

evidence of untreated and treated decay. The term "treated teeth" comprises all extracted permanent teeth and fillings of either permanent or temporary teeth; extracted temporary teeth are not recorded. The average number per head of such treated and untreated carious teeth in the primer classes was 7.1; in Standard II, owing to some of the first teeth being shed, the figure falls to 6.2; in Standard VI, when the first teeth have practically all been shed, the figure has risen again to 7.0; and later, in a batch of seventy-six candidates for the teaching profession (between sixteen and twenty-two years of age), an average of 15.3 teeth per head were found to be carious, filled, or extracted. This is clear evidence of the rapidity with which decay of the teeth is taking place in the school-children and young adults of the Dominion.

The number of carious teeth found in different schools throws some interesting light on the causes of dental decay. Dr. Mecredy says: "The relationship of dental caries to the store (confectioner's shop) is indicated by the greater number of carious and treated teeth per head in schools near a store. The actual ratio is as 100 in schools near a store to 73.5 in the schools remote from a store. The amount of caries is therefore over 25 per cent. less in the latter schools. It would appear from these figures that the store, which mainly sells sweets and biscuits to the children, is therefore responsible for a quarter of the dental caries found in schools." Again: "There are two classes of children—apart from the question of the store—who have teeth which are above the average. The first class is found in the orphanages where the diet is strictly controlled, and the second is recruited from the homes of the very poor. In the case of the latter the diet is of necessity the simplest: stale bread takes the place of the fresh bread dear to the heart of the housewife, sweets and sugar play a small part in the diet, and eating between meals is reduced to a minimum."

Apart from estimates of the number of teeth per head showing signs of decay, the percentage of children with perfect sets of teeth is a valuable index of the general state of the teeth of the children. Of the thirty-four thousand children for which statistics are available the number with perfect sets of teeth was returned as 4.8 per cent. This, again, owing to the limited time which school medical officers can spend in examining the teeth, is certainly an overestimate. Dr. Mecredy's estimate is 2 per cent. He finds that the number steadily decreases from the primer classes to Standard VI, being 1 in 27, 1 in 91, and 1 in 166 in the three groups.

Obstructed nasal breathing, mostly due to adenoids, decreases steadily from the primer classes to Standard VI. *Enlargement of the tonsils* shows a similar tendency to decrease. The decrease in these two conditions with increasing age is due partly to the fact that bad cases receive operative treatment, and partly to the tendency of these enlargements to subside with the approach of puberty.

Goitre increases steadily from the primer classes to Standard VI. Its incidence varies enormously in different districts. Very slight enlargements of the thyroid gland also are recorded as incipient goitre. These form an additional 9.77 per cent. which are not included in the figure given above. Some investigations have been undertaken with regard to the local distribution of goitre. For instance, in Otago there is a "high incidence of goitre along the main Clutha watershed, and a low incidence up the Manuherikia and Poolburn watersheds. The incidence of goitre is practically the same in the upper and middle Clutha groups of schools. This would seem to indicate that the causative factor is constant through the whole course of the river; but whatever this factor may be it obviously does not operate up the Manuherikia branch of the Clutha." The working-out of such goitre maps is an important step towards ascertaining the local causes of goitre, whatever these may ultimately be found to be. It should be mentioned that in certain areas goitre occurs in nearly 40 per cent. of the school-children. A valuable paper on the causation of goitre reviewed in the light of the findings in New Zealand was published in the *New Zealand Medical Journal* jointly by Dr. Baker and the Professor of Public Health, Otago University.

Tuberculosis in its various forms is uncommon in children attending school, occurring in less than 0.1 per cent. It should be emphasized that an extremely important precursor of tuberculosis is a lowered state of general health—and this is not uncommon. The problem of tuberculosis in children of school age is therefore largely one of preventing malnutrition and maintaining a high standard of general health.

Of *infectious diseases*, measles, whooping-cough, and scarlet fever are the cause of an enormous amount of damaged health. Common colds are collectively a serious problem, being the direct and indirect cause of much general ill health and loss of efficiency, as well as being one of the chief causes of nose, throat, and ear trouble.

General State of Health of the Children.

Apart from the very serious extent of disease of the teeth, there are other reasons why we should be far from satisfied with the health of the rising generation in this country, where the opportunities for good health are so exceptional. Dr. Phillipps says: "I find very few children who come up to the standard which I have mentally fixed as readily attainable. Many children are of comparatively poor physique, and their muscular tone is poor." Again, he refers to the "large number of pale faces, the almost invariable drooped shoulders, and the frequent poor chests." Dr. Mecredy, speaking of malnutrition and anaemia, says: "A poor home environment is often responsible. A faulty diet, an overcrowded and ill-ventilated sleeping-room, short hours of rest, and a life in the streets in the daytime are prominent factors in wrecking many a child's physique. At the opposite pole we find the child of the well-to-do parent similarly suffering from malnutrition and anaemia. The history in many of these cases suggests a lack of parental control. The child eats when and where he pleases, and generally indulges to excess in lollies, biscuits, and cakes. Lack of sleep, frequent visits to the 'pictures,' and a love of the indoor life are also often noted in these children."