

# Food Faddism - Nutrition Nonsense and Sense



Publication 348-893  
Reprint October 1981

Virginia Cooperative Extension Service  
Extension Division  
Virginia Polytechnic Institute and State University  
Blacksburg, Virginia 24061

LD  
5655  
A762  
no. 348-893  
VPI  
Spec

Food Faddism  
Nutrition Nonsense and Sense  
Prepared by  
L. Janette Taper, Ph.D.  
Assistant Professor  
Human Nutrition and Foods

---

Virginia Cooperative Extension Service programs, activities, and employment opportunities are available to all people regardless of race, color, religion, sex, age, national origin, handicap, or political affiliation.

An Equal Opportunity/Affirmative Action Employer

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, and September 30, 1977, in cooperation with the U.S. Department of Agriculture. W. R. Van Dresser, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061; M. C. Harding, Sr., Administrator, 1890 Extension Program, Virginia State University, Petersburg, Virginia 23803.

## What Is Food Faddism?

Do you supplement your diet with extra nutrients? Why? Do you believe that, "if some is good, more may be better"? Do you believe, "It can't hurt"? Do you believe that you are building up "nutritional insurance"? If you believe any of these things, you may have been brainwashed by food faddists.

The past decade has seen a tremendous increase in interest by the American public in the whole area of nutrition. Accompanying this heightened interest on the part of the public has been an increase in food faddism. Nutritionists, health professionals, and the public in general are becoming concerned about the increasing amount of misinformation on foods and nutrition available. Such misinformation results in economic and nutritional exploitation of the public.

A food faddist is "an individual who, because of ignorance, delusion, misconception, or intent to deceive, makes excessive claims or promises for the value of a nutritional substance or dietary practice to prevent, alleviate, or cure a disease, extend lifespan, or improve physical or mental performance". The major themes of food faddism are:

- Americans are sick, due to devitalized diets. Modern processing, storage, and cooking destroys most food value.
- Everyone needs to take food supplements.
- Soil depletion and "chemical" fertilizers cause malnutrition.
- Food additives are dangerous. Hence, "organically grown," "natural," or "health" foods are more nutritious than regular foods.
- Megadoses of nutrients provide "super-nutrition". Special diets, foods, nutrients, and herbs have curative properties.

A paradox of food faddism is that many of the practices it promotes actually lead to malnutrition. For example, the zen macrobiotic diet has produced scurvy and even death from starvation. A different kind of malnutrition is the result of overconsumption, such as in the case of vitamin A poisoning. A major hazard created for the consumer by food faddism is the delay seriously ill individuals may experience in seeking competent medical attention while in search of some alternative relief from "health-giving" foods. The increased cost of "health foods" and bizarre dietary practices creates an economic problem for many individuals. Overall, the products designated as "organic," "natural," or "health" foods cost about 70 percent more than comparable conventional foods. Unfortunately, the impact of food faddism is not always so direct. Food faddism persists, despite the scientific evidence denying its validity, because of the more subtle, perhaps less obvious, emotional and social values we attach to food choices. We fall prey to an incredible number of fallacies in which the emotional or symbolic values of food are emphasized to a much greater extent than are scientific or nutritional values.

This publication seeks to familiarize you with several areas of food faddism and to enable you to make responsible choices when confronted with so much that is sensational or controversial concerning our nutritional habits.

## The Myth of Nutrient Supplements

One of the most widespread and expensive types of food faddism quackery in the United States today is the promotion of vitamin and mineral products, special dietary foods, and food supplements. Millions of consumers are being misled concerning the need for such products.

Mega-nutrients have been hailed as the answer to a multitude of problems, physical and emotional. If a nutrient promotes health, can more of the same nutrient promote super-health? There is a growing interest in the use of large doses of vitamins and minerals for problems as diverse as mental illness, insomnia, and "nervousness." Many of us, who are otherwise indifferent about vitamins, pop ascorbic acid (vitamin C) tablets at the first sign of a runny nose. In fact, among certain segments of the American population, it's a rare household in which some member of the family does not take some form of supplemental nutrient on a regular basis.

