



DiabetesWatch

A publication of the PHILIPPINE DIABETES ASSOCIATION, INC. for the Filipino diabetic patient

Vol. II, No. 3

December 2, 1985

YOUTH – ONSET DIABETES: A Growing Problem in the Philippines

Diabetes mellitus is a mixture of diseases with high blood sugar as the one thing in common. Two big groups have been recognized and these are now called Insulin-Dependent Diabetes Mellitus (IDDM) and Non-Insulin Dependent Diabetes Mellitus (NIDDM). The difference lies in that the former (IDDM) is characterized by no more beta cells producing insulin so the patient is threatened constantly by diabetic ketoacidosis (coma). In the latter (NIDDM), insulin is still present in adequate amounts but the body mechanisms responsible for the proper regulation of blood sugar levels are defective, so that the blood sugar goes up without the threat of diabetic ketoacidosis. Interestingly, IDDM afflicts mostly the young while NIDDM hits mostly the adults.

In the Philippines, the predominant form of diabetes is NIDDM. There are very few IDDMs. One local diabetic clinic has a collection of almost a hundred, but that is a referral center and the disease is still considered rare among children.

When diabetes hits the young – many times in the form of IDDM – problems are encountered which are not seen among the older ones (NIDDM). Prominent among these are the inevitable emotional changes which add up to the problems that already plague even non-diabetic children and teen-agers. This needs a lot of understanding from everyone concerned with the care of the young diabetic – doctors, nurses, dieticians, parents, and other relatives, even teachers in school.

Besides the emotional problems, there are dietary restrictions, insulin injections self-administered twice or four times a day, monitoring of blood sugars by fingerprick twice or four times a day, the constant danger of hypoglycemia, hygiene and care of the body, attention to infections, the

constant danger of escape from control and diabetic ketoacidosis, and a host of other seemingly small things that could prove either morbid or fatal if left uncorrected.

In the past twenty years, local attempts at organized concern for these young ones have been futile, until a few years ago when the Juvenile Diabetic Fund, Inc. was organized by concerned lay people. This organization provided the logistics in 1982 for the first camp for juvenile diabetics in the Philippines and probably South East Asia. After the third camp which was similarly sponsored, the parents of the young diabetics banded together in real concern and formed the Philippine Chapter of the Juvenile Diabetes Foundation International (JDFI) with headquarters in New York. The 1985 summer camp was jointly sponsored by the two JDFIs

with the help of a few other sponsoring institutions and agencies.

What is a summer camp for young diabetics? It is an attempt at (1) helping the young diabetic overcome emotional problems resulting from the presence of a chronic lifetime disease; (2) teaching the patient how to go through the daily mechanics of self-monitoring, self-administration of insulin, and self-care; (3) teaching the patient the various possible complications of treatment, over treatment and undertreatment so that he may be constantly aware of the possibilities of coma and hypoglycemia and how to handle these; (4) making the patient realize the importance of proper diet, hygiene, and reasonable exercise; (5) getting the patient to be aware of what the disease really is and what is being done for it so that compliance may be improved; (6) helping the patient develop a brighter outlook towards life by understanding how the disease can be adequately controlled,

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A teaching session at a summer camp for young diabetics.

DIET: The cornerstone of diabetes treatment

Dietary control in the treatment of diabetes has for years not been given the importance it truly deserves although it has long been accepted that diet is the cornerstone of diabetic therapy. No diabetic can be considered adequately treated without some form of dietary restriction and for people under oral antidiabetic preparations or insulin, diet is not only an adjunct but a most essential part of the treatment.

It is fortunate that more and more patients and doctors handling diabetic patients have come to realize the importance of dietary control and many are now closely working with dietitians and nutritionists.

Although there is still much to be studied about diet, many current researchers have already clarified the basic concepts relevant to the dietary principles in the management of the diabetic.

It has now been documented that the risk of atherosclerosis or hardening of the arteries, is diet related, that the quality of food taken is in actuality more important than the quantity of the food, that control of hyperglycemia (high blood sugar) leads to diminution of the blood vessel and nerve complications, that weight reduction improves glucose tolerance and at times may even lead to a "cure" of the diabetic state, that a diet high in fiber content reduces blood sugar levels and diminishes insulin requirements, that different carbohydrate-rich foods vary in their capacities to elevate the blood sugar even if given in quantities containing identical amounts of carbohydrates and that for most diabetics a simplified form of diet can be prescribed that would be easy to implement and acceptable to the patient.

