

*The Nutritional Approach to Allergy and Infection

Granville F. Knight, M.D., F.A.C.A.
Santa Barbara, California



Dr. Knight earned his AB at Dartmouth in 1926 and received his MD from P. & S., Columbia, in 1930. Following graduation he interned at both Presbyterian and Bellevue Hospitals in New York. He is a Senior Attending Officer on the staff of the Santa Barbara Cottage Hospital and Consulting Allergist to Our Lady of Perpetual Help Hospital in Santa Maria. Dr. Knight is active in many medical societies including the AMA, California Allergy Society, Los Angeles Society of Allergy, American Medical Writers Assn., and the Association of American Physicians and Surgeons.

Dr. Knight is a Fellow of the American Academy of Ophthalmology and Otolaryngology, the American College of Allergists, the International Association of Allergists (Founders Group), and is Past President of the American Academy of Nutrition.

SUMMARY

Clinical problems of allergy and infection can not be solved without consideration of the nutritional status of the patient. Nutritional deficiencies lower resistance to infection and predispose to allergic states. Focal infection and recurrent upper respiratory infections aggravate and precipitate allergic reactions. Nonreaginic allergy affects about 95 per cent of the population and is largely unrecognized. This is a most important factor in many clinical conditions. Unless this is appreciated and food or chemical allergens discovered and removed from the environment, nutritional therapy may aggravate symptoms instead of relieving them.

The American Academy of Nutrition has always stressed the practical application of nutritional knowledge. There is naturally a marked variation in the individual approach to medical and dental problems. Each professional man gradually evolves his own technique—for the practice of the healing arts can not be standardized.

In this paper I shall present my own approach to clinical problems encountered in a practice devoted to allergy and otolaryngology. This approach is constantly being modified as new knowledge is acquired.

WHAT IS NUTRITION?

For best results it is important that nutrition be considered from a comprehensive viewpoint. Webster defines nutrition

as "The sum of the processes by which an animal or plant absorbs or takes in and utilizes food substances." Therefore, in the broadest sense, the science of nutrition should include all elements affecting the production and distribution of food, as well as those influencing the health of plants and animals consuming and utilizing such food.

ADVERSE FACTORS

In a discussion of nutrition we must consider factors which affect the quality as well as the quantity of nutrients. These comprise the soil, seed, farming practices, food contaminants and additives resulting from preserving and processing, as well as spray residues consequent upon the application of insecticides in the field, during storage and in the transportation of perishable foodstuffs. Marketing practices, food selection and food preparation obviously affect nutritional values at the consumer level.

To anyone acquainted with the potential damage associated with modern food production, it is self-evident that many of our foods are unsatisfactory nutrients. This is serious enough in itself. The implications are much worse, however, when we realize that most Americans of this generation are already nutritional cripples as the result of poor inheritance and unsatisfactory food intake.

In the words of Roger Williams¹, many are afflicted with "partial genetic blocks." These consist of inefficient enzyme systems requiring relatively large amounts of vitamins, amino acids or trace minerals for normal functioning. Unfortunately, even the best food may not supply adequate quantities for

these individuals. Supplements may be the only answer to their problems—if we are fortunate enough to suspect and uncover their need by noting relief of symptoms following nutritional therapy.

In addition, we are dealing with human beings who are beset with psychological problems, ingrained food habits and prejudices. They must carry on in spite of focal infection, the ravages of allergic states, and the stress of modern life. It is no wonder that degenerative conditions are on the increase^{2,3}.

DISEASE

The approach to illness may be roughly divided into symptomatic and basic therapy. The former consists primarily of diagnosis, the use of specific therapy (if such is available), and the use of modalities designed to alleviate symptoms. Under this heading may be included the administration of antibiotics for suitable infections and analgesics or ataractics for relief of headaches and tension states. Likewise, dental repair work and scaling. Symptomatic therapy is important but meets only obvious needs.