Let's look at just one aspect of this mega-nutrient craze--the consumption of large doses of vitamin/mineral supplements. Vitamins and minerals are organic compounds necessary in relatively small amounts in the diet for normal growth and the maintenance of life. Do we need additional vitamins and minerals beyond the level necessary to prevent deficiencies and promote health? The word "vitamin" apparently has a magical connotation to the public. With increasing vigor, "non-vitamin" vitamins are being huckstered to the public. These include B<sub>13</sub> (orotic acid), B<sub>15</sub> (pangamic acid), and B<sub>17</sub> (laetrile). Once a day, "just to be sure" millions of Americans are urged to take a multivitamin/mineral pill. We are assured that hefty helpings of vitamin C will prevent colds, that vitamin E will aid all those who wish to stay young, that zinc will promote luxurious hair growth and relieve stress, and that selenium will improve sex drive. According to popular literature, large doses of certain vitamins and/or minerals should help us achieve top physical condition. Nutritional research does not support such myths. Studies indicate that vitamins and minerals in excess of recommended dietary allowances do not prove valuable to normal individuals. People with definite vitamin or mineral deficiencies can, when medically diagnosed, benefit from nutrient supplements. However, for the average individual they are not necessary. They are expensive and they can be harmful.

Many substances which are harmless in small or moderate doses can be dangerous either in large doses or by gradual build-up in the system over a period of time. For example:

Too much vitamin A can cause lack of appetite, retarded growth in children, drying and cracking of the skin, enlarged liver and spleen, increased intracranial pressure, loss of hair, migratory joint pains, menstrual difficulty, bone pain, irritability and headache.

Prolonged excessive intake of vitamin D can cause loss of appetite, nausea, weakness, weight loss, constipation, vague aches, stiffness, kidney stones, calcifying of tissues, high blood pressure, acidosis and kidney failure which can lead to death.

Large doses of nicotinic acid or nicotinamide, recommended by promoters of "orthomolecular psychiatry" can cause severe flushing, itching, liver damage, skin disorders, gout, ulcers and blood sugar disorders.

Excess vitamin E can cause headaches, nausea, tiredness, giddiness, inflammation of the mouth, chapped lips, muscle weakness, low blood sugar, increased bleeding tendency and degenerative changes. By antagonizing the action of vitamin A, large doses of vitamin E can also cause blurred vision. Vitamin E can also reduce sexual organ function--just the opposite of the false claim that the vitamin heightens sexual potency. This widely publicized claim is based on experiments with rats.

Another way to look for health trouble is with large doses of ascorbic acid--vitamin C. Like an antihistamine tablet, in some cases it may reduce the symptomatology of a full-blown cold or completely eliminate the symptomatology of a mild cold (thereby creating the impression that no cold occurred). There is no reliable evidence that large doses of vitamin C prevent colds, and it is therefore not logical to take such doses in the absence of a cold. There is evidence that large doses of vitamin C can destroy substantial amounts of vitamin B<sub>12</sub> in food. If enough B<sub>12</sub> is destroyed, you may develop a very dangerous deficiency. In addition, excess vitamin C may damage growing bones, produce diarrhea, produce "rebound scurvy" in newborn infants whose mothers took such dosage, produce adverse effects in pregnancy, and cause kidney problems and false positive urine tests for sugar in diabetics.

Nutrition educators need to counter the mega-nutrient craze and promote good health by pointing out the following basic facts: (1) Ingesting extremely large quantities of any one nutrient is not good and (2) Good nutritional health is obtained by eating a balance of nutrients each day.

#### Natural, Organic, and Health Foods

Concern for health and for the environment has stimulated the growth of the health food movement espousing the use of "health," "organic," and "natural" foods. Some words are excessively tricky. Health, organic, and natural, when used in reference to foods, are three of these. What do these labels mean? Unfortunately, there are no exact standards for these terms. What many who use the word "organic" mean is that a food has been produced without using commercial chemical fertilizers or pesticides. Very little food that fits that definition is produced. Much food which is called "organic" is fraudulent in the sense that at least some commercial chemicals have been used in its production. Consumers may pay 30 to 300 percent more for so called organically grown foods. There is no difference nutritionally between "organic" and "nonorganic" foods.

The word "natural" is surrounded by a magical aura. Most people seem to feel that what is "natural" is good and perhaps ordained by God, while the processed, formulated, or synthetic is automatically bad. In the correct sense, the term "natural" refers to foods as they occur in nature. It is possible to include natural foods in the diet without becoming overly obsessed with the theories espoused by extreme food faddists. However, while some foods can be eaten in the natural state, others cannot. For example, raw milk which is promoted by "naturalists" in preference to pasteurized milk is a favored medium for bacterial growth.

