral, it interrupts replication of the virus by blocking the action of reverse transcriptase, an enzyme that enables the virus to encode its genes into those of human cells. In this way, the drug can delay the onset of AIDS. But Retrovir is so toxic to the bone marrow that as many as one-third of patients cannot tolerate it.

Last October, FDA approved a second anti-retroviral drug under the brand name Videx (also called didanosine, or DDI). Videx appears to be able to improve CD4 cell counts in patients who cannot tolerate Retrovir.

Neither drug is a cure for AIDS, however, and other drugs are still needed to fight off the many infections and cancers to which AIDS patients are prone.

**Ganciclovir**, under the brand name Cytovene, for example, treats an eye infection from cytomegalovirus, a kind of herpesvirus. Usually mild in healthy people, the infection can cause blindness in AIDS patients with weakened immune systems. The drug was approved in June 1989.

**Foscarnet**, a drug approved in September 1991 under the brand name Foscavir, offers an alternative to ganciclovir for cytomegalovirus treatment. Neither product appears to cure cytomegalovirus, however, and both are toxic.

**Pentamidine** (given either by aerosol or injection) prevents Pneumocystis carinii pneumonia (PCP), the most common life-threatening infection among people with advanced AIDS. Pentamidine drugs, under the brand names NebuPent and Pentam (approved in June 1989 and April 1984, respectively), have been tremendously successful in preventing this often fatal pneumonia.

**Recombinant human alpha interferon**, under the brand names Roferon-A and Intron-A, is useful in treating Kaposi’s sarcoma, a skin cancer common to male homosexual AIDS patients. Before the AIDS epidemic, this cancer was rare and found mostly in older men of Mediterranean descent. It is not life-threatening for them, but in AIDS patients the cancer can be highly aggressive, spreading to the lymph nodes, intestinal tract, and the brain. Both drugs were approved in November 1988.

**Fluconazole**, under the brand name Diflucan, is useful in treating candidiasis, a yeast infection of the mouth, and cryptococcal meningitis, a bacterial brain infection. It was approved in January 1990.

**Erythropoietin**, approved in December 1990 under the brand name Procrit, alleviates some of the anemia resulting from AZT therapy and may help some patients stay on the anti-retroviral drug longer.

At the time this article went to press, FDA had about 400 more drugs in its investigational new drug program undergoing various stages of testing. Because HIV infection progresses slowly, it sometimes takes months to see if a drug has any effect on a patient, Wykoff says.

By shortening the approval time and expanding access to unapproved products, FDA has tried to reduce the time it takes for drugs to get from test tube to patient. The rapid approval of Videx and the expanded access program under which more than 20,000 people with AIDS had access to Videx or Retrovir prior to approval are the most recent examples of FDA’s commitment to this process.

**Vaccine Research**

Some scientists believe the best hope for worldwide control of AIDS is a safe and effective vaccine.

“We’re moving along very rapidly with several [vaccine] candidates in clinical trials right now,” said Anthony Fauci.

This optimism is supported by several animal studies showing that a vaccine is at least theoretically possible for humans. Eight vaccines, both pre- and post-exposure, are being studied in humans in small clinical trials for their safety and ability to produce antibodies to HIV.

Ultimately, scientists hope to develop a vaccine to protect against infection. But some scientists believe “post-exposure” vaccines will be developed as well to protect HIV-positive people from developing AIDS.

Just as the rabies vaccine can be given to people already bitten by rabid animals, a post-exposure AIDS vaccine might help the body boost an immune system response enough to stop or delay the viral infection from progressing.

Vaccine development faces several obstacles. First, scientists lack a good animal model for the disease. While chimpanzees can be infected with HIV, they don’t develop AIDS.

Another obstacle to vaccine development is that the virus varies genetically from one patient to another, and even within the same patient. So any antibodies that guard against one strain of virus may not work against another. This viral variation is not uncommon: The common cold virus, for example, has more than 100 strain variations. According to a summary report by the National Institute of Allergy and Infectious Disease on AIDS vaccine research, many researchers believe a combination “cocktail” vaccine working against a variety of strains may be the most effective.

**Finding Strength**

Without a miracle vaccine around the corner, many people with AIDS enlist diet, exercise, and positive thinking in their fight against disease.

Nichols, for example, said he found strength in friends, family, a counselor and support group for people with AIDS, and the hot meals delivered to his home daily by community volunteers.

Two months before his death, he commented: “Every day, I have a great deal of hope that I’ll pick up The [Washington] Post and it will say everybody that’s HIV-infected can be cured by showing up [at the National Institutes of Health] in Bethesda. I don’t think that’s going to happen, but I hope it will. AIDS is one of the most excruciating and traumatic experiences. It’s probably the ugliest way to die.”

Rebecca D. Williams is a staff writer for FDA Consumer.
A BURNING QUESTION

When Do You Need an ANTACID?

by Tom Cramer

You can’t believe you ate the whole thing. But you did. All seven courses. Then you had two helpings of dessert. Then, to be sociable, you had a couple of drinks. Or maybe three or four.

And now you’re paying for it. You’ve got a “burning sensation” in your stomach or your chest, or maybe you feel all knotted up inside.

Your first reaction may be to reach for your favorite antacid to make the hurting go away. And if you do, you won’t be alone.

Americans are currently spending close to $1 billion per year on these popular, over-the-counter drugs. Used according to directions and in moderation, they can quickly relieve the symptoms associated with occasional heartburn and indigestion. But these useful products may not always be necessary, and they have their dark side if used improperly.

“Improperly” means taking too much of an antacid over a short period, or using antacids frequently over a long period (weeks, months or years). Frequent and prolonged use of these products can cause irreparable harm to your heart, kidneys or bones.

Even if used occasionally and in moderation, antacids can mean bad news for people with special medical conditions.

Hugo Gallo-Torres, M.D., a medical officer with FDA’s Center for Drug Evaluation and Research, said it’s a good idea to consult your doctor before using antacids if you:
- are on any kind of medication
- are pregnant or breast-feeding
- have kidney problems
- have chronic constipation, diarrhea or colitis
- have stomach or intestinal bleeding
- have an irregular heartbeat
- have any kind of chronic illness
- have symptoms that may indicate appendicitis

Though they cause problems for some, most people can take antacids without worrying. Consumers who use them only once in a while, and as directed, are unlikely to experience significant side effects.

But, like most everything else in life, moderation is the key.

“Antacids are useful drugs—they serve a purpose,” said Gallo-Torres. “Ideally, though, it’s always better to try dealing with heartburn and indigestion—at least initially—without taking any medications at all, or by avoiding trouble in the first place.”

Gallo-Torres said that there are some simple steps you can take that may help prevent heartburn or indigestion.
- Don’t eat big meals. Your stomach has to work long and hard to process them, which means it has to produce a lot of acid. It helps to eat more frequent—but smaller—meals.
- Eat more slowly. Downing a lot of food in a hurry can overwhelm your stomach, which responds by producing extra digestive acids.
- After you eat, don’t lie down right away. If you do, you’re more likely to have heartburn, because gravity is now preventing food from going speedily to the intestines. It’s also a good idea to eat your last big meal at least three hours before bedtime. When you go to sleep, everything slows down, including your digestive system, so food you’ve eaten right before bedtime will stay in your stomach longer. It won’t feel good.
- Don’t wear tight-fitting garments. They can literally compress your stomach, making it more likely that the stomach’s acid contents will enter your esophagus and cause a burning sensation.
- Cut down on caffeine; it makes your stomach produce more acid. Caffeine-heavy items include coffee, tea, chocolate, and some sodas.
- Avoid foods that contain a lot of acid, such as citrus fruits and tomatoes, and any other food that gives you problems.
- Cut back on alcohol and smoking. Both irritate the lining of your stomach and both tend to lower esophageal sphincter pressure. When this happens, it’s easier for the contents of your stomach to shoot back up into your esophagus.
- Sleep with your head and shoulders propped up six to eight inches, so that your body is at a slight angle. This gets gravity working for you and not against you, and the digestive juices in your stomach are more likely to head south, for your intestine, instead of back up into your esophagus.

“If you do take an antacid, remember that what you’re taking is a drug,” Gallo-Torres said. “It is a drug that, in the vast majority of cases, should be used only for occasional relief of mild heartburn or indigestion. Antacids are fast-acting. They should bring relief within minutes. If you’re taking antacids and there’s no relief, then something else may be going on, something that requires a physician’s evaluation.”

Igor Cemy, a pharmacist with FDA’s Center for Drug Evaluation and Re-
Recipe for Relief

FDA requires that every antacid on the market be safe (which means the antacid won’t cause serious side effects, provided you take it in the proper dosage over the recommended period of time) and effective (which means the antacid will do what it’s supposed to do).

Drug manufacturers must make and label their antacids according to specific guidelines in FDA’s monograph on antacids. If manufacturers don’t follow this federal antacids “recipe,” they are not allowed to market their products.

According to FDA’s monograph, an antacid is safe and effective if it meets the following conditions:

• It must contain at least one of the antacid active ingredients (acid neutralizers) approved by the agency. (All the approved ingredients are listed in the antacid monograph.)
• It must contain a sufficient amount of the active ingredients. Specifically, each active ingredient included in the antacid product must contribute at least 25 percent to the product’s total neutralizing capacity.
• In a laboratory test, the antacid must neutralize a specific amount of acid and keep it neutralized for at least 10 minutes.

The label on the antacid must state that the product is good only for relieving the symptoms of “heartburn,” “sour stomach,” “acid indigestion,” and “upset stomach associated with these symptoms.” The label can’t make any other medical claims.

• The label must contain certain warnings concerning proper dosage, side effects (such as constipation or diarrhea), and how much sodium the product contains.
• The label must warn about the product’s possible interactions with other drugs. Antacids can increase or decrease the speed at which some medications are eliminated from the body. For example, antacids can block the body’s absorption of tetracycline, an antibiotic.
• The label must give directions for using the product, and it must carry a warning not to use the product for more than two weeks except under the supervision of a physician.

—T.C.

search, agreed. “If you find yourself taking antacids frequently,” he said, “you need to say to yourself: ‘Wait a minute . . . I wasn’t doing this before, so why am I doing it now? Something might be wrong with me.’

“If your symptoms last more than two weeks, go see your doctor,” he recommended. “Two weeks is the general rule of thumb. Beyond that, taking antacids can actually mask a more serious medical problem.”

Cerny said it’s a good idea to see your doctor even sooner—preferably right away—if you’re experiencing any symptoms severe enough to interfere with your lifestyle, symptoms such as continuous vomiting or diarrhea, extreme discomfort or pain in your gastrointestinal (GI) tract, vomiting of blood or material that looks like coffee grounds (but which is actually digested blood), or any of these accompanied by fever.

“Using antacids to alleviate serious symptoms like these is like trying to put out a building fire with a hand-held extinguisher,” Cerny said. “Serious symptoms require professional evaluation and treatment.”

A Quick Look Inside

Your entire digestive system is called the alimentary canal, or GI tract. About 30 feet from beginning to end, it includes your mouth (where digestion actually begins), esophagus, stomach, small intestine, and colon (also called the large intestine). Antacids do most of their work in the stomach.

The stomach serves as a kind of “holding tank” for food before it moves on to the intestines, where the major part of digestion takes place. But the stomach does more than just hold food. It helps with digestion, too. It secretes pepsin and hydrochloric acid, which work together to break down proteins into simpler compounds.