Basic treatment, in addition to the above, includes an attempt to ferret out, analyze and correct, insofar as that is possible, the fundamental reasons for the development of illness. It requires much thought, hard work, willingness to learn, and endless repetition of the question—why?

Why are some families susceptible to cardiovascular disease, or allergy, or cancer? Could these conditions be based upon an inherited, increased demand for one or more nutrients that can not be met by food? Or could they be simply the result of inadequate diets for those individuals? Could excessive emotional strain be a factor? How about inefficient detoxication mechanisms or excessive contact with toxic chemicals acting as enzyme inhibitors? Such chemical contacts are becoming more and more frequent in our modern civilization.^{4,5,6}

We all carry viruses in our bodies; that of herpes simplex is a common example. Why are not all of us forever covered with blisters? Why do so few develop paralytic polio? Most individuals have had more than a casual acquaintance with this virus. Rosenow has shown it is spread by respiratory contact as well as other media, and that during epidemics all are exposed⁷.

What about allergy? The atopic type, which includes asthma, hay fever, neurodermatitis and serum sickness, reflects disordered body chemistry not yet fully explained. It may range from mild symptoms to a serious affliction. It is easily recognized and treatment is usually satisfactory.

But how many professional men are familiar with the non-reaginic type? How many are aware that its protean manifestations include such diverse symptoms as headache, neuralgic pains, muscular aches, disabling fatigue, emotional depression, temper tantrums, alcoholism, addictive eating with consequent obesity, hypertension, colitis, the common cold, increased susceptibility to bacterial infections including tuberculosis, convulsive states and even perhaps a tendency to neoplastic growth?^{8,9,10,11} This knowledge is essential for

rational treatment. The impact of such allergy on the metabolic and nutritional status of an individual may be exceedingly severe. Unrecognized nonreaginic allergy is all too frequently mislabeled psychoneurosis.

On the other hand deficiency states involving vitamins C, A, D, B-complex, E, unsaturated fatty acids and perhaps other unknown heat labile factors may increase allergic tendencies. They probably provide fertile soil for the development of new sensitivities through derangements in body chemistry, even though the exact mechanism is not known. Pottenger's cat experiments¹² are a classical example—an increased incidence of allergy from 5 per cent in normal cats to 95 per cent in the third generation of cats fed wholly on denatured food. Physical degeneration and increased allergic tendencies seem to advance hand in hand.

Although long appreciated by clinicians, it has only recently been experimentally shown that deficiencies in pyridoxine, riboflavin and pantothenic acid interfere with antibody production and thus lower resistance to infection¹³. The effects of insufficient amounts of vitamins A, D and C are better understood.

Thus, inadequate nutrition predisposes to infection and to allergic states: Infection promotes allergy and nutritional inadequacy: Allergy in turn renders the body more subject to invasion by viruses and bacteria, as well as leading to nutritional deficiency. And so we have an interesting and sometimes lethal interplay of forces needing resolution.

THE PATIENT

Let us now turn to the patient. The approach should be sympathetic and with genuine interest. Every case should be a challenge.

A careful and complete history is, of course, essential. This includes the present illness and past history with a system review. A short diet history elucidates the amount of meat, fish, milk (raw, pasteurized or homogenized), eggs, potato, bread (freshly ground, commercial whole wheat or rye, white or enriched), citrus and other fruits, salads, vegetables, fats (saturated and unsaturated), coffee or tea, sugar, candy, soft drinks and sweet desserts consumed daily or by the week. From this information one can roughly gauge the adequacy or inadequacy of the food intake.

Food and drug disagreements, likes and dislikes, are always sought for as a clue to allergy. In addition to direct questions, the symptoms of nonreaginic allergy previously mentioned are discussed. Each patient is instructed to fill out a 48-hour pulse chart. If the spread between the high and low pulse reading for the day is sixteen or more, or the highest rate more than 84, idioblastic (nonreaginic) allergy is suspected.

