

# FOOD FADDISM, CULTISM, AND QUACKERY

William T. Jarvis

Department of Public Health Science, School of Allied Health Professions,  
Loma Linda University, Loma Linda, California 92350

---

## CONTENTS

INTRODUCTION .....	36
DEFINITIONS .....	36
MAGICAL THINKING ABOUT FOOD .....	37
WHY FOOD FADDISM PERSISTS .....	38
<i>Human Vulnerability</i> .....	38
<i>How Nutrition Education Unwittingly Aids Food Faddism</i> .....	39
<i>Food Symbolism</i> .....	40
<i>Basic Fallacies Persist</i> .....	41
HARM DONE BY FOOD FADDISM .....	41
<i>Fatalities Related to Food Faddism</i> .....	42
<i>Dangers From Herbs</i> .....	42
<i>Malnutrition</i> .....	43
<i>Economic Harm</i> .....	43
<i>Distortion of Perspective</i> .....	43
CURRENT PRACTICES .....	45
<i>Pseudo-Nutrition Experts</i> .....	45
<i>Pyramid Sales Schemes</i> .....	45
<i>Vitamin and Mineral Supplement Promotion by Pharmaceutical Companies</i> .....	46
<i>Practitioners</i> .....	47
<i>Health Books, Magazines, and Pseudoscientific Journals</i> .....	47
COPING WITH FOOD FADDISM .....	48
<i>Education</i> .....	49
<i>Health Care Deliverers</i> .....	49
<i>The Law</i> .....	49
CONCLUSION .....	49

## INTRODUCTION

"Food faddism" commonly connotes erroneous ideas and practices involving nutrition. As often used, however, the term lacks clear definition and is so loosely employed that it is ineffective in combatting the problems it encompasses. Such terms as "food cultism" and "nutrition quackery," denoting components of food faddism, also need clarification if rational solutions are to be achieved.

A fad is "a practice or interest followed for a short time with exaggerated zeal" (86). At first glance, food faddism appears to mean an inclination to take up fads involving foods. While this might be adequate for transitory fads, many concepts associated with food faddism perennially recur.

Food faddism is expressed in the deep philosophical commitment of its devotees. It is apparent that the phenomenon is much more than a clever marketing scheme. Today's food faddism can be linked historically to the 19th century health reform movement, which combined enthusiasms for Christian perfectionism, romantic primitivism, educational innovation, and "scientific" progress (88), the role of science being to prove the superiority of the movement's ideology.

The health reform movement incorporated a complete world view, but no single aspect of behavior was considered more important than diet. The concept that "you are what you eat" was fundamental. Diet was held to determine not only health and disease but also behavior, spirituality, mental health, intelligence, sexual passion, and almost all aspects of life. Vegetarianism was the focus of the movement at that time but today competes with a spectrum of notions from fruitarianism to eating raw meat.

It is within this context that food faddism is best understood today. Since the suffix "-ism" denotes a devotion to something (60), food faddism may be viewed as a devotion to the belief that diet is the primal factor in practically every aspect of human living.

## DEFINITIONS

*Food faddism* is based upon an exaggerated belief in the effects of nutrition upon health and disease. Food faddists are those who claim that nutrition is more important than science demonstrates it to be. The foods praised as beneficial (e.g. organic foods, health foods, raw foods) are never as good, and the foods condemned (e.g. sugar, white flour, "junk foods," etc) are never as bad as the faddists claim.

*Food cultism* contains a religious component. Its practitioners are drawn together by philosophical positions. It probably represents the most dangerous dimension of food faddism as devotees behave delusionally in their heroic

efforts to “keep the faith”. Cultism is characterized by the presence of a charismatic authority figure whose teachings are accepted even though they do not accord with scientific facts.

Careful definition of *food quackery* must contest certain preconceptions about what constitutes quackery. The term quackery is derived from “quacksalver,” meaning “one who ‘quacks’ like a duck about his salves and remedies” (28). Although most dictionary definitions state or imply that quacks are pretenders or frauds, I apply the term also to those who are sincere, albeit misguided, in their beliefs and who promote questionable nutrition products and/or services. Products and services are questionable if their safety and effectiveness are unproven. Food quackery thus connotes the entrepreneurial aspects of food faddism.

## MAGICAL THINKING ABOUT FOOD

Exaggerated beliefs in the effects of food upon health and disease appear to be based on magical thinking about food. Such thinking has deep cultural roots. According to the Bible, by eating forbidden food man fell into sin, bringing disease and death upon the whole world. Interestingly, the first human couple had to be driven from the Garden lest they eat of the “Tree of Life” and live forever (29). In paradise regained, the Tree of Life is a focal point; its leaves are said to be for the “healing of the nations” (69).

Throughout history mankind has sought to discover mystical components that confer and sustain life. Cleopatra bade the philosophers “Look at the nature of plants . . . which, being perennial, perish not nor die. Look also at Divine Water which governs the perennial plant . . .” (53). Employing the ancient principle that “like makes like,” the alchemists pursued their search for the “elixir vitae.” Successors of the alchemists employed the same concept. Funk derived “vitamine” from *vita* (life) and “amine,” believing that he had isolated from rice polishings a N-containing base (amine). He reviewed evidence concerning the etiology of several food-related diseases and proposed that the absence of such substances caused the diseases (27).

Interestingly, the power attributed to vitamins by many today is not unlike that once ascribed to “elixir vitae” (8). In fact, the vitamin issue is so emotional that political pressure resulted in their exemption from rational regulation by the FDA.

The rapidly beneficial effects of food in curing deficiency diseases also sometimes appeared magical. Observing the dramatic effects on scurvy of a vitamin C-containing tea-like extract from a conifer, the French explorer Cartier recorded in his ship’s log that the juice of a tree cured not only scurvy in ailing men but “all of the diseases they ever had . . .” (52).

