

The Felix Letter

COMMENTARY ON NUTRITION

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The nutrition department at the University of California at Berkeley, where I graduated in June of '77, is in the College of Natural Resources. It used to be called the College of Agriculture until it got its classier name. I went there after my children were grown to find THE ANSWERS to the nutritional mysteries which had been piling up during the twenty-some years of my interest in the subject. At last, in hallowed Morgan Hall, where science and Home Economics, years ago, had wed to produce a top-notch department steeped in biochemical concepts, the mysteries would drop away like petals from a rose.

Alas! -- as they say in fairy tales -- it was not to be! Nutritional truths are not easily come by in the scientific process. They grow from small accumulated fragments, bit by bit, each fragment representing months and years of work. Researchers may labor for ages in one small bailiwick; say, searching for an unknown growth factor for rats in woody plant fibers; or, studying the effects of ascorbic acid on collagen synthesis in tissues. Except for platitudinous safe statements, like "Choose your foods from the Four Food Groups," and "Eat a balanced diet," the larger, all-encompassing Truths represent foolhardy commitments, particularly if they fall into controversial areas, to be avoided like the plague by most workers in nutrition. They are avoided because, inevitably, they will be viewed by fellow researchers as untidy conclusions, prematurely wrested from inadequate studies. Let's face it, given the complicated nature of human nutrition, all studies will to some degree be inadequate. Also, by the time enough workers in different laboratories have repeated an investigation and found enough agreement to warrant a conclusion . . . ten years have gone by and it's time to do the whole damn thing over again because somebody is challenging the outdated methods originally used.

With regard to issues which are most compelling as well as controversial, nutrition departments of universities are caught in a bind. Most of them grew out of the humble Home Economics departments of yesterday and they are still struggling to achieve scientific status.

They are low men on the totem pole with regard to funding and stature, their achievements easily dimmed by the big lights in the medical or biochemistry sectors. For one thing, unlike physicists, chemists, etc., they are dealing with a homey subject. Everybody knows a lot about food. The mantle of scientist can successfully be substituted for the Home Ec cooking apron only if food is characterized by its biochemical components and subjected to rigorous patterns of research.

This is logical and straightforward enough when nutrients themselves are being examined. The rub comes when you're attempting to assess their effects inside the bodies of human beings, who inevitably are a seething cauldron of 'variables' which muck up the investigative process. The time and cost factors in human studies present great additional hurdles to a generally low-budget department. Most studies perforce have to be performed on isolated cell cultures or on lab animals, and the results cannot always be neatly extrapolated to humans. The result is that progress is very, very slow, most particularly in the area of determining how all nutrients, vitamins, and

minerals affect man; how they work synergistically; and the optimum amounts of each needed in states of health and illness.

In other words, the very information we most need has been the slowest and most difficult to derive, given the present state of the art. And since nutrition departments are wed to scientific protocol, any unorthodox attempts to hasten the process are sternly repudiated. Nothing, but NOTHING, chills their blood faster than the awareness that non-scientists or 'renegade' scientists are extracting from *their* research enough information to institute nutritional programs on their own, some with apparent success in terms of improvement in health of subjects. The ferocity with which the academic nutrition community attacks these transgressors in the 'food-faddist' world is in part prompted by a sense of outrage that facile and perhaps irresponsible conclusions have been drawn from fragments of evidence over which they had so long and cautiously labored, and that what is being proclaimed as fact is merely theory and hope; and in part may be related to their frustration in sensing that



the most valued information they could contribute may die unborn, strangled by the restraints of a 'scientific method' not well suited to the nurturing of such exquisitely complicated material.

On the other hand, were they to lean more tolerantly toward empirical data, which might make many things possible, they stand a chance of losing their still fragile status as a "true" science.

Thus, given the nature of nutrition research and the conservative make-up of scientists . . . it's going to be a long month of Sundays before the great, unassailable, definitive 'Truths' are laid, gleaming like pearls, before us.

Then where do we go for answers in the controversial areas of nutrition? Waiting for the academic community to pronounce them, we have seen, is like waiting for the Messiah. It's one thing for a worker to accumulate information from the studies he's done in his field of interest and come out with a cautious review of his and others' work in which he feels justified, for example, in concluding that even brief periods of zinc deprivation in pregnant mice result in serious abnormalities in the offspring.

It's another matter for him to come out with a recommendation that pregnant women on a deficient diet take zinc supplements. Nutrition professionals are reluctant to come out with strong statements and recommendations because, first, as noted, they fear the inevitable censure from their peers for having gone off half-cocked before "all the evidence is in." It's unprofessional to make sweeping, i.e., "biased" statements. Building information, brick by brick -- that's what science is all about.

