

EDITORIAL : VAN DIE REDAKSIE

SOUTH AFRICAN JOURNAL OF NUTRITION

In this issue of the *Journal* we publish, for the first time, the *South African Journal of Nutrition* as a special supplement to the *South African Medical Journal*. This is an important event. It means that we are witnessing the birth of a South African Journal of Nutrition which will, it is hoped, become a regular feature of medical publication in this country. It also means that we are creating an effective organ for the Nutrition Society of Southern Africa—a society whose members have been actively engaged in the fields of human, animal and plant nutrition; food production and technology; dietetics; agriculture, and other aspects of food and nutrition science.

In the past the Nutrition Society published the Proceedings of its biennial congresses in the form of a special volume issued to its members. In 1964 the fourth issue of the Proceedings was published by the *South African Medical Journal* and distributed not only to all the members of the Nutrition Society, but also to all members of

the Medical Association of South Africa and to all the important medical libraries and editorial offices all over the world. Now we have gone a step further by reaching an agreement in terms of which there will be close cooperation between the Medical Association of South Africa and the Nutrition Society of Southern Africa in the matter of publishing *four* issues of the *South African Journal of Nutrition*, which will be the official organ of the Nutrition Society, every year. In every alternate year one of these supplements will be the Proceedings of the Congress of the Nutrition Society.

This is an undertaking which will serve a very important scientific purpose and which will at the same time add yet another prestige publication to the list of scientific publications produced in this country. The wholehearted cooperation and support of every member of both the Medical Association of South Africa and the Nutrition Society of Southern Africa in this undertaking will be greatly appreciated.

SUID-AFRIKAANSE TYDSKRIF VIR VOEDING

In hierdie uitgawe van die *Tydskrif* publiseer ons, vir die eerste keer, die *Suid-Afrikaanse Tydskrif vir Voeding* as 'n spesiale byvoegsel tot die *Suid-Afrikaanse Tydskrif vir Geneeskunde*. Dit is 'n belangrike gebeurtenis. Dit beteken dat ons die ontstaan beleef van 'n Suid-Afrikaanse Tydskrif vir Voeding wat hopelik 'n gereelde faset van mediese publikasies in ons land sal word. Dit beteken ook dat ons 'n doelmatige mondstuk skep vir die Voedingsvereniging van Suidelike Afrika—'n Vereniging waarvan die lede aktief betrokke is in werk op die gebiede van menslike, dier- en plantvoeding; voedsel-produksie en tegnologie; diëtkunde; landbou, en ander aspekte van voeding en voedingsleer.

In die verlede het die Voedingsvereniging die Handeling van sy tweejaarlikse kongresse in die vorm van 'n spesiale uitgawe vir sy lede gepubliseer. In 1964 is die vierde uitgawe van dié Handeling gepubliseer deur die *Suid-Afrikaanse Tydskrif vir Geneeskunde* en versprei, nie net na al die lede van die Voedingsvereniging nie,

maar ook na alle lede van die Mediese Vereniging van Suid-Afrika én na al die belangrike mediese biblioteke orals oor die wêreld. Nou het ons nog 'n stap verder gegaan deur 'n ooreenkoms aan te gaan in terme waarvan daar nou samewerking tussen die Mediese Vereniging van Suid-Afrika en die Voedingsvereniging van Suidelike Afrika sal wees ten opsigte van die publikasie van vier uitgawes per jaar van die *Suid-Afrikaanse Tydskrif vir Voeding*, wat die amptelike orgaan van die Voedingsvereniging sal wees. Gedurende elke tweede jaar sal een van hierdie byvoegsels bestaan uit die Handeling van die kongres van die Voedingsvereniging.

Dit is 'n onderneming hierdie wat 'n belangrike wetenskaplike doel sal dien en wat terselfdertyd nóg 'n prestige-uitgawe sal toevoeg tot die lys van wetenskaplike publikasies in ons land. Die heelhartige samewerking en ondersteuning van elke lid van die Mediese Vereniging en van die Voedingsvereniging om van dié onderneming 'n sukses te maak, sal ten seerste op prys gestel word.

DIET FOR DIABETICS

Following is a prescription from the Papyrus Ebers, approximately 1500 B.C.:

<i>A medicine to drive away the passing of too much urine</i> ¹	Prescription:
Cakes	Branches of Qadet plant, $\frac{1}{4}$
Wheat grains, $\frac{1}{8}$	Grapes, $\frac{1}{8}$
Fresh grits, $\frac{1}{8}$	Honey, $\frac{1}{4}$
Green lead earth, 1/32	Berries from uan tree, 1/32
Water, $\frac{1}{2}$	Sweet Beer, $\frac{1}{6}$
Let stand moist; strain it; take it for four days.	Cook: filter and take for two days.