Foods have sometimes appeared to exert magical effects on the body through the pharmacologic property of constituents (e.g. alcohol, caffeine). Like the ancients, faddists do not clearly differentiate foods and drugs. It may well be that opiates, cannabis, peyote, cocaine, and other substances of herbal origin were originally tried as foods. Historian James Harvey Young has nicely termed this “the agile role of food” (90b). Many herbs that are crude drugs in the raw are part and parcel of food faddism. Thus magical thinking about food has both philosophical and empirical roots.

## WHY FOOD FADDISM PERSISTS

### *Human Vulnerability*

Food faddism meets a persistent human desire. As Maple (54) says, “In the face of the great leveller, Death, we are all children listening *fearfully* for the footsteps of doom, and relieved only by the whisperings of *hope*” [emphasis W. J.]. The push-pull of fear and hope, springing from mankind’s unique ability to contemplate his own inevitable death, is the undefeatable aspect of food faddism. This is suggested in the opening of Nobel Laureate Linus Pauling’s book, *Vitamin C and the Common Cold*, a significant force in promoting “orthomolecularism” and widespread excessive vitamin C supplementation. Pauling states:

The idea that I should write this book developed gradually in my mind during the last five years. In April 1966 I received a letter from Dr. [sic] Irwin Stone, a biochemist whom I had met at the Carl Neuberg Medal Award dinner the previous month. He mentioned in his letter that I had expressed a desire to live for the next fifteen or twenty years. He said he would like to see me remain in good health for the next *fifty* me a description of his high-level ascorbic-acid regimen. (67)

Few people have done more for the cause of food faddists than the Rodale organization, publisher of *Prevention* magazine. J. I. Rodale turned to vitamin E when he discovered he had heart disease. He told television interviewer Dick Cavett that he expected to live to 120 by taking vitamin E. On the same day he succumbed from a heart attack during the broadcast (72).

Fear of the “great leveller” can be manifested indirectly. Any decline or change that subconsciously implies or portends death (e.g. loss of sexual prowess, social failure, aging, environmental decay, debility, diminished performance, or any other of life’s unpleasant experiences) may symbolize dying. It is not surprising that food quacks appeal to the public with the following claims:

**THE LOVE POTION** Advertisements promise that vitamins will increase your “beauty from within,” ensure shapeliness even while you enjoy your favorite foods, and function as aphrodisiacs. Despite the lack of justification for vitamin

E supplementation by the public, the substance was reported to be number one in sales in 1978, capturing 17% of the vitamin market (30). Vitamin E's mythical properties as a sexual rejuvenant stem from a 1923 report of its effect upon the fertility of rats (81).

**FOUNTAIN OF YOUTH** Bernan remarks that in our society the only physical ideal is youthfulness; aging is regarded as sin (7). Greying or loss of hair, drying skin, wrinkles, diminished vigor, failing senses, and other evidences of age-associated change are targets of food faddists and quacks.

**THE PANACEA** According to faddists there is some diet, herb, vitamin, mineral, enzyme, or special food that can bring relief whether the concern is for acne, allergies, arthritis, cancer, "cellulite," colds, colic, diabetes, flu, heart disease, hypoglycemia, tooth decay, etc, ad infinitum. Nutrition scientists think an association with diet may exist in some of these conditions, and they have recommended dietary habits that may decrease the risk of cancer and heart disease. However, these steps pale into insignificance when compared to the promises of faddists who attempt to cure nearly every disease with special dietary regimens.

**THE ATHLETIC SUPERPILL** No group provides a better target for food faddists than athletes. Obsessed with the goal of maximum performance, and fearful that their competitors may do something to gain a decisive edge, athletes are highly susceptible to faddish claims. Coaches are vulnerable, too, and often believe unscientific claims that nutrition supplements, bee pollen, or special concoctions will improve performance (89). Bob Hoffman, one of the leading exponents of food supplements for athletes, has served as the US Olympic weight-lifting coach. In 1979, to the chagrin of nutrition scientists in sports medicine (5), the US Olympic Committee sold its symbol to a commercial enterprise, enabling it to advertise its vitamin line as the official vitamin supplement of the US Olympic team. This sustained the illusion that such substances are important to top performance.

### *How Nutrition Education Unwittingly Aids Food Faddism*

Food faddists are infatuated with the supposed benefits and harms of specific foods or habits. Nutrition educators deal with the importance of individual nutrients and the dramatic results of neglecting these in the diet. The psychology of this approach favors food faddism. Shils & Goodhart warn that "the very act of examining a subject [e.g. a nutritional substance] in great detail tends to exaggerate its importance" (75).

This phenomenon is exploited through promotion that tends to make wholesome foods appear inadequate when compared to "fortified" versions of similar

products. Concerned shoppers are led to search labels for an alphabet of nutrients (and, more recently, a list of trace elements) as they attempt to obtain “supernutrition” or to avoid “depleted” foods. Many consumers turn to health food stores that claim to distribute nutritionally more healthful products—this despite the greater costs (50) and limited appeal of such products.

Emphasis on the “well-balanced diet” also favors food faddism. A national study on health practices and beliefs conducted for the Food and Drug Administration (FDA) found that 86% of the public believed “anyone who eats balanced meals can get enough vitamins in his regular food (25);” yet the majority of the respondents still used or had used supplements because they didn’t think *they* ate “balanced” meals. The words “well-balanced meal” and “balanced diet” apparently suggest that a healthful diet is a precarious achievement. Herbert suggests these terms be replaced with “variety” and “moderation” (36) in order to enable educators to place diet within a total concept of healthful living. The proper education would advocate exercise, indicate the special nutritional needs that arise during growth and development, and emphasize the danger in overuse of nutrients.