Health foods are promoted as having specific healing properties beyond those found in a balanced diet consisting of a variety of foods. Concomitantly, one would suppose that other foods don't provide health. The most obvious comment is that no food and no diet guarantees health. Health is a product of the total environment, including not only food, but medical care, exercise, and freedom from disease and accident. By selection of a variety of foods in adequate amounts a balance of the essential nutrients which promote good health will be provided. In this sense all foods, which when used in proper balance to promote physiological and psychological health, are "health foods".

### Dietary Fiber

Another word with super connotations is fiber. It is one of the latest dietary miracles, following closely after mega-nutrients and organic food. Profits are being made on books and food products featuring fiber as a sure cure or preventive of many ills. Certainly, fiber is important in the diet, but what is it and do we all need to begin consuming large amounts of cellulose pills or all-bran cereals? Dietary fiber is made up of the skeletal remains of the plant cell wall that are resistant to hydrolysis by the enzymes in the human digestive tract. It is relatively indigestible--and that is its advantage! It lends bulk to the feces and thus combats constipation and the ills that go with it. Until 1900 we really consumed a great deal of fiber. Since 1900, we have used increasing amounts of refined flour and replaced whole-meal cereals with more highly processed cereals. In the last 100 years our total daily dietary fiber consumption has decreased by 37 percent. In the early 1970's it was suggested that this decrease in dietary fiber consumption might be associated with the increased incidence of several diseases including cancer of the colon, appendicitis, diverticular disease, and heart disease. These are diseases common to western civilization but rare in countries where high fiber diets are consumed. Several theories have been put forth as to the possible physiological relationship between fiber in the diet and the incidence of these diseases. No clear cause and effect relationships have been established. Other factors besides dietary fiber play significant roles in the development of these disease conditions. For example, coronary heart disease is related to high fat intake, stress, and other factors. Although evidence does suggest an important role for dietary fiber in the maintenance of health, nutritionists warn against making drastic dietary changes based on broad assumptions that fiber is a cure-all. It is incorrect to say that fiber is the sole answer to several nutrition related health problems. However, we could probably all benefit from a small increase in fiber intake. This can be done easily by increasing our consumption of bran, one of the richest and most common sources of food fiber. Bran alone is not the total answer. Intake of fiber-rich cereals such as oatmeal and other whole grain cereals should be increased. Whole grain flour should be used in baking. Intake of fresh fruits and vegetables should be increased. Many of them are good fiber sources. Again caution should be exercised. A moderate amount of dietary fiber is beneficial but it is not the answer to all our nutrition ills.

### Fad Reduction Diets

The fad of popular crash weight dieting is perhaps the most costly of all forms of nutrition nonsense. The main approach to weight loss for many people, including growing youngsters, has been the fad diet designed for quick and easy weight loss. A large number of fad reduction diets are

in existence. The individual consumer may find it difficult to evaluate the nutritional adequacy of certain fad diets and is often unaware of how much damage these diets can do to health.

A rich tradition of nutrition nonsense has developed centering on the belief that certain foods or systems of dieting have value beyond that of established facts of diet therapy in the treatment of obesity. Many are promoted on the basis of unlimited consumption of certain foods. Eat all you want! Calories don't count! The fact is that no diet results in weight loss if the principles of the conservation of energy are ignored. Other fad diets are based on the notion that certain food combinations are less fattening than others. Therefore, certain foods are emphasized in the diet to the exclusion of others. Such diets are likely to be inadequate in several essential nutrients. Fad diets do not educate an individual about the personal or environmental factors which led to weight gain originally or provide an opportunity to develop new and improved eating habits.

Much interest in recent years has focused on high protein, low carbohydrate, water diets. These include Dr. Stillman's Quick Weight Loss Diet and Dr. Atkin's Diet Revolution. What dangers are associated with these diets which allow liberal intake of protein and fat while at the same time restricting carbohydrate intake? An excessive amount of protein can increase the work load of the kidney to potentially harmful levels. A liberal fat intake can cause an undesirable increase in blood lipid and cholesterol level. A low carbohydrate diet leads to rapid water loss creating an illusionary weight loss. This weight is rapidly regained. Short term changes in weight loss are meaningless if the composition of such weight loss is largely water.

Many young people try fasting as a means of rapid loss of muscle or lean body tissue, fluid, and minerals from the body. An excessive loss of water, sodium, and potassium can lead to muscle spasms. One concern associated with prolonged fasting, especially in the case of adolescent girls, is the possible development of anorexia or loss of desire to eat, long after a desirable amount of weight has been lost.

None of the much publicized fad reduction diets qualifies as being nutritionally sound. They do not solve the problem of weight control on a long term basis. A well balanced reduction diet has the advantage in that it can become the basis for a long range plan of eating that will maintain desirable weight and nutritional health over a lifetime.

