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THE OTOLARYNGOLOGIC PATIENT AND NUTRITION*

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According to the National Research Council, it is a statistical fact that at least two out of three Americans are living on faulty diets. Different figures are given for various studies, and in a recent survey of school children in the State of Vermont (Pierce), certain signs of past or present inadequate nutrition were found in 85 per cent of the children. The physician who yesterday treated thirty average patients consequently saw twenty individuals who were in need of dietetic and nutritional guidance. When to this number are added those who use tobacco, alcohol, caffeinated drinks, and other drugs, to say nothing of their indulgence in irregular habits of living, there remain few patients indeed who would not benefit by sound advice on diet and living habits. It is obvious that responsibility for giving this advice must rest with each individual physician, be he a general practioner or a specialist; for consultation with a nutritionist is not available to, or practical for, the great majority of patients.

To sit down with each patient and verbally elicit a nutritional history is not practical and consumes too much time. To circumvent that difficulty, I use a four-page questionnaire** in fine print, which is given to the patient on the occasion of his first office visit and returned at or before the second visit. The answers can be quickly surveyed and summarized, and thus one may gain a clear picture of the individual's nutritional and living habits, as well as symptoms pertaining to the nutritional and metabolic state. The findings from these questionnaires have been very revealing to me, as well as to the patients, for some of them have not realized how irregular their own ways of living were, until they summarized them on paper.

One of the outstanding nutritional errors of Americans is their excessive use of cane sugar, which is an excellent source of caloric energy but lacks minerals and vitamins. During the year 1944, when sugar was seemingly strictly rationed, the average American consumed 104 grams daily (Gubin), and in 1939 approximately half of the daily caloric intake of the average American consisted of refined sugar and white wheat flour (Cowgill). The latter food is also deficient in vitamins. Not only does sugar lack vitamins, but in the metabolic process of using the sugar the available supply of vitamins of the B group is quickly used up, and a vitamin deficiency state may ensue. This was dramatically illustrated in the recent case of a young lady of good family, living on an essentially normal diet, except for

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** The space allotted to this article does not permit publication of the questionnaire or details concerning its use. Copies of the form are available on request. Similar history forms have been described in the literature by Moose, Roberts, and Spies.

the fact that she worked at a soda fountain and partook heavily of cane sugar in the form of ice cream, milk shakes, and sweetened drinks. She presented a typical picture of riboflavin deficiency with glossitis and fissuring at the angles of the mouth. In addition she had been suffering with asthma and hay fever for several years. Oral riboflavin therapy caused prompt healing of the mouth lesions, and additional nutritional guidance also effected relief of the hay fever symptoms.

Vitamins have lost a degree of their former mystery, and we now know that some of them are intimately associated with the enzyme systems in body metabolism. For example, thiamin aids in cellular oxygen uptake, and it has been demonstrated in pigeons that when it is deficient, pyruvic acid will accumulate in brain cells. In humans there is also an increase in blood and tissue pyruvate (*Nutrition Reviews*). If thiamin deficiency produces such profound changes, and riboflavin deficiency can produce ulceration of the lip margins, it is quite likely that a grossly deficient diet will produce other severe changes in the tissues of the ear, nose, and throat. It is to be hoped that eventually these effects can be better demonstrated and classified.

Much has been said and written in recent years about the importance of psychosomatic factors in aggravating the symptoms of many patients. Recent reports (Williams *et al.;* Keys *et al.*) have shown that certain of the symptoms of neurosis can be produced experimentally by diets deficient in some of the B vitamins. Thus when evaluating a patient's complaints we should also evaluate his diet, for some of his feelings may be due merely to impaired nutrition and not to organic disease or a functional neurosis.

It is not my purpose to infer that one group of food factors, such as the vitamins, is the all-important thing, for in recent years the role of proteins in metabolism has also received special attention, as is attested by the increased use and study of amino-acid preparations, and we are now beginning to understand the function of some of the individual amino acids. A diet history form enables the practitioner quickly to determine whether the patient receives too much or too little protein and the approximate biologic value of each type. Mineral intake may also be readily evaluated.

Another common American evil is self-medication, and of this the laxative habit is perhaps the foremost. Laxatives constitute a definite nutritional hazard in that many times they interfere with digestion and absorption of certain essential foodstuffs, the most classic example, of course, being the effect of liquid petrolatum in preventing absorption of fat-soluble vitamin A. In many cases advice about simple hygienic habits to replace the need for cathartic drugs will be very successful, and it is doubtful that specialists in colon diseases will object to this advice being given, for the otolaryngologist is not treating colon disease but is merely advising the patient to abandon an unnecessary, health-destroying habit. Salicylates and sulfonamides, besides their direct toxic action on tissues, may also interfere with vitamin metabolism.

Allergic individuals have been found to benefit by nutritional correction. I do not refer to elimination of allergenic foods but to correcting the entire dietary so that the body has opportunity for normal nutrition. The idea that nutritional deficiency or imbalance might be a cause for an allergic state is not new, for Russell Wilder has stated, "Yet some evidence suggests that allergy itself may be occasioned by unbalanced diets." The nutritional approach to treatment of allergic states will be reported in a separate study, so no further mention will be made now.

I have found patients who have been placed by physicians on very restricted diets or potent

drugs months or years before, and even after the need for the diet or treatment may have expired, the patient continues the program. This is not uncommon, and unless a careful history is elicited, the fact may be overlooked. Spies has shown that so-called special diet programs, which we as physicians have used for many years, are often deficient diet programs.

Not only is the nutritional history idea helpful to the physician, but the patients are usually gratified and pleased that their doctor will take such a detailed interest in their health. It can be adapted to almost any field of medical practice, and those who have used the plan have found it very helpful. I personally feel that if I should fail to consider my patients' nutrition carefully, I would often rob myself of helpful diagnostic criteria, and in turn inadvertently withhold from the patients essential help and advice. Otolaryngology has passed through several overlapping phases of therapy, usable features of each, of course, remaining to this day. The antiseptic era has come and gone. Then came the anatomical (surgical) era, to be followed by the immunologic period, and it, in turn, by the chemotherapeutic one. Now we are in the midst of the antibiotic age, but the nutritional era, which has waited in the background for many years, seems about to come of age.

SUMMARY

A brief survey has been presented showing the close relationship between faulty nutrition and some of the common conditions seen in otorhinolaryngologic practice. The benefits that accrue, both to the physician and to the patient, from a detailed nutritional history are stressed, and the suggestion is made that the elicitation of the history is facilitated by using a comprehensive, yet simple, printed form which the patient can fill out at home. The method is adaptable to fields of practice other than otorhinolaryngology.

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