Under normal conditions, the digestive process rolls along quietly and effi-
The opposite of an acid is a base, and that’s exactly what antacids are. But a base all by itself can’t neutralize the acid inside you. For reasons that are best explained on a blackboard in chemistry class, a base needs some chemical “helpers,” or ingredients, to accompany it on its neutralizing mission into your stomach.

All antacids contain at least one of the four primary “helpers” or ingredients: sodium, calcium, magnesium, and aluminum.

Here’s a brief rundown of the composition and some potential side effects of various antacids:

**Sodium (Alka-Seltzer, Bromo Seltzer, and others)**

Sodium bicarbonate or baking soda, perhaps the best known of the sodium-containing antacids, is potent and fast-acting. As its name suggests, it’s heavy in sodium. If you’re on a salt-restricted diet, and especially if the diet is intended to treat high blood pressure, take a sodium-containing antacid only under a doctor’s orders.

**Calcium (Tums, Alka-2, Titralac, and others)**

Antacids in the form of calcium carbonate or calcium phosphate are potent and fast-acting. Regular or heavy doses of calcium (more than five or six times per week) can cause constipation. Heavy and extended use of this product may clog your kidneys and cut down the amount of blood they can process, and can also cause kidney stones.

**Magnesium (Maalox, Mylanta, Camalox, Riopan, Gelusil, and others)**

Magnesium salts come in many forms—carbonate, glycinate, hydroxide, oxide, trisilicate, and aluminosilicates. Magnesium has a mild laxative effect; it can cause diarrhea. For this reason, magnesium salts are rarely used as the only active ingredients in an antacid, but are combined with aluminum, which counteracts the laxative effect. (The brand names listed above all contain magnesium-aluminum combinations.)

Like calcium, magnesium may cause kidney stones if taken for a very prolonged period, especially if the kidneys are functioning improperly to begin with. A serious magnesium overload in the bloodstream (hypermagnesemia) can also cause blood pressure to drop, leading to respiratory or cardiac depression—a potentially dangerous decrease in lung or heart function.

**Aluminum (Rolaids, AlternaGEL, Amphogel, and others)**

Salts of aluminum (hydroxide, carbonate gel, or phosphate gel) can also cause constipation. For these reasons, aluminum is usually used in combination with the other three primary ingredients.

Used heavily over an extended period, antacids containing aluminum can weaken bones—especially in people who have kidney problems. Aluminum can cause dietary phosphates, calcium and fluoride to leave the body, eventually causing bone problems such as osteomalacia or osteoporosis.

It should be emphasized that aluminum-containing antacids present virtually no danger to people with normal kidney function who use these products only occasionally and as directed.

**Simethicone**

Some antacids contain an ingredient called simethicone, a gastric defoaming agent that breaks up gas bubbles, making them easier to eliminate from your body.

FDA says simethicone is safe and effective in combination with antacids for relief of gas associated with heartburn. But not all antacids contain this ingredient.

If you’re looking for relief of symptoms associated with gas, read the antacid’s label carefully to make sure it contains simethicone.

—T.C.
“If your symptoms last more than two weeks, go see your doctor. ... Beyond that, taking antacids can actually mask a more serious medical problem.”

—Igor Cerny, FDA pharmacist

ciently, unnoticed. But every once in a while something happens down there that catches your attention: a burning sensation, a cramped or bloated feeling, or other unpleasant phenomena that tell you something is not quite right.

**The pH Factor**

Antacids make you feel better by increasing the pH balance in your stomach. The pH system is a scale for measuring the acidity or alkalinity of a given environment (in this case, your stomach). The scale goes from zero to 14.

Seven is neutral. Below seven is acid. Above seven is alkaline.

Normally, the acid level in your stomach is about 2 or 3. Trouble may start when your pH drops below those numbers.

To make you feel better, an antacid need not bring the pH level all the way up to 7 (neutral), which would be a highly unnatural state for your stomach anyway. In order to work, all the antacid has to do is get you to 3 or 4. It does this by neutralizing some of the excess acid. (See accompanying story, “What’s in an Antacid?”)

**So What’s Wrong with Me Anyway?**

The world of gastrointestinal disorders is a complex and sometimes baffling one. If you’re feeling pain or discomfort in your GI tract, it could be something as un worrisome as simple indigestion, or maybe a stress ulcer.

Or it could be cancer.

In between these extremes are a billion other possibilities (a slight exaggeration, but you get the idea).

For example, your doctor may say you’re suffering from non-ulcer dyspepsia. According to the *Handbook of Non-prescription Drugs* (ninth edition), non-ulcer dyspepsia “refers to intermittent [on and off] upper abdominal discomfort, the cause of which is not clearly defined.”

In other words, when you get right down to it, non-ulcer dyspepsia is a catch-all term used for all sorts of stomach upset problems. Some symptoms include upper abdominal pain, nausea, vomiting, bloating, and indigestion.

Indigestion is another fuzzy word. Some people like to call it sour stomach, or acid indigestion, or upset stomach, or acid stomach.

It could mean that you have a touch of gastritis (when your stomach lining becomes inflamed by too much acid secretion). Or it could mean you’ve simply eaten too much at once, and all that food is sitting heavy in your stomach, like a bowling ball, trying to get digested (as in the case of the massive overindulgence described at the beginning of this article).

Then there’s heartburn, which is another matter.

Heartburn happens when the stomach’s contents, along with all its corrosive digestive juices, goes into reverse and shoots back up into the esophagus (the tube that extends from the pharynx, or throat, into the stomach). Normally, the pressure in your stomach is lower than the pressure in your esophagus, which helps prevent food from reentering the esophagus. But once in a while the delicate pressure system can break down.

This unsettling event, called gastroesophageal reflux (heartburn), may sometimes announce itself with an embarrassing belch.

But whether you make a noise or not, you feel the burning. The lining of your stomach is fairly accustomed to an acid environment, but your esophagus definitely isn’t, so even a little acid in there will sometimes be enough to get your attention.

If gastroesophageal reflux is happening to you all the time, then you may have something called gastroesophageal reflux disease. It could be that your esophageal sphincter (the “door” between your esophagus and your stomach) is weak, chronically allowing the stomach’s contents to push back out into the esophagus, burning it.

If the burning sensation is a little lower, and stays around for more than a few days, you could have another problem altogether: a peptic ulcer. An ulcer is simply a sore in your stomach that keeps getting irritated by all the acid swirling around down there.

Antacids can be used to treat all these GI problems. But most people who experience occasional discomfort somewhere along the GI tract, are likely not dealing with an ulcer, or stomach cancer, or anything else major.

Chances are it’s run-of-the-mill heartburn or indigestion.

You don’t need to see a doctor for occasional heartburn or indigestion. The hurting will disappear on its own. If you want some relief in the meantime, antacids will fit the bill nicely.

Again, it should be emphasized that if you experience unpleasant GI symptoms for more than two weeks, or if your symptoms are severe, it may be more than something run-of-the-mill.

Get it checked out. ■

*Tom Cramer is a staff writer for FDA Consumer.*
Cultural traditions die hard. Passed on from generation to generation, they are a source of pride and enjoyment, often serving to identify and bind the members of the group. But sometimes these customs can be dangerous, even deadly.

This is the case with the ways Alaskan Natives prepare certain traditional foods. Some of these methods of preparation foster botulism.

Alaskan Natives suffer the highest incidence of botulism in the world, says Jeffery Rhodehamel, research microbiologist with FDA’s Center for Food Safety and Applied Nutrition.

Several government agencies, including the Food and Drug Administration, are working with Alaskan Natives to educate them about the dangers and lessen the threat of this disease.

“The reason for the high rate of botulism among Alaskan Natives,” says Rhodehamel, “is that their traditional ethnic foods involve some risk. Most are home-processed fish or sea mammals—whale blubber [fat], seal flippers, or seal blubber—and the methods of preparation foster contamination and growth of Clostridium botulinum. These bacteria produce the deadly botulinal toxin that causes the disease.”

Botulism is not new to Alaska. In the early 1900s, explorers and whalers noted that whole families of Natives would be wiped out, with the deaths attributed to ptomaine poisoning. Others later suspected trichinosis to be the cause. It wasn’t until the mid-20th century that the Canadian scientist Claude E. Dolman, in a 1960 article in the journal Arctic, postulated botulism as the probable cause, based on the food practices of certain Native populations. In the last 30 years, laboratory methods have confirmed many of the more recent outbreaks as botulism.

Nerve Symptoms

The disease affects nerve transmission, causing weakness and paralysis, and possibly death. Symptoms come on abruptly, usually from 18 to 36 hours after ingestion of the botulinal toxin, and may progress rapidly over several days.

The toxin binds to nerve endings and prevents release of the neurotransmitter acetylcholine, which transfers messages to the next nerve. With transmission of nerve impulses blocked, weakness and paralysis result.

“It tends to attack the cranial nerves
Fermented whale blubber, or "muktuk," first, says Rhodehamel, "followed by a descending, symmetrical paralysis. The eyelids droop, there is difficulty swallowing and dry mouth, vertigo, dizziness, lassitude. It moves down, and the limbs become paralyzed. Once the muscles of the chest and diaphragm are involved, respiration is inhibited. Respiratory failure and pneumonia are the greatest threat to life." Nausea, vomiting, abdominal cramps, and diarrhea may precede the neurological symptoms.

Treatment is with antitoxin developed from horse serum. The quicker antitoxin is administered, the sooner the progression of the disease can be halted. This is because the antitoxin destroys only the free circulating botulinal toxin; it has no effect on toxin already bound to nerve endings.

Recovery is a slow process because it generally takes months for nerves to regenerate. Weakness may persist for as long as a year after onset of the disease.

Growing Problem

Since 1966, the yearly incidence of botulism in Alaska has increased from 1.2 cases per 100,000 population to 15.2 cases per 100,000, according to a 1988 report in the Journal of Infectious Diseases. In fact, the problem has become so acute that the national Centers for Disease Control in Atlanta now stocks its Arctic Research Station with botulism antitoxin. Normally, the antitoxin has to be requested and distributed directly from the agency in Atlanta.

Several factors contribute to the high incidence of botulism among Native Alaskans:
- Spores of Clostridium botulinum bacteria are ubiquitous in Alaska, especially in the western and southeastern beaches and coastal areas.
- The spores have also been found in the gills of fish and in the entrails of fish and sea mammals, which make up a large portion of the Native Alaskan diet.
- The traditional methods of preparing and storing these seafoods promote C. botulinum contamination and growth. The animals are often slaughtered on the...
beach or on ground where contact with bacteria from the soil or viscera is unavoidable. The food is then placed in a cool, shaded, shallow pit in the ground lined with wood, animal skins, or leaves. It is covered with moss or leaves and left to “ferment” for a month or two.

“Actually, it’s not a true fermentation,” explains Rhodehamel, “because there are no carbohydrates or sugars that are fermenting. Generally, in fermentation with carbohydrates, acid is produced, which would inhibit growth of the bacteria.”

The foods prepared this way, however, consist of fats and proteins, basically decomposing. Botulism outbreaks associated with fermented fish heads (called “stinkheads”) and fish eggs (“stink eggs”) occur in the summer, while outbreaks associated with fermented whale (“muktuk”), beaver tail (“stinky tail”), and seal flipper occur throughout the year, reports Nathan Shaffer, M.D., and colleagues in a recent article in the Western Journal of Medicine.

Despite the expectation that outbreaks would decrease with increasing education campaigns, the annual number of outbreaks has remained relatively constant since the 1970s, Shaffer reports, and recent outbreaks in Alaska have occurred in previously unaffected regions. (All outbreaks of botulism in Alaska reported since 1970 have been investigated by the state’s Division of Public Health or CDC’s Arctic Investigations Laboratory, and all hospitalized patients have been examined by a physician from one or the other agency.)