In Europe and America, 75% of deaths among the diabetics can be traced to hardening of the arteries due to calcified fatty deposits. World wide statistics have shown that in general, gangrene is 10 times more common among Americans compared to Asian diabetics and that ischemic heart disease is also 10 times more common among Europeans compared to rural African diabetics. It has also been shown that both Asian and African diabetics have much lower cholesterol levels, consume

less saturated fat, but higher starch compared to their American and European counterparts.

There was a time when the mere mention of dieting frightened the diabetic patient so that many who were not really troubled by acute symptoms resolved then and there not to follow their doctor's advice. Compliance then was less than 50%. Present diet therapy however, gives consideration to the patient's preferences, eating habits and nutritional requirements and is therefore more acceptable to the diabetic patient.

Based on the observation that populations who eat little starch had the highest incidence of diabetics and higher incidence of obesity plus supportive research findings that diets high in carbohydrates derived from starch have no detectably adverse effect on the fluctuations of glucose after meals, the American Diabetes Association and the American Dietetic Association liberalized the percentage of carbohydrates in the diabetic diet to as much as 50-60% of the total calories provided this is not taken from simple and refined sugars. Furthermore it was recommended that fat be 35% or less of the total calories, 2/3 of which should be polyunsaturated and cholesterol restricted to less than 300 mg daily.

It has also been found that among diabetics, excess caloric intake even if the carbohydrate is within the allowable percentage leads to higher blood sugar levels compared to a diet that is just enough to satisfy the patient's caloric requirement even if the carbohydrate content exceeds that of the recommended percentage. Both doctors and patients are cautioned however that "very high" carbohydrate diets lead to very low insulin levels.

It is also an accepted fact that obesity increases the risk of diabetes and that obesity alone is capable of producing diabetes. Studies have shown that obese diabetics whose disease had been present only for a few years can have a reversal of their aberrant insulin secretion with loss of excessive weight so much so that they are sometimes considered "cured."

It is recommended that diabetics take at least 15-20 gm of fiber in their

diet daily. Fiber slows down carbohydrate absorption and diminishes the blood sugar level. The following foods provide at least 10 gm of fiber: 1 raw fresh fruit or 1/2 cup dried fruit, cooked or uncooked; 1 cup raw, fresh or lightly cooked vegetables such as carrots, turnips and all other leafy vegetables; 4-6 slices of whole wheat, rye or cracked wheat bread; or 1/2 cup of bran cereal. Snack foods such as peanuts, popcorn, raisins, almonds, graham crackers, watermelon, pumpkin and sunflower seeds also contain plenty of fiber.

Another recent finding is that equal amounts of carbohydrates from different carbohydrate-rich foods differ in their capacity to raise the blood glucose which can be expressed in percentage when compared to the rise in blood glucose in response to a standard glucose challenge. This is called the "glycemic index" and this has been found clinically useful in determining allowable carbohydrate-rich foods for the diabetic. For example, potato increases blood glucose levels more than rice, spaghetti or lentil even if given in amounts with equal carbohydrate content. Thus potato has a higher glycemic index than either rice, spaghetti or lentil.

Dietary strategies vary for patients belonging to the two main types of diabetes. Dietary allocation for carbohydrates, fats and protein and limitation of caloric intake is more strict for the non-obese, insulin dependent diabetic. In general they are given more frequent feedings, consistent daily intake of calories, properly timed meals and extra food allowance for exercise and during illness. For the majority of diabetics however who are obese and non-insulin requiring, a more simplified diet which is easy to follow is recommended. Basically this type of diabetics is instructed to: 1) Eat only half as much as they used to eat. 2) Avoid table sugar, soft drinks, syrups, honey, candies, jellies or jams. 3) Lessen the fat in their diet by substituting fish, veal or poultry for red meats as a protein source. 4) Eat all they want of low calorie foods such as celery, carrots, cucumbers, cabbage, and leafy and fiber

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Why Diabetics Go Blind and How to Prevent it!

