

Public Health Pamphlet No. 4

Food and Public Health

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FOOD AND PUBLIC HEALTH
(Government's Nutrition Measures Explained.)

ISSUED BY
THE DIRECTOR OF INFORMATION AND PUBLICITY
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FOOD AND PUBLIC HEALTH

INTRODUCTION.

The importance of food as a contributory factor in public health is now widely recognized. The Indian dietary is generally inadequate, unbalanced and lacks in nutritive contents. This has led to a considerable lowering of the power of resistance of the people to diseases apart from producing a number of other evils. In the recent past, the Government have bestowed special attention on this subject in order to ensure that the food consumed by the people conforms to particular dietary standards, and public health promoted thereby. A few glimpses into what they have done so far in this direction is provided in this pamphlet.

The Nutrition Bureau was first organized in 1944 with a nucleus of one Nutrition Officer and two Health Inspectors, with a laboratory and a museum. The expansion of this bureau was one of the items of post-war reconstruction proposals accepted by the Government early in 1945. Under the scheme, the Central Organization is to consist of one Assistant Director of Public Health (Nutrition), one Nutrition Chemist, and one Statistician with a Central laboratory and museum and four regional nutrition units each consisting of one Nutrition Health Officer, and three Health Inspectors with a mobile canteen in charge of a propagandist. This scheme has been partly implemented with the appointment of two regional units, one with headquarters at Trichinopoly and the other with headquarters at Anantapur, instead of four and the creation of the post of an Assistant Director of Public Health (Nutrition).

The work of the Nutrition Bureau consists of the following items:—

(1) Detailed surveys of the dietaries of different communities and of the food materials chiefly available in the respective areas with a view to plan a better dietary for them with the minimum possible interference, with their usual habits and customs.

(2) Investigation of morbidity arising out of nutritional deficiencies with special reference to vulnerable groups such as infants, expectant and nursing mothers, pre-school and school children, factory workers, agricultural labourers, etc.

(3) Studies of the composition of foodstuffs of local importance.

(4) Intensive education of the public in all aspects of food and nutrition by means of mobile food canteens; exhibitions, lectures, radio talks, cinema shows, etc.

(5) The provision of mid-day meals to school children to ensure at least one square meal a day during their growing age.

(6) Studies in the nutrition of factory and agricultural labour groups and advising suitable remedial measures such as the establishment of food canteens in industries and the promotion of the "Grow More Food" campaign.

Thus it will be seen that the Nutrition Bureau has a comprehensive programme. Its actual achievements so far may now be briefly told.

1) *Diet surveys*.—Samples of the diets of cross-sections of the population in urban, semi-urban and rural areas and the selected students' hostels, orphanages, Police lines, etc., in the districts are being analysed and studied. Based on the results of these studies, appropriate dietary advice is offered to the concerned communities. The technique of these surveys is in accordance with the standards recommended by the Nutrition Advisory Committee (Indian Research Fund Association). The surveys are carried out by the Nutrition Health Inspectors under the supervision of the Regional Nutrition Health Officers, and the field data collected are analysed in the Central Bureau. The dietary habits vary widely from locality to locality and also tend to differ with the seasons of crops of locally grown foodstuffs. The collection of accurate data in respect of the consumption of rationed foods is beset with special difficulties and therefore what information is available of the diets of communities in pre-war years may not be strictly comparable with what is being collected during the post-war years.

Reports of about seven diet surveys of about 150 families, carried out by the Copnoor Nutrition Research Laboratories during pre-war years, in the districts of Chingleput, Trichinopoly and the Nilgiris, and the City of Madras were the only scientific data available on the subject before the Nutrition Bureau of this Department

commenced work in 1944. Since 1944, over 107 diet surveys in about 1,800 families and a few institutions like hostels, orphanages, etc., were completed in eleven districts, viz., Anantapur, Bellary, Cuddapah, Kurnool, Chittoor, Chingleput, Trichinopoly, Ramnad, Madura, Coimbatore and Tinnevely and the City of Madras. These surveys represent the average consumption of various food ingredients in respect of about 57,500 consumption units.

The salient features of these surveys may be summarized as follows :—

(1) The calorific value of the diets is predominantly made up of rice along with one or more other grains or millets among certain sections of the rural population. A mixed diet with different grains and millets which is admittedly more nutritious than a whole rice diet, is more prevalent among the labouring classes than among the affluent sections.

(2) The diets are uniformly defective in proteins, especially animal proteins.

(3) The consumption of fats whether of animal or of vegetable origin, is also very low.

(4) The intake of protective foods such as milk and its products, vegetables especially the green leafy varieties, pulses, meat, fish, eggs, and fruits are conspicuously deficient in all the family diets so far studied. The diets provided in hostels for school children, orphanages, etc., are also equally defective. The fact that protective foods as enumerated above, are the real sources of the much needed vitamins and minerals in human diets, especially those of the vulnerable groups, is not realized at all.

