

Nutrition Cultism

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IN HIS ARTICLE "Historical Aspects of Food Cultism and Nutrition Quackery," a section of the book *Food Cultism and Nutrition Quackery*,¹ Emory University historian James Harvey Young pointed out that religion has influenced food choice from the earliest days of primitive medicine. Foods have been used through the ages as offerings to the gods to soothe their anger or win their gratitude. Ceremonies involving food exist in all major religions. In *Food: Facts, Foibles, and Fables, The Origins of Human Nutrition*,² Simeons stated, "I know from personal experience that it is not uncommon for an orthodox Hindu to prefer dying of pernicious anemia to taking liver extract" (which would be curative). In his book *Cornflake Crusade*,³ Carson noted that the first name given to the processed dry cereal that eventually became cornflakes was "Elijah's Manna," thus invoking the power of religion and magic in the service of food cultism.

It is unfortunately true in the United States that there is no law against misinforming about nutrition provided one does not do so on the label of a product. Hence the proliferation of radio and television "nutritionists" and fast-buck physicians and PhD's on talk shows, who make millions from their books, articles and public appearances promoting sensational nutrition panaceas for all the ills of humankind.

Sensationalism and scare tactics are the hallmarks of all demagoguery. This is as true for the demagoguery that creates nutrition cults as it is for the demagoguery that creates other cults.

The basic scientific axiom that no alleged nu-

trient is safe until proved to be safe or efficacious until proved to be efficacious can be said to have been enunciated when God told Adam not to eat that apple—and the first demagogue of nutrition cultism can be said to have been Satan, when he told Eve to go ahead and have Adam eat the apple. So it has been ever since, with one demagogue after another doing good for himself and harm to others by promoting one after another dangerous remedy as safe, and one after another worthless remedy as preventive or therapeutic, or both.

Most of the "nutrition" advice given to the public in newspapers, magazines, radio, television and popular books ranges from deceptive and misleading to downright fraudulent. The media introduce as "nutrition experts" a number of popular figures whose only nutrition credentials may be criminal convictions for nutrition fraud, coupled with the charisma and amorality which allow them to make sensational claims and use the scare tactics that enchant the public, to sell newspapers, magazines, air time and products.

Nutrition is a science; it is not a religion. Those who ask, "What do you believe about this or that nutrition claim?" and those who state they *believe* this or that about nutrition are talking religion and not science. What nutrients can and cannot do in the human body is determined by the chemical structure of the nutrient and the specific biochemical reactions in the human body in which the chemical structure is capable of becoming involved. Nutrition science is largely a branch of biochemistry. Many of the happy fictions of nutrition cultism are flatly contrary to the scientific facts about what the given nutrient or food substance is capable of doing in human biochemistry.

Nutrition cultism has cleverly profited from dis-

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torting the decision by millions of Americans to assume greater control over their own fate into a cry to abandon science and dependency on scientists, and prove their "independence," "personal responsibility" and "freedom of choice" by making decisions based on anecdote, fraud and misrepresentations rather than making informed judgments.

We need to teach young people to ask "How do we know the things that we know?" The fundamental sciences of logic and epistemology teach how to evaluate the validity of statements. These sciences should be basic teaching in our schools, but are not. We need to teach how belief can be rationally established.

In the realm of science, we know things because they prove to be so when subjected to testing. In science, claims are considered untrue until proved true in studies that separate cause and effect from coincidence. The double-blind controlled trial is a classic such scientific study.

A word should be said about the penchant of the media to promote "debates" between responsible nutrition scientists and promoters of nutrition quackery, for the purpose of sensationalism but disguised as giving a fair hearing to both sides. Is it "giving a fair hearing to both sides" to invite a rapist to provide his side of the story—that is, why rape is good? If not, then why is it appropriate to invite a rapist of the mind—a promoter of health quackery—to present his deceptions, distortions and misrepresentations as if they were fact? When a scientist points out these are lies, the lay audience, without the scientific background or time to delve into the scientific literature to ascertain who is telling the truth, simply concludes that there is just a difference of opinion between two scientific equals (otherwise why would the talk-show host put the quack on?).