Publicity concerning some scientific studies of nutrition give food faddism support that may be unavoidable. Overenthusiastic statements concerning risk factors and the possible role of diet in the prevention of cancer, heart disease, and stroke; the dietary management of conditions like diabetes, arthritis, gout, and PKU; and research on the effects of dietary factors upon behavior all provide grist for the food faddist’s mill as they stretch research leads into facts, misinterpret dietary recommendations as promises, or carry otherwise sensible ideas proposed by nutrition scientists to extremes. Both media and scientists have responsibilities to minimize unjustified interpretation of research in progress (16).

### *Food Symbolism*

Much of the success of food faddism lies in its use of certain foods to symbolize purity, potency, and health. “Health foods” entrepreneurs sell the illusion of health as they gratify their customer’s appetites. By offering exotic substances said to be “natural” or “organic” (e.g. by substituting honey for sugar, special oils for fats, sea salt for regular salt, etc) they help customers to dispel the guilt of eating so-called “junk foods.” The terms “natural” or “organic” bear no valid relationship to health. Indeed, some snacks advocated as “health foods” have been shown to be more cariogenic than their conventional counterparts (58).

Advocating honey in place of sugar provides a classic example of the illusions fostered by faddists. There is no basic nutritional difference between these two sweeteners. From the point of view of safety, sugar is superior because honey can be contaminated with botulism (31, 32), poisonous due

to toxic nectar (13), and is sometimes more cariogenic (65); yet faddism extols honey as a traditional symbol of healthful naturalness.

*Basic Fallacies Persist*

The basic fallacies of food faddism have changed little over the years. These include erroneous beliefs about all aspects of nutrition from garden to gullet. Faddists fear that depleted soil produces cosmetically acceptable albeit health-deficient crops that are picked too soon, stored too long, and shipped too far. They object to employing hormones or antibiotics in production of animal foodstuffs and allege that modern techniques of agricultural production undermine the nutritional value of conventional foods. Similarly, they allege that food processing depletes foods and adds dangerous chemicals. Even sound food enrichment is depicted as an inadequate attempt to correct the drastically altered nutritional value of processed food. According to the FDA study (25), most persons interviewed believed the fallacies upon which food faddism rests (see Table 1). Apparently, nutrition education has failed to address these issues adequately.

HARM DONE BY FOOD FADDISM

Food faddism kills, maims, and robs in a manner so subtle that few recognize they are victims; society therefore reacts less adversely to food faddism than to

**Table 1** Percentage agreeing with statements about food supply healthfulness

Statement	Percentage agreeing
1. The chemicals added to our manufactured food take away much of its value for health. (FALSE)	48
2. Man-made vitamins are just as good as natural vitamins. (TRUE)	35
3. Much of our food has been so processed and refined that it has lost its value for health. (FALSE)	60
4. Chemical sprays that farmers use make our food a danger to health, even if they are used carefully. (FALSE)	57
5. There is no difference in food value between food grown in poor, worn-out soil and food grown in rich soil. (TRUE)	15
6. Many foods lose a lot of their value for health because they are shipped so far and stored so long. (FALSE)	73
7. Food grown with chemical fertilizers is just as healthful as food grown with natural fertilizers. (TRUE)	44

From (25)

other causes of needless harm such as medical and drug nostrums and quackery (24a).

### *Fatalities Related to Food Faddism*

The cultists are most vulnerable to fatality resulting from some form of food faddism. Devotion to Zen Macrobiotics (92) and to the Temple Beautiful Diet (82) has resulted in death by starvation.

Cult-like behavior may also be seen in the case of the mother who refused to take legal action against the Adelle Davis estate after inadvertently poisoning her infant son with an overdose of potassium on the basis of recommended treatment for colic in Ms. Davis's book *Let's Have Healthy Children* (17). The woman's faith in Ms. Davis seemed "unshaken," and she did not want the book removed from the market (83).

Fatal poisonings have resulted from laetrile [sometimes erroneously labeled as "Vitamin B-17"] ingestion by individuals who rejected scientific advice in favor of that given by charismatic "nutrition-oriented doctors" [called cultists by Herbert (35)]. Some faddism-related deaths result from neglect of proper treatment. It can be reasonably assumed that so-called "metabolic therapy" (laetrile administration), which centers around diet cure, has been responsible for many needless and early deaths. An estimated 70,000 (21) cancer patients have opted for this completely ineffective (63) treatment, rejecting conventional cancer treatments, which, according to the American Cancer Society, now achieve a 40% overall cure rate.

Many currently popular but unproven cancer treatments center around naturopathic notions of diet cure. A number of apparently needless and/or early deaths have been due to refusal of effective treatment in favor of diet cures. Unfortunately, these are rarely (41) reported in the scientific literature, but several have appeared in popular (11, 45, 48, 61) and legal (56) publications.

Faddism may have killed a child *in utero*. Massive dosing of the pregnant animal with vitamin A has long been known experimentally to produce neural tube defect in the fetus. A woman given unproven megavitamin A therapy for a psychiatric disorder during pregnancy delivered an anencephalic fetus (4).

Faddists' attraction to herbal therapy has led to death through overdose (24) and misidentification (68).

### *Dangers From Herbs*

*The Medical Letter* listed over forty dangerous herbal preparations being promoted by the "health-food" industry; some are potentially lethal (1). Tyler, who describes the possible harms and benefits of over 100 herbs, observes that authors of herbal books seek to protect themselves by carefully worded disclaimers indicating that readers should refrain from testing suggested remedies; the authors thus taunt their readers with information they are warned not to



apply (84). Reports of harm (9, 51, 76, 77) and potential carcinogenicity (15, 47, 73) from herbs have appeared in recent literature.

### *Malnutrition*

Faddism has caused malnutrition by variously recommending overuse and underuse of certain nutrients. Vitamin A toxicity has been widely reported (4, 23, 34, 36, 38, 39, 78). Publicity given the retinoids in acne treatment and cancer research appears likely to increase this phenomenon. Overuse of all vitamins from A through E is warned against by medical experts (64), yet excessive dosing with these substances continues to be possible with immunity from regulation by government agencies. Deficiency diseases rarely encountered today in the general population have been reported among food cultists (26, 74). Particularly tragic are the diseases seen among the children who are forced by their overzealous parents to survive on inadequate, strict-vegetarian diets (20, 22, 66, 71, 93).

