

## NUTRITION.

The question of nutrition has been given special attention, 6·6 per cent. of children receiving complete physical examination being classified under the heading of "Subnormal Nutrition." Gross malnutrition is extremely rare, and this percentage refers rather to a group of children who for various causes fail to reach a satisfactory standard of physical fitness and general vitality. Last year's annual report gave the result of a recent Height-Weight-Age survey of some 40,000 New Zealand children, which demonstrated that our children are both taller and heavier than they were twenty years ago. This fact undoubtedly is a general indication that nutrition is satisfactory. ("Good nutrition promotes good growth"—*Sir George Newman*.) Many children, however, for various reasons do not reach "optimum nutrition," to use a phrase now widely current in Great Britain—that is, they fall short of their potential level of positive health and vitality as compared with mere absence of defect. Good nutrition implies the correct use and development of bodily functions and powers. The simple essentials for healthy growth—that is, food of the right type and amount, adequate sleep and rest, fresh air, sunlight, wholesome exercise—should be as readily available in New Zealand as anywhere in the world. It is their right distribution and usage that merits consideration. The question of maternal efficiency is vital, the capabilities of the mother and the facilities at her command being of first importance. This undoubted difficulty of balancing the family budget in hard times is fully recognized, and it must be emphasized here that the subject is discussed on general lines from the Dominion viewpoint.

Causes contributing to under-nutrition as assigned by individual School Medical Officers may be quoted: Debility resulting from neglected physical defect, as enlarged tonsils and adenoids, dental caries, &c.; or from underlying susceptibility to disease, as tuberculosis; over-fatigue from too little sleep; nervous exhaustion following on over-stimulation and exploitation of talents; excessive demand of work outside, as on country farms or as newsboys, &c., in the city; unsatisfactory sleeping-conditions due to overcrowding and housing problems.

*Inadequate Diet.*—The inadequacy is much more often in quality than quantity, cheaper or ill-chosen dietaries being as a rule deficient in those food essentials indicated below. Impressive committees have been set up in many countries to report upon the condition of the people and to make recommendations towards the improvement of the general nutrition by bettering the diet. The findings and recommendations of these committees are essentially in agreement. The League of Nations Health Organization Report on the Physiological Bases of Nutrition, 1935, states:—

"The Commission recognizes the fact that the deficiencies of modern diets are usually in the protective foods (foods rich in minerals and vitamins) rather than in more strictly energy-bearing foods (rich in calories). Among the former are, first and most important, milk and milk products, eggs, and glandular tissues; then green-leaf vegetables, fruit, fat fish and meat (muscle). Among the energy-bearing foods of little or no protective power are sugar, milled cereals, and certain fats.

"Of energy-giving foods, unmilled cereals are not rich in protective nutrients, and the more they are refined the less is their protective power. Many fats, especially when refined, possess little or no protective constituents. Refined sugar is of value only as a source of energy; it is entirely devoid of minerals and vitamins. The increasing habit of large sugar-consumption tends to lessen the amount of protective foods in the diet and is to be regarded with concern."

Extracts from the annual report of the Division of School Hygiene, 1924, may also be noted as follows:—

"School Medical Officers continue to record that tea, white bread, and meat play the chief part in the dietary of many homes. Fresh fruit and vegetables, even in rural areas, are not eaten sufficiently. . . . A noteworthy fact is that in New Zealand the consumption of sugar per head per annum is 117 lb., as against rather more than half that quantity in Britain, and much less in other countries. Apart from its directly deleterious influence on the teeth, the alteration of food-values in the dietary necessitated by the inclusion of so much sugar results in digestive troubles and disturbed nutrition. In this country, with its many sources of supply, eggs, milk, cheese, butter, fresh fruit, and vegetables should be available in sufficient abundance and at low enough prices to displace to a greater extent the meat that is such a prominent article of diet in many households."

This and similar reports from health officers everywhere may be quoted to show that enough has long been known of the general principles of dietetics to provide practical guidance. In New Zealand the essentials for an adequate diet should be within the purchasing-power of all classes of the community. In addition we need more discipline and intelligence in the choice of our food and more skill in its preparation.

The necessity for popular education is evidenced by the fact that tinned and prepared foods are often bought at greater expense and with less benefit than would be derived from the purchase of the home-grown article, and also by such an anomalous situation existing as that in country districts numbers of farmers' children (estimated in one investigation as at 10 per cent.) do not drink milk. On some farms practically all the milk is sent to the factory, the farmers' children getting little or none. The value of skimmed milk is not sufficiently recognized, though its protein, vitamin, calcium, and other mineral content make it a cheap protective food.