Technology Complicates Situation

Ironically, modern technology has added to the problem rather than alleviated it because of the introduction of new implements. Native Americans are increasingly using plastic bags to line the pits and enclose the food, promoting the anaerobic conditions (absence of oxygen) necessary for growth of C. botulinum and subsequent production of the toxin responsible for the illness.

Plastic buckets and glass jars also complicate the problem. The food may be put in plastic buckets with the lids snapped tightly shut, providing an anaerobic environment, and then left to ferment above ground. The warmer, aboveground temperatures foster growth of the bacteria. Or the food is put in a glass jar and kept in the house next to the stove at about 30 degrees Celsius (86 degrees Fahrenheit), an almost optimum temperature for C. botulinum growth. Prepared this way, the food is ready in about a week, and has been dubbed traditional “fast food” by some government investigators.

A review of botulism outbreaks in Alaska from 1947 to 1985 published in the Journal of Infectious Diseases in June 1988 reported that all 59 confirmed or suspected outbreaks during that period occurred in Alaskan Natives and were associated with eating traditional Alaskan Native foods.

“The traditional methods of preparation might well have served originally to provide essential nutrients lacking in the diet,” says Miriam Lancaster, a nurse with the Alaskan Native Health Service in Anchorage. “The fermentation process softens fish bones so they are edible,” she explains, “providing a usable source of calcium, a nutrient that has not been readily available in the diets of Alaskan Natives. Also, fermenting foods may release vitamin B.”

Strong Tradition

Past efforts at preventing botulism by educating Native Alaskans about the dangers inherent in traditional food preparation have been largely ineffective. They were “viewed as outsiders in-
Fermented beaver tail.

For health officials, the message is to suspect botulism and treat it promptly. The disease is often mistaken for something else, such as stroke or drunkenness.

"There was a report once that a Russian immigrant came to an emergency room dizzy, stumbling, with dry mouth and slurred speech. And of course he had difficulty with English. They couldn’t figure out what was wrong and sent him home to sober up, only to have him come back a couple hours later in far worse condition."

"Generally, a medical doctor may never see a case of botulism in a lifetime," says Rhodehamel. "The problem is it’s not often recognized because it’s so seldom seen and, in terms of treatment, early recognition and prompt administration of antitoxin is critical."

Therefore, health officials going to Alaska are warned that it is a high-incidence area for botulism, and they are taught the signs and symptoms of the disease.

Giving up fermented fish heads and seal flippers may seem to many people a simple sacrifice to prevent botulism, but, as Rhodehamel points out, "The Alaskan Natives might look at yogurt and say, ‘Well, that’s nothing but spoiled, curdled milk,’ so it’s all a matter of cultural preference."

Marian Segal is a member of FDA’s public affairs staff.
Botulism in the Entire United States

Home-canned and home-preserved foods are the most common cause of botulism in the United States. The problem of botulism in commercial canning in the early 20th century was virtually eliminated after a series of studies defined the habitat of the *Clostridium botulinum* bacteria responsible for the disease, the foods incriminated, and the conditions that would destroy *C. botulinum* spores.

The largest outbreaks ever reported in the United States were one in Pontiac, Mich., in 1977, when 59 people developed the illness after eating home-canned peppers in a restaurant, and another in Clovis, N.M., in 1978, when 32 people became ill with botulism after eating potato salad at a country club.

There are seven strains of *C. botulinum*, designated A though G. Types A, B, E, and F are responsible for most cases of botulism in humans. The bacteria can also be grouped into proteolytic and non-proteolytic categories. The proteolytic types have enzymes that break down proteins in food, releasing compounds such as putrescine and cadaverine that produce offensive odors, providing a warning that something is wrong. Non-proteolytic types, on the other hand, don’t have these enzymes. They can grow in a food and make it toxic with no signs of spoilage, either in appearance or taste.

Although botulism is not a common food-borne disease in the United States apart from Alaska, still roughly 5 to 10 outbreaks occur each year, says Jeffery Rhodemel, research microbiologist with FDA’s Center for Food Safety and Applied Nutrition.

“Most outbreaks are from improperly home-processed foods—either home canning or other home processing,” he says. “Commercial outbreaks occur less often, but when they do, they usually involve a number of people and are more spectacular.”

*C. botulinum* bacteria grow under anaerobic conditions—that is, in an environment without oxygen, such as in canned food or other vacuum-packed products. Though a relatively anaerobic environment and temperatures above 30 degrees Celsius (86 degrees Fahrenheit) are optimal for production of botulinum toxin, strict anaerobic conditions are not necessary, and toxin production by some type E strains has occurred at temperatures as low as 3.3 C (38 F).

Low-acid canned foods are historically associated with botulism. Recent outbreaks, however, have involved foods not usually associated with botulism, such as improperly prepared sautéed onions, potato salad, and commercial garlic-in-oil.

“These outbreaks emphasize the need for continued vigilance both by consumers and by regulatory agencies,” Rhodemel says. He advises consumers to be aware that swollen or badly dented cans have a greater potential for contamination. A severe dent may stress the metal and make a pinhole through which the bacteria may enter.

Regarding home-processing, Rhodemel says that freezing inhibits the growth of *C. botulinum*. “If you vacuum-pack a product and spores are present, they may be able to grow, but if you freeze it, they won’t grow, and if you thaw the product under refrigeration and cook it, there’s no danger. Boiling the product for 10 minutes or other equivalent cooking will destroy any toxin that may have formed,” he says.

—M.S.
Drugs Helping People With Parkinson’s Disease

by Evelyn Zamula

Walter is approaching 80, but his smooth, unlined face looks years younger. When he sits quietly in his chair, no one can tell he has Parkinson’s disease. He has never had tremor, the trembling of the hand or foot that plagues the majority of people with this chronic neurological ailment.

But watch him try to get out of the chair. He grips the wooden arms, moves to the edge of the seat, and rocks back and forth a number of times to gain momentum. Using all his strength, he pushes down on his hands to propel himself upright. For a long time he stands as if rooted to the spot. Then he hurries forward, shoulders bent, walking in short, shuffling steps, looking every one of his 80 years.

For the most part, Walter (who asked that his last name not be used) has coped remarkably well with his illness, which began when he was 65. Until a few months ago, he drove his car around the rural area where he lives, doing his little errands. But lately he appears to be going downhill rapidly despite carefully regulated medication. Doing fine tasks with his hands, such as buttoning his shirt and handling eating utensils, has become more and more difficult, which depresses him. Slight drooling has also become a problem. But what bothers him most is that he has begun to hallucinate, a side effect of one of the drugs he is taking. He stands at the window and peers into the woods, seeing strange creatures that are not there, but appear only too real to him. His daughter reports that this retired policeman, once strong and confident, becomes anxious when left alone. Since it’s not possible for her to be with him all the time, she is thinking, finally, of a nursing home.

Unlike Walter, Virginia “Jinny” Krohnfeldt’s first symptom was a tremor that affected her writing hand. Her symptoms showed up much earlier, too, when she was in her mid-40s, 13 years ago. Presently a realtor in the Washington, D.C., area, Krohnfeldt had to resign her high level government job because it became difficult for her to sign checks, an essential part of her duties. Like Walter, Krohnfeldt also stoops and shuffles, symptoms that make her appear to many people as if she is a
drug abuser. Once reluctant to tell people she had Parkinson’s disease, Krohnfeldt is now outspoken about her condition: “Better to say you have Parkinson’s than have people think you’re on drugs.”

**Diagnosing the Disease**

The chief or major signs of Parkinson’s disease are slowness of movement (bradykinesia), tremor, and muscle stiffness or rigidity.

In addition to these, Parkinson patients may have minor signs, including a mask-like face (which accounts for Walter’s deceptively youthful look), drooling, stooped posture, “freezing” (feet unable to move), difficulty swallowing, mumbly speech, sleep disturbances, a tendency to fall forward (propulsion) or backward (retropulsion), infrequent blinking, and bowel and bladder problems. Diagnosis is based on the presence of two major signs, or one major sign and at least two minor signs. Often, the disease progresses so slowly that it may take years before a doctor can make a firm diagnosis.

To rule out other brain disorders, doctors may also order tests, such as a computerized axial tomography (“CAT”) scan, which produces images of “slices” of the brain, or an electroencephalogram (EEG), which measures electrical activity in the brain. These tests are usually normal in patients with Parkinson’s disease.

**Dopamine Key**

Parkinson’s disease results from a depletion of the chemical dopamine in the brain. Dopamine is produced and stored in a small, pigmented group of nerve cells in the upper brainstem called the substantia nigra. Long, thin nigrostriatal fibers connect these pigmented cells to nerve cells in the corpus striatum, a part of the brain that controls movement, balance, walking, and posture. Dopamine aids the transmission of messages between the pigmented nerve cells and the striatal nerve cells (see diagram).

If, for any reason, the substantia nigra’s nerve cells are injured or destroyed, the corpus striatum does not receive enough dopamine to correctly program movement, and parkinsonian symptoms develop. Symptoms may not show up until more than 50 percent of the dark nerve cells are destroyed and the striatal dopamine content is reduced by 80 percent or more, a process that can take many years. During the course of the disease, the substantia nigra continues to degenerate.

**Treatment with Levodopa**

In 1817, the British physician James Parkinson described as the “shaking palsy” the disease that now bears his name. He had little at his disposal to relieve the disease’s disturbing symptoms. Medical men of his time were great believers in keeping the bowels open and bloodletting; Dr. Parkinson approved of the former for palsy patients, but not the latter.

Until levodopa (or L-DOPA) was introduced in the 1960s, doctors relied mostly on botanical preparations, such as tincture of belladonna, to treat the disease. Then Arvid Carlsson, a Swedish professor, found in 1957 that the effects of reserpine, a drug that caused parkinsonism in laboratory animals, could be reversed by injections of levodopa. He proved that dopamine levels in the brain were reduced by reserpine and restored to normal by levodopa, and suggested that levodopa be tried in treating Parkinson’s disease.

Doctors prescribed the drug timidly at first—either given by mouth or injected into a vein—fearing serious adverse reactions. The results were disappointing. But George Cotzias, M.D., of the Brookhaven National Laboratories, Upton, N.Y., daringly prescribed doses a thousand times greater than had ever been used. His patients improved dramatically. When Leonard L., a postencephalitic Parkinson patient (and hero of the movie “Awakenings,” based on the book by Oliver Sacks, M.D.), heard about the drug, he spelled out on his letterboard, “Dopamine is Resurrectamine. Cotzias is the Chemical Messiah.”

FDA approved levodopa in 1970. But there were problems. Curiously, levodopa can cross the blood-brain barrier—where it is converted in the brain to dopamine—but dopamine itself cannot. When taken orally, an enzyme in the blood and tissues converts levodopa to dopamine so rapidly that only a small part of a levodopa dose enters the brain unchanged. Consequently, large amounts of levodopa are needed to relieve neurological symptoms and replace the lost dopamine, causing unbearable nausea and other side effects.

Researchers found that when carbidopa was added to levodopa, it blocked the enzyme responsible for the breakdown of levodopa in the body, and al-
allowed more levodopa to get to the brain. Carbidopa makes it possible to use about 75 percent less levodopa, thereby reducing nausea and vomiting. This combination of levodopa and carbidopa is marketed as Sinemet.

