

When no other cause for the symptoms can be discovered, both patient and doctor are likely to blame them on the low blood pressure.

Many a person with low blood pressure, however, is "in good physical trim" and "robust health." The well-trained athlete is a typical example of a person with low blood pressure who has no symptoms or complaints, Dr. Durant points out in a report to the Medical Society of the State of Pennsylvania.

The nervous, tired low blood pressure patient is also generally underweight and leads a sedentary life, taking very little exercise.

In most cases these patients can be relieved of their headaches, nervousness, cold hands and feet and tired feeling by "faithfully indulged-in graduated exercises and dietary measures to correct the weight deficiency," Dr. Durant declares.

Science News Letter, September 12, 1942

INVENTION

Cultivate Germs to Combat Harmful Japanese Beetles

► THE JAPANESE beetle and similar insect enemies are likely to have a bad time of it in the future. Two deadly micro-organisms which attack the larvae of these insects, producing milky disease, can be cultivated, rapidly multiplied and preserved by a method described in U. S. patent 2,293,890, issued to Samson R. Dutky of Moorestown, N. J.

The inventor has assigned the right to manufacture and use his invention to the United States government without payment of royalties.

The two micro-organisms that cause milky fever were described by the inventor in 1940 and named by him *Bacillus popilliae* and *Bacillus lentimorbus*. They are found in the blood of larvae having the disease. The blood is extracted and dried, in which condition the spores of the bacteria will remain alive and virulent, the inventor says, for at least four years.

To multiple the supply, the spores are separated from the dried blood by delicate processes and injected into the blood of healthy larvae which are then put into an incubator. In 10 to 12 days, the inventor states, the spores injected are multiplied 1,000-fold.

In this way a plentiful supply can be obtained and preserved against future invasions of the Japanese beetle and his like.

Science News Letter, September 12, 1942

MEDICINE

Combating Syphilis

Ten-hour syphilis treatment tried experimentally. But six-week treatment available in 50 clinics is considered promising to replace standard 18-month schedule.

► A TEN HOUR treatment for syphilis, major disease of war and peace, is being tried experimentally on a few patients in the early stages of the disease. Both arsenicals and artificial fever are used in this one-day treatment.

Now in practical use in over 50 clinics, including government hospitals, are six to ten-week treatments given thousands of patients.

These are promising improvements over the old standard treatments. Eighteen long months was the time needed to cure this venereal disease until medicine's new offensive achieved these new results.

Authorized details of the one-day syphilis treatment practiced by Dr. Walter M. Simpson, Dr. H. Worley Kendall and Dr. Donald L. Rose of Dayton, Ohio, may now be given with the cooperation of the U. S. Public Health Service which is publishing the scientific paper in its technical publication, Venereal Disease Information.

Ehrlich's "magic bullet," arsenic, in the form of Mapharsen, is combined with 106-degree man-induced fever in the Dayton treatment. That is the trick of the speedy action allowing, if the first few successes are continued, one day of treatment to do as much as 540 days have done in the past.

Premature and over-enthusiastic disclosure of the experimental work caused the scientists and the U. S. Public Health Service to release details at this time. The patient is given a preliminary dose of bismuth, long a part of standard treatments for syphilis. After injection into his muscles of four grains of bismuth subsalicylate, he is put into the fever cabinet early in the morning. As soon as the heat of the cabinet has raised his temperature to 106 degrees Fahrenheit, he is given his first hypodermic injection of Mapharsen. Three more injections of this drug are given at the end of the third, sixth and ninth hours of fever. Total amount of the arsenical given the first patients varied from 120 to 240 milligrams. After the tenth hour of fever, the treatment is finished, though the patient is kept in the hospital for a few days for observation and tests.

The Dayton research team do not claim a one-day cure for syphilis. In fact, they do not even announce the development of a new method for treating syphilis in one day. Instead of any such claim, they specifically state:

"It should be emphasized that it is not the purpose of this communication to present a new method of therapy. The number of patients is small and insufficient time has elapsed following the administration of the therapy to permit adequate clinical evaluation of the method employed."

Their aim, they state, is to present experimental data on the value of quantitative rather than merely qualitative tests for syphilis under various methods of treatment. Qualitative tests, they point out, are "yes" or "no" tests. They show either that a patient has syphilis or that he has not got it.

Quantitative tests, devised by Dr. Reuben L. Kahn, of the University of Michigan, show not only whether the patient has syphilis but also whether he is getting better as a result of treatment. These tests, the Dayton scientists state, showed that after the intensive one-day treatment their patients were getting better, whereas the standard qualitative tests would for some time have continued to show a blunt "syphilis positive" and would have led to the assumption that the treatment was without value.

The U. S. Public Health Service, although it is publishing the scientific account of the one-day treatment, does not recommend it for general use. It is watching this and all other speedy methods of treating syphilis with interest, but takes the position that it is too soon to state whether one or the other is the final answer.

The Public Health Service, however, has recommended as standard procedure in all U. S. Marine Hospitals the six-weeks treatment procedure devised by Dr. Harry Eagle and Dr. Ralph B. Hogan, of the U. S. Public Health Service and the Johns Hopkins Medical School. And since the Army and Navy are alert to put into practice all advances in medicine, it would be logical to assume that the shorter treatment proce-