SCIENCE NEWS

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THE PRODUCTION OF PENICILLIN

A PRECEDENT in United States-Mexican relations that may have far-reaching good results has been set with the establishment in Mexico of the Wyeth-Stille Laboratories for the production of penicillin.

News of this laboratory, which was established in April and by the end of this month is expected to be producing 10,000,000 units of life-saving penicillin a day, was brought to this country by Dr. Jose Zozaya, director of the Mexican Institute of Public Health and Tropical Diseases, a member of the Mexican Advisory Council to Science Service. Dr. Zozaya is also chairman of the Committee of Penicillin Control established in Mexico by presidential decree. It was his idea to get an American drug manufacturing firm to join with a similar firm in Mexico for penicillin production.

The Mexican part of the new penicillin production plant, Stille Laboratories, is one hundred per cent. Mexican. Wyeth, Inc., of Philadelphia, instead of establishing a laboratory or branch of its own, has joined with the Mexican firm to establish a new laboratory and is sending technical men to train Mexicans in penicillin production methods. The latter will work under Dr. Zozaya's direction. This is the first time such an arrangement has been worked out.

Thanks are especially due the American Embassy in Mexico which, according to Dr. Zozaya, "has broken a million barriers in getting this accomplished."

Many lives will be saved in the coming months as a result of its efforts and those of other agencies in getting the penicillin production plant started at once instead of six months from now.

Dr. Zozaya is in this country now to discuss with Army and Public Health Service authorities and professors in medical schools a plan he has for making the facilities of his institute available to American students of tropical diseases. The institute has not only a laboratory for research in tropical diseases but a fifty-bed hospital and branches in other parts of Mexico where young physicians can see and study patients suffering from diseases that war may spread far beyond the tropics as soldiers and European refugees return to their homes.

Typhus fever, brucellosis or undulant fever, malaria, fungus diseases, and intestinal infections are among the diseases of which the institute can furnish abundant material for study. Dr. Zozaya hopes that the institute may have as guests, for six months or so each, medical scientists planning to specialize in the investigation as well as in the treatment of tropical diseases.—JANE STAFFORD.

ITEMS

THE average length of life of the American people reached a peak of 64.82 years, the highest on record to date, in 1942, according to statisticians of the Metropolitan Life Insurance Company. The average girl baby who celebrated her first birthday that year can expect to live longer than the proverbial threescore years and ten. She can expect to live till she is 71 years. Almost two years over the average expectation of life at birth is gained by surviving the first, dangerous year of life, and more is gained by being a girl. Among white males, the average age at death will be over seventy years only for those who have reached their fortieth birthday. The longevity record established in 1942 probably will not be equalled in 1943 or 1944 because of the war. "A very large proportion of those now at work will live to the usual retirement age. Age sixty-five will be attained by more than two thirds of those now between twenty-five and thirty-five, by almost three quarters of those now forty-five, and by four fifths of those fifty-five years old. The number of years remaining after sixty-five is quite appreciable; for the average person it is 13.12 years, while for those in a state of health better than average the outlook is even more favorable."

SOME of the B vitamins may help to make promin a better medicine for tuberculosis, it appears from studies reported by Dr. G. M. Higgins, of the Mayo Clinic. When this relative of the sulfa drugs is given by mouth to growing white rats it exerts a rather severe toxic effect. Over-irritability, occasional paralysis, some loss of appetite, cyanosis and anemia are among the changes in these animals following doses of promin. The animals lost weight and gradually lost their hair. When, however, the promin-treated animals were allowed to partake freely of B vitamins as they desired, their intakes of thiamin, riboflavin and pyridoxine greatly increased, sometimes sixfold over the amounts considered essential for normal nutrition. While taking these extra amounts of the vitamins, they did not show signs of the toxic effects of promin. There were no signs of irritability, they did not grow bald, nor did they lose their appetites or any weight. Signs of cyanosis were far less marked and the anemic condition improved.

MEN in the dire need of water that comes when adrift on a raft at sea can, surprisingly enough, meet part of their requirements through eating glucose, according to a report made by Professor James L. Gamble, of Harvard Medical School, to the meeting of the American Philosophical Society. He said: "It turns out that a part of the water requirement found for fasting can be replaced by glucose, and all of the physiological benefits of glucose can be gained, at no cost to the water exchange." Hydrogen and oxygen are present in glucose, as well as in other carbohydrates, in the same two-to-one proportion that represents water, but with the addition of half-a-dozen carbon atoms per molecule. The rearrangement by which the body is able to make use of these elements is physiologically complex, but the living mechanism of human cells can do it if the need is great enough.