Dental Caries and Paradental Disturbances

III. The Dietary History and Its Value in Dental and Medical Practice

By

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In the course of studies being carried out in the College of Dentistry at the University of California on the relation of diet to dental problems an endeavor has been made to secure as accurate a dietary history as is possible from the patient, or from the patient's mother in case of a child. Since few of us recall many details regarding our food habits before the age of 15 years or so, whenever possible, even in the case of adults, we have interviewed the patient's mother (personally or by correspondence) regarding these early years.

We were fully aware, before we attempted to take dietary histories of patients, that the experience of most persons, who have endeavored to learn what a person's food habits have been by questioning the individual, has been rather disappointing. But we were very anxious to secure such data so have attempted to work out a technique which gives a by and large estimate of an individual's nutritional background. As a result of this experience it is believed that in most instances it is possible to secure a fairly accurate (in a relative sense, of course) estimate of the present and past nutritional record of an individual, provided sufficient time, and a moderate amount of tact and diplomacy are used.

However, it is not intended to give the impression that the degree of accuracy of interpretation of results, such as one expects in animal research, is possible. But the data have shown that it is possible to say in most instances whether or not unsatisfactory nutrition may be a factor in the etiology of the disorder, which has brought the patient to our attention. Furthermore, it is possible to evaluate the various dietary factors (in a general way) which in turn gives a rather clear picture as to which dietary essentials have been present in smallest amounts. Paper IV of this series will discuss the problem of the evaluation of the dietary history.

The fundamentals of an adequate diet and the foods supplying them have been known for several years. But a detailed dietary study of approximately 450 persons suffering from various dental and medical disorders has shown that very few of these persons are taking a satisfactory diet. In most instances studied the reason was not a financial one. The reason appeared to be a lack of an understanding that one of the prerequisites for optimum health is that the diet should contain liberal amounts of all dietary factors. It is fully recognized that a diet may contain adequate (liberal) amounts of all dietary essentials but, due to the body's failure to assimilate them, malnutrition or even deficiency diseases may result. It cannot be stressed too often that the mere fact that an individual is not suffering from one of the deficiency diseases is no indication that his (or her) diet is optimum from a nutrition standpoint. Although we fully appreciate that (1) poor mouth hygiene, (2) endocrine disturbances, (3) hereditary factors, (4) developmental defects, (5) general health and (6) lack of professional care, often complicate dental problems, we question whether the newer knowledge of nutrition is as yet being applied by the majority of persons; we do not believe that optimum nutrition on a large scale over a period of years (except among

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certain primitive peoples) has been given a chance to show what it can do in the prevention of dental disorders. However, it appears that there are certain dental problems which are primarily inheritance problems over which nutrition has little or no control.

An example in point: certain enamel problems. That problems over which nutrition has little or no control. Dental problems which are primarily inheritance and in many instances does set a limit to what a person is capable of from a health standpoint. Economics may or may not complicate one's health problem.

In the light of the experience in taking about 450 dietary histories, a series of questions has been formulated which forms part of this paper. No one is more cognizant than the author of the fact that the usual answers to questionnaires are frequently not of great value, but it is not intended that this set of questions be given to a patient. They are for the guidance of the dentist, the dietitian, the physician, or other persons sufficiently trained to take dietary histories. Naturally all questions do not apply to all patients. As soon as one is familiar with the many factors which may enter into the nutritional background of an individual, the questionnaire can be dispensed with, but until one is familiar with the technique it serves as a reminder of important points.

The questionnaire is divided into several parts: Part I consists of eleven questions which apply to the diet and health of the mother and also to the general health of the family. Part II (to be answered by the mother, if possible) is concerned directly with the food habits of the individual up to about 15 years of age. This section is further divided into two parts: (1) dietary habits up to the age of 6 years; (2) from age 6 to 15 years of age. Ages are relative of course. Part III is devoted to "Some Health and Hygiene Factors" which may or may not complicate the nutrition problem (to be answered by the mother, if possible). Part IV consists of questions to be answered by the patient, i.e., food habits in general after 15 years of age. Part V is composed of questions relative to "Health and Hygiene Factors" which may have complicated the nutrition problem from the age of 15 to the present time. In all instances the age division is relative. It has been found that the majority of persons interviewed recalled in a general way their food habits after the age of 12 to 15. They did not remember details of menus of course, but any individual even before the age of 12 knows whether the family lived on a ranch (and the kind of a ranch, fruits, stock, wheat, or dairy, etc.) a small farm, in a village where it was possible to have their own cow, a few chickens, and possibly a few fruit trees, or whether the family lived in a city where all foods had to be purchased. This information is of importance in a nutrition history due to its bearing upon the food supply of the family.

Unless the income is rather large such foods as milk, meat, butter, eggs, fresh or canned vegetables are not used so abundantly, due to the cost, as they are when available on a farm. In other words, in many instances all that is necessary is to secure the "nutritional set-up" of a family, and with a moderate amount of experience one can estimate with a fair degree of accuracy, as human studies go, what the food supply has consisted of. Personal likes and dislikes must always be taken into consideration; an abundance of food of high nutritive value may have been available but due to a personal idiosyncrasy (not necessarily an allergy) the individual has not taken the type of diet he or she could so easily have taken.

If the market orders of a family appear to contain an abundance of high nutritive value foods, this does not necessarily mean that an individual has taken a highly satisfactory diet. But if the market orders over a considerable period of time are known to have been inadequate (and there has been no outside source of food) naturally the diet of the individual members must have been inadequate. The statement that all persons sat at the same table and must have eaten the same diet has long been known not to be true; amount of food eaten and likes and dislikes complicate the problem.

Not infrequently a person has had two or more periods in his life from a dietary standpoint. For example, an individual may have been born on a ranch and lived there for the first 15 years of his life. Milk, eggs, butter, fruits and vegetables were abundant; he liked these foods and ate liberal amounts of them. He was out of doors a great deal especially in summer so sunshine played its part as a source of vitamin D. No severe illnesses complicated his childhood. From the age of 15 to 40 he may have lived in a city with an entirely different set of conditions as regards his food supply and outdoor life. These details are very important from the standpoint of a dietary history.

Another person may have had an entirely different childhood even though he did live on a farm. He may have had a long series of illnesses which not only complicated his nutrition problem but also kept him from leading the active outdoor life of a country child. Another patient may be one of a family of six or more children who lived in a city on a small income. Dut to expense, milk, butter, cheese, eggs, meats, fresh or canned fruits, and vegetables had to be used in small quantities; cereals and their products being less expensive foods, had to be used in greater abundance. The mother may not have known enough about food values to spend the food money as wisely as it could have been spent. Cereals and their products are primarily energy foods. If a patient recalls that from an early age he has taken either or both tea and coffee, one is fairly safe in estimating that less milk has been consumed than is believed necessary for a child, due in part to the limited quantity of the fluid intake. In other words, each patient must be considered as an individual. It often takes considerable time and patience to learn the many factors which have played a rôle in an individual's nutrition-set-up.

**DIETARY HISTORY**

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<tr>
<td>Width-Weight:</td>
<td>(Consult Width-Weight Tables for Boys and Girls; Men and Women: of Helen B. Pryor, M.D., Stanford University Press, Stanford University, California)</td>
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**PART I**

The following 11 questions apply to the MOTHER of the patient, or to the general health of the family.