Long-standing diabetes may result in complications which manifest in different organs of the body. One of such complications is diabetic retinopathy (DR), a disease of the eye affecting the retina (the inner lining of the eyeball) that can lead to blindness if not treated properly.

Not all diabetics will manifest complications in the eye, but the incidence increases with the duration and severity of diabetes and the inadequacy of blood sugar control. Generally speaking, the longer one has had diabetes, the greater the chances of having DR. Studies have also shown that poorly controlled diabetes is associated with early and rapid progression of DR. Good control however does not mean immunity from this complication for there are well controlled diabetics who develop severe DR. It is also observed that insulin-dependent diabetics are more prone to having DR than diabetics whose blood sugar can be controlled by diet alone.

The basic pathology in DR is the occurrence of cellular and structural

changes in the small blood vessels (capillaries) supplying nutrient to the retinal tissue of the eye. This is initially manifested as loss of supporting cells within the walls of the capillaries. As a consequence, patches of retinal capillaries will close down and outpouchings or ballooning in the walls of the capillaries which are called microaneurysms will develop. These microaneurysms can be seen scattered all over the retina but more prominently around the areas of capillary closure.

As the DR progresses, some of the microaneurysms would leak fluids from the blood to the retinal tissues producing retinal swelling or edema. Subsequently vision will be impaired and tissue damage due to edema can become irreversible even with treatment.

In some cases of DR, edema of the retina is not a very prominent feature. Instead, the retina forms new but abnormal vessels on its surface. At first, these new blood vessels grow without disturbing one's vision nor is the patient aware that they are there. Their presence

can only be verified with a thorough examination of the retina. In time, these new and very delicate blood vessels can break and bleed causing hemorrhage inside the eye. In some instances, these new blood vessels incite the growth of fibrous tissues that pull on the retina and cause retinal detachment. Frequently such an occurrence results in total blindness.

Fortunately, these blinding complications can now be prevented by the application of laser photocoagulation on the retina. This procedure improves the retinal circulation and at the same time destroys and prevents further growth of new blood vessels on the retina. It can also destroy microaneurysms that cause retinal edema. The timing of laser application is however very crucial because in advanced DR, the disease becomes irreversible and total blindness will be incurable.

The importance of regular eye examination by a competent eye specialist to watch for signs of DR and the application of laser photocoagulation as soon as indicated cannot be overemphasized. Patients who go blind without the benefit of laser photocoagulation should be a thing of the past. (B.V.C.)

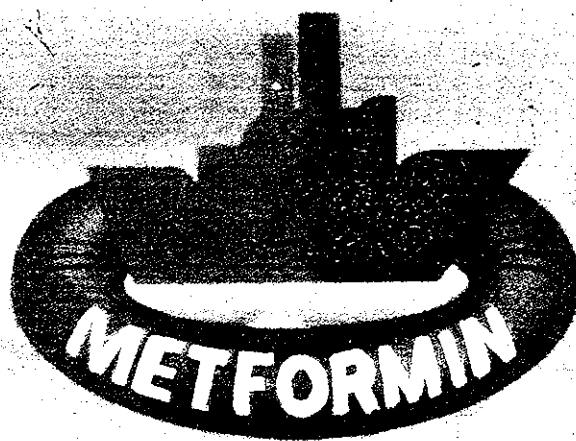
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Beware of FADS and FAKES!

For patients who have been drawn into the use of that 'drug,' labeled as Key Cell, the lead lines of Dorothy Segal's article, "Fads and Fringes" in *Diabetes Forecast* ring a familiar tune. And, in fact, we looked up that 1983 issue when Key Cell came again into the limelight with the pronouncement of its maker, that the 'drug' may protect one from what so many fear dreadfully these days, — AIDS!

In her column, 'The Eye of Horus,' in *Ang Pahayagang Malaya*, a respected physician, Dr. Esperanza A. Icasas-Cabral, says the following of Key Cell:

"The Bureau of Food and Drugs, after a thorough review and evaluation of the submitted documents for the rationale of the formulation, its safety and efficacy for the claimed indications, denied his application, the findings having shown that requirements and criteria for registration have not been met. The 'drug' up to this very day, remains unregistered and disapproved for marketing and is therefore being sold illegally."

