PUBLIC HEALTH

Health Service Officers Go To Bolivia to Test Vaccine

Dangerous European Type of Typhus Fever Always Present in Highlands There, Facilitating Trial

TWO top-flight disease fighters of the U. S. Public Health Service, Dr. R. E. Dyer, assistant director of the National Institute of Health, and his colleague, Dr. N. H. Topping, have gone to La Paz, Bolivia, to make an extensive, thorough trial of the anti-typhus fever vaccine on which the safety of British and American troops and even the outcome of the present war may depend.

The possibility that American troops may have to go into typhus fever regions of South America for hemisphere defense, as well as plans for aid to Britain which include supplying her with the typhus fever vaccine, make it vitally imperative to know whether or not this vaccine works.

Previous attempts to test the vaccine in European countries where typhus fever is a constant threat to life have failed because of the war abroad. Large batches of the vaccine, made according to the method originated by Dr. Herald R. Cox, of the U. S. National Institute of Health, were sent to Hungary, Rumania and Spain. Reports as to the results of the trials have either been inconclusive or have failed altogether to reach officials in the United States. So the U. S. Public Health Service is going to make the tests itself under conditions that will leave no doubt about the results.

Enough vaccine for 5,000 persons has already been sent to Bolivia, where public health authorities and officials have promised full cooperation for the tests. The director of the state health department laboratory will probably work with Dr. Dyer and Dr. Topping.

These tests present one of the most difficult problems in disease-fighting. For each person vaccinated, there must be one person unvaccinated who lives under exactly the same conditions as the vaccinated person, living in the same house, even sleeping in the same bed if possible, and thus equally exposed to the typhus fever germs which are spread by body lice.

The dangerous European type of louse-carried typhus fever, which kills from one-fifth to about three-fourths of those who get it, is always present in the highlands of Bolivia and certain other South American countries, often flaring to disastrous epidemics. If an epidemic should break out in regions where Dr. Dyer and Dr. Topping have vaccinated one-half the population, they will have a quick answer on what the vaccine is worth, from comparing the number of cases, if any, among the vaccinated with the number among the unvaccinated. There is always so much typhus in Bolivia, however, that they will get an answer even without an epidemic. It will take longer, maybe as long as nine months, Dr. Dyer said, but Bolivia offers the best opportunity in the world today for field trials of the vaccine. It cannot be tried in the United States because we do not have any European type typhus fever here.

The Cox vaccine is the best of all those that have been prepared to fight typhus fever, the Public Health Service believes, because it has given the best results in animal protection tests and because it can be manufactured on a large scale. While Dr. Dyer thinks he will need to vaccinate only 5,000 people in Bolivia to determine its value, he can get vaccine for 100,000 if he needs it.

Science News Letter, August 16, 1941

PUBLIC HEALTH

Shortage of Chlorine Should Not Affect Public Health

THE safety of your drinking water, your swiming pool, and the cleanliness of the drink you obtain at a roadside hot dog stand are being protected despite the shortage of chlorine.

Correspondence between Dr. Thomas Parran, Surgeon General, and the Director of Priorities, E. R. Stettinius, Jr., reveals that there is plenty of chlorine to take care of the needs of public health.

The only danger to the supply for water works and sanitation seems to lie in an unfounded fear that a shortage will develop. Acting on this fear, some buyers are overstocking, thus tying up containers. Lack of these containers may slow up the filling of new orders.

Public Health uses of chlorine have been put on a par with defense needs by the Office of Price Administration and Civilian Supply. Adequate supplies are insured for water purification, sewage treatment, sanitation, refrigerant gases for existing equipment, slime control in industrial plants, preparation of products for medicinal use, preservation and processing of food products.

Not specifically mentioned in this provision is the use of chlorine by many soda fountains, roadside stands, and bars for the sterilizing of dishes and glasses where steam or boiling water is not readily accessible. Chlorine is also widely used on dairy farms and city milk plants to kill bacteria in containers and to sterilize the hands of milkers and the udders of the cows before milking.

For these purposes, a dry form of chlorine—sodium hypochlorite or calcium hypochlorite—is used, not the liquid chlorine commonly used as a bleach as well as a disinfectant.

The OPACS is depending on distributors of this dry chlorine to see to it that these important public health needs are adequately filled.

Public Health officials know of no substitute which will kill the germs and not endanger humans.

They warn that without careful sterilization of milk containers, drinking glasses and dishes, there would certainly be a spread of many diseases carried in this way, including colds and influenza, tuberculosis, typhoid fever and paratyphoid fever, septic sore throat, diphtheria and scarlet fever.

Of the present production of chlorine, it is estimated that about 30% will go for defense. Only about 5% to 7% is needed for sanitation. It has been put up to the housewife, the laundry and the paper manufacturer, who use chlorine as a bleach, to cut down their use of chlorine so that neither public health nor defense uses need be curtailed.

Science News Letter, August 16, 1941