### *Economic Harm*

Food faddism is expensive. Foods touted as "health foods," "organic," or "natural" are actually specialty foods that cost consumers more because of lower sales volume and higher distribution costs (including high profit margins) (59). The FTC labeled these terms "confusing" and "deceptive" in their 1978 report on food advertising, essentially restating what the FDA's Walter Campbell said in a 1929 press notice (90). Investigations by Consumer's Union (12) and others have repeatedly found deceptive use of these terms by "health foods" marketers. These specialty foods reportedly cost consumers about 70% more than comparable conventional foods (2), although recent comparisons have found price differences shrinking as demand for these foods and outlets increases (50). High pricing of "health foods" harms poor buyers most (25, 70).

### *Distortion of Perspective*

In his article on food safety, Hall recalls the Biblical warning that without perspective it is possible to "swallow camels while straining off gnats" (33). He appropriately calls attention to the distortion of perspective caused by food faddism, a distortion that results in inability to distinguish good from bad. Faddists persuade followers to reject fluoridated water while drinking potentially dangerous raw milk. Devotees may reject chemotherapy because of its toxicity and swallow laetrile, a potent source of cyanide.

Distorted perspective causes smokers to ingest vitamin C in hopes of offsetting the widely accepted effects of their dangerous habit on lung cancer. Distorted notions about food additives have resulted in the removal of antioxidants as food preservatives despite the fact that they may reduce the risk of cancer (40).

Jukes chides distortions of perspective regarding food additives by stating that "the most dangerous food additives are those extra calories eaten after nutritional needs are satisfied. Extra calories lead to obesity, which is a far greater threat to health than the additives whose safety is now being questioned" (46).

Food faddists also cause people to confuse their friends with their enemies. According to "health foods" propaganda, government regulatory agencies, nutrition scientists, organized medicine, food technologists, and the like are enemies of the public. At the same time, "health food" faddists pose as friends and saviors of mankind, condemning fluoridation, immunization, pasteurization, and other protective measures while undermining public confidence in organized public health efforts.

Faddist literature persistently claims that orthodoxy is not to be trusted. This is understandable since such a notion is essential justification for the existence of the "health foods" industry (41, 43). If supermarket foods are safe and healthful, there is no need for an "alternative" industry.

This negative philosophy ties together food faddism, food cultism, and all other forms of food quackery. Indeed, one of the major successes of pseudo-scientific thinking has been tacit acceptance of the word "alternatives" into current health care jargon. Writers and speakers glibly refer to unproven treatments stemming from folk medicine, past discarded theories, and even occult practices as "alternatives" to current proven methods. Dr. Sanford Miller of the FDA has termed such teachings "the new metaphysics" (62). While choices sometimes exist among proven methods, the "alternatives" to methods established as safe and effective are the unsafe, ineffective, or untested ones, which are the stock-in-trade of quackery.

Even regulations imposed by the government sometimes distort perspectives. Only two products currently carry cancer warning labels: cigarettes, which according to the Federal Trade Commission carry a warning so obscure that it is not seen (79); and saccharin-containing products, against which supermarkets prominently post eye-level warning signs despite the lack of evidence that such products threaten human health (49). This may produce a kind of "boy who cries wolf" psychology if the risk of cancer from use of saccharin and tobacco is equated.

Such distortion of perspective by the government regulators is one effect of having to enforce the Delaney Clause, which pertains to substances regarded as weak potential carcinogens on the basis of experimental evidence regarded by many scientists as unpredictive of human effects. Deutsch regards the Delaney Clause as ill-conceived and resulting from lobbying by food faddists (18). There is little doubt that its provisions have generated hysteria and contributed to the success of entrepreneurial food faddism. Media attention automatically becomes sensationalist when an emotion-laden topic such as cancer is involved.

Recent marketing research reveals that consumers continue to be inordinately concerned about food additives (55). When asked on what nutrition-related topics they desired more information, respondents most frequently mentioned "ingredients which may cause cancer" (57). Obviously, faddists make the most of such fears as they seek to undermine public confidence in conventional institutions.

## CURRENT PRACTICES

Food faddism is responsible for billions of dollars worth of business activity annually. Because the tenets of food faddism are so widely believed, much business activity based on it appears legitimate. Even conventional food advertising touts "natural" or vitamin-fortified products that contain "no preservatives" and "no sugar". Food faddism has become so pervasive as to cause a past President of the American Society for Clinical Nutrition to ask whether questionable nutrition will overwhelm nutrition science (38). Such concerns appear well-founded considering the organized efforts to profit from food faddism.

### *Pseudo-Nutrition Experts*

The designation "nutritionist" is unregulated and may be claimed by anyone. Proliferating diploma mills presently offer mail-order credentials for completing courses of study based upon the faulty tenets of food faddism. In California, unaccredited schools may operate as "authorized" institutions of learning for the purpose of granting certificates of proficiency in various endeavors (e.g. cosmetology, business skill, language usage, etc). To the dismay of nutrition scientists, several "authorized" (but not "approved" or "accredited") schools are offering credentials in nutrition or nutrition consulting. At least one of these schools issues certificates that they call "Bachelor of Science," "Master of Science," and "Doctor of Philosophy" degrees. So far the State of California's Office of Post-Secondary Education has not curtailed such misrepresentation. According to one estimate, this diploma mill will grant more "PhDs" in nutrition in 1982 than all of the legitimate, accredited universities in the United States combined (J. Kenney, personal communication)! Other such diploma mills are known to be operating in Illinois, Missouri, New Mexico, and Texas. The public seems not to know who represents the voice of scientific nutrition in the community.

