

PUBLIC HEALTH

Expect Victory or Disaster In War on Sleeping Sickness

Stage Appears To Be Set Either For Disease To Flare Into War Epidemic or To Yield To New Knowledge

IS SLEEPING sickness going to be the plague of the present war, as influenza was the plague of the last World War? Or are the nation's disease fighters on the verge of discovering how this dangerous disease is spread and, therefore, how it may be prevented?

Hints that the stage is being set either for disaster or for discovery, though at the moment it is impossible to say which, appear in reports to the *Journal of the American Medical Association*, (July 19) in the *Public Health Reports* of the U. S. Public Health Service (July 4), and in the report to the federal health service of an outbreak of 35 cases of sleeping sickness, 25 of them since July 1, in North Dakota alone.

In the North Dakota outbreak, four of the cases were diagnosed as encephalomyelitis, the medical term for the kind of sleeping sickness that attacks horses and spreads from them to man. Outbreaks of this disease in both horses and men have been reported for a number of years but they usually occur in late summer and fall. The North Dakota outbreak seems to have come a little early and may mean that the nation's total of about 280 cases since the first of the year will go much higher, although 1,217 cases had been reported by August 1 in 1940.

Second danger point in the confusing situation is the finding, just reported from studies of one of last year's outbreaks, that horses not only have their own kind of sleeping sickness which they may pass on to man but are also susceptible to the human sleeping sickness or encephalitis of the type that was epidemic in St. Louis in 1933. This was discovered by Dr. Cornelius B. Philip and Dr. Herald Cox, of the U. S. Public Health Service, Dr. John H. Fountain, of the Weld County, Colo., Health Office, and J. W. Kilpatrick, of the Montana Livestock and Sanitary Board.

Apparently clinching the point that horses may constitute a reservoir of both kinds of encephalitis is the independent discovery of Dr. William McDowell Hammon, of the University of Califor-

nia. He investigated an epidemic of human encephalitis in Yakima valley, Washington, which coincided with a sleeping sickness outbreak among horses, and discovered that some of the patients had St. Louis type of human encephalitis, some had the horse encephalomyelitis, and some had both.

More than one-fifth of the patients in this outbreak died, but some had such mild attacks that without special tests their illness would have been diagnosed as grip or influenza or similar infection of the upper respiratory tract. This suggests that there may be more cases of encephalitis than doctors or health officers know about, a situation with the potential danger of the disease spreading to many patients before it is recognized.

Hope for checking the horse sleeping sickness among both man and horses rests on a vaccine which protects the

horses. Even if this could be used on humans and if there were also a vaccine against the St. Louis type encephalitis, laboratory tests would have to be made during an outbreak to determine which vaccine to use and by that time it would probably be too late for a vaccine to check the disease, Dr. Hammon points out.

The sulfa drugs were given to many patients in the Yakima outbreak but there was no evidence that they helped.

The two encephalitis sicknesses are of special concern to military camps, Dr. Hammon points out, because of the ages at which people are generally attacked, the geographic distribution of the diseases, and epidemiologic features. Even a mechanized army has plenty of horses and mules around its camps to serve as reservoir for encephalitis. Present knowledge shows they may have been the source of the encephalitis outbreaks in World War army training camps.

How the encephalitis viruses get from horses to man, or for that matter from horse to horse or man to man, is still an unsolved mystery. Mosquitoes have been suspected but the case against them has so far not been proved. Birds have also been implicated as helping to spread the diseases. If horses are the chief reservoir, it will narrow the search for means of preventing the disease.

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MEDIUM

This is the first M-3 medium 28-ton tank in the United States equipped with regulation armor plate and guns, ready for combat duty. After this demonstration it was delivered to Major General Charles M. Wesson, Chief of Ordnance, U. S. Army, as a gift from the Chrysler Division salesmen, dealers, distributors and their employees. The photograph on the front cover of this week's Science News Letter shows how it can overcome obstacles.