THE STUDY OF NUTRITION IN LATIN AMERICA

BY

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(ABRIDGED)

The National Institute of Nutrition at Buenos Aires has come about as a gradual development over a period of ten years. In 1921 Prof. P. Escudero,* professor of clinical medicine at the National University, started a scientific movement for the study of nutrition. Three years later he suggested to the Director of Public Assistance the desirability of a survey of nutritional diseases, to be carried out at the Rawson Hospital. The services so created were the origin of the Municipal Institute of Nutrition in 1928, at which systematized studies were undertaken. Here the first dietetic kitchen in Argentina was established. A survey of nutrition was made at the municipal hospitals in 1931 under the guidance of Prof. Escudero, and its results were summarized in a report to the fourth National Congress of Medicine in Argentina.

A School of Dietitians was started in 1935; and in 1938, by a decree of the then President, General Justo, the National Institute of Nutrition was founded. This included the School of Dietitians and also a residential college for students from the provinces and territories, whereby the benefits of the foundation were extended to the interior of the country. To enter the Institute the candidate must show the same standard of secondary education as is required for entrance to the Medical Faculty. Almost every province and national territory now has graduates from the Institute. In 1939 scholarships were instituted to promote the study of dietetics as a medical specialty, and during the present year doctors from four provinces have graduated. In the course of the next decade or two it is expected that a considerable number of medical specialists in nutrition will be practising in the country.

The third International Conference on Nutrition under the auspices of the League of Nations—the first to be held outside Geneva—was assembled at Buenos Aires in 1939, and its conclusions were so startling that in October of that year the late President of the Republic, Dr. Ortiz, opened the doors of the Institute to all Latin-American countries, with a grant of scholarships for dietitians and dietetic specialists. Fellows from six South American countries apart from Argentina itself have now graduated from or are students at the Institute. Thus the Institute has become a Latin-American university centre for the study of nutrition. It has a staff of over 300, and its present provisional budget is for 1,200,000 pesos (about £70,000). An Act conferring full autonomy on the Institute and providing for its resources is expected shortly to be passed by the Argentine Senate.

Aims of the Institute of Nutrition

Prof. Escudero has given the following definition of the work of his Institute: "The basis for the conservation of the human being is nutrition; life, strength, reproduction, mental energy, and social and moral progress are dependent upon it. The Institute of Nutrition includes the study both of the life of the individual as a physical and moral entity and of the society of which he forms a part. The Institute is not merely a hospital, although it treats patients; not merely a laboratory, although it examines biological processes; not merely a centre for social studies, although it investigates sociological phenomena; not merely an office for social welfare, although it helps those in need; nor is it merely a school or a pulpit, although it teaches and preaches. It is all these things, with investigation of facts, causes, and remedies as its central aim." In other words, it is a centre for social, economic, and hygienic survey. It co-ordinates all these branches of activity with a view to maintaining and improving the physical and moral health of the individual, the family, and the community. In

studying the patient and the causes of disease it has always the prophylactic aim in view.

In many quarters there exists a narrow and therefore mistaken notion of what is understood by nutrition. The Director of the Institute divides nutrition into three stages: (1) alimentary, or intake of matter and energy, beginning from the time the food is chosen; (2) metabolism, or exchange of matter and of energy, beginning from the moment of absorption of the alimentary substance; (3) excretion, or the elimination of the used or unusable. Nutrition, he says, is not a single function, but the result of correctly harmonized functions which complement one another, and the aim is to maintain the normal integrity of living matter and to ensure life. Too often nutrition is considered only as metabolism. Prof. Escudero has similarly enlarged the notion of nutritional disease, which to most authors is a synonym for metabolic disorder. He divides all nutritional diseases into three main groups: alimentary, metabolic, and excretory.

Some special forms of study and of approach to the subject have been adopted at the Institute. One of these is "alimentary anamnesis"—to assist in the judgment of the existing alimentation and to furnish information of the effect of past and present dietary habits on the disease or the state of the patient. A formulary has been worked out for the examination and comparison of different dietaries so that adjustments can be made and prescriptions given for the food required and the way it should be prepared and consumed. By these various methods and formularies it is possible to prescribe, examine, and compare the diets advised.