Another problem with levodopa medications is that some patients develop complications with long-term use. This has made some doctors reluctant to prescribe them until symptoms interfere with the quality of life. (Recent studies have shown that it may make no difference to the eventual outcome when levodopa drugs are started, because no anti-parkinsonian agent can slow the natural progression of the underlying disease.) After about four or five years, sometimes sooner, the patient begins to respond less satisfactorily to levodopa. Dyskinesias, or involuntary movements (such as lip smacking or tongue thrusting), may develop. Reducing the dose helps reduce the dyskinesias, but results in a worsening of Parkinson symptoms.

Some Parkinson disease patients may have “on-off” effects, which means that their movements fluctuate from normal to abnormal in a random fashion, or as a “wearing off,” when symptoms return as the blood level of levodopa decreases. The controlled-release form of Sinemet, Sinemet CR, which was approved for use by FDA in 1991, was formulated to help keep blood levels of levodopa more constant throughout the day, possibly preventing these fluctuations.

Modernizing Old Therapies

Anticholinergic drugs have been used to treat Parkinson’s disease for almost a century. (Those old botanical preparations had anticholinergic properties.) Used along with levodopa, modern anticholinergic drugs are useful in reducing tremor. As decreased amounts of dopamine are produced in the brain, an imbalance with the neurotransmitter acetylcholine occurs, making symptoms worse. Anticholinergics work by partially blocking the action of acetylcholine. Examples of anticholinergic medications used to treat Parkinson’s disease are Artane (trihexyphenidyl), Akineton (biperiden), Kemadrin (procyclidine), and Cogentin (benztropine).

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<th>Some Drugs Used to Treat Parkinson’s Disease</th>
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<td>MAO-B Inhibitor</td>
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Anticholinergic drugs relieve rigidity, tremor and drooling, dry mouth, blurred vision, mental changes, difficulty in voiding, constipation.

Antidepressants with anticholinergic activity relieves depression and improves sleep (may also relieve anxiety).

Anticholinergics relieve rigidity, tremor and drooling, dry mouth, blurred vision, mental changes, difficulty in voiding, constipation.

Antidepressants without anticholinergic activity relieve depression and improve sleep (may also decrease anxiety and improve sleep).

Antihistamines reduce tremor and can be sedating, drowsiness.

Anti-psychotomimetics may lessen hallucinations and delusions, mental changes.

Antiviral improve all symptoms, mottling of skin, swelling of feet, confusion, hallucinations.

Dopa decarboxylase inhibitor combined with levodopa improve all symptoms, involuntary movements, mental changes, dizziness.

Dopamine agonists improve all symptoms, nausea, dizziness on standing, mental changes.

MAO-B Inhibitor may slow progression of the disease and increases the effectiveness of levodopa, dizziness, nausea, insomnia.
Parkinson’s disease affects slightly more men than women and more whites than blacks in the United States. About three-quarters of all patients develop the disease between 50 and 65, though one person in seven develops it earlier, in the 30s or 40s. An estimated 1.5 million Americans have the disorder, according to the Parkinson’s Disease Foundation.

The question of whether the disease has a genetic factor has been debated for years. Studies of both identical and fraternal twins, in which one twin had Parkinson’s disease, showed that the unaffected twin had about the same frequency of the disorder as found in the general population.

“There is no definitive data to support whether Parkinson’s is or is not hereditary,” says Thomas Chase, M.D., chief, experimental therapeutics branch, National Institute of Neurological Disorders and Stroke, Bethesda, Md. “The mainstream thinking is that most Parkinson disease cases look as though they do not have any hereditary component whatsoever, on the face of it. The twin studies support that view . . . .

“But one can’t be absolutely sure that there is no hereditary component in ordinary [idiopathic] Parkinson’s disease, because there are two or three families around the world where Parkinson’s is clearly hereditary.”

A recent study of two large families from the same small town in southern Italy revealed that 41 family members in four generations, including members who emigrated to the United States, have had a particularly serious form of the disease. Genealogical studies of the two families showed a common ancestor dating to the early 1700s.

“Fortunately, these cases are exceedingly rare,” says Chase. “So when a patient asks if Parkinson’s can be inherited, the answer is the chance is one in a million.”

Other experts debate whether Parkinson’s disease has an environmental cause. The occurrence of the condition in couples married for many years, presumably eating the same diet in the same environment—in many cases in institutions—is exceptionally low. However, one researcher found that residents of three adjacent kibbutzim (community settlements) in Israel have five times the incidence of Parkinson’s disease found in neighboring areas. Until recently, all three kibbutzim used drinking water from the same well, possibly contaminated by a nearby junkyard with rusting automobiles and tractor parts. Other researchers have also noted a higher risk of Parkinson’s disease among rural populations who use well water.

Some, such as Donald M. Calne, D.M., University of British Columbia, argue that Parkinson’s disease is not a specific disease entity, but rather a syndrome that may have either a genetic or environmental cause, depending on the particular case. Professor C.D. Marsden of the National Hospital for Nervous Diseases, London, U.K., writes in The Lancet (April 21, 1990): “A more complex theory is that the development of Parkinson’s disease may be due to a combination of exposure to an environmental toxin with an inherited inability to adequately dispose of such a toxin.”

The possibility that a virus or other infectious agent is responsible has been proposed, but sophisticated techniques have so far been unsuccessful in finding any such agent.

About 85 percent of patients who develop tremor, rigidity, slowness of movement, and minor signs have ordinary (or idiopathic—of no known cause) Parkinson’s disease. Other patients with the same symptoms for which the cause is known have symptomatic or secondary parkinsonism. Parkinsonism can be induced by a variety of causes. One type is caused by drugs that block the dopamine receptors in the brain. The chief offenders are the antipsychotic drugs, such as Haldol, Thorazine, Loxitane, Stelazine, Mellaril, Prolixin, Compazine, Orap, and others of this class. Fortunately, these symptoms disappear when the drugs are withdrawn or the dose is lowered. (Benzodiazepine, or minor, tranquilizers such as Valium and Librium do not cause parkinsonism.)

The drug reserpine is prescribed in low doses to combat high blood pressure; in high doses, however, reserpine depletes dopamine in the brain and causes parkinsonism. Its effects are also reversible when use is discontinued.

Other chemicals are also implicated. In 1977, a young chemist in California synthesized a street narcotic that was contaminated with a byproduct known as MPTP. After several injections, he developed a tremor and was unable to move or speak. When he died in 1978 of a drug overdose, the autopsy showed irreversible damage to the brain’s dopamine-producing systems.

In a study conducted in the province of Quebec, Canada, researchers found a strong correlation between the use of herbicides chemically related to MPTP, such as paraquat, and the development of Parkinson’s disease. In one area where these types of herbicides were heavily used, the incidence of parkinsonism was seven times higher than in neighboring areas with low herbicide use.

Certain occupations are associated with the destruction of the dopamine-producing cells of the brain. Mechanics exposed to carbon monoxide, welders and miners exposed to manganese, and people in contact with mercury or carbon disulfide in rubber manufacture, for example, may have symptoms resembling those of parkinsonism.

Brain tumors, head injuries, strokes, tuberculosis, syphilis, subdural hematoma, degenerative diseases such as Alzheimer’s, hereditary diseases (Huntington’s chorea and Wilson’s disease), or any other condition that damages the cells of the substantia nigra may cause some degree of parkinsonism, but these cases are rare.

—E.Z.
Although used primarily in treating asthma and allergies, antihistamines are also effective against tremor because of their anticholinergic properties. Most frequently used antihistamines for this purpose are Benadryl (diphenhydramine) and Phenoxene (chlorphenoxamine).

Like antihistamines, Symmetrel (amantadine), an antiviral drug, was serendipitously discovered to benefit patients with Parkinson's disease. Prescribed for a woman to prevent flu, Symmetrel relieved some of her Parkinson symptoms and made her generally feel better. It is helpful both in the early and late stages. In addition to its anticholinergic properties, Symmetrel promotes the release of dopamine in the brain.

Other drugs, called dopamine agonists (activators), bypass the degenerating nerve cells in the substantia nigra and directly stimulate the striatal dopamine receptors. Though dopamine receptors are selective about which chemical messengers they'll receive, they can respond to synthetic compounds that aren't dopamine, but act like dopamine in the brain. Dopamine agonists can be used alone, but are more effective when used with Sinemet. They are usually added to the treatment when the patient is encountering too many side effects, such as dyskinesias, with Sinemet. Dopamine agonists available in the United States are Parlodel (bromocriptine) and Permax (pergolide). They don't necessarily have the same effects in all patients, so if one drug loses its efficacy or causes too many side effects, the physician may prescribe the other drug.

MAO-B inhibitors block the MAO-B enzyme in the brain that helps break down and metabolize dopamine. When the enzyme's action is slowed down, more dopamine may be available to relieve symptoms and improve motor performance, allowing Parkinson patients to move about more freely. Eldepryl (deprenyl) is the only MAO-B inhibitor to be approved for use in treating Parkinson's disease in this country. It is useful for patients with advanced disease who are having problems with Sinemet. In a large clinical trial in 1989, Eldepryl showed a possible neuroprotective effect by prolonging the time before the patient needed levodopa treatment.

Many Parkinson's disease patients suffer from profound depression, as well as insomnia. Doctors may prescribe tricyclic antidepressants (such as Elavil, Endep and Tofranil) that have both anticholinergic and sedative properties. Medications that relieve symptoms of depression, such as Prozac and Desyrel, are also used.

Many doctors say that levodopa preparations will probably continue to be the most useful drugs in treating Parkinson's disease for a long time to come. Researchers are studying newer drugs that will enhance levodopa's effectiveness by slowing down the rate at which the body breaks it down. They have also found that medications approved for other uses (such as Clozaril) can reduce side effects. Other substances (such as Eldepryl and vitamins C and E) are under study to see if they can reduce the rate of disease progression.

It's unlikely that results will be available soon enough to benefit Walter, who now lives in a nursing home in the small Midwestern town where he grew up and served on the police force. In general, he is doing fairly well, but no sooner is his medication adjusted to get rid of one troublesome side effect than a different one appears in its place. The usual infirmities of old age have added to his problems.

Krohnfeldt's symptoms are under control, except that her hand still trembles and she is suffering from dyskinesia—her right foot sometimes moves spasmodically back and forth and she is unable to stop it. But Krohnfeldt retains her good spirits. "I've always said it's my cross to bear. If I can stick with it, I'll hang in there. It's better than a lot of other diseases I wouldn't care to have. I started an exercise program about six weeks ago and it's doing me a world of good. I play golf occasionally and work out for two hours a day three times a week, and I feel just great. I get a lot of support from my family. My kids are behind me and that helps."

Evelyn Zamula is a freelance writer who lives in Potomac, Md.
A decade ago, the National Institutes of Health called it "the leading chronic disease of childhood." An editorial published in the Journal of the American Medical Association just a few years before that, in 1975, went further, terming it "the most common disease of mankind."

The scourge referred to, dental caries (non-dentists call it tooth decay), is a malady that may well be on its way out, thanks mostly to fluoride, a remedy supplied by nature in some parts of our nation and applied by human ingenuity in others. It's now a major ingredient in 95 percent of the toothpaste we purchase. It's also an ingredient in the community water supplies serving most of our citizens.

Interest in the role of fluoride arose when it was observed that people in some parts of the country had a surprisingly low incidence of tooth decay. The areas, it turned out, were those in which fluorides occur naturally in the drinking water.

By the mid-1950s, the results of decade-long controlled studies of water-supply fluoridation had established beyond a doubt both the effectiveness and the safety of fluoridation in reducing tooth decay. The practice was—and continues to be—endorsed by the American Medical Association, the American Dental Association, the U.S. Public Health Service, and the National Research Council.

