

Reviews.

"INTERNATIONAL JOURNAL OF LEPROSY," Vol. 1, No. 4. October, 1933.

Dr. Keil, of Leprosy Polyclinic, Paramaribo, writes on the importance of nutrition in the prevention and cure of leprosy. This article emphasises the well-known fact of the importance of diet in leprosy and appends the diet used in the Polyclinic School. The authorities are fortunate in being able to put the children on such a diet. Many of the institutions in the tropics would find such a scale not only financially impracticable, but impossible during many months of the year. However, there is a temptation to sacrifice quantity for quality, and the diets used in Surinam should be of value as a basis in the regulation of the diets elsewhere.

Dr. Denney, of Carville, contributes an article on the work of the United States National Leper Home. This article reviews the work of the Technical Services, the Dermatological Service, Ear, Nose and Throat, Neuro-psychiatric, Orthopædic, Dental, Laboratory, X-ray, Nursing and Dietetic Services. The whole article reflects the immense work which is undertaken and demonstrates the efficient way in which this home is organised.

Dr. Muir contributes the second of the reviews which are to appear on the "Treatment of Leprosy." This is a contribution which covers some fifty pages with bibliography of 257 references. The review is one of the most exhaustive which has ever been done and is of immense value. No attempt will be made to summarise it as readers are advised to consult the original article.

Dr. Robineau writes on leprosy in French West Africa, giving a summary of publications during the past thirty years.

The reprinted articles include a condensation of Dr. Ryrie's contribution to the Transactions of the Royal Society of Tropical Medicine and Hygiene (1933). A condensation of an article by Denney & Eddy, which appeared in the archives of Dermatology and Syphilology (1933), on the *in vitro* behaviour of lepra and certain other acid fast organisms in the presence of leukocytes. The following is a summary given by the authors:—

"Acid-fast bacilli in Tyrode's solution have been subjected to rabbits' leukocytes from peptone pleural effusions.

"Bacilli of the tuberculosis group proliferated readily in the presence of both living and subsequently dead leukocytes. Phagocytosed bacilli proliferated until the death of the phagocyte. Both intra- and extra-cellular colonization produced irregular stellate clumps.

"Bacilli of the non-pathogenic group proliferated readily, but were not greedily phagocytosed. Colonization was predominantly extra-cellular, and the colonies were irregular and often stellate.

"Of the bacilli cultivated by others from lepers, eleven strains were distinctly attracted to the leukocytes; fourteen were not. With the former, intra-cellular proliferation continued until eventually the phagocyte was ruptured. The latter grew principally extra-cellularly, and when phagocytosed appeared not to proliferate rapidly, if at all.

"Rat leprosy bacilli were readily phagocytosed, as single rods and small clumps. Within the cell proliferation continued until the phagocyte was distended to the point of rupture, the intracellular growth sometimes being dense and distinctly globular. Extra-cellular colonies progressively increased in size and some of the dense, spherical masses were indistinguishable from globi.

"Leprosy bacilli and globi obtained from an incision in a nodule

showed chemotactic affinity with the rabbits' leukocytes, but no proliferation of the single rods or increase in the size of the globi.

" Pus from leprous abscesses also underwent phagocytosis. There was no definite increase of free bacilli, but a definite increase in the number and size of globi. Subsequent additions of fresh leukocytes appeared to cause a progressive increase in the size of the globi, and the formation of additional small ones ; this formation of new globi apparently ceased when free organisms were no longer present in the suspension."

" CUTANEOUS SENSITIVITY TO ACID-FAST BACILLI IN SUSPENSION," Prof. S. L. CUMMINS, LL.D., M.D., and ENID M. WILLIAMS, M.D. (*British Medical Journal*, April 21st, 1934).

This article was prepared as a result of a suggestion of Muir's as to whether healthy adults in countries where leprosy is no longer endemic react to Mitsuda's Leprolin Test in the same way as non-leprous adults in India. To perform this test, twenty-five non-tubercular male adults at the Cardiff City Mental Hospital were chosen, and for sake of comparison each patient was tested both with "leprolin" and an intracutaneous inoculation of 0.1 c.c. of tubercle bacillary suspension equivalent to 10 million dead bacilli. In addition, to see how tuberculous patients reacted to a tubercle bacillary suspension, it was decided to test the same suspension diluted so that 0.1 c.c. contained one million bacilli only, and five adult males with relative chronic pulmonary tuberculosis and three children with non-pulmonary lesions were chosen. The following is the summary of observations by the authors :—

" The factors determining the responses noted to the intradermal inoculation of heat-killed acid-fast bacillary suspensions in persons free from the signs of clinically active tuberculosis call for further study, and can only be discussed as a part of the larger subject of bacterial hypersensibility. Here it will suffice to summarise the points brought to light in the series of observations described.

" 1. The typical reaction to tubercle suspension resembles the typical intradermal tuberculin reaction in reaching its maximum on or about the third day. It differs from the tuberculin reaction in persisting longer and showing a tendency to late central necrosis. The writers have noted central necrosis as a rare occurrence after intracutaneous tuberculin tests, but these have been marked at the third day at the height of the reaction, whereas the central necrosis caused by bacillary suspension comes on as the initial inflammatory reaction is fading.

" 2. The typical reaction to leprolin (suspension of heat-killed leprosy bacilli and leprous tissue), when applied to healthy persons in an area free from endemic leprosy, differs from the intracutaneous tuberculin reaction in remaining for some days negative or doubtful, gradually developing to a maximum between the eighth and the fifteenth day, and lasting on for from four to six weeks as a diminishing zone of inflammatory oedema, often showing late central necrosis.

" 3. Six out of twenty-five persons tested with leprolin reacted to the injection in a manner similar to the usual response to intracutaneous tuberculin or to tubercle bacillary suspension, showing that they were hypersensitive to a bacillary antigen to which, presumably, their tissues were " virgin soil." This result suggests that " group " sensitivity must play a definite part in reactions to acid-fast bacillary constituents.

" 4. It is of interest that, in two probably non-tuberculous children tested with intracutaneous tubercle bacillary suspension, no reaction was observed either late or early, the bacilli being disposed of without inflammatory response."