In medical school we learned that anecdotes and testimonials are worthless as evidence of either safety or efficacy of a claimed remedy. We learned that before accepting as valid a claim of cure, it is first necessary to ascertain that the patient had the disease, that the diagnosis was established by objective criteria and that the claimed cure resulted *from* the therapy rather than merely being coincidental *with* the therapy. We learned that 80 percent of all symptoms with which patients present disappear with no therapy, so that quacks produce "cures" in four out of five cases, and the distinction between the quack and the genuine physician is that the physician is able

to correctly diagnose and treat that one in five who has not had a spontaneous "cure."

We learned in medical school that most chronic diseases progress in halts (remissions) and starts (exacerbations) rather than inexorably, and sometimes there are permanent remissions with no therapy. It is easy to mistake a remission occurring in the natural history of the disease for a therapeutic triumph due to an irrelevant "therapy." That is why adequate numbers of untreated patients (controls) must be compared with adequate numbers of treated patients before accepting a therapy claim, such as the megadose vitamin C self-cure for collagen disease recited by Norman Cousins in his best-seller *Anatomy of an Illness*.⁴ As reviewer Terence Smith pointed out, "On one hand, Cousins' criticisms of nutrition practices in the United States read like passages from *Prevention* magazine—emotionally appealing but scientific nonsense. On the other hand, many of his thoughts on our American approach to sickness and health are right on the mark."⁵

Unfortunately, the farther away we get from medical school, the more likely we are to forget those hard lessons, and accept as valid the nutrition miracles promoted by the media, who present anecdotes, testimonials and undocumented conclusions as fact, as if such irresponsible promotion was responsible scientific evidence. The willingness of the media to promote nutrition cultism as long as it is sensational is compounded by the unwillingness of most scientific journals to publish facts that could arouse the ire of cultists and promoters.

Emory University Professor of History James Harvey Young has distilled from his decades of study a ten-point profile of health cultism and quackery:⁶

- (1) Exploitation of fear.
- (2) Promise of painless treatment and good results.
- (3) Claims of a miraculous scientific breakthrough.
- (4) Simpleton science: Disease has but one cause, and one treatment is all that is needed to fight it. (Bad nutrition causes all disease; good nutrition cures it.)
- (5) The Galileo ploy. (Like Galileo, we cult gurus are misunderstood by blind scientists, but are destined to be heroes to future generations.)
- (6) The conspiracy theory (also known as "the establishment is out to get us").

(7) The moving target: Shifts in theory to adjust to circumstances. Laetrile went from drug to "vitamin," from cure to palliative to preventive, from low to high dosages, from working alone to never working alone, from one chemical formula to another, and so forth. "B₁₅" ("pangamate") is any chemical or combination of chemicals the seller chooses to put in the bottle.

(8) Reliance on testimonials.

(9) Distortion of the idea of "freedom": By distorting "freedom of informed choice" to "freedom of choice," snake-oil salesmen acquire freedom to defraud, and their victims can lose their money, their health and their lives.

(10) Large sums of money are involved: Nutrition cultism is a multi-billion dollar industry. Laetrile was a billion-dollar-a-year industry for the product alone in the United States as of June 1979. "B₁₅" ("pangamate") was the largest selling "health food" in the United States in 1978, according to the *Wall Street Journal*, even though it is a label and not a product, and each manufacturer tosses any chemicals he chooses into bottles so labeled.

Young⁶ summarized the success of Laetrile as "fear of cancer, suspicion of government, a primitivistic retreat from complex civilization to 'natural' ways, skillful organization, adept lobbying, and a shrewdness at borrowing time-tested techniques from quackery's well-stocked past."