What about Dietary Aids? In addition to fad reduction diets, there are a number of slimming aids on the market that promise to take weight off quickly and painlessly. Dietary aids used in weight control include preparations which fall into several different groups. These include: (1) Those which increase bulk in the gastrointestinal tract. (2) Diuretics (3) Low calorie liquid preparations (4) Glucose-containing aids (5) Appetite suppressants (6) Hormones and (7) Artificial sweeteners.

Bulk producing agents are actually cellulose wafers and are available at your local drugstore. When eaten with fluid, they absorb water, swell in the intestinal tract, exert a filling effect, and theoretically decrease the desire to eat. Drinking fluids or eating fresh fruits and vegetables would produce the same effect at less cost. Diuretics promote fluid loss

from the system and create an illusionary weight loss. Such weight loss is rapidly regained. Liquid preparations provide a nutritionally balanced diet at 225 calories per can. For a short time they are probably harmless. Such a diet, however, does not correct faulty eating habits or promote long-term weight loss. Glucose-containing preparations are sold in the form of candy. Theoretically the glucose in one piece of candy raises blood glucose concentrations causing the appetite center in the brain to be deactivated thus decreasing the desire to eat. It is questionable whether this is the case. If so, one teaspoon of sugar or honey in a hot drink would have the same effect at reduced cost. Appetite suppressants contain a chemical to suppress the appetite. Overuse of such preparations can become habit forming and dangerous. Hormones are sometimes used to increase metabolic rate and, therefore, rate of caloric utilization in the extremely obese. They should be used only under medical supervision. The use of artificial sweeteners remains controversial. There is no evidence to show that the use of such products has had any long-term positive effect on weight reduction.

It should be emphasized that any dietary aid for weight control will not cause weight loss or maintenance of weight loss unless there is a concomitant decrease in caloric intake. They are of limited usefulness and their use involves certain risk factors.

### Evaluating Food Fads

How can you, the consumer, make sense out of all the talk about food and nutrition? Information on food and nutrition is available on all sides. You find that there are different "facts" being claimed as correct and different "expert" opinions being offered. What can you believe?

There is no easy answer but we can give you some guidelines to help you make judgments about what information to accept and what to reject. One very basic consensus among nutritionists is that the best and simplest general nutrition advice today is to eat, in moderation, a wide variety of foods from each of the basic four food groups, such as found in the Daily Food Guide prepared by the United States Department of Agriculture. When information suggests something very different from this consensus, weigh that information carefully. Its proponent departs from a basic agreement of most professionals in nutrition.

There is no foolproof test or list of absolutes that will distinguish fact from fiction in food and nutrition information. However, some guidelines will help you to judge the content of the information and the credibility of the person or group putting it out. The following guidelines may be useful:

#### Who Said It?

--Does the person have special expertise in the area of food and nutrition? Degrees are one indication of expertise but, alone, they do not guarantee knowledge in the specific subject matter. M.D. is doctor of medicine. Although medical training is placing increasing emphasis on nutrition, many physicians are lacking in nutritional knowledge. R.D. is registered dietitian. The dietitian is a reliable source of nutrition information. Ph.D. is doctor of philosophy, generally a research degree with specialization in one field. A Ph.D. in chemistry assures no necessary expertise in nutrition. M.S. is master of science, often a research degree but with less specialization than the Ph.D. Again, unless the degree is in nutrition, no knowledge of the subject is guaranteed.



## Where Is It Said?

--The communication media can affect the nature of the content. Some media, such as journal articles, are under the discipline of people knowledgeable in nutrition. Others, such as the more sensational mass media, have no restrictions beyond individual ethics or legal responsibility. Be wary of information on radio or television "talk" shows unless you know that the individual's credentials are valid. Producers may set the goal of reaching a large audience with a "hot" topic above the accuracy of the information. Become familiar with the reliability of different periodicals. Certain weekly newspapers may use sensationalism and emotionalism in reporting. Newspapers report what's new and may report research which has not been critiqued by other scientists. The significance of such reports without comments and interpretation by other professionals in the same field may be difficult to judge. Scientific and professional journals rate well as reliable sources. Manuscripts in these are reviewed by other researchers before being accepted for publication.

## How Is It Said?

--Language can reflect different meanings. Watch for word changes between statements made by professionals and what is actually printed. For example, a "theory" may be reported as a "discovery." A "suggestion of" may be reported as "proof for." Read carefully.