Exceeding Expectations

Every 10 years, PHS (of which FDA is a part) determines national health objectives for the decade ahead. In setting dental health goals in 1980, PHS declared that by 1990, the proportion of 9-year-olds who had never had cavities in their permanent teeth should rise to 40 percent.

At the time, 40 percent seemed a sensible expectation (the most recent data then available showed that in the mid-70s, the figure was under 30 percent). Yet, even then a new survey was under way, and it soon became clear that at the time the goal was set, it had already been not only achieved, but surpassed.

In 1982, the National Institute of Dental Research released the results of its 1979-80 survey, based on a sampling of 40,000 children nationwide, showing that more than half of the 9-year-olds (51 percent) were decay-free. In fall of 1988, PHS announced that, according to preliminary results from a 1986-87 survey, over 65 percent of American 9-year-olds had never had decay in their permanent teeth. And the trend continues.
How Fluoride Helps . . .

There are three requirements for the creation of cavities: teeth, which are extremely susceptible to attack by certain acids; bacteria—notably Streptococcus mutans—that produce those acids; and food on which the bacteria can feed. Carbohydrates, especially sucrose (ordinary sugar), make fine fare for S. mutans and kin.

No vaccine against caries-causing bacteria is in sight. Nor has anyone found a way to enforce immediate after-meals tooth-brushing to remove the bacteria-nourishing nutrients. Enter fluoride, which structurally bolsters the teeth’s resistance to acid invasion.

To achieve resistance, children growing up in an area where the water is neither naturally nor artificially fluoridated may need to receive supplements (see “Fluoride Supplements for Young Teeth”).

Only fluoride taken internally, whether in drinking water or dietary supplements, can strengthen babies’ and children’s developing teeth to resist decay. Once the teeth have erupted, they’re beyond help from ingested fluoride.

For both children and adults, fluoride applied to the surface of the teeth can nonetheless add protection, at least to the outer layer of enamel, and it has unquestionably also played a role in reducing decay. The most familiar form, of course, is fluoride-containing toothpaste, introduced in the early 1960s. Fluoride rinses are also available, as are applications by dental professionals. All these products are regulated by FDA. They are considered effective adjuncts to ingested fluoride—and they are the only useful sources of tooth-strengthening fluoride for teenagers and adults.

. . . And (Sometimes) Hurts

There is one proven adverse effect of fluoride on the teeth: Too much fluoride can cause a condition called dental fluorosis. In its mildest form, this condition causes small, white, virtually invisible opaque areas on teeth. In its most severe form, it causes a distinct brownish mottling. However, dental fluorosis doesn’t result from artificial fluoridation alone, because the levels are kept low enough to avoid this effect.

Over the years, many studies of dental fluorosis patterns have established optimal levels for fluoride in drinking water—levels that will provide protection against decay but will cause no, or negli-
When to Give Fluoride Supplements

To be sure that teeth incorporate decay-fighting fluoride during structural development, infants and children need to receive fluoride on a regular basis. Whether or not supplements are needed, and how much, depends on both the local water supply and sources in a child’s diet.

Fluoride supplements, which are regulated by FDA as drugs, may take the form of drops or, for older youngsters, chewable tablets. They are available both alone and in combination with vitamins.

The daily requirement rule of thumb suggested by the American Dental Association and the American Academy of Pediatrics is 0.25 milligrams per day up to age 2, 0.5 mg for ages 2 and 3, and 1 mg after age 3 and until the teen years. Children who consume tap water with a fluoride concentration of less than 0.3 parts per million (ppm) need full supplementation. At water supply levels between 0.3 and 0.7 ppm, only half the need is met; if the water supply provides 0.5 ppm, for example, an average 5-year-old should receive 0.5 milligrams of supplemental fluoride per day. Breast-fed infants are exceptions to the rule, since breast milk contains almost no fluoride (nor do ready-to-drink formulas).

Further, doctors need to consider both the local water supply and the baby’s diet as a whole in calculating needs and prescribing supplements, points out Katherine Karlsrud, M.D., a clinical instructor in pediatrics at Cornell University Medical College.

The process can be complicated for physicians in some “mixed” geographical areas. Karlsrud practices in New York City, which offers what she pronounces a “perfect” fluoride level—but she also cares for children from surrounding counties where the level is zero.

“Each baby’s need,” she says, “has to be individually figured out. If a baby in Manhattan, for example, is being partly breast-fed, but half that baby’s diet consists of formula reconstituted with tap water, half the child’s need for fluoride is being met.” That would not be true, though, for an infant in nearby Suffolk County, on Long Island, where the citizenry at this writing continues to reject health officials’ recommendation that the water supply be fluoridated.

In areas where the drinking water provides protective fluorides, over 0.7 ppm, breast-fed babies who have been weaned need no further supplementation.

—D.S.
Only fluoride taken internally can strengthen babies’ and children’s developing teeth to resist decay.

In accordance with the Safe Drinking Water Act, EPA periodically reexamines its standards and is currently reviewing

Tips for Parents

While parents should be sure that their children are getting fluoride’s protection for their teeth, they should also be aware of what FDA’s Ronald Coene calls the “total body burden of fluoride” and be sure their children aren’t ingesting unneeded amounts. (Only ingested fluoride, not topical application, has been associated with dental fluorosis or any other systemic effect.)

Some guidelines on various fluoride sources:

- **Drinking Water:** Find out from local health officials the fluoride concentration in your community’s water supply. If it’s below protective levels, see that your children receive supplements until their teen years. If the level’s just right and a physician or dentist prescribes supplements, question him or her about it (exceptions would be breast-feeding babies who drink very little or no water). If the level is naturally too high, contact your local EPA office.

- **Fluoride Supplements:** If they’re needed, be sure the doses are appropriate, taking into consideration, for example, such factors as an infant’s varied diet.

- **Toothpaste:** The fluoride concentration in toothpaste is high, and toothpaste is meant to be applied to the surface of the teeth, not swallowed. According to Assistant Secretary for Health James O. Mason, M.D., if the average 2-year-old brushing twice a day swallows the toothpaste, it could add 0.5 milligrams per day to the child’s fluoride intake—full supplement dosage for a child of this age. He suggests that children be carefully taught never to swallow toothpaste and to use only a pea-sized amount on the brush.

- **Rinses:** FDA has concluded that these nonprescription products can indeed boost the anti-cavity effect of fluoride toothpaste. They are best used after brushing but should not be used by children under 6 unless recommended by a dentist. (Nor should they be used by anyone who may be apt to swallow some of the product.)

- **Dental-Office Application:** This is the most concentrated topical form of fluoride, and can be quite helpful in preventing cavities in children and adults alike. The likelihood of harm from proper application is virtually nil, says Jack Klatell, D.D.S., chairman of the department of dentistry at Mount Sinai School of Medicine: “The application is usually in the form of a paste or gel inside a mouth guard, which is placed in the mouth and left in contact with the teeth for a period of time and then removed.”

—D.S.
information that has become available since 1985. A report is expected by late 1992 or 1993.

A Community Decision

Along with caries reduction, PHS set another dental health objective a decade ago—that by 1990, at least 95 percent of the population using community water systems would be drawing optimally fluoridated water from their taps. But by 1985, that figure was only 62 percent, and growth in community water fluoridation had slowed to 1 to 2 percent a year. Why are so many fluoride-deficient water supplies still unfluoridated?

There is no national law requiring fluoridation, and the question must be decided locally. Although most Americans are aware that many substances are routinely added to our water to ensure that it’s safe and drinkable, there are still some apprehensions about the addition of chemicals that don’t occur naturally. And some misunderstandings have arisen.

Four Ill-Fated Rats

The most recent misunderstanding occurred in the spring of 1990, with the news of an experimental animal study. Some abbreviated reports of the study were interpreted as confirming a “weak link” between fluoride and cancer. However, a more detailed look at the study results shows this was not the case. In the study by PHS’s National Toxicology Program, four male rats given very high doses of fluoride developed osteosarcoma, a rare form of bone cancer.

They were among 50 rats and mice of both sexes given the highest doses of fluoride they could tolerate in their drinking water for two years. One rat that developed cancer received fluoride at a level of 45 ppm; the other three received it at a level of 79 ppm. There were no cancers found in female rats, or in mice of either sex, at these fluoride levels; nor were cancers found in any animals at lower levels.

Despite the weakness of the association, the Department of Health and Human Services assembled a panel to review all current and past research relating to fluoridation safety. The group, the Ad Hoc Subcommittee on Fluoride of the Committee to Coordinate Environmental Health and Related Programs, included scientists from more than a dozen federal agencies and was chaired by former FDA Commissioner Frank E. Young, M.D., Ph.D.

The subcommittee’s report, released in February 1991 after months of examining the evidence, concluded there was no cause for alarm and no reason to link fluoridation of water with any human disorder or disease, including osteosarcoma or other malignancies. And a study published in the April 1991 issue of the American Journal of Public Health, comparing the incidence of osteosarcomas in fluoridated and unfluoridated areas of New York state, found no difference in the rates.

The PHS report did observe that there are multiple sources of fluoride and commented that, “In accordance with prudent health practice of using no more than the amount necessary to achieve a desired effect, health professionals and the public should avoid excessive and inappropriate fluoride exposure.”

Clearly, the levels of fluoride added to water supplies do not represent a public health hazard. But the risk of adverse effects, specifically of fluorosis in young teeth, is real if infants and children ingest appreciably more fluoride than they need for decay prevention.

Ronald F. Coene, an engineer and water supply specialist at FDA’s National Center for Toxicological Research, who served as executive secretary of the special subcommittee, points out that, “It is possible for a child to get too much fluoride. That can happen when more than maximum allowable levels occur naturally in drinking water, or from swallowing toothpaste. It can also result from unnecessary dietary supplements. Sometimes, dentists have been known to recommend fluoride tablets when the local water supply is fluoridated. Too much fluoride can cause fluorosis. That was the concern of the committee when it comes to overexposure—fluorosis, not cancer.”

Dodi Schultz is a freelance writer in New York City and a contributing editor of Parents magazine.
The Notebook: a potpourri of items of interest gathered from FDA news releases, other news sources, and the Federal Register (designated FR, with date of publication). The Federal Register is available in many public libraries.

- A toll-free number for health professionals who have questions concerning FDA policy on medical advertising and promotion has been set up. The number is (1-800) 238-7332.

- Breast milk is affected if a mother drinks alcohol even in small amounts before nursing. The odor and flavor of breast milk is changed, causing the infant to consume less, according to a report in the Oct. 3 New England Journal of Medicine. This contradicts popular folklore that suggests drinking small quantities of alcohol shortly before nursing increases milk production, relaxes the mother, and improves feeding. (NIH Healthline, October)

- A new vaccine to protect against meningitis and upper urinary tract infections in newborns has been developed by the National Institutes of Health, which has taken applications from commercial drug companies to market it. (FR Oct. 3)

- Vaccine information pamphlets must be distributed by health-care providers to anyone who will be immunized with a vaccine listed in the National Centers for Disease Control’s “Vaccine Injury Table,” according to a final rule published by that agency. (FR Oct. 15)

- Nurses’ aides must undergo training and competency evaluations to ensure they have the education, practical knowledge, and skills needed to care for nursing home residents, according to a final rule published by the Health Care Financing Administration. The rule applies to nurses’ aides employed in nursing facilities that participate in Medicare and Medicaid. (FR Sept. 26)

- Female physicians paid an average of $2,000 less than male doctors in liability premiums in 1989, according to the American Medical Association. This is down from an average $5,000 difference in 1988. The gap appears to be closing as women increasingly move into higher risk specialties. (Physician Marketplace Update, September)

- Injury Mortality Atlas of the United States, 1979-1987, has been released by the national Centers for Disease Control. The atlas is a collection of maps illustrating the geographic distribution of death rates for eight major causes of injury-related death. The atlas is available free from Injury Atlas, Program Development and Implementation Branch, Division of Injury Control, NCEHIC, Mailstop F-36, Centers for Disease Control, 1600 Clifton Road, NE, Atlanta, Ga. 30333.