Psychological tensions are usually left until a later visit when better rapport has been established. Direct and repeated questions as to insecticide exposure in the home or garden are indispensable for uncovering such contacts.

A careful physical examination is naturally done. Particular attention is paid to skin tone, color, roughness, acne,

texture of hair and nails, presence or absence of seborrhea, palm color and moisture. The pulse and blood pressure are recorded at the beginning and end of the examination. The conjunctivae are observed for jaundice, congestion or Bitot's spots.

The nasal mucous membranes are an important index. A dry, red membrane suggests an overactive sympathetic nervous system; pallor without edema the opposite. Congestion with mucopurulent discharge usually means infection; both pallor and edema with excess secretion indicate nasal allergy or infection with an allergic reaction.

The oral cavity is a veritable gold mine of information. Facial and dental configuration suggest good or bad inheritance. Coliform halitosis usually means infection in sinuses, gums, tonsils, lungs, or gastrointestinal malfunction. Dental caries—past or present—is noted. Gingivitis and recession point to deficiency states. A coated tongue is usually associated with reverse peristalsis—cause to be determined. Scalloping of the tongue edge indicates vitamin B complex deficiency; so does a beefy-red or magenta color, a geographic surface, a strawberry tip or atrophy of the papillae.

Increased capillary fragility is often the result of inadequate intake of ascorbic acid and bioflavonoids,^{14,15,16} and calls for increased amounts of these nutrients as well as general nutritional support.

Laboratory work is tailored to each individual. In cases of allergy and chronic sinusitis the following are routine: red cell count and hemoglobin, white blood count and differential; sedimentation rate; cholesterol and protein bound iodine. If insecticide poisoning seems likely, a cephalin flocculation, icterus index and thymol turbidity may be indicated, and followed by a fat biopsy. A Diagnex test for gastric acidity may be helpful in those showing chronic or refractory B complex deficiency.

Skin tests are valuable for discovering inhalant sensitivities to pollens, house dust, etc., but are comparatively useless for diagnosing food allergy.

TREATMENT

Obviously treatment is variable. Specific therapy may be outlined as follows:

1. *Atopic allergy.* Hyposensitization to pollens, fungi, house dust and other offenders by means of injections is very satisfactory. I use high dilutions and have had no constitutional reactions in years. Dust Seal[®] to immobilize house dust has considerable value.

2. *Nonreaginic allergy.* Pulse studies, revealing a rise in pulse rate after food ingestion or contact with specific inhalants, are used for identification and consequent elimination of offenders. After foods have been avoided for several months, the minor allergens may then be reintroduced not oftener than once every five days. In severe cases, sensitive to many foods, a simple lumbar sympathectomy may reduce the number of food allergens to a recognizable and avoidable few.

3. *Infection.* My findings substantiate those of Rosenow and Chapman^{17,18,19}—namely, that an alpha streptococcus (viridans or mitis) is the common denominator of chronic and recurrent infections. These may produce potent toxins. Local treatment of the sinuses is effective. This includes shrinkage, Proetz displacements for the ethmoids and antral irrigation through the region of the natural or accessory ostia. Large doses of sodium ascorbate intravenously and by mouth are helpful. Antibiotics may be needed in severe cases. Auto-genous vaccine may help to solve resistant, chronic problems.

Non-specific treatment includes an adequate diet with avoidance of sugar, the use of certified raw milk, freshly-ground whole wheat or rye bread, eggs as indicated, a moderate intake of fish and meat (including animal organs) and plenty of raw and cooked fruit, vegetables and salads. Fruits should be peeled, celery scraped, and lettuce and other leafy vegetables, if possible, obtained from unsprayed sources or home-grown. The use of sprouted beans is encouraged.

High potency supplements are usually necessary to overcome deficiencies²⁰. These are given in conjunction with yeast or liver to supply unknown factors, enzymes and minerals. Trace minerals are occasionally prescribed.