Aretaeus, who lived in Cappadocia in Asia Minor during the second century A.D., recommended milk with cereals, starch, autumn fruits, and sweet vines. Honey was frequently prescribed. In the 18th century meat was considered a specific therapy. Some thought that the diet should be rich in sugar, to replace that lost in the urine. Opposite reasoning suggested sugar-free diets. Bouchardet in 1857 noticed that his patients improved during the period of food deprivation at the time of the German blockade of Paris in the Franco-Prussian war, and hence

*Please note that the series no. of this *Journal* is 11, and that the issue of 13 March, incorrectly numbered 11, should have been no. 10.

came to advise fast days. The treatment of diabetes by severe caloric restriction was later further popularized by Van Noorden, Naunyn and F. M. Allen. Under Allen's leadership, patients were fasted until all glycosuria had disappeared; feeding was then very cautiously restarted, but the reappearance of glycosuria was an indication for further fasting. Although many subjects suffered from severe undernutrition, some were enabled to survive until 1922, when insulin became available.

Following the advent of insulin, diabetics remained on strict rations, and much discussion continued regarding the best proportions of the basic foodstuffs in the diet. To this day some authorities insist on strict and exact dieting schedules, although it is doubtful whether many of their patients carry out their precise orders. It gradually became clear, however, that diabetics taking insulin could remain perfectly well with almost no restrictions; the pendulum then swung over and other authorities started to allow 'free' diets with virtually unrestricted foods, provided only that symptoms and ketosis were avoided.

Controversy between the strict and free dieters, and those who steer a middle course, still continues. Arguments in favour of strictness and precision are:

1. That it protects from overweight, from symptoms such as nocturia and pruritus, from infections of the skin and other organs, and from ketosis.
2. That it allows normal growth.
3. That it tends to prevent or lessen vascular disease associated with diabetes. This is extremely difficult to prove, since no study has been made on two groups of exactly comparable subjects, differing only in strictness of their dietary control. Many reports have certainly suggested that badly controlled patients attending one or other clinic get more vascular disease than well-controlled ones. In these various reports, however, although the patients may have been well controlled, the observations themselves were not.²

The work of Dunlop and his colleagues,³ from Edinburgh, comes nearest to the ideal comparisons of two regimens. They studied concurrently 50 patients on a free diet and 40 on a carefully restricted diet. Their observations were too short to allow them to draw any conclusions about vascular disease, but, during the five-year trial period, the authors felt forced to change 11 of the 50 original free dieters to a restricted diet because they were doing so badly, either on account of mounting requirements of insulin, frequent hypoglycaemic attacks, obesity, or pruritus.

Arguments in favour of free diet are:

1. It is much more pleasant for the patient (and easier for the doctor).
2. It makes no difference to the prognosis.
3. It lessens the likelihood of hypoglycaemic attacks.
4. The patients of the strict dieters do not obey their doctors anyway. There is some truth in this—even the senior members of the Joslin Clinic admitted that only 14 per cent of their patients followed instructions carefully for any length of time.⁴

The middle course seems to be the logical answer. In other words, the diet should be controlled, especially as regards total calories and the manner in which they are spread throughout the day. Within each calorie allowance, the carbohydrate and fat portions are moderately carefully calculated, though not actually weighed, while protein is rather liberally allowed. The aim is to maintain the blood sugar between 100 and 200 mg. per 100 ml. and to avoid hypoglycaemic episodes.

Specially constituted diets have been claimed to have beneficial effects in patients already suffering from diabetic vascular disease. The Kempner rice diet contains very little fat and little protein or salt, and has been said to produce improvement in diabetic retinopathy. Van Eck⁵ also used a low fat diet (20 grams daily) and observed that retinal exudates cleared up in many cases. King and Dobree⁶ confirmed these findings, using a diet containing 20 grams of animal fat plus 60 grams of unsaturated vegetable fat daily. Visual acuity, however, was not improved by the clearing of exudates.

Kinsell and his colleagues⁷ found improvement in peripheral vascular disease on diets in which all fat (20 grams a day) was supplied in polyunsaturated form. Conversely, Fanconi *et al.*⁸ reported a remarkably high incidence of nephropathy in young diabetics who had been maintained and well controlled on diets high in fat. Fat is not invariably deleterious, as was beautifully illustrated by Johnson and Rynearson's thin diabetic man⁹ whose diet had at first contained 150 grams of animal fat and later 250 grams for about 30 years. He had no recognizable vascular disease.

There is as yet insufficient evidence that the constitution of the diet affects the development of diabetic angiopathy.

The position with regard to coronary artery disease, and perhaps peripheral vascular disease, is a little different. The coronary atheroma of diabetics appears to differ in no way from that of non-diabetics, except that it is even more common. If we believe that a diet low in total fat, or in which unsaturated fat is largely substituted for saturated fat, is of any value in the prevention and treatment of coronary disease, then such a diet should be recommended *a fortiori* for diabetics of all ages and both sexes. Until very recently most published diets for diabetics contained rather a high proportion of animal fat. Although the position is certainly not clear, it seems to us reasonable and prudent to recommend a lower total fat intake, to allow more carbohydrates, and to replace most of the meat fat, whole milk, cream, butter, and hydrogenated margarines by fish oils, vegetable fat, skimmed milk, and peanut butter.

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3. Forsyth, C. C., Kinnear, T. W. G. and Dunlop, D. M. (1951): *Brit. Med. J.*, 1, 1095.
4. Keiding, N. R., Root, H. F. and Marble, A. (1952): *J. Amer. Med. Assoc.*, 150, 964.
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