

PHYSICAL DEGENERATION AND THE ALLERGIC DIATHESIS

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This presentation is not a scientific case study. Rather, it is an introduction designed to stimulate thought (and hopefully more research) along a path which constitutes the only fundamental approach to the basic problems of allergy and immunology. By that I mean the relationship between inadequate or unbalanced nutrition and a resultant tendency toward the development of the allergic state. I firmly believe that such a relationship exists and hope supporting evidence will develop some of the reasons therefor.

While animal experiments cannot necessarily be extrapolated to human experience, the facts suggest that because of physical degeneration now existing in civilized countries, it may take four or more generations before human beings—if supplied with completely adequate nutrition—can approach a state where health is optimal, immunological biochemistry normal and allergic reactions minimal. The possibility of such a complete recovery from contemporary degeneration is remote—particularly because of increasing chemical contamination of our environment, the pressure of economic

factors, and the steadily mounting demand for packaged foods. Nevertheless, its importance cannot be exaggerated. Meanwhile we are duty bound to teach our patients and the public the fundamentals of good nutrition. Such instruction must also include practical advice regarding selection, preparation and cooking methods to best preserve the nutritive values of all foods purchased. Vitamin and mineral supplements must be prescribed when indicated. From the pragmatic standpoint, this approach often produces surprisingly dramatic results.

ECOLOGY

A study of ecology is essential for an understanding of the physical degeneration afflicting civilized man. A very simple, basic definition of ecology is "the relationship of man, beast, fish, fowl, vegetation and all other forms of life to the living soil and the total environment."

The relatively uncomplicated, although hazardous, life of primitive man and beast—where only the fittest survived the struggle for existence—has been replaced by a complex, artificial and chemicalized civilization posing new and difficult problems of adaptation: and modern medicine has assured the survival of many of the unfit. Food, fresh from fertile soil or from the sea, has been replaced, to a great extent, by refined, processed and preserved produce of far different nutritional qualities. This has occurred because the continuing urbanization of modern man created the need for foods which could be transported long distances and stored without spoilage. And modern



Fig. 1

Africans have superb physical development, including regular dental arches without dental caries, while on native foods which are largely animals, bananas, roots, nuts and honey. (Reproduced by permission from *NUTRITION AND PHYSICAL DEGENERATION*, by W. A. Price, D.D.S.)



Fig. 2

Modernized Africans have rampant dental caries and have often lost the ability to masticate their food. In some tribes the loss of a tooth represents punishment for some misdemeanor. (From *NUTRITION AND PHYSICAL DEGENERATION*, by W. A. Price — Courtesy Price-Pottenger Foundation.)



Fig. 3

Adult female cat, one year old, on raw meat and milk. First litter in pens, 1936. Four kittens, 4 days old. Note full development and activity of kittens. Note smoothness and luster of fur. Inactive kitten second from left is sole surviving kitten in litter of four from cat in Fig. 4. (others died end of four days.) (From research of F. M. Pottenger, Jr., M.D.—Courtesy, Price-Pottenger Foundation)



Fig. 4

Adult female cat 524. On cooked meat (2/3) and raw milk (1/3) for six months and then during pregnancy. 1936 litter. Note dull eyes, poor fur. Those kittens, 4 days old, dead. Living kitten shown in Fig. 3. (From research of F. M. Pottenger, Jr., M.D.—Courtesy Price-Pottenger Foundation)

housewives, many of whom, as a result of inflation, hold part or full time jobs, welcome ready-to-eat cereals, crackers, cookies, canned goods, and even frozen, precooked T.V. dinners as an answer to their culinary problems.

The metabolic effects of these changes in our basic foods — even though poorly understood — demand consideration by the clinician. Deficiencies must be looked for and rectified if possible. Toxic or allergic reactions to the thousands of new chemicals now present in food, air, water, medications and physical surroundings, must be suspected, recognized and dealt with. This aspect has been discussed by many, including W. C. Hucper¹ and Rachel Carson.² T. G. Randolph has made important clinical observations, supported by case reports, of the serious effects of petrochemicals on susceptible human beings.³ Others have supported these findings and have stressed the dangers of suboptimal nutrition and the severe reactions which may result from sensitization to coal tar products.

