

lanta reports the results. (*Journal, American Medical Association*, April 3.)

About 34 per cent. of the Negroes and 7 per cent. of the white persons on the county relief rolls are syphilitic. Of that number 17 per cent. between 20 and 40 years are not able to do competitive work. Sixteen per cent. of those past 50 years are not able to work at all.

The Fulton County study showed a sudden drop in the number of the syphilitic between the ages of 39 and 60 and over. This rapid decrease means one of three things, according to Dr. McDaniel—the people died, have been treated or are not able to report.

No orderly train of symptoms could be found resulting from syphilis in the Fulton County study.

All physical abnormalities were more frequent in persons who had syphilis.

"There is no disease that I know of, found among such large numbers, that responds so beautifully to treatment as does syphilis, nor can I think of one that has a longer latent period before serious symptoms manifest themselves, thereby affording a golden opportunity for diagnosis and cure or at least an arrest of the disease," Dr. McDaniel states.

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in 1882 and to which, at the time, I owed the animosity of doctors and pharmaceutical chemists.

"I am persuaded," I said, "that the therapeutic of the future will employ, as a curative means, the physical modifiers, heat, light, electricity and other agents still unknown . . . And that the most poisonous drugs of chemistry will have to give place to these imponderables that have the advantage of introducing no poison into the organism."

Warns Against General Use

A warning against abandoning the tried and tested chemical means of treating early syphilis for the newer fever treatment was sounded at the Conference of Fever Therapy. The warning came from Dr. Walter M. Simpson, director of the Kettering Institute for Medical Research, Miami Valley Hospital, Dayton, Ohio, and his associate, Dr. H. Worley Kendall.

Artificial fever treatment is effective in the treatment of neuro-syphilis but its use in treating early syphilis, before nervous and mental symptoms have developed, is still in the experimental stage, these physicians said.

The combined fever and chemical treatment "is not applicable at the present stage of its development to any mass management of the million or more individuals in this country who urgently require treatment for syphilis, each year," Dr. Simpson declared.

Malaria Germs Injected Into Brain

A new method of using malaria to treat paresis, the mental disorder due to syphilis, was reported by Dr. Maurice Ducoste, chief physician at the Psychiatric Hospital, Villejuif, France.

Dr. Ducoste injects directly into the brain a small quantity of blood containing malarial germs. He adds tetanus (lockjaw) antitoxin to the malarial blood before injecting it and believes this makes the treatment more effective.

Out of 453 patients treated in this way in the last 10 years, 353 have been cured, Dr. Ducoste reported. There were 26 deaths from other diseases or accidents several months or years after the treatment. The failures amounted to 12.8 per cent.

Use of fever treatment in eye conditions, particularly those due to syphilis and gonorrhoea, was reported by Dr. L. Hambresin of Paris and by Dr. John S. McGavic of the Cincinnati General Hospital in this country.

In the condition known as specific simple atrophy (wasting) of the optic

MEDICINE

Fever Does Not Kill Germs; Should Build Up Resistance

FEVER treatment does not cure disease by killing disease germs. In diseases like syphilis and gonorrhoea, fever should be used with chemical treatment as a means of building up resistance of organs and other body tissues against the germs of the diseases so that "the infection must eventually die away by itself."

Prof. Julius Wagner-Jauregg, Nobel Prize winner who originated fever treatment for the mental disease that is the late stage of syphilis, gave this explanation of how fever helps cure disease in a message to the First International Conference on Fever Therapy. The conference, of which he is honorary chairman, was held in New York last week.

Spirochetes Persistent

Contradicting those who believe that the high artificial fever cures by killing the disease germs, Prof. Wagner-Jauregg, pointed out that the spirochetes of syphilis are present in the human organism for different periods of time. They are still capable of living even after a successful treatment with artificial fever, whether induced by malaria or by physical means such as short waves of fever chambers. The same holds true for the organisms of gonorrhoea. The patient, however, is well after successful treatment, so the great Viennese scientist advised fellow medical men to revise their theory but to keep up the method of treatment.

Prof. Wagner-Jauregg first tried malarial fever as a cure for general paralysis of the insane, dread late stage of

syphilis, in 1917. His success with this kind of fever treatment, in which the fever was produced by deliberately giving the syphilitic patient malaria, started a world-wide wave of fever treatment culminating in the conference. Long before 1917, however, Prof. Wagner-Jauregg had tried to cure mental diseases by artificial fever. In 1891 he made his first attempts, using tuberculin. Some of these early patients recovered and "enjoy the best health even now, after more than 20 years," Prof. Wagner-Jauregg reported. As early as 1887, he held that the high fever does not kill the germs but is an index of the intensity of the curative process running its course.

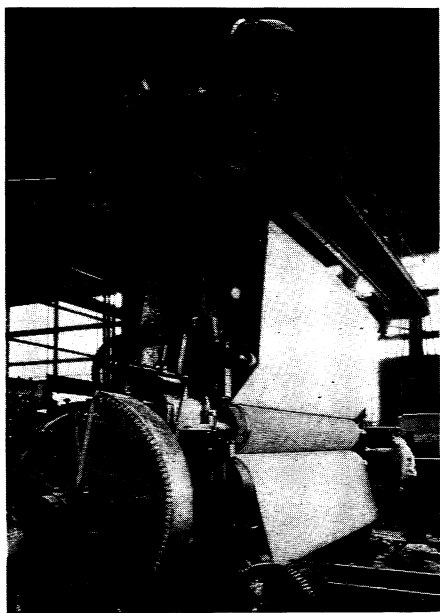
The importance of using chemical methods along with artificially produced fever in treating disease was also emphasized by Prof. Wagner-Jauregg.