### *Pyramid Sales Schemes*

Food faddism exploits the dream of success by drawing tens of thousands of people into pyramidal schemes to market food supplements, herbs, weight-loss products, milk substitutes, and other faddist items. In the 1960s the FDA vigorously opposed such schemes, dismantling major pyramidal structures of

door-to-door salesmen (91). Today, with laws against them given low enforcement priority, these activities are thriving. Among the most dangerous pyramid schemes are the extreme low-calorie diet programs sold by lay persons who are billed as "diet counselors". Although disclaimers advise dieters to obtain medical clearance before embarking on these programs, it is doubtful that many people go to such trouble and expense.

Also potentially dangerous is the promotion of nutritionally inferior milk substitutes for use in infant feeding. While such products have some legitimate role in the marketplace, they have become faddist because of promotional claims touting them as protective against heart disease, cancer, arthritis, stroke, allergies, and so forth.

### *Vitamin and Mineral Supplement Promotion by Pharmaceutical Companies*

Drugstores sell more vitamins and mineral supplements than health food stores (2nd) and supermarkets (3rd) (30). Apparently concerned about gains being made by the health foods industry, drugstores and the pharmaceutical companies that supply them are aggressively promoting products that exploit widespread public belief in the tenets of food faddism.

E. R. Squibb & Sons' advertisements for Theragran® feature athletes and mention the product's "endorsement" by the US Olympic Team. The "endorsement" was the result of a \$500,000 contribution by the company (5, 6). By associating Theragran® with sports champions, Squibb capitalizes on the myth that athletes need special nutritional aids.

The J. B. Williams Company has long exploited women's possible need for diet supplementation. The company has paid a number of fines for false and misleading advertising in connection with its product Geritol®, which claims to be a "pick-me-up" for people with "tired blood" (14). Such promotion capitalizes on the most widespread health misbelief in the United States that extra vitamins provide more pep and energy (25).

Hudson Pharmaceuticals uses radio commercials geared toward "seasonal trends" in vitamin sales. In 1981, Hudson began "Nutra-Phone," a daily "education" message on nutrition and health in New York City. Many of its messages reportedly use scare tactics to promote the sale of unnecessary supplements (6). Hoffman-La Roche, which produces most of the bulk nutrients repackaged by other vitamin manufacturers, advertises heavily to both the public and professionals. The company maintains a Vitamin Nutrition Information Service (VNIS) that distributes reports quoting scientific literature but heavily biased toward vitamin supplementation. These reports exaggerate the need for supplements, minimizing the risks by omitting adverse facts (6). The VNIS produces a Teachers' Guide that focuses attention on the "role and importance of good health and proper nutrition." One of the main stated goals is "to promote awareness of vitamin insufficiencies and how to alleviate and

control them.” The FDA study (25) suggests that both Hudson and Hoffman-La Roche exploit people’s misbeliefs about the nutritional inadequacy of modern foods.

Bronson Pharmaceuticals makes books available at discount prices to medical doctors that promote scientifically questionable theories on megavitamin therapy, orthomolecular psychiatry, and the use of vitamins to prevent colds, flu, cancer, allergies, and so forth. Of the 25 titles listed by Bronson in their 4–81 “Special Book Offer,” not one appears on the list of nutrition references recommended by a respected professional association (10), while several appear on its “not recommended” list. Bronson may be attempting to exploit the lack of nutrition knowledge among medical practitioners by indoctrinating them through books promoting a clinical use of supplements not supported by nutrition science.

### *Practitioners*

Some practitioners (MDs, DDSs, DOs, and clinical psychologists) have joined together in fringe organizations espousing megavitamin therapy, hypoglycemia treatment, hair analysis, specious food allergy testing, computer dietary analysis (based upon questionnaires without established validity), and other unproven methods. Many of these practitioners, by touting themselves as “holistic” (or “wholistic”), as part of “new age medicine,” or as purveyors of “alternative” health practices, imply their own superiority to conventional health service providers. Such “holistic” practitioners note a lack of nutrition training in medical schools but fail to explain what training enabled them to rise to clinical superiority. Although scientifically well versed clinical nutritionists and nutrition scientists are highly critical of their practices, the public has difficulty distinguishing the fake from the genuine. Many of these fringe practitioners use unproven forms of diet therapy to treat serious diseases such as cancer, diabetes, heart disease, and so forth.

Unorthodox practitioners such as chiropractors, naturopaths, homeopaths, iridologists, reflexologists, healthologists, etc almost invariably hold faddist views. Owing to their current degree of social acceptance as providers of “alternative” health care, these practitioners pose a greater threat now than in the past. This is particularly true of pseudoscientific practitioners licensed by the states (e.g. chiropractors and, in some cases, naturopaths).

### *Health Books, Magazines, and Pseudoscientific Journals*

Essential to food faddism’s success is promotion of the assumptions that Americans are generally unhealthy, that modern science is anti-nature (nature being a benevolent force from which man has become alienated), and that conventional medicine, food technology, government regulators, and other established institutions are misguided and/or untrustworthy (43).

Man's innate fear of the unknown is exploited by faddists as they make the most of public unfamiliarity with high technology. Chemical terms on labels, warnings required by law for food additives, and the possible side effects of medications cause particular apprehension among the uninformed. It is paradoxical that efforts to protect consumers by requiring full disclosure in labeling and packaging of conventional foods and drugs appear to undermine the public's confidence, while such accountability is often not required of the substitutes offered by food faddists, cultists, and quacks.

Food faddism rests upon false hypotheses (43). Americans are generally healthy (85). Soil depletion and modern farming methods have not devitalized or dangerously contaminated foodstuffs. Modern food processing is not inferior to old-fashioned methods nor is it the cause of subclinical nutritional problems. And nutritional supplements are not generally needed for "nutritional insurance." Exceeding the Recommended Daily Allowances does not provide "supernutrition," nor are special diets, herbs, or foods curative as faddists claim. Although such false concepts are widely taught by the publications that spread the faddist philosophy, they cannot legally appear on labels.

