# EDITORIALS

### *THE FIRST YEAR OF* DIABETES

With this issue, the American Diabetes Association completes the first year of publication of its Journal. It is the hope of the Editors, shared by the Editorial Board and Staff, that DIABETES has measured up to the expectations of the members of the Association and other readers.

The Editors are sincerely interested in receiving comments and constructive criticism in regard to both contents and format as they have appeared during 1952. Contributions will be welcomed whether original scientific papers, review articles, biographical and historical notes, descriptions of technics, or correspondence. Each paper submitted will be studied by selective members of the Editorial Board and, if judged suited to the interests of readers of DIABETES, will be published promptly.

The program of the Annual Meeting of the Association is the main source of the scientific papers published in the Journal. Thus, the Program Committee is in a large measure responsible for the character of the contents of DIABETES. The Committee is conscious of this two-fold responsibility and it also is glad to receive comments in regard to the programs of past years, as well as suggestions in regard to the program of the meeting to be held in New York, May 30 and 31, 1953.

Although not formally announced heretofore, Mr. T. J. Davin has recently been added to the Staff as the new Managing Editor and is demonstrating his ability to continue the high standard previously established by the Journal.

DIABETES has now passed through its phase of infancy. As it matures to meet the challenge of the future, it is hoped that it will serve, with increasing success, physicians and other scientists in their efforts to advance knowledge of disorders of metabolism and especially to promote the welfare of diabetics.

### *"FREE DIET" FOR DIABETES*

The paper by Larsson, Lichtenstein, and Ploman in this issue deals with a controversial subject. Members of the Editorial Board who hold different views present herewith their comments, pro and con.

It should be pointed out that the term "free diet" as used by these authors, has a limited meaning. They do not approve the use of sweets and other dietary indulgences. "Free diet does not mean freedom from control."

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PRO

Larsson and Ploman have rendered a notable service in their completion of the paper, which was begun by the late Professor Lichtenstein as a definitive summary of extensive experience in the treatment of juvenile diabetes mellitus in Sweden under a regimen which he inaugurated in his clinic more than twenty years ago.

Since the discovery of insulin, cumulative experience with its use has decreased the disparities that existed among various schemes for diabetic management practiced in different parts of the world. At present, the issues of disagreement among well-qualified clinicians on principles for diabetic management are more apparent than real, with far more points of agreement than of disagreement in their reciprocal criticisms. All agree that the immediate essentials for the treatment of juvenile diabetes are the promotion of good growth and development, strict vigilance during periods of changing insulin requirements to avoid the acute complications of ketonemic acidosis and coma, and the maintenance of a feeling of good health and well-being. Divided opinions on how these objectives can best be attained actually are mainly concerned with the degrees of glycosuria deemed permissable, rather than with details of dietary formulas.

Nearly everywhere, diets now prescribed to be measured for diabetic patients correspond closely in composition and quantity to the diets deemed optimal, from the point of view of nutritionists, for healthy nondiabetic persons of the same age. When normoglycemia is held to be of primary importance, the prescription of a measured diet is desirable, or essential, for the practical purpose of making easier the adjustment of insulin dosage to minimize the risks of hypoglycemic insulin reactions.

The term "free diet" as used by Stolte and Lichtenstein and their many followers has provoked much controversial debate, sometimes stormy and acrimonious. The term itself is ambiguous and inexact, but it has the practical advantage of brevity and wide acceptance with a carefully defined meaning, and its use will probably continue. The term denotes a more or less self-selected diet, unmeasured but eaten within reasonable limits of appetite, and in accordance with family habits and the family table (granted, of course, that the latter is adequate). Those who recommend this so-called unrestricted normal dietary regimen have repeatedly stated that they do not condone reckless excesses or gross irregularities in eating habits. Lichtenstein reported long ago that such self-selection of food among his patients led to an average total consumption which, over considerable periods of time, corresponded closely to the amounts that might have been prescribed to be measured and eaten each day. With food intake varying according to appetite, however, insulin dosage must be adjusted frequently to allow continuous, or almost continuous, glycosuria as a safeguard against hypoglycemic reactions and also to avoid excessive glycosuria (with attendant polyuria) and to avoid the development of ketonuria. So far as the immediate consequences of such a regimen are concerned, there is abundant evidence that hyperglycemia per se does not lead to acute manifestations of metabolic imbalance. Metabolic balance studies on diabetic subjects over short periods of time have shown that the anabolic effects of insulin will sustain positive balances (i.e., storage) of nitrogen and minerals needed for growth despite continuous glycosuria; further evidence on this point is afforded by the records of excellent growth and development throughout childhood among the patients reported by Lichtenstein and his co-workers.

