OUR PRIZE COMPETITION.

WHAT ARE THE CAUSES OF MALNUTRITION, ITS EFFECTS, AND SOME OF THE REMEDIES?

We have pleasure in dividing and awarding the prize this week between Miss Ména M. G. Bielby, Cranford, Middlesex, and Miss Beatrice Allbutt, Hove Villa, Brighton. Both Papers are of equal value.

PRIZE PAPERS.

By Miss Ména M. G. Bielby.

Causes .--- The commonest causes of malnutrition are improper food, lack of sunlight, pure air, sleep, vitamines, and open-air exercise. Insufficiency of means to purchase necessary nourishment is less often a cause than ignorance concerning the wise selection of foodstuffs and their right cooking. Overfeeding, especially with white bread, cornflour, bought cakes and pastries-which usually contain deleterious matter-and unwholesome sweets, at all hours of the day, accounts for as much malnutrition as underfeeding does. A widespread cause amongst children is lack of milk, partly owing to its high price and partly to the fact that the money which should buy it is wasted, economically speaking, on alcohol, tobacco, meat, and other "luxuries." Constipation, with its poisonous effect, is the ally of improper feeding.

Decayed teeth are at once a cause and a result, leading to poisoning of the whole system, and, by imperfect mastication, the failure of the first stage of digestion.

Other contributory causes are irregular feeding, insufficient drinking of pure water between meals, and the consumption of pickles, spices, pepper, vinegar, and other condiments, which are eaten daily by the children of the industrial classes.

Of all causes of malnutrition alcohol is the most prominent, even when taken in small doses, either directly or indirectly through the parents, in all classes. This is responsible for many organic diseases, and the faulty metabolism to which so much malnutrition is traceable. Alcohol has an inhibiting influence on metabolism, especially by delaying oxidation or causing its deficiency, thus hampering the body by the presence of many effete substances. It creates want of appetite, injures the whole of the mucous membrane, and leads to defective lactation and defective ovulation. Thus alcohol taking by the mother is wholly disastrous to the child. A great deal of infantile malnutrition is really due to ante-natal infection with syphilis and parental alcoholism. The tobacco habit, too, hinders nutrition; in

the case of young children, by inhaling the fumes.

Effects .--- The most obvious effects are rickets, tuberculosis, chest diseases, and a liability to all the infectious diseases of childhood, and constantly recurring "colds." Adenoids, enlarged tonsils, neurosis, anæmia, and general debility are common results. Malnutrition provokes the incipience of potential disease, and is often the forerunner of severe illness. Defective growth, arrest or failure of brain development (up to the age of thirty years), mental deficiency, and insanity are other effects, in their turn leading to incalculable waste of funds subscribed to voluntary hospitals, and State funds. The dullard cannot receive education, and adds to the sum of immorality, venereal disease, insanity, and race degeneracy.

Remedies .- The most urgent are pure air and sunlight in the home. Total abstinence from alcohol and tobacco. Breast feeding by a properly fed mother. Whole wheat should be used for bread, puddings, and cakes, as in white flour all the nourishment except starch is absent. Fresh food, conservatively cooked instead of the nutriment being wasted by wrong cooking, including lettuce, spinach, raw apples, oranges, lentils, barley, and oatmeal should form the daily diet instead of tinned foods. Nature provides valuable green food free wherever sting-nettles and dandelions grow. Children under seven should be chiefly dairy-fed. Every growing person needs a quart of milk daily. Dripping, butter, codliver or olive oil, or herrings, supply essential fat. Pure food and the abolition of flies are necessary.

Environment plays an important part in nutrition. The child who, in addition to his material needs, secures love, joy, and harmonious surroundings generally, thrives better than that child who, while his material wants are supplied, is starved in the psychic side of his nature, or who grows up in a loveless, sordid atmosphere, in fear of harshness or violence.

By MISS BEATRICE ALLBUTT.

Malnutrition is a condition usually occurring in connection with some disease or abnormal condition. It may be due to improper, insufficient or unsuitable food, chronic constipation, defective animation, foul air, overwork, sleeplessness, tuberculosis, various diseases of childhood, such as marasmus, rickets, infantile scurvy, and congenital disease. Nutrition is often disturbed in nervous diseases, nutri-

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