- Endometriosis, a major cause of infertility, can affect every facet of a woman’s life, including her relationships and her ability to work, according to Facts About Endometriosis, a booklet available from the National Institute of Child Health and Human Development. Write to: Endometriosis/HL, National Institutes of Health, Building 31, Room 2B23, Bethesda, Md. 20892 (NIH Healthline, October)

- The life expectancy for black males in the United States rose to 66 years in 1989 and 1990, reversing an unexplained decline in 1987 and 1988. (Nation’s Health, October)

- Systemic lupus erythematosus, a disease that affects the body’s immune system, is nine times more common in women than in men, and the prevalence and death rates are three times higher in black women than in white women, according to What Black Women Should Know About Lupus, a new booklet available from the National Institute of Arthritis and Musculoskeletal and Skin Diseases. Write to: Lupus/Healthline, Box AMS, 9000 Rockville Pike, Bethesda, Md. 20892. (NIH Healthline, October)

- Life-saving medical intervention, such as mouth-to-mouth resuscitation, electrical defibrillation, and chest tubes, can be refused by New York residents who are being treated at home or in other types of non-hospital settings, according to a New York state law scheduled to take effect this year. The law is designed primarily for terminally ill patients who choose to die at home. (NARD Journal, October)

- Experimental tomatoes have been genetically altered so that they no longer produce a gas, ethylene, that causes them to ripen. Scientists said the development may some day allow fruits and vegetables to remain fresh while being transported long distances without refrigeration. (Science, Oct. 19)
Investigators' Reports

Vet Drug Salesman Sentenced in Coverup

by Dori Stehlin

A salesman of veterinary drugs was recently sentenced to three years probation and fined $1,000 plus a special assessment of $50 for covering up the sale of potent drugs to unauthorized purchasers.

Roger D. Howland, owner of Clear Lake Premix and Veterinary Supply, Clear Lake, Iowa, was sentenced on Aug. 19, 1991, after pleading guilty on April 29 to one count of falsifying voice related to the sales of an FDA-regulated product.

The invoices indicated that Howland had sold a vitamin supplement to three Iowa swine farmers, when actually he sold them Mecadox Medicated Premix-10 (Carbadox), a drug approved by FDA to help swine digest feed more efficiently and to control dysentery and bacterial enteritis.

Mecadox is a potent drug, and residues in animal tissue pose a cancer risk in people who eat the meat. It is administered to swine by mixing it with the animals' feed. Because the drug is so potent and the mixing requires precise measurement, FDA requires that anyone who wants to use Mecadox, and other similar drugs, must hold an FDA-approved medicated feed application.

Howland’s three customers didn’t have approved applications.

The trail to Howland began with one of his customers, Kevin D. Thompson, a farmer in Forest City, Iowa. In April 1988, inspectors with the U.S. Department of Agriculture found illegal residues of the drug sulfamethazine in a hog
Thompson had brought to slaughter. USDA notified FDA's Des Moines residence inspection post, and on May 17, FDA investigator Michael Verdi went to Thompson's farm.

No one answered the door at the farm house, but while waiting for Thompson to show up at the farm, Verdi saw two bags of Mecadox in an open shed. Verdi waited for Thompson for two hours, then left.

When Verdi returned to Thompson's farm on May 24, the Mecadox was gone, and Thompson denied having any.

"Mr. Thompson's story changed, however, when I told him I had seen Mecadox on his farm on May 17," says Verdi. "He admitted he had moved the bags to his father's farm next door."

In a signed affidavit, Thompson confirmed that he had purchased Carbadox from Howland three times in 1988 and that he knew the sales were illegal because he did not hold an approved medicated feed application. He also confirmed that Howland had falsified invoices to cover up the illegal sales.

On June 1, Verdi met with Howland and found records that confirmed Thompson's 1988 purchases of Mecadox, as well as two other sales of the drug to Roger Pringnitz and his brother Gordon, both of Garner, Iowa. Howland had concealed all five sales with invoices that indicated he had sold the vitamin supplement "ADE." Howland admitted in a signed affidavit that he knew that none of the farmers were legally eligible to buy the Carbadox.

FDA's Kansas City district office issued a Notice of Hearing to Howland on April 21, 1989, which outlined his violations of federal law and requested that he meet with FDA officials on May 18. Howland did not respond to the notice or attend the meeting.

Another letter was sent on May 22. On June 5, Howland's attorney told FDA in a letter that Howland had no further information to give the agency and that he had closed his business immediately after the inspection.

On June 15, 1990, FDA requested that the U.S. Department of Justice initiate criminal proceedings against Howland. Negotiations between the Department of Justice, Howland, and Howland's attorney resulted in Howland's April 1991 plea.

Howland's sentence includes detention in his home—he can't leave his house except for work, medical appointments, and regularly scheduled religious services—for the first six months of probation. The sentence also prohibits him from selling Mecadox while on probation.

In addition to Howland's guilty plea, the Department of Justice reached plea agreements with Thompson, Roger Pringnitz, and Gordon Pringnitz on Sept. 4, 1991. All three agreed to plead guilty to one count of illegally purchasing veterinarian drugs. Thompson also agreed to plead guilty to a second count of illegal use of sulfamethazine. At press time, the three had not yet been sentenced.

_Dori Stehlin is a staff writer for FDA Consumer._

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**Firm Calls Them Health Foods; FDA Says They're Drugs**

Responding to legal pressure from FDA, a health food company in North Dakota has agreed to stop marketing four products that made unsubstantiated claims of being able to prevent or cure heart disease and other serious medical conditions.

Swanson Health Products, Inc., of Fargo has stopped selling Heart Food and Cardiolife (which the company claimed could prevent heart attacks), Cata Rx (promoted as a cure for cataracts), and Gymnema Sylvestre (a "sugar eliminator").

Some of the above products contained little more than cayenne pepper, garlic or onions, according to the fine print on their labels.

Swanson has also promised to stop making therapeutic claims for three other products—Willard Water (promoted as an infection fighter that could either be swallowed or applied topically to open wounds) and Co-Enzyme Q-10 and Acidophilus (promoted as digestive aids).

When a company claims that an article is intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease, then that product is a "drug" as defined by the Food, Drug, and Cosmetic Act, and is regulated as such. It must undergo the FDA review and approval process for safety and effectiveness.

Swanson, however, made no attempt to obtain FDA approval for any of the seven products targeted by the agency.

On May 3, 1991, FDA filed a complaint for injunction against the health food company and two of its officers, Jay L. Swanson and his brother, Leland A. Swanson.

The injunction, filed in the U.S. District Court for North Dakota in Fargo, put Swanson on alert that FDA was aware of its misleading promotional activities and wanted the situation corrected at once.

The injunction alleged that Swanson was marketing as drugs seven products that had not received FDA approval. It also alleged that the products were misbranded because they made unsubstantiated medical claims.

Swanson disagreed.

On May 28, the company filed a motion to dismiss the complaint for injunction, claiming that it was marketing the seven products as foods, not drugs, and that the products were therefore not subject to FDA's drug regulations.

Swanson's motion was later dismissed by Judge Rodney Webb.

On July 2, attorneys for FDA and Swanson argued their respective cases before Judge Webb. FDA attorneys maintained that the public can be harmed when a product is labeled or advertised as being able to prevent, treat or cure a disease when in fact the product has not been proven safe or effective. Such promotional practices, FDA argued, may encourage people to stop taking their regul
lar medication and to rely instead on Heart Food, Willard Water, or other products of dubious medical value.

FDA attorneys then read from a number of Swanson’s advertising catalogs in which the company promoted several of its products via testimonials from “satisfied” customers. In these testimonials, the customers claimed they had stopped taking their prescribed medication and had switched to Swanson’s products.

Following the hearing, at Judge Webb’s request, FDA and Swanson negotiated a consent decree of permanent injunction in which Swanson agreed to stop marketing four of the products in question and to stop making “drug” claims for the other three.

—Tom Cramer

Condoms Relabeled For Accuracy

When it comes to protection against AIDS, natural-membrane condoms, made from lambskin, can’t put up as good a defense as their latex cousins. And, according to FDA, the labels ought to say so.

On July 26, 1991, FDA investigators and federal marshals seized 29,844 packages of Trojan Kling-Tite Naturalamb condoms because the manufacturer had failed to comply with FDA demands to label the products with a warning that natural-membrane condoms are not for protection against sexually transmitted diseases (STDs). By the following week, the labels were revised to FDA’s satisfaction.

The condoms, made by Carter-Wallace Laboratories, Inc., provide good birth control and a varying degree of protection against some, but not all, sexually transmitted diseases, according to FDA research.

“We cannot expect people to know which STDs they need to be protected against,” said Thomas Arrowsmith-Lowe, D.D.S., of the Office of Health Affairs at FDA’s Center for Devices and Radiological Health.

“The reality is you don’t know what your partner has,” he said, “and we wanted natural-membrane condoms to have labels that don’t allow the user to assume they’re effective against the small viral STDs.”

Natural-membrane condoms have microscopic pores. They provide good birth control because sperm are too large to get through the pores. They also prevent diseases caused by some of the larger bacterial STDs, such as gonorrhea.

But natural-membrane condoms may not protect against STDs caused by smaller viruses or virus-size particles, such as those that cause AIDS, vaginal warts, hepatitis B, or herpes.

One sperm measures about 3,000 nanometers (a nanometer is one-billionth of a meter). The organism that causes gonorrhea measures 1,000 nanometers, while the AIDS virus is only 100 nanometers. The hepatitis B virus is a tiny 40 nanometers.

FDA began researching condoms extensively in 1987 because the devices were being recommended by health professionals to reduce the risk of transmitting HIV, the AIDS virus.

During laboratory research, FDA verified that latex condoms provide a better barrier against HIV and smaller viruses than natural-membrane condoms.

In May 1989, FDA notified the two
American manufacturers of lambskin condoms—Carter-Wallace and Schmid Laboratories Inc. of Anderson, N.C., which makes the Fourex brand—to relabel their products.

Schmid complied with the FDA label changes, but FDA never heard from Carter-Wallace. In December 1990, the agency wrote a second letter to the company asking to see the current labels.

FDA investigators Pamela L. Wertalik and Kathleen P. Clark of the Newark, N.J., district inspected the Carter-Wallace warehouse May 31, and Wertalik returned June 6 to collect more samples.

The investigators found condom packages both with and without proper labels.

After the inspections, Carter-Wallace still did not write or call FDA, so agency officials began proceedings to ask federal marshals to seize all of the warehouse’s mislabeled natural-membrane condoms, valued at nearly $437,000.

After the seizure, Carter-Wallace issued a press release stating that the company had written a new label that said, “To help reduce the risk of catching or spreading many sexually transmitted diseases, use a Trojan brand latex condom.”

But FDA was not satisfied with the new label. “It wasn’t good enough because it didn’t tell them that they shouldn’t use lambskin condoms to prevent STDs,” said Arrowsmith-Lowe.