Prominent among the pioneers in this field is an octogenarian — scarred by many battles — who, for many years, has stressed the vital importance of the nutritional approach to medical problems. Steadfast in defense of his principles, his considered conclusions and his friends, he is now beginning to receive long overdue accolades for his foresight and judgment. I refer, of course, to no other than Jonathan Forman — a gentleman and physician of the old school, of whom we are justly proud. To follow in his footsteps is a privilege.

EVIDENCE OF PHYSICAL DEGENERATION

Government statistics reveal a definite and alarming increase in the incidence of degenerative diseases in civilized countries — particularly notable during the past fifty

years. Outstanding examples are the rapidly increasing number of deaths from cardiovascular diseases and cancer. Dental caries or pyorrhea now afflict one hundred per cent of Americans. Arthritis, osteoporosis and allergy are on the increase. Viral diseases are assuming greater importance and seem responsible for recurrent waves of upper respiratory and gastrointestinal disorders which were unknown 20 years ago. Independent studies have shown a suboptimal intake of protein, vitamins and minerals in most segments of the population. Crowded teeth due to narrowed facial bones and dental arches in civilized man are in marked contrast to the perfect dental arches and teeth of primitives on their native diets. The annual consumption in the United States of more than 100 pounds of refined sugar per person must be significant. Recent studies suggest this may be an important factor in atherosclerosis by stimulating recurrent hypoglycemic episodes, accompanied by relative anoxemia and resultant vascular damage.

As early as 1914, Sir Robert McCarrison suspected nutritional deficiency as a cause of thyroid disorders. His experimental findings supported his thesis and were later extended to other body organs. In 1924 he published a book, "Studies in Deficiency Diseases."⁴ This included extensive observations of animals and birds fed deficient diets. Some of these diets were typical of those eaten by the average Englishman.

Pathological findings included adrenal hypertrophy, together with atrophy of the thyroid, pituitary, thymus, testis and ovary. In addition to virtual disappearance of Peyer's patches in the small intestine, there was thinning of the walls and elongation of both the small and large bowel. (Among other things, this could mean increased absorption of unsplit protein molecules with sensitizing properties.)

Weston A. Price spent most of his life studying primitive tribes in all parts of the world. He was looking for human beings free of dental caries and he found them only in isolated areas. Contact with civilization and adoption of foods of commerce promptly resulted in marked tooth decay plus changes in dental arches and facial form in the next generation. The following observation is of great significance: *When parents with active caries resumed their native diets, their cavities became inactive. Moreover, children conceived, born and raised under these circumstances now had perfect dental arches, wide malar bones and no tooth decay.* Dr. Price's beautiful and dramatic photographs of these natives speak louder than words. They are taken from his classical book, *NUTRITION AND PHYSICAL DEGENERATION*.³ (Figs. 1, 2, 5, 6, 7)

The late Francis M. Pottenger, Jr. made extensive observations of cats given varied diets.⁶ The following quotations are taken from one of his unique papers describing the unexpected and lethal effects of certain combinations of processed and raw foods when fed to cats under controlled conditions.

The experiment stemmed from the fact that we suffered steady mortality among the cats on which we were performing adrenalectomies for the purpose of standardizing adrenal cortex material. We were feeding these animals the meat scraps from the Sanatorium, together with raw milk and cod-liver oil. The scraps consisted of liver, tripe, sweetbread, brain, heart and muscle. We were at a loss to explain the reason, for it had been taught that such a diet contained the substances necessary to maintain animals in a condition of health.

In time, more cats had been given to us than we were able to feed on the scraps from the Sanatorium. We placed an order for raw meat scraps at the market where the Sanatorium meats were bought; these scraps included muscle, bone and viscera.

We at first fed the raw scraps to cats in one particular pen. The change in the animals in that pen compared with the others was almost unbelievable, and demanded explanation; so the present study was undertaken.

Feeding experiments were conducted to determine the effects of raw and cooked meat. Another series of experiments went on to compare the differences resulting from the feeding of raw and processed milks.

RESULTS

(1) Cats fed two-thirds raw meat and one-third raw milk were healthy and reproduced in homogeneity. (2) This was also true of cats fed one-third raw meat and two-thirds raw milk. Cooking the meat of group 1, or substituting heat processed milks for raw in group 2, resulted in heterogeneous reproduction and physical degeneration that increased with each generation. Kittens of the third generation failed to survive six months. Diet E (raw metabolized Vitamin D milk only, from cows on dry feed and from cows on green feed) produced unexpected results, i.e., *rickets and early death of male kittens.*

Vermin and parasites abounded. Skin diseases and allergies increased from an incidence of five per cent in normal cats to over ninety per cent in the third generation of deficient cats. Susceptibility to infections rose markedly and severe osteoporosis was universal. Mortality was high. These cats suffered from most of the degenerative diseases encountered in human medicine, including endocrine dyscrasias. Autopsy findings were revealing.