A major part of food faddism's marketing program is protected by freedom of speech and press. Through the use of "health" magazines and books, the industry built upon food faddism engages in a form of "hidden advertising" to present ideas that sell their products and services. The broadcast and television media have become effective vehicles for such hidden commercializing. The talk-show format enables show business celebrities [many of whom personally accept faddist nonsense (18)], self-styled nutrition "experts," and food faddism's supersalesmen to expound the ideas upon which faddism thrives. Many such shows are sponsored or well supported by supplement and health food advertisers. "Health food" stores are often stocked well in advance with products being discussed on these shows.

Such promotion is the essence of quackery. This freedom to mislead perpetuates the mythology upon which food faddism is built. Some efforts are under way to classify this type of promotion as "commercial language." As such it would be ineligible for protection by the First Amendment, as is other false advertising. Such efforts are based upon the fact that nutrition is a science, not a religion or political ideology; claims and ideas about nutrition can be objectively tested. Ideas capable of scientific testing do not need the same kind of protection as political or religious ideologies.

## COPING WITH FOOD FADDISM

Only the combined efforts of educators, health care deliverers, and the law will ultimately thwart food faddism's spread. In this the scientific community has a direct responsibility (16).

## *Education*

Nutrition science has succeeded in identifying essential nutrients, applying nutritional therapy, and so forth, but has failed to gain recognition as the most reliable source of nutrition information in the community.

Nutrition educators must capture the attention of their audience. Herbert notes that "good nutrition is about as exciting as sensible shoes." However, millions of people are already involved in health awareness movements that inform them about exercise and nutrition. These people should be encouraged; they should also be taught the limitations of nutrition in health and disease. There is widespread concern about environmental pollution and misguided technology. People must be taught to balance this concern with an understanding that science is not anti-nature. Science is the study of nature that will enable us to live in harmony with its laws. Above all, the public needs reassurance that modern food science and technology are trustworthy.

## *Health Care Deliverers*

The public now appears to expect, mistakenly, that all physicians will as a matter of course become nutrition experts (80, 87). Nutrition is too highly specialized a subject for this to be the case. Physicians, dentists, and other health care deliverers must be educated about how best to utilize both nutrition science and the specialists soundly trained in it.

The role of dietary practices in the psychological management of patients has been little explored. The food faddist's success in part arises because he gives his followers something to do. This enables them to feel that they are in control of their lives when facing diseases from which they have little hope of full recovery.

Dealing with the victims of food faddism on an individual level involves other approaches (see 42).

## *The Law*

Presently, anyone can call herself or himself a "nutritionist" and dispense dietary advice that may have serious health consequences. The division between nutritional advice and medical practice is not clearly defined. Qualifications need to be developed for legally defining who may give nutrition counsel that may significantly alter health status. Regulatory measures should, in my opinion, be formulated. Consumer protection laws must be expanded to curtail the dissemination of false information about nutrition and health by publishers and the non-news media.

## CONCLUSION

Food faddism, cultism, and quackery are complex phenomena that may never be completely eradicated. Steps should be taken, however, to reduce to an

acceptable level the waste of human economic resources resulting from these factors. The task will not be easy. In the absence of scientific guidance, legislators, judges, and executives, all vulnerable to emotionalism, can set rationality aside in favor of personal biases. The point must be made repeatedly that nutrition is a science, not a religious or political ideology. As a science it can be dealt with objectively.

In a free society education is the nutrition scientist's hope for long-range effectiveness in the struggle against misinformation. Since faddists also "educate" it is essential that all purveyors of nutrition information be made legally accountable for what they propound. Some type of quality control over nutrition information seems essential if food faddism is to be effectively curtailed.

### Literature Cited

1. Abramowicz, M. 1979. Toxic reactions to plant products sold in health food stores. *Med. Lett.* 21(7), Iss. 528
2. Appledorf, H., Wheeler, W. B., Koburger, J. A. 1973. Health foods versus traditional foods: a comparison. *J. Milk Technol.* 36(4):242-44
3. Deleted in proof
4. Averbach, P. 1980. Multivitamin prophylaxis and a cause of neural tube defect. *Lancet.* ii:101
5. Barnes, L. 1979. Olympic committee endorses vitamin. *Phys. Sports Med.* 7: 17-18
6. Barrett, S., Herbert, V. 1981. *Vitamins and Health Foods*. Philadelphia: George F. Stickley Co. 189 pp.
7. Berman, R. 1981. *Advertising and Social Change*. Beverly Hills, CA: Sage. p. 128
8. Bitensky, R. 1973. The road to Shangri-La is paved with vitamins. *Am. J. Psychiatr.* 130(11):1253-56
- 8a. Blix, G. 1970. *Symposia of the Swedish Nutrition Foundation VIII—Food Cultism and Nutrition Quackery*. Uppsala, Sweden: Almqvist & Wiksells. 103 pp.
9. Bryson, P. D., Watanabe, A. S., Rumack, B. H., Murphy, R. C. 1978. Burdock root tea poisoning. *J. Am. Med. Assoc.* 239:2157
10. Chicago Nutrition Association. 1981. *Nutrition References and Book Reviews*. Chicago: Chicago Nutr. Assoc. 76 pp. 5th ed.
11. Child in Laetrile case dies of Hodgkin's disease. 1980. *Med. World News*. August 18, p. 31
12. Consumers Union. 1980. It's Natural! It's Organic or Is It? *Consum. Rep.* 45(7):410-15
13. Coon, J. M. 1966. Discussion. In *Toxicants Occurring Naturally in Foods*, 27:281. Washington DC: Natl. Acad. Sci. 301 pp.
14. Cornacchia, H., Barrett, S. 1980. The health marketplace. In *Consumer Health*, 1:15. St. Louis: C. V. Mosby Co. 335 pp. 2nd ed.
15. Crosby, W. H. 1977. Lead-contaminated health food: association with lead poisoning and leukemia. *J. Am. Med. Assoc.* 237:2627
- 15a. Darby, W. J. 1971. *Resource Conference on Food Faddism and Cultism*. Chicago.
16. Darby, W. J. 1980. Science, scientists, and society: the 1980's. *Fed. Proc.* 39:2943-48
17. Davis, A. 1972. *Let's Have Healthy Children*. NY: Signet. p. 242
18. Deutsch, R. 1976. *The New Nuts Among the Berries*. Palo Alto, CA: Bull Publ. Co. pp. 315-16
19. Deutsch, R. 1976. See Ref. 18, pp. 315-16
20. Dwyer, J. T., Dietz, W. H., Hass, G., Suskind, R. 1979. Risk of nutritional rickets among vegetarian children. *Am. J. Dis. Child.* 133:134-40
21. Ellison, N. M., Byar, D. P., Newell, G. R. 1982. Special report on laetrile: the NCI review. *N. Eng. J. Med.* 306(4): 549-52
22. Erhard, D. 1973. The new vegetarians. *Nutr. Today* 8(6):4-12
23. Farris, W. A., Erdman, J. 1982. Protracted hypervitaminosis A following long-term, low-level intake. *J. Am. Med. Assoc.* 247:1317-18
24. Fatality and illness associated with consumption of Pennyroyal Oil—Colorado. 1978. *Morbid. Mortal. Wkly. Rep.*
- 24a. Fishbein, M. 1932. *Fads and Quackery in Healing*. NY: Covici, Friede