Second, and very important, it is considered unseemly (and dangerous) for non-clinicians to graze into medical territory. There exists in orthodox nutrition an immense reluctance to tread on medical toes. The profession is loaded with Ph.D.'s but has a paucity of M.D.'s. A great caution prevails about usurping the physician's privilege to prescribe food and nutritional supplements therapeutically. This can only lead to incredible genuflections, backbends, and other forms of ritual acrobatics in a determination not to offend through overstepping the bounds.

The absurdity lies in the fact that the boundaries in nutrition inevitably spill over into clinical medicine. The study of nutrients HAS to include what happens to those nutrients in the body, otherwise we're not talking about nutrition, we're describing one small part of it -- the

biochemistry of food elements. As for "therapeutic" use of nutrients . . . since when has this been the sole province of medicine? Surely not since the first mother on earth stuck her tit in her baby's mouth to keep him from being hungry, thirsty, or cranky. My mother could have been hauled off to jail for practicing medicine without a license otherwise, since she administered chicken soup unrepentantly at the least sign of malaise in my brother and me. It would have been MORE appropriate to cite her for child abuse, when she pinioned me at the age of four, kicking and screaming, to pour codliver oil down my throat -- therapeutically, to be sure.

The trouble with nutrition is that -- unlike chemistry or astronomy -- EVERYBODY "studies" it. Every day of their lives, every human on earth has to make decisions about it. We have, in our country, a very large number of persons carrying the weight of responsibility not



only for making these decisions but for implementing them for all the persons in their households. They are called "mothers." Being told about the Four Food Groups and a Balanced Diet is not enough. They need to know about vitamin C: that saturating their children's diet with it can bring a reduction in tonsillitis, earaches, and viral infections. They need to know that, for themselves, so-called therapeutic doses throughout pregnancy may shorten their labor, minimize stretch marks, and leave vaginal tissues virginal and untraumatized. They need to know that Vitamin E given to their premature newborn who has been placed in a mechanical respirator may prevent the often fatal lung changes called bronchopulmonary dysplasia; or that the same vitamin E given to their husbands may help keep their arteries and heart resistant to atherosclerotic damage.

The nutrition community is unwilling to commit itself to 'controversial' recommendations of this sort, for all the reasons I've stated. They are performing an

"After you, Alfonse," "No, after YOU, my dear Gaston!" gavotte with the medicos. "Our job is to develop nutritional studies. Their clinical implementation, my dear doctors, is up to you!"

Okay, folks, I know you've been fairly deluged with nutrition recommendations by your M.D.'s, right? Yup, important stuff like Eat a Balanced Diet, Choose from the Four Food Groups, and Cut down on your Calories -- stuff you wouldn't have thought of yourself in a million years. (As a matter of curiosity, when did your doctor last ask you what you ate each day? If you've found one who is even interested, you're ahead of the game.)

I have been struck over and over again by the contrast between the enormous volume of information that keeps issuing out of numberless nutrition studies . . . and the slim trickle that ever finds itself incorporated into medical clinical practice. Hundreds of professional nutrition journals all over the world methodically report on work in field studies, laboratories, hospitals, and metabolic units. I have read thousands of these papers. Many have been exciting to me because of the implications for human health. In contrast to studies published in other scientific disciplines, those in nutrition often have direct relevance to human and animal medicine. I can cite chapter, book and verse on the life-saving qualities of vitamin E described in studies in orthodox journals. It is the only preventer of abnormal blood clotting that is completely safe. It effectively conserves oxygen after heart attacks. It prevents anemia and hemorrhage caused by red corpuscle fragility in newborns.

Where is the doctor who routinely prescribes vitamin E for any of these conditions in preference to drugs? He's rare indeed. The question is, what is being done with the great mass of material related directly to human health which is published regularly in every nutrition journal of the world? Who is compiling and interpreting this invaluable information, and recommending clinical application in surgery, pediatrics, geriatrics, and so on?

Not the nutrition scientist because of their hands-off-medicine policy. Not most doctors nor the medical journals. Nutrition, alas, is an economic issue. Where it means profits, nutrition studies are indeed applied. Veterinarians, in contrast to physicians, always have been receptive to nutrition information and quick to implement it. Nutrition is the cornerstone of animal husbandry; the list of ingredients



until 'all the evidence is in.' Looking back, I think that Adelle Davis, more than any other single individual, helped to reinstitute the concept of taking responsibility for one's own health. I say, "reinstitute," because until 75 years ago, people may have turned to physicians and surgeons to bail them out of emergency situations but generally accepted that staying healthy was one's own business and burden, and eating good food was as important a means as any. Somewhere along the way, about the time miracle drugs began to proliferate in the late 1940's and the giant pharmaceutical industry to dominate medical thinking, it became necessary to go to doctors for "check-ups," i.e. to be told if you were healthy (your own judgment about yourself and your children was no longer reliable). Failing to pass muster, you were prescribed a medical regimen which might give token recognition to the importance of nutrients but leaned heavily on the new chemical armamentarium to really do the job. Medicine is a giant industry now, its simple surgeon-barber-herbalist beginnings lost in the awesome complexities of modern drugs and biomedical machinery. Not much time is spent in

in animal chows reads like the wildest page of health nut magazines. It pays off; good feeds mean healthy stock, i.e., profits.