Fulfills Old Prophecy

A prophecy made over half a century ago, that electricity would be used in treating disease, has come true and the scientist who made it is still alive to see his then rash statement justified.

The scientist is the 86-year-old Prof. A. D'Arsonval of Paris, whose galvanometer is familiar to every high school physics student. He recalled his early statement in a message to the Conference. Prof. D'Arsonval is honorary president of the French committee of the conference.

"I am forgiven today," Prof. D'Arsonval concludes his message, "for the phrase which I am proud of having written



MAKING PIPE

A section of transite pipe is being made on the big horizontal roller or mandrel of this machine. The wide, continuous felt belt picks up a wet mixture of asbestos fibre and cement and deposits it on the revolving steel mandrel, thus building up the pipe to the required wall thickness. One twenty-fifth of an inch is added with each revolution. Steel pressure rolls bearing against the deposited mixture on the mandrel produce a dense, homogeneous structure and create a strong bond between cement and asbestos fibre.

nerve, fever treatment is the only method which can check the injury and prevent the patient from becoming blind, Dr. Hambresin stated. Even with this method, however, the eyesight cannot be saved in all cases, it appears from Dr. Hambresin's report. He stressed the importance of starting the treatment early in the eye diseases and of using chemicals with the fever treatment.

The results of fever treatment in 7 cases of inflammation of the cornea due to syphilis were more impressive than in any other type of eye disease, Dr. McGavic reported from his experience. Patients who usually stayed in the hospital for many weeks before showing appreciable improvement opened their eyes and left them open after one or two fever treatments. Other forms of treatment had been most disappointing in previous cases of this eye disease. The more acute the stage, the better was the response.

In gonorrhoeal eye disease heat treatment seemed to increase the amount of pus formed in the conjunctival sac following the first and second treatment. After that, Dr. McGavic reported, the

discharge steadily diminished and tests soon showed that the germs of the disease had been eliminated. He recommended giving heat treatments in this condition as frequently as the patient can stand them because the more rapidly the infection can be cured the less likely will be damage to cornea.

St. Vitus' Dance

The irregular, jerking movements of St. Vitus' Dance or chorea were checked in nearly nine-tenths of the cases after an average of 4 sessions of fever treatment, Drs. Maurice Blatt and Clarence A. Neymann and Mr. S. L. Osborne of Northwestern University Medical School reported. They have treated 25 children suffering from this disease. Although it is still too soon after the treatment, except in the first 7 cases, to draw definite conclusions, these scientists believe that with the exception of those patients who relapsed soon after treatment ceased they have really been able to cure chorea and to stop its recurrence.

Although fever due to poisons from disease germs may be a grave strain on a heart damaged by rheumatic fever or chorea, the Northwestern University scientists found that electrically induced fever did not adversely affect the hearts of the child rheumatic fever and chorea patients they treated.

Helps Angina Pectoris

Angina pectoris, much-dreaded and painful heart disease, can be helped by fever treatment when the fever is induced by electrical means, Prof. Charles Laubry, attending physician to the Hospitals of Paris, and his associates, Drs. Walser and Jean Meyer, reported. Short-wave electric currents across the heart are the best means of inducing fever for treatment of this condition, the French physicians find. In their series of 56 angina patients they obtained very good results with this treatment in 40 per cent. and fair results in 20 per cent.

Treatment with short wave electric currents (diathermy) which did not raise the temperature of the patient gave good results in cases of high blood pressure. The blood pressure, the French physicians reported, decreases and remains lowered for several weeks or months.

Prompt relief and apparent cure in 12 of 20 cases of acute infections non-specific arthritis and partial relief in another 8 cases were the results of fever treatment with the Kettering Hypertherm reported by Drs. Robert M. Stecher and Walter M. Solomon of

Western Reserve University Medical School. Fevers of about 105 degrees Fahrenheit were maintained for four or five hours in each treatment. Just how the treatment helps this condition is not clearly understood, but the Cleveland physicians suggest that a rise of white blood cells and an increased blood flow may be responsible.

Fever treatment gave complete relief from joint pain and swelling and seemed to reduce the duration of attacks of acute rheumatic fever, Drs. E. E. Simmons and F. Lowell Dunn of the University of Nebraska College of Medicine reported. Since this disease has periods when it subsides by itself, only to start up again, these physicians pointed out that it will be a long time before final conclusions as to the value of fever treatment can be known.

Neuritis Relieved

All types of neuritic pain can be relieved by fever treatment, although the condition causing the pain is not necessarily cured, Drs. A. E. Bennett and Paul T. Cash of the University of Nebraska reported. They stated that other measures of treating the conditions should also be used and warned against fever treatments being given except in institutions well equipped and staffed to handle any dangers that may arise.

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ASTRONOMY

Artist to Paint Eclipse On Next June 8

WITH an artist's eye and a physicist's scientific knowledge of colors, Charles Bittering, well-known Washington painter, will work with the astronomers of the National Geographic-U. S. Navy Eclipse Expedition when they observe the total eclipse of the sun on June 8 from a desert islet in the remote South Pacific.

Because of its unusually long duration—four minutes and ten seconds at the point of observation—it will afford exceptional opportunities to both artist and astronomer.

Mr. Bittering has made a special study of pigments and their combination, from the scientific as well as the artistic angle. He has also studied the effects of light of all wavelengths. Some of his paintings are double, showing one scene by ordinary daylight and an entirely different picture when viewed under ultraviolet radiation.

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