25. Food and Drug Administration. 1972. *A Study of Health Practices and Opinions*. Philadelphia: National Analysts, Inc. Pt. II, p. 65
26. Ford, M. J. 1980. Megaloblastic anemia in a vegetarian. *Br. J. Clin. Pract.* 34: 222
27. Funk, C. 1912. The etiology of the deficiency diseases. *J. State Med.* 20: 341-68
28. Funk, W. 1978. *Word Origins*. NY: Bell Publ. p. 111
29. Genesis 3:22-24
30. Gorman, T. 1978. What's new with vitamins? *Drug Top.*, pp.48-60
31. Gregg, M. B. 1978. Follow-up on infant botulism—United States. *Morbid. Mortal. Wkly. Rep.* 27(3):17
32. Gregg, M. B. 1978. Honey exposure and infant botulism. *Morbid. Mortal. Wkly. Rep.* 27(29):249
33. Hall, R. L. 1977. Safe at the plate. *Nutr. Today* 12(6):6-9
34. Hatchcock, J. N. 1976. Nutrition: toxicology and pharmacology. *Nutr. Rev.* 34:65-70
35. Herbert, V. 1979. Laetrile: the cult of cyanide: promoting poison for profit. *Am. J. Clin. Nutr.* 32:1121-58
36. Herbert, V. 1981. Nutrition cultism. *West. J. Med.* 135(3):225
37. Deleted in proof
38. Herbert, V. 1981. Will questionable nutrition overwhelm nutrition science? *Am. J. Clin. Nutr.* 34:2848-53
39. Herbert, V. 1982. Toxicity of 25,000 IU vitamin A supplements in "health" food users. *Am. J. Clin. Nutr.* 36:2-5
40. Jansen, J. D. 1982. Nutrition and cancer. *World Rev. Nutr. Diet* 39:18
41. Jarvis, W. T. 1977. Beware nutritional quackery. *J. Am. Coll. Dent.* 44:200-214
42. Jarvis, W. T. 1980. Coping with food faddism. *Nutr. and the MD.* 6(10):1-2
43. Jarvis, W. T. 1980. Food quackery is dangerous business. *Nutr. News* 43:1-2
44. Jarvis, W. T. 1981. The myth of the healthy savage. *Nutr. Today* 16:14-22
45. Judge says Hofbauers have right to Laetrile. 1978. *Schenectady (NY) Gazette*, June 29
46. Jukes, T. J. 1977. Food additives. *N. Eng. J. Med.* 297:430
47. Kapadia, G. J., Chung, E. B., Ghosh, B., Shukla, Y. N., Basak, S. P., et al. 1978. Carcinogenicity of some folk medicinal herbs in rats. *J. Natl. Cancer Inst.* 60:683-86
48. Kruger, H. 1981. Doctor ordered to turn over records. *Mill Valley (Calif.) Record*, August 26, p. 2
49. Lecos, C. 1981. The sweet and sour history of saccharin, cyclamate, aspartame. *FDA Consum.* 15(7):8-11
50. Lekon, B. M., Kris-Etherton, P. M. 1981. Meal and cost analysis: health food store versus conventional food sources. *J. Am. Diet. Assoc.* 79:456-58
51. Lightfoote, J., Blair, H. J., Cohen, J. R. 1977. Lead intoxication in an adult caused by Chinese herbal medication. *J. Am. Med. Assoc.* 238:1539
52. Lowenberg, M. E., Todhunter, E. N., Wilson, E. D., Feeney, M. C., Savage, J. R. 1968. *Food and Man*. NY: John Wiley & Sons. p. 15
53. Mahdihasse, S. 1979. A comparative study of Greek and Chinese alchemy. *Am. J. Chin. Med.* 6(2):171-81
54. Maple, E. 1968. *Magic, Medicine and Quackery*. Cranberry, NJ: A. S. Barnes & Company. p. 12
55. Maracom Research Corporation and Nutrition and Marketing Research Departments of General Mills, Inc. 1980. *Dewline: Changing Consumer Values and Behavior Related to Food*. Minneapolis, MN: General Mills, Inc. Rep. 15.
56. Marco, C. H. 1979. Why Chad Green died in Mexico. *Legal Aspects of Med. Prac.* December, pp. 35-38
57. Marketing Science Institute. 1980. *Determinants of Food Usage Behavior: A Market Segmentation Approach*. Cambridge, MA: MSI
58. Martin, J. B., Berry, C. W. 1979. Carcinogenicity of selected processed, machine-vended and health food snacks. *J. Am. Diet. Assoc.* 75:159-61
59. McBean, L. D., Speckmann, E. W. 1974. Food faddism: a challenge to nutritionists and dietitians. *Am. J. Clin. Nutr.* 27:1071-78
60. McKechnie, J. C., ed. 1968. *Webster's New Twentieth Century Dictionary*. NY: World Publishing Co. 2nd ed.
61. McNamara, S. 1980. Cancer's conquest. *Pacific Sun* (Mill Valley, California), August 22-28
62. Miller, S. A. 1960. The new metaphysics. *Nutr. Rev.* 38:53-64
63. Moertel, C. G., Fleming, T. R., Rubin, J., Kvols, L. K., Sarna, G., et al. 1982. A clinical trial of amygdalin (laetrile) in the treatment of human cancer. *N. Eng. J. Med.* 306(4):201-6
- 63a. National Dairy Council. 1981. Nutrition misinformation. *Dairy Counc. Dig.* 52:19-24
64. Nelson, R. A. 1982. Use and misuse of vitamins in the elderly. *Geriatrics* 37(2):138-44