Character of the Studies

In its studies the Institute works in six divisions, co-ordinated by a general direction. These divisions are: education, social work, alimentation, research, educational work, and medical assistance. The general direction undertakes the administrative and technical control of the Institute, which has a general and a technical secretary. The problems which come before the general direction can be divided into three—health, economic, and social—always, of course, related to nutrition. For the solution of such problems a technical council or board is formed by the heads of the divisions, with the general director as chairman.

The educational division is concerned with the training of technicians in food and alimentation. The teaching of this discipline is officially assigned to the Institute by the Faculty of Medicine of the University, and there is perfect understanding between the two bodies, as the General Director of the Institute is also Professor of Nutrition. Training is given in the Nutrition Clinic for undergraduates of the School of Medicine in their final year (the seventh), also finishing courses for graduates who are to become dietitians, a title awarded by the Faculty. By decree of the National Executive Board all official technical posts related to food and alimentation must be preferentially filled by those who have followed these courses. The students are first instructed in the alimentation of the normal individual and the community and afterwards in the alimentation of sick persons.

The training of dietitians is of a university type, claimed to be far superior to the similar disciplines at other American and at European schools. The plan of studies is divided into two cycles. The first includes normal alimentation from the biological and economic points of view for the individual at different ages and for the community; the second considers alimentation in sickness. Two scholastic years are occupied with the first—or normal—studies, and the third with alimentation in disease. For admission to this training a college course degree is required, such as Bachelorship of Arts or Commerce. The occupation of dietitian (non-medical) is reserved to women.

The School also trains auxiliaries and nurses specializing in food problems; the studies undertaken in these cases are more restricted. The medical dietetic specialist, the dietitian, and their co-workers—the auxiliary and the nurse—form a unit ready to solve any nutritional problems. As already stated, the School has a residential quarter where students from the provinces or from other Latin-American countries may be boarded during their training.

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Sociological Studies

The division of the Institute which deals with social work is subdivided into research, prevention, and social assistance sections. The research section has two branches, one of which is concerned with the social and economic condition of the families investigated, making inquiries regarding income, food consumption, and health conditions; the other branch is concerned with the moral condition of families through a survey of social behaviour and mental health.

The section dealing with prevention is entrusted with the care and protection of normal individuals. It has nothing in common with the so-called health centres in other countries. Its work is carried out by means of clinics or consultations at which advice is given on matters of health, food, and the influence of work and home in relation to the age and condition of the individual. Periodical examinations are made, patients being given appointments at the day and hour most suitable to them. Food is studied from the hygienic and economic points of view, and advice is given regarding the best kinds of food to choose, bearing in mind the family budget and the individual requirements. Eugenics, care and protection of pregnant women and nursing mothers, care of children, popular education on food questions, and social records, all come within the scope of this section.

In the section of social assistance various moral problems and problems of behaviour concerning the individual and the family come forward for consideration. Occupation is provided for the workless, and material help, mainly in the form of food, is also provided. In this connexion the Institute endeavours to preserve family life. It does not rely on popular restaurants or canteens, which disturb the normal family relations. The meal-time is the occasion for the gathering of the family, the time when the existence of the family as a unit is best manifested. The provision of canteens is accepted as a necessary accompaniment of industrial or business life, but it is not regarded as anything like the ideal approach to the nutritional problem. A more discriminating assistance is sought to be given, requiring knowledge of the family and its means, and calling for the teaching of cooking and the best means of utilizing food, and in necessitous cases the giving of foodstuffs.

Help is still more generous in the case of pregnant or nursing women and mothers of small children. A lactarium for the free provision of mothers' milk, regardless of the family budget, for the first month of the infant's life, has been set up, and so far has proved extremely successful. The extra milk is purchased from the donor mothers, and both their babies and those of the receiving mothers are supervised.

Alimentation, Research, and Propaganda

The alimentation division of the Institute includes various technical studies, and maintains and controls free refectories for sick people and school canteens; dietetic restaurants, too, are shortly to be provided for sick persons who can afford to pay. The work of the division is undertaken by a number of medical dietetic specialists, lay dietitians, auxiliaries, and nurses. The research division includes various chemical and biological laboratories; laboratories of alimentary technology and an experimental farm are projected.