(5) Quantitative defects in the diets are very conspicuous especially those carried out during the past few months.

(6) Food emergencies as prevail now, have largely changed dietary habits in all communities especially in the direction of the greater consumption of alternative foods available in the locality. People who seldom resorted to valuable millets like ragi, and the comparatively richer grains like wheat, maize, etc., are now, under the stress of the present emergencies, getting accustomed to a mixed diet.

(7) There is a general awakening of food consciousness with the result that there has been demands for diet surveys from various quarters and an increasing desire on the part of the people to learn how best to correct dietary defects at minimum cost and by the use of substitute foods.

(2) *Nutrition surveys.*—Side by side with diet surveys, the nutritional conditions of the people, particularly of children, were also examined. The heights and weights of school children were

recorded along with a clinical assessment of their obvious food deficiency signs. About 30 to 40 per cent of the children have thus been found to be either under-nourished or mal-nourished or both. The deficiencies of Vitamin A and B-2 were more commonly met with than others. In average weights and heights, the children from the rural areas compare less favourably with those of the children in Madras City. Previous standards for different areas are, however, not available to compare with present findings for the same areas. The incidence of the various common deficiencies as detected in different places has been reported in the periodical progress reports of the Nutrition Organization.

(3) *Nutrition Bureau and compost manufacture.*—Compost manure is being manufactured in several municipalities and panchayats to assist the "Grow More Food" Campaign. The Nutrition Bureau is in general charge of the scheme which is in operation in 86 municipalities and panchayats. The total production of compost during the quarter ended 30th June 1947, was 1.25 million cubic feet and the total quantity disposed of to the ryots was 1.38 million cubic feet.

(4) *Nutrition Laboratory and Museum.*—A small laboratory with a Chemical Assistant was established in June 1945. The chief work undertaken in the laboratory was to evolve palatable recipes with unaccustomed foodstuffs. Various recipes with wheat, maize, ragi, cholam, tapioca, food yeast, groundnut, coconuts, etc., were thus worked out. These have been collected and published in pamphlet form. The English pamphlet was translated into all South Indian languages and widely distributed. Various recipes for community feeding and for special purposes have also been the subject of study. Examination of foodstuffs to find out their fitness for human consumption has been another important activity in the laboratory.

The services of the laboratory staff have also been utilized in the preparation of materials for the different nutrition exhibitions which were organized under the auspices of the Public Health Department. The Nutrition Bureau has also taken advantage of all appropriate occasions, in Madras City and outside, to organize such exhibitions. So far, nine exhibitions have been organized with success and a tenth one is just under way as listed below—

(1) Mahamakham festival at Kumbakonam—February 1945; (2) Pushkaram festival at Bezwada—July 1945; (3) Annual Health Week Celebrations in Cholai, Madras, by the City Youths' Union—October 1945; (4) All-India Teachers' Conference, December 1945; (5) I.N.A. Exhibition at Madras, August 1946; (6) All-India Khadi and Swadeshi Exhibition at Madras—December 1946; (7) Provincial Physical Education Conference at

Madras—February 1947; (8) Harijan Industrial School Fund Benefit Exhibition at Madras—March to April 1947; (9) All-India Khadi and Swadeshi Exhibition at Madura—April—May 1947; and (10) All-India Industrial Khadi and Arts Exhibition at Madras—September 1947.

Materials are being collected to equip a Nutrition Museum at Madras. Various exhibits, posters, charts, lantern slides, etc., have already been either purchased or made for this purpose. These equipments will be fitted up as soon as suitable accommodation is made available.

(5) *Nutrition education.*—Nutritional education has been undertaken as an essential activity of the Bureau. As stated in the previous paragraphs, every important opportunity such as that provided by festivals, conferences and other exhibitions have been availed of to organize Nutrition exhibitions.

Radio talks, Nutrition lectures, contributions to journals, distribution of pamphlets, etc., have been the other methods of education undertaken. The following is the list of subjects of radio talks or publications, arranged by the Nutrition Bureau :—

(i) Simple Food Recipes in English, Tamil, Telugu, Malayalam and Canarese; (ii) Abridged pamphlet on feeding of children from 6 months to 6 years; (iii) "Balanced Food"; (iv) Alternative Foods; and (v) Poor man's diet.

(6) *Training of personnel.*—The training of personnel in regard to Food and Nutrition subjects has been another activity of the Nutrition Bureau. The training of six batches of candidates for appointment as food propagandists under the District Collectors, during 1946, the training of Women Medical Officers under the Maternity and Childwelfare Scheme, Area Organizers of the I.W.C.C., and the Rural Recreation Officers, have already been undertaken.