Thus, for all intents and purposes, Key Cell has not been found efficacious and safe for the indications so claimed for it . . . and this certainly includes diabetes! For what drug that contains "only minimal amounts of vitamins, minerals, proteins and sugar, an anti-odor substance hardly enough to deodorize a smelly big toe, and a subtherapeutic dose of thyroid extract" can pretend to cure diabetes?

Even in developed countries as the United States, dozens of unorthodox diabetes 'treatments' have been touted to the gullible public, and several of these have been checked out and 'found that even those with a kernel of truth can be ineffective or downright dangerous.' Segal states that diabetes is a 'quack favorite.' And in the words of Dr. Morris Fishbein, head of the American Medical Association bureau of investigation, "The diabetic field is a rich one for those who would commercialize human suffering, and it is one that is assiduously tilled."

For our readers, let us repeat a story in Segal's article about the most famous and lucrative diabetes fraud that went on for more than a decade, ending only in the sentencing to prison for four years and the fining of the perpetrators \$7,000. The story:

"Two physician brothers, Drs. Charles and Peter Kaadt, dispensed by mail thousands of gallons of their 'Home Treatment,' a worthless mixture of vinegar and saltpeter. When the Post Office put a halt to this in the 1930s, the Kaadt brothers founded the Kaadt Diabetic Institute, where patients could stay for a three-day, \$60 visit.

"The institute was even more successful than the mail-order business, earning the brothers an estimated \$6 million in ten years. By itself, the 'home treatment' may have done little harm. But the advice dispensed with it was lethal: Always have some sugar in your urine

"Throw away your diet! Throw away your needles!"

For years, the empty promises of fast cures and easy outs have lured people with diabetes — sometimes with devastating consequences.

*Dorothy Segal, in Diabetes Forecast
November-December, 1983, page 24.*

. . . Don't ever get a blood sugar test. It is dangerous . . . If you have a diet, throw it away . . . Whiskey, ice cream, cakes and pies are beneficial in diabetes . . . (To our Filipino patients, do these words of advice sound familiar?)

"As you might expect, there were many deaths. Still, others lived and spread the word — seemingly 'living proof' of the treatment's effectiveness.

"Finally, the combined forces of the Food and Drug Administration and the Better Business Bureau brought the Kaadts to trial. The brothers freely admitted they didn't know the number of calories in a gram of carbohydrate, protein, or fat, and they had no idea how to test blood glucose or to perform a glucose-tolerance test. Although their defense attorney called them 'modern-day Christopher Columbuses,' testimony from prosecution witnesses (including one who testified from a stretcher and later died) was devastating. On April 15, 1948, the brothers were sentenced to prison . . ."

Thus, we echo an article in the April 2, 1985 issue of this publication, "Patients and their relatives must not believe in cure-alls and remedies which they may hear about. Especially those which seek to diminish the values of diet and exercise. There is no miraculous cure for diabetes, but a special treatment can be planned, which will, however, require regular clinic attendance and check-ups."

— A.D.L.



A practice session on self-blood glucose monitoring.

First Course on Diabetes Nursing Care

Twenty eight participants attended the 2-1/2 day course on diabetes nursing care offered by the Diabetes Clinic of the Makati Medical Center last Nov. 14-16, 1985. The course consisted of didactics on the nature of diabetes mellitus, the over-all management of the disease, principles of dietary management, complications of diabetes and the role of the nurses in preventing them, care of the teeth, feet and skin, the types of insulin and their administration and the role of the nurse in diabetes care. Workshops on foot exercises and glucose monitoring in the blood and urine were carried out. Pre-tests and post-tests served to evaluate the participants learning of the course.

Breakdown of the participants affiliation: Seven from Makati Medical Center; eight from the armed forces services (Army — 2, and one each from the Air Force, Constabulary, Marines, Navy, Headquarters and Dispensary); 2 from private clinics; one each from Cardinal Santos Memorial Hospital, Far Eastern University Hospital, San Juan de Dios Hospital, St. Luke's Hospital and the Philippine Heart Center for Asia. Six of the participants were private duty nurses.

The participants have applied for membership to the Section on Nurse Educators of the PDA.

NASAL INSULIN?