The precise food factors destroyed by heat processing are unknown. Alterations in the physicochemical state of globulins, albuminoids and minerals, together with partial destruction of vitamins, enzymes and amino acids, may be involved. The former could interfere with digestion and assimilation.



Fig. 5. — Left: Indian from sea coast reared on primitive diet, largely sea food. Right: Son of Indian at left, reared on commercial food. There is evident a marked change in facial and dental arch form.



Fig. 6. — Left: Sierra Indian reared on native diet. Right: Son of Indian at left, reared on foods of modern commerce. The marked change in facial and dental arch form is evident.



Fig. 7. — Natives from islands north of Australia. Note broad arches of girl at right (on native diet) and the progressive changes in the younger sister and brother with lengthening and narrowing of the face and body. (All illustrations from *NUTRITION AND PHYSICAL DEGENERATION*, by W. A. Price—Courtesy Price-Pottenger Foundation.)

Change is shown not only in the immediate generation, "but as a germ plasm injury which manifests itself in subsequent generations of plants and animals." *Four generations on raw meat and raw milk* were required to bring some of the second generation of degenerating cats back to normal. (Figs. 2, 3)

It may safely be concluded that in this group of cats, at least, physical degeneration induced by feeding them a diet containing two thirds of heat-processed food was accompanied by a marked increase in the incidence of allergic manifestations and a significant loss of resistance to infection. These experiments support the concept that allergy and immunology are basically influenced by nutrition.

BIOCHEMICAL INDIVIDUALITY

It seems logical to suppose that with increasing physical degeneration over several generations, inherited deficiencies affecting enzyme systems must assume increasing importance in the health and survival of the individual. This idea—the "genetotropic concept"—has been presented and dealt with at length by Roger I. Williams et al.⁷ in several publications. I agree that, in the past, too little attention has been paid to the mild symptoms and still reversible biochemical changes which are the precursors of definite tissue pathology and malfunction now recognizable as disease.

Dr. Williams has demonstrated that just as no two faces are exactly alike, every individual differs in biochemical makeup and nutritional needs. The necessity for essential nutritive substances such as vitamins, amino acids, calcium, phosphorus, magnesium, potassium and the trace elements may vary as much as tenfold. Therefore, it is obviously impossible for individuals with increased needs for specific

nutriments to have these requirements met by a so-called "average diet" (whatever that may be). In addition, poor selection of food, together with wasteful preparation and cooking methods, almost guarantees the gradual development of nutritional deficiency for the great majority of citizens, regardless of income.

Dr. Williams's observations indicate that those with a deficient biochemical make-up may never be healthy unless they are provided with the necessary nutritional supplements in adequate amounts. This concept must logically include allergic, as well as other degenerative diseases and merits more investigation.

At the biochemical level, Z. Z. Godlowski has presented interesting and very suggestive evidence that allergy and anaphylaxis may be the result of deranged enzyme systems.⁸ His findings may help to explain the effects of malnutrition and of chemicals acting as enzyme poisons on tissue metabolism.

This necessarily sketchy introduction to the subject is admittedly incomplete and those interested should study the references cited. Time does not even permit mentioning the observations of other pioneers in nutrition, ecology and toxicology.

PRACTICAL CONSIDERATIONS

Any attempts to stem and then hopefully reverse this tide of physical degeneration are fraught with great difficulty. Nevertheless, the problem must be faced—and soon—if our civilization is to survive.

From the broad ecological standpoint, the following suggestions seem logical:

1. *Soil Conservation.* We must rebuild our depleted topsoil by returning to it organic matter, minerals and trace elements now destroyed or wasted by being burned,

buried or dumped into our rivers and thence into the ocean. This should include composting city wastes into fertilizer—a process which has been proven economically feasible. Other known methods of soil conservation should be followed.

2. *Harvesting the Oceans.* Fish provide an important source of high quality food. The use of fish flour, recently approved by the Food and Drug Administration, is a step forward. The attempt to find an economical way of growing algae as a food supplement is laudable.