I don't want to bludgeon you with the obvious, but healthy people, good food, and vitamin supplements don't make money for the medical profession. We are NOT witnessing the spectacle of doctors stumbling over one another in their haste to seize upon and incorporate nutritional truths into their practice. Nor does the A.M.A. aid and abet its members to function with this goal in mind. As a matter of record, the A.M.A. devotes considerable energy and expense to heaping coals upon the heads of those who imply that the road to health may be paved with good nutrition, notably of the execrable 'food-faddist' kind.

What we have in essence is a great and growing body of data, some of it directly applicable to human health, and IT IS HARDLY BEING USED BY THE HEALTH PROFESSIONALS. While nutrition scientists dance their deferential fandango before the medical hierarchy, invaluable studies are gathering dust in library stacks. In the early 1950's, one nutritionist tired of this farce. Adelle Davis wrote a series of books in which she did the unforgivable: she actually drew conclusions -- from nutrition studies which are supposed to be left simmering on back burners until 'all the evidence is in'. She dared to say that since it was shown over and over again that vitamin

deficits caused abnormalities in laboratory animals, there was a damn good chance they would do the same to people. She implied that the average denatured American diet would leave the average laboratory rat scruffy-haired, foul-tempered, and impotent, and maybe it was doing it to us. She cited case after case, from years as a consulting nutritionist working with physicians, of persons made well again through judicious use of food and supplements. Her point was that doctors are rarely educated or interested in nutrition and should not be solely awarded the responsibility to prescribe it. The fruits of the Adelle Davis rebellion are all about us in a remarkable raising of nutrition consciousness over the last twenty-five years, along with the growth of health food publications and shops on an unprecedented scale.

Adelle Davis is considered unprofessional by fellow scientists. Her books were ignored or treated with scorn by the nutrition department faculty at U.C. Berkeley when I was studying there. Why? Because she went off half-cocked on the basis of inadequate studies. She leaped to conclusions on empirical evidence. She assumed medical prerogatives by suggesting specific vitamin and mineral supplements to prevent or treat conditions of ill health.

She also helped a lot of people, myself among them. The trouble with nutrition as a science is that one can't wait



medical schools on food and nutrients as healing forces other than to acknowledge that deadly illnesses like scurvy and pellagra can occur with severe vitamin deficiencies, or to recognize symptoms of inanition and treat them accordingly. Medical effectiveness is equated with surgical and pharmaceutical intervention primarily. Adelle Davis was the first modern nutritionist to make us pause and ask ourselves: Can it be something missing in our diet that is causing the health problems we are experiencing?

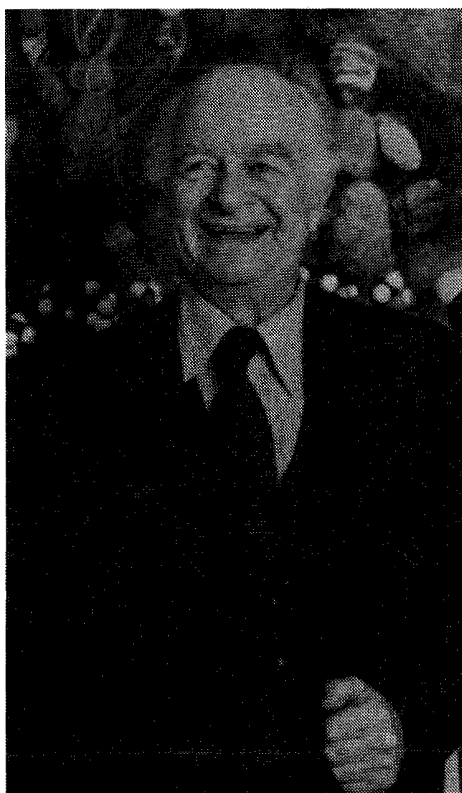
It is to her great credit that, half-cocked or not, she hit the nail on the head more times than not, and thousands of her readers became enthusiastic proselytizers for a do-it-yourself method of gaining health. Now, for someone who has spent a small fortune and a lot of time seeking in vain for a medical solution to his health problems, it is perhaps pardonable if, at his next appointment with his doctor, he'll remark a bit smugly that he started

taking the brewer's yeast that his sister-in-law suggested, his ailment disappeared and it only cost him \$3.99. Multiply that by hundreds of thousands of similar revelations, and it isn't hard to imagine a giant collective clenching of medical jaws.

