

PUBLIC HEALTH

Smallpox Problem Remains

► THE HEALTH FORCES of the world are determined to eliminate smallpox from the globe some 165 years after the English practitioner Edward Jenner discovered a vaccination.

The 14th World Health Assembly, annual meeting of the governing body of the World Health Organization in New Delhi, India, also tackled the new threat of ionizing radiation, as well as the stubborn problems of such other old diseases as yaws, malaria, schistosomiasis, cholera and typhus.

"As long as smallpox survives in a single country," Dr. M. G. Candau, director-general of WHO, said, "it constitutes a danger for all." He termed smallpox "a complete anachronism."

In India, where smallpox is most prevalent, the Indian Government authorized spending \$700,000 on 16 pilot projects in 16 states. The all-India eradication cam-

paign will be launched on the basis of the experience gained in these pilot projects, and is expected to cost the Indian Government some \$14,000,000.

Sixteen countries in Africa reported cases of smallpox in January. Brazil and Ecuador also reported smallpox cases for that month.

During a ten-year period, however, smallpox cases reported in the Americas dropped to one-fourth the previous rate. National campaigns of vaccination are showing steady progress against the disease. Although exact figures are not available, World Health authorities say there has been a decrease from 72,000 cases of smallpox reported in 1959.

Recent advances in tuberculosis control are being discussed, as are radiation control programs and the health hazards of nuclear-powered merchant marine ships.

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MEDICINE

Enzyme Dissolves Clots

► A WEAPON against blood clots that have been formed and threaten death may have been found after a seven-year study by Dr. Eugene E. Clifton of Cornell University Medical College in New York.

Dr. Clifton has succeeded in isolating an enzyme, fibrinolysin, which is found in human blood, and ordinarily is sufficient to dissolve the small clots readily formed but harmless.

Other scientists have developed a drug that prevents the formation of blood clots and this drug was administered to President Eisenhower in treatment of his coronary ailment. However, this is an anticoagulant that is not effective against a clot that already has been formed.

Although Dr. Clifton and his associates have administered injections of fibrinolysin

to only 45 men and women suffering from critical heart ailments, 39 survived. The six who died were in a state of shock or hopeless heart condition.

It is hoped fibrinolysin will be helpful in other ailments besides heart conditions that involve blood clots. Among these are phlebitis, an inflammation of a vein, such as young mothers sometimes develop as "milk leg" after delivery.

Dr. Clifton said injections of fibrinolysin will usually be given only in an emergency and that, although the enzyme may save many lives, it will not always be successful. The National Science Foundation and other foundations made the research on fibrinolysin possible through grants.

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MEDICINE

Asian Flu Danger Seen

► WITH APPROXIMATELY 1,500 deaths in the British Isles from Asian flu during January, there is danger of infection through carriers to the United States.

Schools have closed in Tokyo because of influenza this winter—25 of them have presently suspended classes following 13 deaths from flu this year. American Samoa and the Caroline Islands have reported influenza-like diseases.

Dr. Joseph A. Bell of the Laboratory of Infectious Diseases at the National Institutes of Health said the U. S. has been lucky so far.

"But this is only February," he said. "Feb-

ruary and March are the dangerous months here."

No practical way of preventing carriers from spreading the disease among susceptible people has been found, Dr. Bell said.

"Vaccination is the safest preventive," he advised. "Don't wait for an epidemic. Even one dose of vaccine is fairly effective in adults, although we usually recommend two shots four weeks apart."

The U. S. Public Health Service Communicable Disease Center in Atlanta reported no outbreaks of influenza in this country through January, 1961. Pneumonia and influenza deaths are almost normal for this time of year.

There were almost 60,000 excess deaths here in a six-month period from October, 1957, to March, 1958. The 1960 epidemic caused an excess of more than 26,000 deaths.

In view of the A-2 strain influenza during the first three months of 1960, CDC said, it is not expected that type A influenza will occur this year in the form of a nation-wide epidemic. But localized outbreaks of either influenza A or B may occur this winter. Type A-2 is Asian flu.

The Public Health Service has encouraged routine annual immunization against influenza.

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MEDICINE

Blood Enzyme Test Shows Liver Damage

► A BLOOD ENZYME test has been devised for liver damage.

Drs. R. J. Wieme and Y. Van Maercke of the University of Ghent, Belgium, reported to a New York Academy of Sciences conference that they used a method of general application they called "enzymoelectrophoresis." The enzymes are revealed by spectrophotometric techniques applied directly to the medium used in the electrophoretic separation. (Electrophoresis involves the separation of charged particles by an electric field.)

The researchers said the one outstanding attribute of their test is specificity.

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PHYSIOLOGY

Sensitivity to Pain Rises When Senses Are Inactive

► SENSITIVITY TO PAIN apparently increases as the other sense organs are deprived of stimulation.

This conclusion was reached by Dr. Jack A. Vernon of Princeton University and Dr. Thomas E. McGill of Williams College after a study of the effects of sensory deprivation upon the skin's pain threshold.

The 18 male subjects for the study first underwent tests to make sure they had stable pain thresholds. The pain sensations were caused by charges of electrical current administered through electrodes clamped to the right ear lobe.

After the preliminary testing, nine were confined, one at a time, for four days in a soundproof and totally dark cubicle containing only a single bed upon which the subject lay.

At the end of the four-day confinement, his pain threshold again was tested. Without exception, the men who had been confined showed a lowered pain threshold and an increase in sensitivity. The other nine, who had followed usual routines during the four days, showed no appreciable change.

Drs. Vernon and McGill report in *Science*, 133:330, 1961, that as the other senses are deprived, the brain has less work to do. Hence, when pain sensations are applied, the resulting neural impulses encounter less opposition, and the pain is sensed at a lower threshold.

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