In the sphere of propaganda one division undertakes the service of the Press and wireless to popularize basic knowledge about nutrition. Lectures are given to teachers and to housewives on kitchen cookery and on the best utilization of the food they purchase, with brief explanations of the hygiene of alimentation. These lectures and courses are given by women dietitians who are well acquainted with this kind of social and educational work.

Finally, a sixth division undertakes medical assistance in nutritional diseases. It is estimated that 80% of such chronic patients do not require complete institutional treatment. They can be assisted as out-patients by means of a refectory, receiving, in fact, everything that they would have received in an institution except the bed. The patient sleeps at home, carries on his work, and has his meals at the Institute. The acute cases or cases in the acute stage of a chronic condition are received at a residence having 60 beds, to which also are admitted cases requiring special study. Usually the patients

who need a special diet and have their meals at the refectory are suffering from diseases of metabolism and imbalance, diseases of the digestive tract and its glands, of the urinary and renal system, and of the skin. The assistance given is supplemented by the service of consultants in dermatology, gynaecology, urinary diseases, and otology and laryngology. Physiotherapy and massage are administered. There are also a small surgical service, a radiological department, and pathological laboratories.

The service given to in-patients and out-patients extends to all ages and both sexes, and is organized on the lines of a general hospital. Between 6,500 and 7,000 patients are treated every year.

Future Work of the Institute

It should be borne in mind, however, that the Institute is principally a centre of investigation and teaching. The direct assistance given to patients is only of limited extent; the aim of the Institute is to ascertain the best form of assistance, not to fulfil it as a routine. The same is true of the social assistance which it affords. It avoids mere extension due to the multiplication of the routine of its services; it looks for the cause of the phenomena studied and endeavours to find the remedy or the means of avoiding them.

Its social and educational work is equally important. Until 1921 studies on nutrition were regarded with indifference by the scientific world of Argentina. Until 1930 the Government, the Legislature, and the people were generally ignorant of alimentary problems, although the main source of the revenue of the country is food production. But the question of popular alimentation has awakened a legislative, social, and economic movement, the more marked since the third International Conference on Nutrition under the auspices of the League of Nations was held at Buenos Aires in 1939.

Over a period of eighteen months—from June, 1936, to November, 1937—the Institute conducted a survey of health conditions in Buenos Aires in relation to the family budget. The expenditure on food and the minimum budget required to live modestly but decently and to be correctly fed were estimated. A similar survey has just been completed at the industrial town of Avellaneda, a suburb of Buenos Aires, and another is being carried out at the town of Mendoza. Prof. Escudero resigned his professorship of clinical medicine, which he had held since 1921, to become professor of nutrition when the Faculty of Medicine included a clinic of nutrition in its plan of studies.

The work already done in the training of medical dietologists, dietitians—a new profession which may be said to have been created by the Institute—and their auxiliaries is expected to have further developments in the Argentine Republic. Already the province of Mendoza in Western Argentina has set up a department of nutrition as a branch of its health direction, involving a certain modification of its hospitals and an economic-social survey of its population. The Institute has also started to draw up an "alimentary geography" of the country, including a study of alimentary folklore and of present food production. By the time the work of the Institute reaches its full development it is hoped that health conditions in Argentina will have manifested very great improvement owing to a recognition of what the founder of the Institute has called the "non-specific prophylaxis" of diseases whose onset is due to simple maladjustments in living rather than to any specific cause.

H. P. Fernandez (*Tubercle*, 1942, 23, 50) records six cases in patients aged from 20 to 39 who developed symptoms of distress after aspiration. The onset of these symptoms was attended by a fall in blood pressure, associated with high negative intrapleural pressures, mediastinal displacement, and lung re-expansion. In all cases relief of distress followed injection of adrenaline and pituitrin. The relief was accompanied by a rise in blood pressure and occurred at a time when mediastinal displacement, lung re-expansion, and high negative intrapleural pressure had not been adjusted. Fernandez comes to the following conclusions: (1) The symptoms of distress after aspiration were due to a high negative intrapleural pressure; lung re-expansion produced by this led to a circulatory disturbance, causing a fall in blood pressure. (2) Injection of adrenaline is of value as an emergency measure for such distress.