

## OUR PRIZE COMPETITION.

WHAT IS MALNUTRITION? AMONG WHAT CLASSES IS IT PREVALENT? WHAT ARE THE CAUSES AND HOW SHOULD THEY BE COMBATED?

We have pleasure in awarding the prize this month to Miss Hilary H. Riggall, F.B.C.N., 4, Makepeace Mansions, Highgate, N.6.

### PRIZE PAPER.

Malnutrition is a condition caused by a defect in the qualitative or quantitative requisites of foodstuffs or in their assimilation. The qualitative requisites are those of digestibility, vitamin content and taste, while those of quantity represent a sufficiency of protein to repair outworn tissue and to enable growth, and quantities of fats and carbohydrates in correct proportion to supply the correct amount of calories a day, together with roughage.

Proportions vary under differing conditions of age, race, climate, and output of energy, and exact standardisation of human requisites is therefore impossible. Cases must be studied individually, estimates being based on adaptation of general principles to individual requirements.

Civilised man has no reliable instinct for choosing the right food. Enormous developments of science have made it increasingly possible for him to select the wrong kind. Varying degrees of malnutrition are common, ranging from slight disturbances of general health to the severe disease of rickets. Greater rapidity, however, in shipment of foodstuffs and increased skill in preservation has tended to improve the diet of millions and almost to eliminate the deficiency diseases of scurvy, beriberi, and pellagra. Death by starvation, common in the past, is now almost unknown owing to development of the social services.

Malnutrition is prevalent chiefly among the low-waged workers; and, broadly speaking, it constitutes a defect both of quantity and quality. Cheap, bulky foods predominate, often with too much sugar and too low a quantity of protein, animal fat, and all vitamins. Most of this food is also of poor quality and not fresh. These conditions are mainly due to economic difficulty. They are further complicated by poor choice, lack of variety and defective cooking—results of ignorance and apathy.

Malnutrition is shown mainly in growing children who are necessarily most affected, but it is also demonstrable in the adult. Certain definite diseases appear, of which the most serious now common is rickets (in children), but there is also a lowering of vitality and of general efficiency amongst the total population in which malnutrition is present. Epidemics are more easily spread, the death rate is higher, the full benefits of education cannot be gained, earning power is diminished and social discontent is apt to arise.

Amongst the more highly paid workers the chief mistakes in diet are too high a proportion of protein, too concentrated food, insufficiency of roughage, and too much alcohol. Here, also, there is good food spoilt in cooking, this being due to demand for elaborate dishes. Vitamin shortage is not common in the upper classes, with the exception of B1 and B2, lack of which causes intestinal stasis and liability to infections.

Of certain classes of workers liable to malnutrition seamen, military forces on active service and institution dwellers are the most common. This is due to difficulty in procuring fresh or inexpensive food. Research has greatly diminished this danger, which formerly was neither foreseen nor understood.

Causes of malnutrition may be economic, environmental, or individual. Economic conditions have already been suggested as the most prevalent. Environmental causes include unhygienic surroundings, especially where there is lack of light and air, both essential to proper assimilation. The right kinds of food may have been provided but the individual unable to assimilate them adequately. There may be included poor mealtime conditions, such as a narrow time limit, noise, diet and overcrowding. Individual causes may include fatigue, mental strain, irregularity of meals, bad posture limiting peristalsis, and such physical conditions as dental caries, tonsillar infection and other pathological states.

Further causes are overweighting of the market with preserved foods. Many of these are devitalised in the process. Substitution of canned fruit for fresh fruit and of polished grain for whole grain are causes of deficiency in vitamins C and B respectively. Tinned milk may be deficient in vitamins and in fat. All dried foods are likely to be deficient in vitamins. Cheapening of these foods leads to their substitution. The buying of cheap cooked foods is a growing danger to the poor.

The combat of malnutrition is an immense question, involving improvement in the economic state of the poor, steady international trade and the preservation of peace. Much may be done by those not directly concerned with these problems by constant education of the public of all classes on the importance of a properly balanced, natural diet, and of the best means of obtaining fullest value both of raw materials and in preparing these for consumption. In the care of individual cases study of the history will involve not only investigation of diet but of environment and often of heredity. This will indicate the lines on which treatment should be pursued.

### HONOURABLE MENTION.

The following competitor receives honourable mention: Miss Jane McNellie, F.B.C.N. She writes in part:—"Proper rules of preventive dentistry should be enforced; the teeth share in any lowered resistance or predisposition to disease, so to keep them in good preservation the body must be kept in a healthy condition. Nowadays the expectant Nursing Mother realizing that all the temporary and most of the permanent teeth have begun to form in the jaw several months before a child is born, knows that one of her most important responsibilities is the laying of the foundation for strong healthy teeth for her child, by the eating of food of a proper nature, because on the type of food she eats at this important period will depend the condition of the child's teeth and through them her child's health. The diet of the expectant mother is the Alpha and Omega of preventive dentistry."

### QUESTION FOR NEXT MONTH.

What is Addison's Disease? Describe its symptoms, signs and forms of treatment, and nursing care.

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