In an article in Search written by Jon Quejido, a new nasal spray developed by researchers from Boston University Medical Center is said to have been less painful than injections, but much faster. The period of study was three months, and during this time, patients in the trials were said to have tolerated the nasal spray without side effects.

The nasal spray is said to more closely stimulate the body's naturally produced insulin in response to a meal than injected insulin. In the non-diabetic, the pancreas secretes into the blood higher levels of insulin just before eating, a pattern which cannot be totally mimicked by injecting insulin before meals, since insulin takes longer to be absorbed and peaks at the wrong time. Insulin by nasal spray is said to pass from the nasal membranes directly into the blood and acts almost immediately.

For now, there are a few problems that are being threshed out. Surfactants (substances that would help carry insulin through the nasal membranes and into the blood) which are safe and effective are being studied since some subjects eventually dropped out because of nasal stinging and congestion. Other problems are summed up by Dr. George T. Gilling, one of the developers of the nasal spray, "We're still learning how to use this therapy. For example, what doses should be used, timing, whether or not snacks should be covered and what we should do in the case of a runny nose or a cold or hay fever. But, the hope to free oneself from the infection, remains eternal."

New PDA Sections

The Board of Directors of the Philippine Diabetes Association (PDA) through a committee of three composed of Drs. Aurora Villegas-Cinco, Ricardo E. Fernando and Augusto D. Litonjua is forming new sections of the PDA to conform with the Associations objective of "unifying all interests and entities in the Philippines concerned about diabetes" under the PDA.

1. *Section on Nutrition* — a tie-up between the specialists' group of the Hospital Dietetics Section, Nutritionist-Dietitians Association of the Philippines (NDAP) and the PDA was forged. The objectives of the section would be to establish training guidelines for nutritionist-dietitians in the management of diabetes; to conduct courses for the continuing education of the diabetes mellitus specialist group; to prepare standard guidelines for the prescriptions of calorie controlled diets; and to prepare instructional materials for the use of practitioners involved in the care and management of diabetes and for lay individuals.

2. *Section on Nurse Educators* — this new section of the PDA will "codify" the instructional materials for nurse educators, so that the course content of training courses for nurse educators will be uniform and updated.

3. *Section on the Study of Diabetes in Pregnancy* — a group of diabetologists and obstetricians interested in the care of pregnant diabetes will engage in a multi-center survey of diabetes prevalence in pregnant Filipinos in order to come up with guidelines on the proper management of diabetes in pregnancy.

supper. Various socio-cultural programs and entertainments take place at night before taps are sounded. Altogether the kids go through an entirely different experience, very rich in camaraderie and that nice feeling that one is not alone in the struggle against the disease. A lot of advantages are derived from camp which can never be expected from home, school, or church.

Following this year's summer camp, a whole-day Minicamp was held in September with Gary Valenciano — himself a juvenile diabetic — participating and even donating significant contributions to the total effort. It is hoped that, in spite of the increasing logistic problems, more and better camps can be organized in the future — for the number of young diabetics is increasing very significantly . . . very alarmingly. And the next kid may be your kid! (R.E.F.)

Diet: the cornerstone . . .
(Continued from page 2)

foods. 5) Limit rice to only 1 cup, fully packed, level, for each meal or 2 slices of bread. 6) Take at least 1 hour of light exercise (walking) or 30 minutes of more strenuous exercise (swimming, cycling, fast walking) daily. (G.A.M.Jr.)

Concerned and experienced doctors, nurses, dietitians, physical education directors, and parents — volunteers all — threw in their time and effort during the May 1985 summer camp at the Boy Scouts Jamboree Site in Los Baños. The typical day would start out with pre-breakfast monitoring and insulin shots with all campers required "to do it yourself" — even the six and eight year olds. Doctors are around to advise insulin dosage adjustments based on the previous day's records. Breakfast is followed by a get together and lecture/demonstration hour. Then, follows a snack preceding physical exercise — hiking, basketball, swimming, etc. Monitoring takes place before lunch. Quiet hours after meals provide for personal "confessions", and the inevitable siesta. Afternoons see both physical activities and lectures with timely snacks in-between. Monitoring continues before supper and before sleep with insulin shots for most taken or adjusted before

Youth - onset . . .
(Continued from page 1)

and by realizing the presence of unlimited possibilities in spite of apparent limitations.