3. *Control of Pollution.*

(a) The smog problem in urban areas has reached serious proportions. As more and more individuals lose their stage of adaptation to the chemicals involved, it becomes an increasing health hazard.

All too little is known about the long term and potentially synergistic effects of the hundreds of chemicals now contaminating our processed foods. Extenders, bleaches, coloring agents, sweeteners, preservatives, antioxidants, anti-caking and anti-foaming agents, clarifiers, and a host of other permitted additives of no nutritional value increase the hazards of such foods.

Not long ago a pandemic of hepatomas destroyed most of the fingerling trout in many fish hatcheries. Laborious research finally incriminated moldy cottonseed meal in the feed as the common denominator. Later, minute amounts of aflatoxin from *Aspergillus Flavus*, plus the presence of a synergist, were proven to be the carcinogenic factors. (Aflatoxin is one of the most potent carcinogens known.)

It is not inconceivable that our lack of concern and knowledge regarding chemical and other food contaminants could result in an explosive outbreak of cancer in hu-

man beings years from now. And even if the cause were then discovered, it would be only of academic interest, since the latent period in man following contact with the responsible carcinogen may be 20 years or more before the development of a clinically recognizable neoplasm. The rapid increase in leukemia afflicting young children and even involving the fetus in utero, suggests we are already in serious trouble. Animal experiments indicating the preventive value of yeast and liver again point to the importance of adequate nutrition in this field as well as others. More research is needed.

No publicity is given to the fact that in some industrial centers, hydrogen fluoride is one of the most toxic components of ambient air. Contamination of air, food and water by insecticides is commonplace in any location where extensive farming is carried on, or where widespread attempts have been made to control tree pests or the fire ant. Recent evidence has revealed that DDT, which is extremely resistant to degradation, has now contaminated our oceans and has pierced the aquatic food chain. Even in the Arctic and Antarctic, fish and their predators are concentrating DDT. Our national symbol—the baldheaded eagle—is threatened with extinction; and so is the lowly pelican, as well as other fowl. (It has recently been discovered that relatively small amounts of DDT over-activate a liver enzyme in birds, which results in the production of fragile shells that cannot withstand the weight of the nesting mother.) Fish from some lakes and streams in the far west now contain as much as 45 ppm, making them inedible and those from the Great Lakes have shown up to 36 ppm, rendering them likewise unfit for food. Obviously the lowly plankton, crustacea and other links in the sea food chain are increasingly contaminated and if not destroyed by the pesticide eventually pass on

ever higher concentrations of the chlorinated hydrocarbons to their predators. Even though steps are now being taken to ban the use of DDT, it may be too late to save the food chain on which mankind depends. Perhaps the recent furor about the population explosion is premature, for man is at the apex of this chain.

Randolph⁸ has stressed the dangers from household air pollution as a result of hypersensitivity to illuminating gas, detergents, "fried" house dust, tobacco smoke, deodorants, insecticides, etc. One simple way to reduce part of this load is to advise against the use indoors and in the garden of any insecticides except rotenones and pyrethrins in sesame oil. The chlorinated hydrocarbons such as DDT, lindane, chlordane, aldrin, dieldrin and the like are dangerous, as are the usual petroleum carriers or the propellant. Sale of such chlorinated hydrocarbons should be banned nationwide.

Malcolm Hargraves, formerly of the Mayo Clinic, has reported that hundreds of cases of leukemia and aplastic anemia gave a history of repeated exposure to chlorinated hydrocarbon sprays, or to paints and solvents, prior to the development of serious illness. He is convinced that such exposures were more than coincidence.⁹

(b) *The Water Supply.* Many of our rivers and lakes are heavily contaminated by sewage, industrial wastes and detergents, as well as by long-lasting pesticides draining into them from sprayed land. Fluorides constitute an additional hazard. Most of these chemicals cannot be removed by ordinary methods of purification. Probably the most serious danger via air and water is from waste products of atomic power plants and the widespread, lethal contamination, which could occur in case of malfunction or accident, particularly in thickly populated areas. This hazard is both

real and imminent. The public should demand that any such plants—if permitted at all—be installed underground.

In farming areas synthetic nitrate fertilizers have seeped into many wells and pose an increasing threat, particularly to young children, of nitrite poisoning.