Opinions differ as to what etiologic factors are involved in the slow evolution of the late complications of degenerative disease in diabetic patients, and as to whether long-continued hyperglycemia is in fact a critical factor. The classification of patients into categories according to the degree of "control" is fraught with the obvious possibility of errors of interpretation when investigators differ in their definitions as to what constitutes good or bad clinical control; also, when there is so much uncertainty regarding the conduct of patients during periods of self-management when not under close medical supervision. Among such groups it is obvious that many factors other than mere levels of glycemia or glycosuria are operative. Clinical practices in diabetic management, both with and without strict dietary supervision, have greatly improved and the hazards of infection have greatly diminished during the past ten years—or even five years—with the advent of antibiotic- and chemo-therapy. It is likely that another twenty years of observation may be necessary for adequate evaluation of this important problem.

—GEORGE M. GUEST, M.D.

## CON

One welcomes to DIABETES the contribution of Larsson and Ploman from Lichtenstein's clinic in Stockholm because the paper provokes discussion as to the best type of dietary treatment for diabetic patients not only in childhood but also in later life. It is refreshing to note that the authors encourage their patients not to indulge in excesses or gross irregularities in diet. However, proponents of the "free" or "unrestricted normal" diet would admit that, despite a certain amount of standardization and uniformity which may develop naturally after a time, there is inevitably more variation in food intake from day to day on such a program than

if definite amounts of food are prescribed. Furthermore, with less restricted diets, patients are more apt to take concentrated carbohydrate in forms difficult for even the best controlled diabetic to utilize.

Diets for diabetic children and adults should be thoroughly adequate particularly as regards protein, minerals, vitamins and calories. This can be arranged without difficulty by definite dietary prescriptions in which the amount of carbohydrate and of total calories are kept within certain reasonable bounds. The uniformity and constancy from day to day which follow allow a much better opportunity for establishing the insulin requirement than does the variability of the unrestricted diet.

It is natural that those clinicians who advocate free or unrestricted normal diets also maintain that hyperglycemia and glycosuria are not harmful as long as ketosis is avoided. Furthermore, often they teach that the late cardio-vascular-renal and nervous system complications of diabetes are not preventible by careful control of the diabetic state but that they will occur anyway after a sufficient number of years of diabetes.

At the outset, it must be stated clearly that the main point is not whether hyperglycemia and glycosuria are in themselves harmful. They may well be injurious because of disturbances in fluid and electrolyte balances which they cause. However, the chief reason for directing attention to hyperglycemia and glycosuria is that they are convenient and reliable indicators of underlying metabolic abnormalities. They are way-stations on the road to ketosis. The clinician must decide whether he will set as his goal the mere avoidance of ketosis or whether he will attempt to approach the normal more closely by avoiding also hyperglycemia and glycosuria in so far as practicable.

To find reliable answers to the basic questions which have been raised, it is not enough to follow children over 5, 10 or even up to 15 years of diabetes and to be impressed that during such periods those under observation appear to be well and to have developed properly. One must take pains to follow such patients over 15, 20, 25 or 30 years of diabetes and at the end of these long periods attempt to discover whether those patients who have maintained the best control of diabetes have the least complications in the vascular and nervous systems and those whose control has been poorest have the most extensive complications. One cannot draw valid conclusions from a single patient or from small numbers of patients but when truly large groups with onset of diabetes under the age of 25 years and duration of the disease over 15 years are studied, the conclusion is inescapable that consistently poor control usually brings a high incidence of retinitis, nephropathy, vascular calcification and neuropathy. On the other hand, careful control usually brings the reward of relative freedom from complications.

Proponents of the free diet maintain that psychologic trauma is lessened when patients are allowed a free choice of food and permitted to live an unhampered life. This may be true to some extent but often this aspect of the problem is overemphasized. At any rate, in the long run, such deleterious effects as these are of minor importance when compared to the physical damage seen after many years of poor control. Nothing is more disheartening than to see an individual in his thirties or forties who after 15 or more years of diabetes is blind or nearly so and has extensive vascular-renal disease with hypertension and nephropathy.

Uncontrolled diabetes is not a benign condition. It is a foe worthy of respect. Based on painstaking studies of large groups of patients, the conviction is growing that proper treatment consists in the supplying of a thoroughly adequate yet carefully controlled diet with sufficient insulin to keep the blood sugar as nearly normal and the urine as nearly free from sugar, as is possible without producing frequent or severe insulin reactions. "Ideal" control is practically unattainable with the means of treatment now available; of necessity one achieves varying degrees of partially adequate control. However, although one rarely if ever achieves the ideal, if one sets a lower goal, the results are almost certain to be less satisfactory.

—ALEXANDER MARBLE, M.D.

## *THE MENTION OF* DIABETES

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To those firms who shared our confidence in the appeal and acceptance of DIABETES during its first year, we offer our appreciation.

Members of the ADA and readers who find information in these pages are aware of the contribution which these advertisers make to our common goal of disseminating knowledge of the nature, diagnosis, and treatment of diabetes and its complications to the practicing physician.

When corresponding with advertisers, mention of the fact that their message has been seen in DIABETES can do much to confirm their opinion of this magazine as a medium reaching physicians and scientists in this and other countries.