The State of California panders to nutrition cultism by allowing the creation of scientifically worthless mail-order doctorates in nutrition. Such doctorates may be given by any businessperson who secures approval from California to be "authorized" to be a university. The only requirements imposed by California before "authorizing" a university are that it must have a curriculum and faculty (no quality criteria for either are required), have \$50,000 of net assets in California (which can be the home or office of the businessperson) and file with the State of California an annual affidavit of "full disclosure." California forbids its mail-order doctorate-granting universities to represent themselves as either "approved" or "accredited," which are the two levels above "authorized" in the California descriptive lexicon of university quality, but not one person in a thousand is aware of this fact, nor does California require businesspersons who send out literature advertising mail-order PhD's in nutrition to state this fact. (The latest in misleading claims by California's

"diploma mills," which are "authorized" by California, is "accreditation" by "accreditation mills,"—that is, independent accrediting agencies not recognized by either the United States Office of Education or the California Department of Education.) California law should, but does not, require "authorized" institutions to prominently publicize in all their literature that they are not approved or accredited and

Filing pursuant to this subdivision shall not be interpreted to mean, and it shall be unlawful for, any [authorized] institution to expressly or impliedly represent by any means whatsoever, that the State of California, Superintendent of Public Instruction, the State Board of Education or the Department of Education, has made any evaluation, recognition, accreditation, approval, or endorsement of the course of study or degree.⁷

Persons with unapproved or unaccredited degrees in nutrition must be considered as having no educational qualifications that would make them experts in the science of nutrition until proved otherwise.⁸ A report by the National News Council on a California "nutrition university," which had been falsely represented in a national magazine as "the real thing," appears in the March-April 1981 issue of the *Columbia Journalism Review*.⁹

To understand why nutrition quackery and cultism flourish, *cherchez le dollar*. It is necessary to recognize that nutrition cultism is big business, based on exploitation, deception, misrepresentation, anecdote and testimonial. Physicians should be aware that fundamental to the success of this business is the group defamation of physicians and other health scientists. By destroying their credibility, the snake-oil purveyor can then say, "You can't trust the establishment; trust me!" It is also fundamental to the success of nutrition cultism that the public accept as valid the reversals of the two basic scientific canons that no therapy is safe until proved safe or effective until proved effective. The reversals read, "safe until proved unsafe, and effective until proved ineffective." More than 50 people died in connection with self-administered protein-sparing modified fasts before the media and the public realized that calling something nutritional therapy does not allow reversing the basic canons of therapy; that lesson was quickly lost on them.

The power of the promoters of nutrition cultism is delineated in the chapter "Laetrile: The political success of a scientific failure" in the 1980 book *Health Quackery*.¹⁰ As that article notes,

the proponents of Laetrile are . . . increasingly turning to legislators who seem susceptible to the pressure group tactics used by the pro-Laetrile lobby . . . the government's ability to rid the marketplace of quack remedies of all kinds may be jeopardized. . . .

The power of political pressure is being felt even in the scientific world. Generally, major cancer research centers consider it unethical to test a drug on human beings unless it first shows promise in animals. Laetrile has shown no such promise. Nevertheless, the National Cancer Institute and the Memorial Sloan-Kettering Cancer Center—two organizations that have conducted extensive animal tests on Laetrile and found it ineffective—say that controlled human tests of Laetrile may now be necessary.

"Laetrile is a highly emotional issue that will not soon go away," an NCI official explained. "By conducting very careful human tests, we hope to prove once and for all time that the stuff is useless, and doesn't do anything that it's touted for."

The well-meaning National Cancer Institute trial has lent a specious legitimacy to Laetrile. Laetrile is 6 percent cyanide by weight, and can kill when given by mouth or rectum, since the cyanide is released by the plant enzyme β -glucosidase present in many nuts, fruits and vegetables eaten with Laetrile, and also present in colon bacteria. Laetrile seized by the FDA contains 0 to 80 percent of label strength, and this explains the relatively low toxicity of the Laetrile industry product. The National Cancer Institute Laetrile trial is being done in a fashion to avoid acute poisoning. Only 0.5-gram doses of Laetrile, given orally, are used, and then there is a one-hour wait to allow the Laetrile to clear from the stomach before any plant food, which might release cyanide from the Laetrile, is fed. Even with this precaution, acute toxicity occurred in a patient given an ounce of almonds one hour after each Laetrile dose, diarrhea occurred in another, and the remaining four in the Mayo Clinic toxicity trial had blood and urine cyanide and thiocyanate levels consistent with low-grade chronic cyanide toxicity. The minimum lethal dose of cyanide is 50 to 60 mg; 1 gram of pure Laetrile contains 60 mg of cyanide. Given parenterally, Laetrile just creates expensive urine. As repeatedly pointed out, most recently by Koeffler and co-workers,¹¹ Laetrile is chemotherapy, but is worthless chemotherapy because the dose that kills the cancer kills the patient (that is, it has a host to tumor therapeutic ratio of 1:1, which is unacceptable). Acceptable chemotherapy must have a therapeutic ratio such that the dose that kills the tumor is less than the dose that kills the patient. Because promoters of quackery empty words of their dictionary meaning in their skillful use of specious logic, they