## What Is Said?

--The actual content of a report may give you clues about its acceptability. Be skeptical when statements

- seek to build distrust of the established scientific community.
- promise or imply cure-all properties and dramatic results.
- offer testimonials rather than scientific evidence to support claims.
- offer an unusual diet plan.

If you need additional help in judging the reliability of nutrition information, whom can you turn to? For general nutrition questions, contact a nutritionist at the Extension Service of the land-grant university, or your city, county, or state health department. For questions on food preparation and preservation you could contact the Home Economist at your city or county Extension service, the gas and/or electric company, or the local supermarket or major food company. For questions on special diets, contact a registered dietitian associated with your local or state public health department, or your local hospital.

Following are some government, public, and private groups which provide regular releases on nutrition. These prepare pamphlets, posters, newsletters, and audiovisual aids of use to the public.

### Government

U.S. Department of Agriculture, Washington, D.C. 20250  
 Agricultural Research Service  
 Extension Service  
 Food and Nutrition Service  
 Office of Information

## Department of Health and Human Services

Office of Child Development, DHHS, Washington, D.C. 20201  
 Food and Drug Administration, 5600 Fishers Lane, Rockville, MD 20857  
 Health Services and Mental Health Administration  
 Office of Information, Parklawn Bldg., Rockville, MD 20852

## Department of State

Agency for International Development  
 Office of Public Affairs, Washington, D.C. 20523

Associations, Institutes, and Foundations

Cereal Institute, Inc., 1111 Plaza Dr., Schaumburg, IL 60195

National Dairy Council, 6300 N. River Road, Rosemont, IL 60018

Dairy Council Digest, published bi-monthly

Nutrition News, published quarterly

Both of these publications can be obtained from above address

National Canners Association, 1133 20th St., N.W., Washington, D.C. 20036

National Live Stock and Meat Board, Nutrition Research Department,  
 444 N. Michigan Avenue, Chicago, IL 60611

Food and Nutrition News, published bi-monthly

Publication available from the above address

The Nutrition Foundation, Inc., Office of Education and Public Affairs,  
 888 17th Street, N.W., Washington, D.C. 20006

United Fresh Fruit and Vegetable Association, 1019 19th Street, N.W.,  
 Washington, D.C. 20036

Monthly Supply Letter, published monthly

Nutrition Notes, published quarterly

Available from the above address

Wheat Flour Institute, 1776 F St., N.W., Washington, D.C. 20006

Professional Associations

The American Dental Association, 211 E. Chicago Ave., Chicago, IL 60611

The American Dietetic Association, 430 N. Michigan Ave., Chicago, IL 60611

The American Home Economics Association, 2010 Massachusetts Ave., N.W.,  
 Washington, D.C. 20036

The American Institute of Nutrition, 9650 Rockville Pike,  
 Bethesda, MD 20014

The American Medical Association, 535 Dearborn St., Chicago, IL 60610

The American Public Health Association, 1015 18th St., N.W.,  
 Washington, D.C. 20036

The American School Food Service Association, 4101 East Iliff Ave.,  
 Denver, CO 80222

The Society for Nutrition Education, 2140 Shattuck Ave., Suite 1110,  
 Berkeley, CA 94704

Voluntary Health Organizations

The American Diabetes Association, 18th E. 48th St., New York, NY 10020

The American Heart Association, 7320 Greenville Ave., Dallas, TX 75231

The National Foundation/March of Dimes, Box 2000, White Plains, NY 10605

To Sum Up . . .

In conclusion, there is an unprecedented interest in nutrition in the United States today. The public is becoming increasingly aware of the role of nutrition in the maintenance of health and is becoming more sophisticated in the type of questions it asks. This growing interest on the part of consumers in the safety and nutritional quality of the American diet is a welcome development. Yet, at a time when individuals are most receptive to information and when our national health could be better than it has ever been, many people are in danger of becoming food faddists, while others actively participate in one form of food faddism or another.

Many consumers show a distrust of the food supply and a general skepticism towards science, resulting in rejection of scientific nutrition principals and the acceptance of mythology. Criticism of "the establishment" is healthy and is one of the functions of society, but such criticism should not lead to the displacement of scientific facts by misinformation. Food is not without its dangers. However, we cannot let food faddists confuse our priorities. The dangers may not lie so much in the form of processed foods and additives as in the practice of overconsumption. It is incumbent upon all members of the nutrition profession and informed consumers to counter all views and claims we know to be false if nutritional quackery is to be controlled.