Digestive enzymes in the form of pepsin, bile salts and pancreatin may be invaluable in some cases; hydrochloric acid and pepsin in others.

Additional approaches include the prescription of adequate exercise, extra rest, weight reduction and discussion of emotional problems. It is important to reduce the toxic load by attention to focal infection in the colon as well as elsewhere. Exposure to tobacco, alcohol, antibiotics, sedatives, insecticides, fluorides, chemicals in foods, smog and gas stoves must be considered from the toxic and allergic standpoints²¹.

Education and continued supervision are essential for best results. It is difficult for many to accept the fact that there is no magic wand and that they must take an active part in their own rehabilitation. With full cooperation, numerous satisfactory results are achieved and a few are almost miraculous.

CASE REPORTS

1. Mrs. F.F., age 33. CC.: Eruption on back, spreading to trunk and groins past two years; itching and congested eyes; edema of lower lids; generalized fatigue; nasal obstruction and sneezing. Ceased smoking 2 months ago without relief; gains weight easily.

PX—Sensitive to house dust, weed pollens and cat hair by intradermal testing. Pulse range from 50-90. Primary allergens by pulse test—milk and milk products. After elimination, pulse range from 50-68. Urinary frequency, fatigue and skin eruption traced to dairy products. Nasal symptoms relieved by injections of house dust and pollens.

2. Mrs. L.F., age 35. CC.: Aching in forehead and left cheek, itching deep in ear; pains in back of neck, legs and feet; nervousness, dizziness, headache, fatigue. Asthma as a child, which disappeared spontaneously. Constipation and mucous in stools all her life. Nervous breakdown after birth

of daughter five years ago. Diagnosed as neurotic. Sedatives helped very little.

PX—Tired-looking but otherwise apparently healthy except for pulse of 100. BP 116/74. Tongue deficient. Pulse range from 78-108. Normal pulse range 70-84 as determined later. Many foods incriminated as allergens. Sympathectomy considered, but will not be necessary. Major allergens beef, commercial bread, citrus fruits, lamb, rice, potato, banana, chocolate, egg, cinnamon. The offending substance in bread has not yet been identified. It may be either egg white, alum or a preservative.

This woman had been told many times that she was neurotic and that nothing more could be done for her. Her reaction to the relief experienced as a result of avoiding her major allergens was most gratifying. Life is now worth living and she feels equal to meeting her daily problems with pleasure rather than dread.

3. Mrs. B.L., age 43. Complains of frequent severe headaches, fatigue and dizziness recurring at intervals of five to seven days; duration about fifteen years. Sister has migraine headaches. Dust contact a precipitating factor. Headaches of migraine type with nausea, vomiting and prostration, often lasting several days. Overweight; depressed.

Remarried 5 years ago. Responsible for nine children. Treated many times for sinusitis. Fond of rare beef and eats it one or more times daily.

Examination essentially negative except for marked increase in capillary fragility, moderate obesity and marked gingivitis, together with a red and atrophic tongue.

A pulse survey revealed a pulse range from 58-120. Skin tests were positive to dust, grass and tree pollens. By means of the pulse technique, her food allergens were found to be beef, milk, cane sugar, and wheat. Avoidance of these foods plus vitamin supplements has wrought a complete change in this woman's life. She no longer has headaches (except for breaks in her routine), has lost 20 lbs. and her refractory gingivitis, which did not respond to local treatment or vitamins is now under control. She looks and acts like a new person and has abundant energy and a new outlook on life.

The pressure of her household and other responsibilities would have justified a diagnosis of migraine headache and sinusitis resulting from tension. These diagnoses had been made, but therapy had been unsatisfactory. She is now free of symptoms as long as she avoids her known food allergens. Occasional breaks in routine may bring on headaches, but the cause is known and the price cheerfully accepted.

235 West Pueblo Street

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