

This he endeavoured to do by means of the chemical method; but it was, strictly speaking, merely a tentative experiment, and he would have been the last to adhere tenaciously to a chemical theory, as have some of his followers, who are still trying to isolate antibodies. This deviation into the backwaters of pure chemistry was due, in Lehmann's view, to the fact that the serum reaction was discovered after, instead of before, the reaction to bacteria. The latter reaction was regarded as a defensive movement on the part of the body to an attack by bacteria. With the study of the serum reaction, however, it was found that the organism was as active against its own defensive weapon, the antibody, as against its enemies, the bacteria, and elaborated substances of an anti-antibody type; the absurdity of the notions of attack and defence thus became evident. Research has now regained its proper direction, for the problem of immunity is regarded as one of cell life and cell metabolism. This, Lehmann considers, is a return to Virchow, whose conception of the cell as a "person" he pushes to its extreme. We are asked to contemplate, not merely the properties of the cell as taught by physiologists, but also to consider its psychology, its free will, its habits, its memory, and so forth. This may appear to be introducing fancy rather than the imagination into scientific matters, but the book is interesting and suggestive, and it also contains much information on the more recent progress that has been made in the subject of immunology. It contains no new facts, and claims merely to point out the direction in which the solution of the problem is to be found, not to furnish the solution itself.

#### OLD MEDICAL BOOKS.

THE many medical men who are interested in the history of medicine may be glad to have their attention directed to a very rare old book which will appear for sale at Messrs. Sotheby's, in Bond Street, on December 14th. It is by John Cotta, and is entitled "A Short Discoverie of the Vnobserved Dangers of severall sorts of ignorant and vnconsiderate Practisers of Physicke in England. London. Imprinted for William Iones, and Richard Boyle. 1612." In the same sale is included also a copy of Sir T. Elyot's "Castel of Healthe," which unfortunately lacks the title-page and cannot be dated, as the colophon on the last page is reticent; but the auctioneers aver that this must be a hitherto unrecorded edition, as it does not correspond with the issues of 1541 and 1547. Another volume to be sold the same day contains the 1572 edition of Elyot's book, and three other works on health ranging from 1557 to 1576.

#### DENTAL DISEASE IN CHILDREN.

THE Medical Research Council has issued this week a report by the committee it appointed in 1921 for the investigation of dental disease. The first, by Mr. J. Howard Mummery on the structure of teeth in relation to dental disease, was published in 1923, and was noticed in our columns at the time (1923, vol. ii, p. 388). The new report<sup>1</sup> is on the incidence of dental disease in children, and is founded on the result of the dental inspection of 4,000 children in public elementary schools. It is mainly statistical and is designed to supply data which will be reliable from an etiological standpoint. It was thought that if a number of investigators were employed, although a large amount of information could thus be obtained, the personal equation of each investigator might render difficult the satisfactory comparison of the results. The inquiry was therefore entrusted to one investigator, Mr. N. J. Ainsworth, L.R.C.P., M.R.C.S., L.D.S., and the statistical reduction of the data collected was carried out by Dr. Matthew Young, a member of the staff of the Medical Research Council's Department of Statistics. The medical profession is

indebted to both these gentlemen for the careful way they have carried out their laborious task.

The points of inquiry scheduled by the committee comprise: (1) The age and period of eruption of the permanent teeth; (2) the most common sites of caries; (3) age of commencement and rate of progress of caries; (4) teeth most frequently attacked; (5) frequency of "arrested caries"; (6) frequency of hypoplasia and its relation to caries; (7) incidence of chronic marginal gingivitis; (8) frequency of antero-posterior mal-occlusion.

That a very large amount of material can be collected by a single observer is shown by the fact that Table II, a summary of the incidence of caries in permanent teeth, is compiled from observations on 55,000 teeth. Yet the committee has to acknowledge that on some, and by no means unimportant, points the material is insufficient to allow of definite deductions. Such points are the possible influence of race on caries, the relative incidence of caries in town and country schools, and a comparison between the various schools examined.

In regard to the main issues, the committee thinks that "the replies to the original questions are definite, and may on the whole be considered reliable." The data on eruption confirm previous conclusions. Those on the incidence of caries in permanent teeth show no sex difference and confirm the bad reputation of the first permanent molar as showing the highest percentage of caries. If, however, the incidence of caries is calculated for each tooth at one year after the average date of eruption, then the lower second molar has the highest incidence, and the lower first molar, upper first molar, upper second molar, upper first premolar, upper central, and upper lateral follow in a descending scale; giving a valuable indication of the relative liability of these teeth to caries. "Arrested caries" is very rare among permanent, but comparatively common among temporary teeth. Hypoplasia increases the incidence of caries.

The slighter forms of gingivitis occur in about one-third of the children examined, and there is a steady rise, with increasing age, in the numbers with the severer forms of the disease. Some degree of antero-posterior mal-occlusion was found in 23.2 per cent. of all children examined. The occlusal surface is the most frequent site of incidence of caries, especially among the molar teeth.

Such are, shortly, the committee's conclusions, but there are many other points of interest on which light is thrown in the report. We may note, as two such points, the infrequency of syphilitic hypoplasia, and the very slight indication that softness or hardness of water has an influence on dental caries. That no conclusion could be reached in regard to the time of onset and rate of progress of caries is not to be wondered at, but figures on the matter given in Table V point to a possible elucidation of the problem.

The report will make a strong appeal to statisticians on account of the accuracy of its figures and the explanatory notes accompanying the diagrams.

We may be allowed to ask whether in actual fact, as the specimen chart indicates, only "anterior marginal gingivitis" was considered. If we add that in one or two places the train of thought in the minds of the framers of the report is not quite clear, we have expressed our worst criticism. The report is a valuable record of accurate and carefully considered observation, none the less valuable for the fact that its whole tenor confirms the prevalent views of the etiology of dental caries.

#### SUBSCRIPTIONS FOR 1926.

MEMBERS of the British Medical Association are reminded that subscriptions fall due on January 1st in each year, and that if each member who receives an application for his or her subscription from the Head Office will send the amount to the Financial Secretary within the first week of the new year the work of the office will be very considerably lightened. Members are also reminded of the claims of charity. The amounts at the disposal of those concerned in the administration of medical benevolence are altogether insufficient to meet the appeals that are received, and the British Medical Association Charities Fund was formed in order to assist. Subscriptions or donations are urgently needed, and every member of the Association is asked to add to his next payment a sum for the credit of the Medical Benevolent Account.

<sup>1</sup> II. The Incidence of Dental Disease in Children. Reports of the Committee for the Investigation of Dental Disease. Medical Research Council. Special Report Series No. 97. 1925. H.M. Stationery Office. (8vo, pp. 48. 1s. 6d. net.)