In addition to controlling pollution at the source, our great need for water calls for its re-use for industrial purposes, the desalinization of sea water and a ban against the use of pesticides and detergents unless they break down rapidly into harmless compounds. Chemical detergents, which resist bacterial degradation, have made bubble baths of some of our streams and are stealthily invading our underground aquifers. In addition, animal experiments have proven that the presence of minimal amounts of detergent permits intestinal penetration by coal tar dyes that would, under normal circumstances, not be absorbed. Research has shown that some coal tar colors, when injected, induced neoplastic changes. These were thought to be commercially safe, since oral tests showed no absorption under test conditions. However, repetition of the oral ingestion experiments revealed dye in the tissues: and eventually traces of detergents in the water supply proved to be the culprit. This observation is an excellent illustration of how even the best "controlled experiments" may sometimes lead to erroneous conclusions.

4. *Dietary Changes.* This suggestion is made with full knowledge of the resistance to be expected, not only from the public, but from other sources as well. Habit, custom, and economics present serious obstacles, but the only alternative at present is that of increasing morbidity and death rates. From the taxpayer's standpoint this means an ever increasing load of taxes for more hospitals, more and more rest

homes, higher and higher medical and nursing costs for more and more prematurely aging, nutritional cripples. The nutritional approach could at least slow down the spiral of increasing taxes which is inherent in "free" medical care.

The need is for diets higher in protein, unrefined carbohydrates, good quality fats, calcium, phosphorus, magnesium, iron and trace elements, as well as a much higher level of water soluble and fat soluble vitamins. B-Complex, C, D and E would seem to be of special importance. These should preferably be obtained from good food raised on fertile soil and consumed as promptly as possible. Unfortunately, in our present civilization such foods are available to only a few; and public ignorance and food habits have created little demand for improvement.

Under the circumstances, physicians and dentists can at least urge their patients to eliminate, or drastically reduce the consumption of "empty calories" exemplified by sugar, white bread, polished rice, spaghetti and macaroni. Since it has been estimated that more than one half of the calories consumed in the United States are derived from these sources, the benefits of this suggestion should be obvious. (Recent reports of allergic reactions in human beings and of toxicity for animals make it unwise to substitute artificially sweetened food or drink for those containing sugar.) In addition such substitutes perpetuate the desire for sweets.

The use of protein from uncontaminated animal, fish and fowl should be encouraged, together with the consumption of safe raw milk. Unsprayed green and yellow vegetables, fruits and salads are of paramount importance. Freshly-ground whole wheat, rye, corn or millet breads without preservatives should replace white flour—whether or not the latter is "enriched" by the addition

of a few of the many nutrients removed in processing.

RECOGNITION OF DEFICIENCY STATES

Until more exact laboratory methods for determining deficiencies of all known vitamins and minerals become economically available, interested physicians can make a fairly sound clinical estimate of the need for some of the important vitamins and minerals.

A simple history of foods customarily eaten is essential. Deficiency in niacin and riboflavin result in a magenta colored or "beefy red," notched tongue often with atrophy of the papillae; in the early stages only the tip and edges may be involved. Tender calf muscles, nervousness and neuritis often indicate a lack of thiamin. Convulsive states, or extreme jumpiness, fatigue, headaches, paresthesias and neuritis suggest the need for pyridoxine, thiamin, magnesium or calcium. They may also indicate the presence of hypoglycemia.

Lack of vitamin A may produce a roughened, dry skin, night blindness and Bitôt's spots on the conjunctiva. Inadequate vitamin C intake may also result in a rough, dry skin.

A deficiency of polyunsaturated fatty acids may be recognized by dryness of the skin and by oval, depigmented areas on the face, trunk and extremities.

Vitamin E deficiency in human beings has only recently been recognized. It is a vital factor in the prevention of hemolytic anemia of the newborn. Nevertheless, for years, d-alpha tocopherol has been prescribed empirically in large amounts by the Shute brothers of Canada and others for the treatment of phlebitis, angina pectoris and other cardiovascular diseases with gratifying results. (Obviously such doses are phar-

macological and far in excess of normal requirements.) The refining of flour has removed a major source of vitamin E from the diet. I personally believe 50 to 100 mg. of d-alpha tocopherol daily, as a minimum, to be good insurance. Except for wheat-sensitive patients, the addition of a teaspoonful of wheat germ oil provides unknown fractions, as well as polyunsaturates.