“It’s like having a bottle of strychnine,” he added, “and on the bottle it says, ‘Drink water,’ when it should say, ‘Don’t drink this.’”

By July 31, Carter-Wallace had changed its label again, this time to a statement that met FDA requirements: “Highly effective against pregnancy when properly used. Not to be used for prevention of sexually transmitted diseases (STDs). To help reduce the risk of catching or spreading many STDs use only latex condoms, such as Trojan brand latex condoms.”

Although there may still be some Trojan Kling-Tite Naturalamb condoms with the old labels on store shelves, FDA did not ask Carter-Wallace to remove them or recall condoms already sold.

“There was no problem with the product itself, just the labeling,” said FDA special projects officer Frank Pipari. “As far as we knew, the condoms were sound [for birth control].”

—Rebecca Williams

Court Backs FDA’s Device Definition

Whether an instrument is used to diagnose disease—and is thus a medical device—is FDA’s call, a U.S. court recently decided.

“This decision is of great importance because it gives the agency a wide latitude in interpreting ‘devices,’” said Jerome Bressler, director of the compliance branch at FDA’s Chicago district office.

On Sept. 10, 1991, the U.S. Court of Appeals for the Seventh Circuit in Chicago upheld a district court ruling that the Sensor Pad, claimed by its manufacturer to improve self-examination for breast cancer, was an unapproved medical device. The court ordered the firm, Inventive Products, Inc. (IPI), of Decatur, Ill., to destroy its inventory of Sensor Pads that had been seized in 1989 and valued at more than $400,000. IPI had asserted its product was not a medical device because it wasn’t used to “diagnose” disease. It was only a “screening” tool, the firm said.

A woman would lay the Sensor Pad (a round, flat latex bag containing a small amount of silicone lubricant) over her breast while gliding her hand over it. IPI claimed the product improved the sense of touch by making lumpy masses feel larger and by insulating the fingers so that heat, surface texture, and friction would not mask the lumps.

FDA first heard about the Sensor Pad on April 24, 1985, when Grant Wright of Earl Wright Company (IPI’s predecessor) notified the agency’s Center for Devices and Radiological Health of the firm’s plans to market the Sensor Pad. Grant Wright is Earl Wright’s son.

In Grant Wright’s pre-market notification to the center, he claimed the Sensor Pad was substantially equivalent to latex examination gloves, a class I “pre-Amendments” device, which would permit it to be marketed. (The Medical Device Amendments were added to the Federal Food, Drug, and Cosmetic Act on May 28, 1976.)

In response to this notification, in a letter dated June 18, 1986, the center informed Wright that the Sensor Pad was not equivalent to latex examination gloves because such gloves aren’t sold for the same intended use as the Sensor Pad—that is, as an over-the-counter device for untrained users to improve sensitivity during breast self-examination.

Furthermore, the center informed Wright that the Sensor Pad did in fact require a pre-market approval (PMA) application that shows the device to be safe and effective. Marketing the device without an approved PMA application is illegal, the letter warned.

Six months later, the Wrights established a new business—IPI—at the same address and with the same officers as Earl Wright Company, and began to market the Sensor Pad without FDA’s approval. IPI did not register or list the device with FDA, as the law requires.

On Nov. 22, 1988, the center received an inquiry about the legal status of the Sensor Pad from the American Cancer Society, which had become aware of the device through several newspaper stories.

The agency’s Chicago office sent investigator Mark Peterson to IPI Jan. 11, 1989. He found 25 cases of Sensor Pads. According to Peterson, he reminded Grant Wright of the center’s warning against illegal marketing, and Wright said his attorney told him to market the Sensor Pad and claim it wasn’t a device—despite Earl Wright Company’s having filed a medical device pre-market notification for it. Peterson collected samples of the Sensor Pad, its labeling, and promotional literature.

Because IPI continued to market the unapproved device and showed no sign it intended to stop, FDA asked the U.S. attorney to file for seizure, and on April 18, a U.S. marshal seized some 42,500 Sensor Pads.

IPI filed a claim for the articles on
April 26, insisting the Sensor Pad was not a device within the meaning of the law.

But, on Sept. 27, the center received a PMA application from the firm.

The center on Dec. 11 informed IPI’s counsel by letter that the PMA couldn’t be filed because it did not contain sufficient scientific data to demonstrate the Sensor Pad was safe and effective for its intended use. The center said it wouldn’t review the document further unless IPI corrected the deficiencies or justified not doing so.

At FDA’s request, the U.S. attorney on Dec. 21 filed for a “summary judgment.” In a brief supporting the government’s request, FDA attorney Kay Cook argued that the claimants themselves, as Earl Wright Company, had declared that the Sensor Pad fit within the legal definition of a device.

According to the law, articles intended for use in diagnosing disease or intended to affect the function of the body are medical devices and are therefore subject to FDA regulation. Claims in the Sensor Pad labeling and promotional material showed that the product was clearly intended to be used in diagnosis of a disease, breast cancer, and was clearly intended to affect a function of the body, the sense of touch. The Sensor Pad “falls squarely within the definition of a device” under the law, Cook said.

On June 14, 1990, Judge Harold A. Baker found in favor of the government and dismissed the case. But IPI appealed. At Cook’s request, Peterson on Aug. 30 again visited IPI. He asked Grant Wright whether IPI had produced Sensor Pads since the April seizure. Wright replied that any questions should be given in writing to his attorney. Peterson was allowed to go into the manufacturing area, where he saw Sensor Pads still being produced. Wright refused to answer questions or provide information about production or distribution, and he refused to let Peterson take samples or literature.

However, Peterson saw a sign by the front door that read, “NO UPS TODAY,” so he visited the United Parcel Service, where he learned that there had been several shipments of Sensor Pads since the court’s ruling against IPI. This led to a second seizure in December of about 700 Sensor Pads at Bellaire Hospital in Houston.

During the appeal hearing Feb. 25, 1991, IPI reiterated its earlier argument that the Sensor Pad didn’t need to be classified because it wasn’t a device under the law. The firm maintained the Sensor Pad was used only as a screening tool, not for diagnosis of disease.

Circuit Judges Richard Cudahy, John Coffey, and Frank Easterbrooke ruled in the government’s favor, finding the firm’s distinction between screening and diagnosis to be “indistinct” and “unteachable.”

“It would be entirely plausible to suggest that Congress intended the FDA to decide for itself which devices are used for diagnosing disease,” they stated. “A broad definition of ‘diagnosis’ allows for greater authority in the agency to oversee developments in health care, and thus better to protect the public health.” In affirming the district court’s ruling, the judges ordered IPI to pay court costs of $173.85.

FDA will monitor the case until the devices are destroyed.

—Dixie Farley
SEIZURE ACTIONS

Food/Poisonous and Deleterious Substances

PRODUCT: Eggplants, at Chicago, N. Dist. Ill.; Civil No. 91-C3231.
CHARGED 5-24-91: When shipped by Robee Produce Co., Pompano Beach, Fla., the article labeled (carton) “Florida Vegetables . . . 1 BU. Produce of U.S.A . . . Keep Refrigerated . . . Perishable” was a raw agricultural commodity bearing the chemical Methamidophos in excess of the limits of the tolerance granted for the use of such pesticide chemical on the article—402(a)(2)(B).
DISPOSITION: Consent—ordered destroyed. (F.D.C. No. 66171; S. No. 91-610-531; S.J. No. 1)

Food/Contamination, Spoilage, Insanitary Handling

PRODUCT: Crab claws, cooked, frozen, at Bayou LaBatre, S. Dist. Ala.; Civil No. 89-0879-BH.
CHARGED 11-8-89: While held for the account of Fish Market, Inc. (t/a Joe’s Fisheries), Bayou LaBatre, Ala., who had processed the article, the article had been prepared, packed and held under insanitary conditions—402(a)(4).
DISPOSITION: Consent—ordered destroyed. (F.D.C. No. 65766; S. No. 89-504-541; S.J. No. 2)

PRODUCT: Crab meat, at Franklin, W. Dist. La.; Civil No. CV 90-2439.
CHARGED 11-7-90: While held by Bayou States Seafood Supply Co., Franklin, La., the articles labeled “Claw crabmeat [or “Special Crabmeat” or “Jumbo Lump Crabmeat” or “Backfin Crabmeat] . . . atchafalaya SFD of Franklin [or “Diamond Reef SFD] . . . LA, Pasteurized” had been prepared and packed under insanitary conditions—402(a)(4).
DISPOSITION: The article was claimed by the dealer, who denied the charge and asserted a counterclaim. The government moved to dismiss the counterclaim and for summary judgment. The court ruled that the claimant could not rest upon the mere allegations or denials of its pleading, but must set forth specific facts showing that there was a genuine issue for trial. The court found that since the claimant had not offered any significant probative evidence tending to support its position, the claimant could not defeat the government’s motion for summary judgment. As to the claimant’s counterclaim, the court cited the exception of 28 U.S.C. §2680 of the Federal Tort Claims Act, which excepted claims “arising in respect of the . . . detention of any goods or merchandise by any office of customs or excise or any other law-enforcement offices,” and found that in such situations, the government had not waived its sovereign immunity and could not be sued. Accordingly, the article was condemned and ordered destroyed. (F.D.C. No. 65947; S. No. 90-0879-096 et al.; S.J. No. 3)

PRODUCT: Rice, and pinto beans, at Bronx, S. Dist. N.Y.; Civil No. 91 Civ. 1398(RPP).
CHARGED 2-26-91: While held by Havanera Tropical Market Corp., Bronx, N.Y., the rice contained rodent filth, and both articles had been held under insanitary conditions—402(a)(3), 402(a)(4).
DISPOSITION: Default—ordered destroyed. (F.D.C. No. 66041; S. Nos. 91-546-617/8; S.J. No. 4)

PRODUCT: Tomato paste, canned, at Chicago, N. Dist. Ill.; Civil No. 89C7862.
CHARGED 10-19-89: When shipped by Canada Maritime, Montreal, Canada, the article, labeled “Tomato Paste . . . ACIL Lisbon—Portugal,” contained decomposed tomato material—402(a)(3).
DISPOSITION: Consent—authorized release to Productos Industriales Del Noreste, S.A., De C.V., Mexico, for export to the original foreign supplier. (F.D.C. No. 65769; S. No. 89-507-167; S.J. No. 6)

Food/Economic and Labeling Violations

PRODUCT: “Orange juice,” concentrated, frozen, in bulk and in 1-quart cartons, at Shenandoah, N. Dist Ga.; Civil No. 3:90-CV-114-GET.
CHARGED 11-6-90: While held by Georgia Sun, Inc., Shenandoah, Ga., who was repacking the unlabeled bulk article into the cartons, which were labeled “Georgia Sun . . . Frozen Concentrated Orange Juice . . . Georgia Sun, Inc., Shenandoah, Ga.,” the artificial color turmeric had been added to make the articles appear better or of greater value—402(b)(4); the articles failed to conform to the standard of identity for frozen concentrated orange juice, because they contained a color (turmeric) and a chemical substance (sodium benzoate) that were not allowed by the standard—403(g)(1) and the articles contained the artificial color turmeric, and their labels failed to state that fact—403(k).
DISPOSITION: Default—ordered destroyed. (F.D.C. No. 65949; S. No. 90-631-285; S.J. No. 7)

PRODUCT: Vitamin drink, at Chippewa Falls, W. Dist. Wis.; Civil No. 90-C-0359-C.
CHARGED 4-9-90: While held for sale, the article appeared to be a vitamin drink, produced in Thailand and labeled almost exclusively in a foreign language and lettering, and its label lacked the common or usual name of the food—403(i)(1); and required label information was not prominently placed on the label in terms likely to be read and understood, since the net quantity of contents, the list of ingredients, and nutrition information did not appear in

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English; the list of ingredients, name and address of the manufacturer, packer or distributor, and nutrition information did not appear on the information panel without intervening material; and the name and place of business of the manufacturer, packer or distributor did not appear in the required type size—403(f).