On the whole, the profession has greeted with something less than rapture the growing public awareness that in humble nutrients may lie medical answers so long in the seeking. Unwilling to acknowledge that just such concepts are essential to a total approach to human health, the medical establishment has largely chosen to ignore them or view them as a threat instead of taking steps to incorporate them into clinical practice. It's a damn shame, really, because a lot of people could have been helped during all this time. The heavy influence of the drug conglomerates is evident: their big profits derive from medicines which they can patent -- not from vitamin and mineral supplements which are non-patentable and can be produced by even tiny companies, or from good food grown on good soil, which isn't the drug companies' business at all.

My own experience may be valid here. I went to a major university to find definitive answers to puzzling and major questions in nutrition and found these still unsolved or sidestepped. I sought in medical circles and literature for evidence of assimilation of promising nutritional data, and found ignorance or hesitation as well as hostility. I'm back at Square One, recognizing a little sadly that the information which has been of the greatest practical benefit to my own health and that of thousands of others has come via the 'food faddists' -- that loosely defined amalgam of naturopaths, herbalists, and assorted laypersons, as well as physicians and researchers who have fallen from grace by virtue of embracing not-yet-proven nutritional therapies -- those who have published their experiences in dozens of health food journals and hundreds of popular books during the last decades. The more responsible and scientifically based of these have done yeoman's service by staying current with the research and popularizing information which medicine has been content to leave in the archive. In a sense, they have picked up the ball where medical and nutrition professionals dropped it, and we owe them a debt.

By making available information on the preventive and therapeutic uses of nutrition, they have encouraged persons to take responsibility once again for their own



Randolph Bufano

health. This often becomes a process with its own dialectics which can lead to a restoration of confidence in one's own judgment and wisdom with regard to bodily well-being.

The opportunity for error is great, for we are dealing with theories rather than established fact. Fortunately, the errors rarely prove fatal when nutrients rather than medicines are used. It is my considered opinion that over the span of the 25 years I have surveyed it, the health food literature has done immeasurable good and comparatively little harm. To the 'renegade' physicians, biochemists, etc. who have added the weight of their seasoned judgment to this literature, I offer my thanks. It can't be much fun being pelted with stones by one's peers. Dr. Linus Pauling, elder statesman of chemistry, early opponent of nuclear testing, and twice Nobel Prize winner, is described as unprofessional because he espouses the 'unproven' use of many grams of vitamin C., i.e., thousands of milligrams daily in contrast with the 60 milligrams recommended by the National Academy of Sciences' Food and Nutrition Board. What, indeed, should a caring scientist do when he sees strong evidence from countless studies that an overlooked, harmless, and inexpensive nutrient may have unique therapeutic value in a number

of serious degenerative diseases? Is he to wait the ten, twenty, fifty years, or never, that it will take for concordance in the scientific community, and over and above that, to wait until medical orthodoxy deems it of sufficient interest to warrant clinical applications?

It may take a major turnabout in the philosophy and economics of medicine before we see a change in its attitude towards nutrition. In the meantime, excellent studies continue to be conducted which only reinforce our realization that it is a loss to the healing arts and to all of us for this information to be essentially ignored in medical practice. It is to the credit of a popular magazine like *Prevention* that it has on its staff writers whose job it is to comb the research literature and report on it in layman's language to its huge readership. The weight of this type of informed reader, who must now number in the millions, has been felt in both the academic and medical world, where parents are clamoring for the application of nutritional wisdom in classroom and lunchroom, and patients are turning to their doctors for vitamin therapy.

Having sought vainly for answers to key questions in the nutrition department of a great university, I know now that none of us can afford to wait for science to issue the 'ultimate truths' before deciding to take actions about our own diet and our own lives. By accepting the incomplete and tentative nature of nutrition data, we can live more easily with the awareness that we will have to do a fair amount of experimenting on our own. We can expect a few risks along the way, but man has been taking risks since the beginning of his existence. It was empirical, not scientific evidence that taught early man to distinguish beneficent from deadly plants, and we still need the empirical, along with the scientific, in our exploration for usable truths. While I am properly skeptical of the popular literature, I am also impressed by the many miracles over the years that I have seen accomplished through nutrition wisely and appropriately applied, sometimes because of the information offered by these writers. The purpose of this newsletter is to offer information on nutrition that can be used to improve health. I propose to use both the popular and the scientific literature for this purpose.

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