65. Newbrun, E. 1974. The role of manufacturers in the dietary control of caries. *J. Am. Soc. Prev. Dent.* 4(5):33-44
66. Olson, R. E. 1979. Vitamin B12 deficiency in the breast-fed infant of a strict vegetarian. *Nutr. Rev.* 37:142-44
67. Pauling, L. 1970. *Vitamin C and the Common Cold*. San Francisco: W. H. Freeman & Co. p. 1
68. Poisoning associated with herbal teas: Arizona, Washington. 1977. *Morbid. Mortal. Wkly. Rep.* 26:32
69. Revelation 22:2
70. Rhee, K. S., Stubbs, A. C. 1976. Health food users in two Texas cities. *J. Am. Diet. Assoc.* 68:542-45
71. Roberts, I. F., West, R. J., Oglivie, D., Dillon, M. J. 1979. Malnutrition in infants receiving cult diets: a form of child abuse. *Br. Med. J.* 1:296-98
72. Ryneanson, E. H. 1974. Americans love hogwash. *Nutr. Rev.* 32: (Suppl. 1) 1-14
73. Segelman, A. B., Segelman, F. P., Karliner, J., Sofia, D. 1976. Sassafras and herb tea—potential health hazards. *J. Am. Med. Assoc.* 236:477
74. Sherlock, P., Rothschild, O. 1967. Scurvy produced by a Zen macrobiotic diet. *J. Am. Med. Assoc.* 199:130-34
75. Shils, M. E., Goodhart, R. S. 1973. *Modern Nutrition in Health and Disease*. Philadelphia: Lea & Febiger. p. 114
76. Siegel, R. K. 1979. Ginseng abuse syndrome. *J. Am. Med. Assoc.* 241:1614-15
77. Siegel, R. K. 1976. Herbal intoxication—psychoactive effects from herbal cigarettes, tea, and capsules. *J. Am. Med. Assoc.* 236:473-76
78. Smith, F. R., Goodman, D. S. 1976. Vitamin A transport in human vitamin A toxicity. *N. Eng. J. Med.* 294:805-8
79. Smoking more dangerous than many realize; current health warning in cigarette ads not effective, says FTC staff. 1981. *FTC News Summ.: Fed. Trade Comm.*, May 29, pp. 34-81
80. Stare, F. 1980. Nutrition—sense and nonsense. *Postgrad. Med.* 67:147-53
81. Tappel, A. L. 1973. Vitamin E. *Nutr. Today* 8(4): 11
82. Temple Beautiful Diet-death for David Blume. 1979. *The San Bernardino (Calif.) Sun*, p. A-3
83. Today Show broadcast. April 25, 1978
- 83a. Todhunter, E. N. 1973. Food habits, food faddism and nutrition. *World Rev. Nutr. Dietet.* 16:286-317
84. Tyler, V. E. 1981. *The Honest Herbal*. Philadelphia: Geo. P. Stickley Co. p. 5
85. U S Dept. of Health, Education, and Welfare. 1979. *Healthy People*. Washington DC: USGPO. 177 pp.
86. *Webster's Seventh New Collegiate Dictionary*. 1971. Springfield, MA: G. C. Merriam Co.
87. White, P. O., Selvey, N. 1980. Nutrition in the 1970's. *J. Am. Med. Assoc.* 243: 2220-22
88. Whorton, J. C. 1977. Rationale for vegetarianism. *J. Hist. Med.* April, pp. 115-39
89. Wolf, E. M. B., With, J. C., Lohman, T. G. 1979. Nutritional practices of coaches in the big ten. *Phys. Sports Med.* 7(2):112-24
90. Young, J. H. 1967. You are what you eat. In *The Medical Messiahs*, pp. 333-59. Princeton, NJ: Princeton Univ. Press. 459 pp.
- 90a. See Ref. 90, p. 336
- 90b. Young, J. H. 1978. The agile role of food. In *Nutrition and Drug Interrelations*, ed. J. Hathcock, 1:1-17 NY: Academic. 927 pp.
91. Young, J. H. 1982. Professor urges FDA to crack down on food quackery. *Food Chem. News*, July 5, p. 26
92. Zen macrobiotic diet hazardous: presentment of Passiac grand jury. 1966. *Publ. Health News*, June, pp. 132-35
93. Zmora, E., Gorodischer, R., Bar-ziv, J. 1979. Multiple nutritional deficiencies in infants from a strict vegetarian community. *Am. J. Dis. Child.* 133:141-44