**DISPOSITION:** Default—ordered destroyed. (F.D.C. No. 65863; S. No. 90-571-267; S.J. No. 8)

**Drugs/Human Use**

**PRODUCT:** Polyvinyl alcohol foam particles, calibrated leak microcatheters, detachable balloon catheter kit, latex detachable balloon microcatheters, tantalum powder, and silicone release agent, at San Diego, S. Dist. Calif.; Civil No. 89-444-184 et al.; S.J. No. 12)

**CHARGED 3-9-89:** The labels of the articles, which were manufactured and distributed by Pacific Medical Industries, Inc., La Mesa, Calif., lacked adequate directions for use—502(b), 502(l)(l).

**DISPOSITION:** Default—ordered destroyed. (F.D.C. No. 65871; S. No. 90-577-519; S.J. No. 9)

**PRODUCT:** Gloves, latex, for medical examinations, at Zanesville, S. Dist. Ohio; Civil No. 2-91-217.

**CHARGED 3-19-91:** While held by DeLille Oxygen Co., Zanesville, Ohio, the circumstances used for the manufacture, processing, packaging, and holding of the article failed to conform with current good manufacturing practice—501(a)(2)(B).

**DISPOSITION:** Consent—authorized release to the dealer for bringing into compliance. (F.D.C. No. 66032; S. Nos. 91-610-137/8; S.J. No. 10)

**Medical Devices**

**PRODUCT:** Oxygen, U.S.P., at Zanesville, S. Dist. Ohio; Civil No. 90-1010-A.


**DISPOSITION:** Default—ordered destroyed. (F.D.C. No. 65871; S. No. 90-577-519; S.J. No. 9)

**PRODUCT:** Gloves, latex, for medical examinations, at Chicago, N. Dist. Ill.; Civil No. 90C2935.


**DISPOSITION:** Default—ordered destroyed. (F.D.C. No. 65871; S. No. 90-577-519; S.J. No. 9)

**PRODUCT:** Oxygen, U.S.P., at Zanesville, S. Dist. Ohio; Civil No. 2-91-217.


**DISPOSITION:** Default—ordered destroyed. (F.D.C. No. 65871; S. No. 90-577-519; S.J. No. 9)

**PRODUCT:** Polyvinyl alcohol foam particles, calibrated leak microcatheters, detachable balloon catheter kit, latex detachable balloon microcatheters, tantalum powder, and silicone release agent, at San Diego, S. Dist. Calif.; Civil No. 89-444-184 et al.; S.J. No. 12)

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an FDA investigator. Accordingly, the indictment was dismissed as to the individual, and, upon the criminal information, the individual was sentenced to imprisonment for one year, fined $50,000, and placed on probation for three years. The corporation pleaded guilty to count 16 of the indictment and was fined $50,000. (F.D.C. No. 65314; S. No. 84-488-241 et al.; S.J. No. 14)

**INJUNCTION ACTIONS**

DEFENDANTS: Clark Research & Development, Inc., William T. Clark III, president, and Michael S. Pearl, vice president, Folsom, E. Dist. La.; Civil No. 89-3201.

CHARGED 7-20-89: That the defendants, at Folsom, La., manufactured, promoted, and shipped in interstate commerce the Al/Fe Clark Specific Biocompatible Hemoperfusion System, which included an Al/Fe hemoperfusion cartridge containing defer-oxamine mesylate (DFO) for use in removing excess aluminum and iron from a patient’s blood; that, by a May 10, 1989, FDA order, such cartridge device was classified as a class III device requiring either an effective pre-market approval or an investigational-use exemption—501(f)(1)(B); that, because the defendants’ device lacked such pre-market approval or exemption, they violated the law in shipping such device; and that, notwithstanding FDA’s warnings, the defendants refused to cease distribution of their device.

DISPOSITION: The action was ordered transferred for consideration of consolidation with an earlier suit by the defendant corporation against the government (see S.J. No. 16 of this issue of FDA Consumer). After a hearing before the court, the court issued a temporary restraining order as to all prospective distribution and marketing of the defendants’ Al/Fe hemoperfusion cartridges with DFO, although the court provided that its order should not prevent delivery of the device to a specific doctor or individual for continued use by a patient of a qualified physician whose treatment of the patient already included use of a hemoperfusion cartridge containing DFO. Following a joint stipulation of the parties, the court entered a similar preliminary injunction against the defendants.

Subsequently, upon representations of the defendants’ attorney that a patient in the New Orleans area required immediate attention and therapeutic intervention, had been languishing in the hospital for the better part of a month with her condition worsening and with a grave prognosis, the court issued an oral order excepting from the preliminary injunction the delivery of the defendant’s device to that patient. The defendants’ attorney provided FDA with the patient's medical records, but such records verified only that the patient had sickle cell anemia and the complications expected from that disorder. The government then approached the patient’s physician, who affirmed that, at the time in question, his patient was neither in an emergency situation or in critical condition, was not hospitalized, and did not need the device for her immediate survival. The government moved for sanctions against the defendants’ attorney and for rescission of the court’s verbal order. The court recalled and set aside its verbal order. The court found that the record showed that “without doubt, even taking most of the defendants’ representations as true, that the court was misled” and that it was clear that had the defendants’ attorney presented the matter in a proper manner and not at 4 p.m. on Friday when the facts could not be fully ventilated, the court would not have issued its verbal order. Accordingly, the court not only recalled its verbal order of exemption, but ordered costs assessed against the defendants’ attorney in the amount of the government’s cost in bringing the motion for sanctions and for rescission of the verbal order.

Ultimately, the parties entered into a joint stipulation of perman-ent injunction. (Inj. No. 1219; S. No. 89-548-101; S.J. No. 15)

**MISCELLANEOUS ACTIONS**

SUBJECT: Hemoperfusion cartridge, its status as a class III device, and FDA’s response to a pre-market notification filed by Clark Research & Development Inc., Folsom, E. Dist. La.; Civil No. 89-0662.

CHARGED 2-14-89 and amended 3-2-89 by Clark Research & Development, Inc., Folsom, La., against the Department of Health and Human Services, the Food and Drug Administration, FDA Commissioner Frank E. Young, and FDA officials John C. Villforth, Kshitj Mohan, Halyna Breslawec, and Frank Casciani in a complaint for judicial review, injuction and damages: That on Nov. 4, 1988, Clark Research had submitted a pre-market notification of its proposal to introduce its “Al/Fe Clark Specific Biocompatible Hemoperfusion Cartridge”; that Clark Research had specifically noted that the Al/Fe cartridge was substantially equivalent to the Clark Biocompatible Hemoperfusion System that Clark Research had been marketing before the enactment date of the Medical Device Amendments; that the Al/Fe cartridge differed in its manufacturing process in that it included the addition of the FDA-approved chelate known as deferoxamine mesylate U.S.P. (DFO), but that all of the cartridge’s component materials had been well-known and well-characterized as safe and effective for human use; that the pre-market notification had been received by FDA on Nov. 10, 1988; that on Feb. 8 and 9, 1989, Clark Research alerted customers that its new device was available and sent out advertisements for its new product, and on the next day orders began arriving and Clark Research began shipping the product; that on Monday, Feb. 13, 1989, Clark Research received a letter [dated Feb. 6, 1989] from FDA (complaint attachment Exhibit D) requesting additional information; that attached as Exhibit E to the complaint was the envelope that contained the FDA letter whose envelope bore the postmark “February 8, 1989 Suburban Maryland” [and also the postmark “FEB 7, 89 Rockville, MD”]; that Clark Research considered FDA’s letter, which arrived after Clark Research began marketing and selling the device, to be unjustifiable harassment; that FDA’s actions (count 1) violated applicable federal statutes, (count 2) were arbitrary and capricious and an abuse of discretion, (count 3) violated constitutional rights, (count 4) were in excess of statutory authority and jurisdiction, (count 5) were unwarranted by the facts, and resulted in damage to Clark Research; and that, therefore, the defendants’ actions be declared void, that they be enjoined, and that damages be awarded.

DISPOSITION: The government moved to dismiss, asserting that the court lacked subject matter jurisdiction to enjoin FDA from enforcing its law, to issue declaratory relief; or to entertain a suit
for monetary damages, and that Clark Research had failed to exhaust its administrative remedies. Subsequently, Clark Research amended its complaint to include a count 7 that alleged constitutional tort violations by government officials and a count 8 allegation concerning common law tort.

The government asserted: that Clark Research's non-exempt device was automatically placed in class III and was being marketed without pre-market approval; that the Medical Device Amendments placed no time requirements on FDA to classify a "new" device; that the 90-day obligation of 21 U.S.C. 360(k) belonged to the marketers of products, not FDA, and that, even if the 90-day obligation advanced by Clark Research did exist, FDA's letter had been timely, since the date of FDA's receipt of Clark Research's pre-market notification marked the first review day, and Feb. 7 identified the last review date of a 90-day period.

After additional litigation, including an injunction action initiated by FDA against Clark Research, as well as an action in the Eastern District of Louisiana, Civil No. 89-2389, by a patient being treated with the device (which suit was dismissed upon consent of the parties), the court granted the government's motion to dismiss Clark Research's suit. Counts 1–5 of Clark Research's complaint and count 6 of the amended complaint were dismissed without prejudice. Clark Research's constitutional tort claim in count 7 against the government and its employees was dismissed with prejudice, as was count 8 of the amended complaint. (Misc. No. 896 & 899; S.J. No. 16)

SUBJECT: Nifedipine capsule Abbreviated New Drug Application (ANDA) and FDA rescission of an ANDA letter advising of ANDA approval with delayed effectiveness date, Dist. N.J.; Civil No. 90-3428(NHP).

CHARGED 8-28-90 by Chase Laboratories, Inc., Newark, N.J., against HEW Secretary Louis W. Sullivan, M.D., FDA Commissioner James S. Benson, and the U.S. Food and Drug Administration in a complaint for declaratory and injunctive relief: That the government had not followed statutorily mandated procedures in rescinding its ANDA approval letter; that FDA had not followed the mandated "due notice and opportunity for hearing" procedure to withdraw approval of an application; that the Food, Drug, and Cosmetic Act (FD&C Act) did not contain any provisions that allowed FDA to "rescind" a lawfully granted ANDA approval; that FDA's "rescission" was not based on any defect in or a doubt about Chase's ANDA in particular, except that the bioavailability study in question, and advised Chase that its ANDA was approved including Chase's recent submission regarding the bioequivalence study in question, and advised Chase that its ANDA was approved although the effective date of approval was delayed until March 2, 1991. (Misc. No. 931; S.J. No. 17)

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I certify that the statements made by me above are correct and complete.

Judith Levine Willis, editor
People said that Commissioner Gordon had heart. He was a tough cop, and proud of it. Eating right, exercise, vacations—those things were for guys not so tough.

Tobacco was part of it. A smoke would jump-start the day, help him get through a long night, mellow out the bad hours.

Then one day all the pain in the world collected in his chest and squeezed.

Jim Gordon's heart wasn't working right anymore. That made it hard to be tough. And even harder to be proud.

For information about helping your heart to work right, call or write your nearest American Heart Association.