ignore the fact that Laetrile is a chemical, refer to Laetrile as "nontoxic therapy," and contrast it to chemotherapy.

We are now witnessing the nutrition cultism of another program—this one having achieved wide public acceptance of an unpalatable low calorie diet, only 10 percent of whose calories are derived from fat. There are no data in the scientific literature to show that the program in question results in reduced rather than increased morbidity and mortality as compared with equivalent low calorie diets with higher percentages of calories derived from fat. The current average American diet derives 42 percent of its calories from fat. Moderation and variety are the keys to good nutrition: a 10 percent fat diet is not moderation and reduces variety, since it requires sharp reduction in intake from two (meat and milk) of the four (meat, milk, grain, fruit and vegetable) basic food groups. A fifth food group (fats, alcohol and sugar) has recently been added by Canadian and American federal agencies, in part to assure supply of the essential fatty acids arachidonic and linoleic, and in part to enhance palatability.

In an effort to bring together for the public and health professionals the facts as they relate to some of today's most prevalent nutrition cults, including all the above information, and all the pertinent scientific references, a number of articles recently published in the scientific literature were updated to 1980 and brought together in the book *Nutrition Cultism*.¹² The book is divided into three parts: nutrition cultism, ethical medicine and nutrition facts. Among the subjects covered in Part I are cyanide poisoning from Laetrile, mutagenesis produced by "B₁₅," destructive effects of "nutritional and metabolic antineoplastic diets," and hot fictions versus cold facts of megavitamin therapy and the vitamin craze.

Among the subjects covered in Part III are the definitions of a vitamin, nutritional assessment with respect to water-soluble vitamins, the 1979 American Medical Association "Concepts of Nutrition and Health,"¹³ and the 1980 National Academy of Sciences publication *Toward Healthful Diets*,¹⁴ with commentary pro and con relating to whether or not healthy Americans should cut down on dietary cholesterol.

A closing thought: Epidemiologic studies reviewed in many places, including *Toward Healthful Diets*,¹⁴ show that a high level of cholesterol in serum is a risk factor for coronary artery disease. Prospective epidemiologic studies show a low

serum level of cholesterol is associated with an increased risk of cancer.¹⁵⁻¹⁷ Are either or both of these epidemiologic observations effect rather than cause? Partly each? Effect in some, cause in others? Epidemiology teaches coincidence; it does not teach cause. Intervention trials teach cause. Should we abandon the scientific method of determining whether an association is cause-and-effect or coincidence and insist every American jump on the low cholesterol bandwagon? Is it not wiser to limit the recommendation of a low-cholesterol diet to those whose serum lipids have been measured, and for whom a medical judgment was made that a low cholesterol diet is in order, based on adequate evaluation of the clinical and laboratory data?

An interesting fact is that a number of authors of popular nutrition books may have a diploma-mill* PhD in nutrition,¹⁸ a PhD in a field other than nutrition, or an MD degree with the right to practice limited or revoked by their home state, and sometimes also a criminal conviction in connection with some of their "nutrition" activities. To find out if this is the case for an author whose writings appear questionable to you, you can consult *Nutrition Cultism*¹² or *The Health Robbers*,¹⁹ or you can write to the Food and Drug Adminis-

*"Diploma mill" is defined in the *Random House Dictionary of the English Language* as "a pretended institution of higher learning existing for profit only and granting degrees without demanding proper qualifications of the recipients."

tration, Litigation and Recall Staff, 5600 Fishers Lane, Rockville, MD 20857, or your state's health department.

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