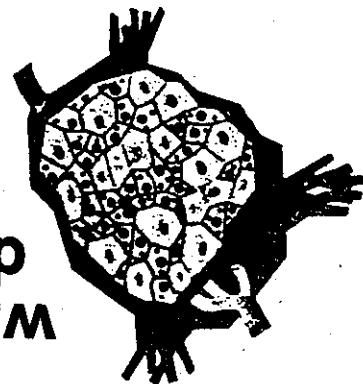
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IN THE NEWS

Lectures

Dr. Harold E. Lebovitz, Professor of Medicine, State University of New York was guest speaker of the Association on November 29 at the Philippine Columbian Clubhouse. He spoke on recent trends in the management of diabetes in a talk entitled, 'Today in Diabetes.' His trip to the Philippines was sponsored by Farmitalia Carlo Erba.

In a mini-convention on December 12, the President-Elect of the International Diabetes Federation, Prof. Joseph J. Hoet will speak about diabetes and pregnancy before the Association. The Philippine Society of Endocrinology and Metabolism and the Philippine Obstetrical and Gynecological Society are co-hosting the affair. Prof. Hoet will also speak before the lay members of the Association. Prof. Hoet's sojourn to the Philippines is sponsored by Med-Asia, Novo and Ames.

Diabetes Week

The proposed Diabetes Week has been shelved temporarily, as well as, the projected Diabetes Education and Fund

Campaign that should have culminated in the Diabetes Center. Instead, the Board of Directors has agreed, in view of the uncertain political and business climate, to start setting up chapters in the cities and provinces early next year.

Letter

Brussels, October 22, 1985

I read the **Diabetes Watch** with interest and would like to congratulate you for the editorship of your newsletter.

I like also to congratulate Rev. John Montenegro for his donation to the P.D.A. This action is more than commendable and also most inspiring. Convey to him the best wishes on behalf of the international community of Diabetics, the International Diabetes Federation.

With all good wishes to you and your associates.

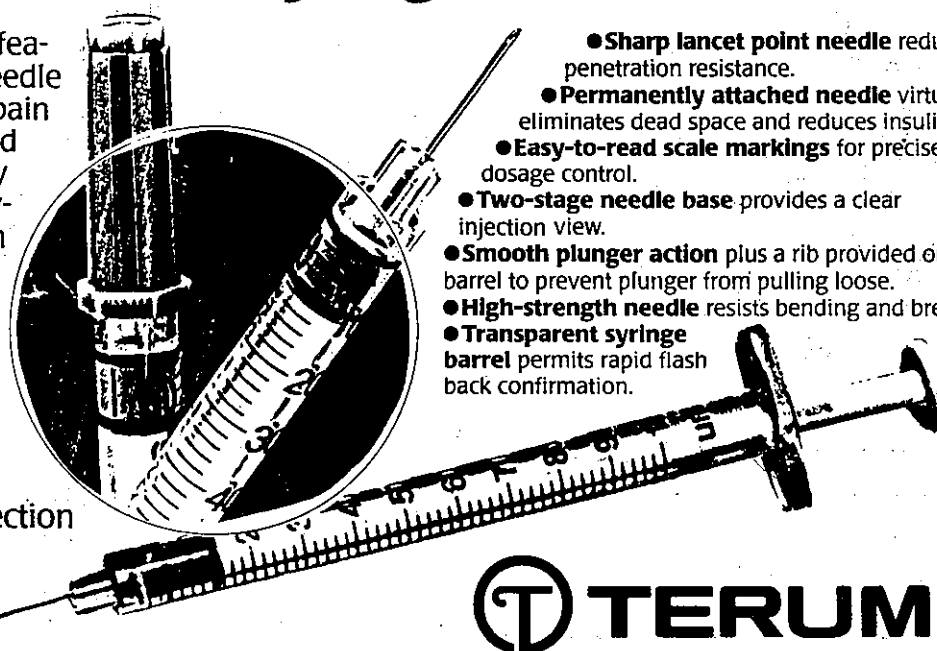
PROFESSOR J. J. HOET
President-Elect
International Diabetes Federation

Ed's Note: Incidentally, we received another donation of P1,000.00 from Mr. Nicolas Montenegro, brother of Rev. John!

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