SUGGESTIONS

We must think in terms of prevention rather than treatment. A crash program to reduce contact with the hundreds of petrochemicals in our environment is of vital importance. The use of DDT, aldrin, dieldrin and other long-lasting insecticides should be forbidden. They must be replaced by rapidly degradable pesticides, plus the increased use of natural predators and the release of swarms of artificially sterilized male insect pests to destroy the reproduction capacity of insect populations lending themselves to such manipulation. Rebuilding good soil, which in turn will produce more resistant plants, is of primary importance.

Allergic patients presenting signs of deficiency usually respond well to a good diet plus vitamin and mineral supplements as indicated. However, food and chemical reactors must be recognized and allergenic foods eliminated or treatment instituted. Yeast is a common offender and forms the base of many B complex supplements. Reactions to chemical excipients in vitamin preparations are frequent.)

As a rough guide, I supply my patients with the following suggestions regarding food intake. Individual modifications, of course, are necessary.

1. Avoid sugar and bleached flours. Use only whole wheat, corn, rye, millet or other

breads made from *freshly ground* cereal grains. Substitute brown rice for white.

2. If available, fresh eggs from chickens raised on the ground and meat, as well as fowl, from sources not fed antibiotics, anti-thyroid drugs, stilbestrol, or other chemicals, are desirable. Until recently, ocean fish were free from insecticide residues; now, many of these are contaminated. However, fish are an excellent source of protein, trace elements and polyunsaturated fatty acids; and those from the oceans are still relatively free from significant residues. Fish should be eaten at least once weekly.

3. When possible, purchase vegetables and fruits raised without the use of modern insecticides and grown on composted soil. All other fruits should be peeled and vegetables thoroughly washed.

4. Concentrate on a diet of milk, meat, fowl, fish, animal organs such as liver, brain, tripe, sweetbreads and kidneys, whole grain bread, green and yellow vegetables, potatoes (boiled or baked), salads and fruits. Certified raw milk, or high quality grade A raw milks, are desirable. So is unpasteurized butter from these sources.

5. Use fresh nuts; increase the intake of polyunsaturated vegetable oils; buy only unprocessed cheeses. Avoid hydrogenated fats and particularly any foods containing fats that might be rancid.

6. Increase the intake of ascorbic acid and bioflavonoids (250-500 mg. daily). Powdered yeast and raw liver provide important sources of B-complex and trace elements. Tablets of desiccated raw liver are useful.

7. Take supplements of calcium, phosphorus, magnesium, trace elements and concentrated vitamins when prescribed.

8. Keep to a minimum any exposure to chemicals such as cleaning fluids, paint

thinners, lacquers, hair sprays, aniline dyes, drugs, preservatives, fluorides, insecticides, antibiotics, tranquilizers, detergents, etc.

9. Avoid specified foods and other substances to which you may be allergic.

COMMENT

After world-wide investigations, Dr. Weston A. Price analyzed the varied diets of natives who were resistant to dental caries and other degenerative diseases. He found that the intake of calcium and phosphorus varied from 2.1 to 8.2 times the minimum daily requirements suggested by the National Research Council; that of magnesium from 1.3 to 28.5 the M.D.R. All primitive diets provided a large increase in water soluble factors over those in modern diets. The fat soluble vitamins exceeded those of modern diets by a factor of 10 at least. (It should be stressed that these were in natural form and not synthesized.)

In the words of Dr. Price, "Almost all primitive diets studied contained at least four times the minimum requirements, whereas the displacing nutrition of commerce, consisting largely of white flour products, sugar, polished rice, jams, canned goods and vegetable fats, have invariably failed to provide even the minimum requirements."

The nutritional approach alone seldom cures allergy but it can bring about marked improvement both in symptoms and in general health. It is my firm impression that it reduces the tendency to develop new sensitizations and improves the response to hypsensitization. It also raises resistance against upper respiratory infections — a most important factor.

The widespread application of good nutritional knowledge can greatly improve the health of future generations. This must include the goal of food grown for quality

rather than quantity, and recognition of the fact that foods vary widely in nutrient content, depending upon soil fertility, mineral balance, processing, preparation, cooking and other factors. Concomitantly, with improved nutrition there should be a marked reduction in the number of human beings born with or developing the allergic diathesis, as well as susceptibility to other degenerative diseases.

It seems to me that all physicians have a serious responsibility in this area. The use of applied nutrition brings great satisfaction to both physician and patient. Of far greater import is the fact that this approach is essential to the survival of our civilization.

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