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Sleeping Sickness (Equine Encephalomyelitis)

Michigan State University Extension Service

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# SLEEPING SICKNESS

*(Equine Encephalomyelitis)*

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EAST LANSING



A Typical Case

# SLEEPING SICKNESS

(*Equine Encephalomyelitis*)

The disease called sleeping sickness of the horse is not new. It was recognized more than a century ago and has been present in the United States since the middle of the 19th century, although not definitely diagnosed in Michigan until the summer of 1938. The great Kansas horse plague of 1912 was undoubtedly sleeping sickness. The cause of the disease in this country was not demonstrated until 1930 when it was proved to be a filterable virus (a disease-producing agent capable of passing through a porcelain filter). Two types of virus are present in the United States—an eastern virus and a western virus. The eastern virus appears to be confined to the Atlantic seaboard, while the western virus is found in other parts of the country. The eastern virus has not been found west of the Appalachian and Blue Ridge mountains and the western virus has not appeared in the tidewater sections of the East. A horse immunized against one virus is not resistant to the other.

The virus of sleeping sickness has been found in man and in many animals other than the horse and mule. The presence of the virus in birds, including migratory fowls, may have a bearing on the propagation and spread of the disease. The reservoir where the virus is held over from one season to another is not known. The horse and mule appear to be only incidentally involved and have not been demonstrated to be carriers or spreaders of the disease. It is generally accepted that the virus is commonly transmitted from infected to susceptible animals by biting insects, particularly mosquitoes. This seems to account for the presence of the disease among horses and mules only during the insect season—summer and early fall. Sleeping sickness is rarely reported before June and it disappears with the frosts in the fall.



*Photographs, Courtesy of Dr. C. M. Haring, University of California.*

Fig. 1. Pushing forward stance. Typical symptoms of dizziness.



Fig. 2. Backing stance—typical symptoms of dizziness.

The present trend is toward an increase in the incidence of sleeping sickness in the United States as a whole, but the disease is by no means a devastating plague. Conservative estimates place the number of horses and mules that contract and develop the disease in affected territories at one in ten. The latest Federal data relating to the situation in the whole country show that 21.4 per cent of the sick horses and mules died. Viewed from the mortality standpoint, therefore, about 2 per cent of the horses and mules have died of the disease in the affected areas. **Most of such losses can be prevented by proper procedures.**

### SYMPTOMS

The symptoms exhibited by infected horses and mules are exceedingly variable. The brain and spinal cord are affected. Deranged consciousness is frequently shown and marked by excitement or mental depression. The mental dullness and the coma which frequently follows give the disease its name—sleeping sickness. Paralysis of various organs and structures, including the throat, is common.

### PREVENTION

The control of insect spreaders of the disease appears to be a logical procedure but one difficult to accomplish under average farm conditions. Use of sprays and fly nets has been recommended. The Illinois Agricultural Experiment Station has developed a mosquito and fly repellent which is effective for several days after one application and can be used to advantage for pastured horses and mules. Your county agricultural agent can furnish the formula for this material.

Late developments indicate that the best method of preventing sleeping sickness is through the use of the chick embryo vaccine. This vaccine is prepared by inoculating chick embryos with the virus and later killing the virus. The finished vaccine contains no live virus nor any other material that could be harmful to the horse. Evidence in favor of the chick embryo

vaccine is rapidly accumulating. It appears to be many times as efficient as the brain tissue vaccine previously employed. Where the vaccine has been used before the disease appeared in an area, the losses have been a small fraction of 1 per cent but losses have been higher where vaccination was delayed until horses were sick on the farm or in the neighborhood. When action is delayed, it is probable that sick horses will be vaccinated or that not enough time will have elapsed for the vaccine to produce resistance before the animal is exposed to the disease.

Whether vaccination is to be employed or held in abeyance will depend upon developments and conditions. Obviously it would not be logical to vaccinate all horses and mules because it has not yet been demonstrated that the immunity produced by the vaccine will endure more than six or eight months, but it would be advisable to vaccinate in areas where the disease was present last season and to be prepared to vaccinate elsewhere if the disease approaches dangerously near. Vaccination in the spring or early summer will protect the horse until the danger for the year is past. Neighborhood organization and grouping of the work will reduce the cost of vaccination and permit the veterinarian to function more efficiently.

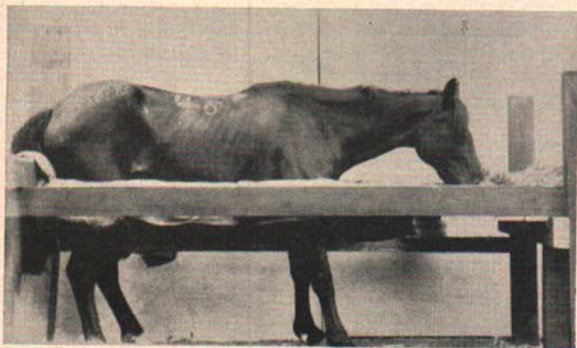


Fig. 3. Suitable supporting frame.

### TREATMENT

If a horse or mule shows indications of sleeping sickness, call a veterinarian at once. Prompt and proper treatment will save many animals. Do not depend upon home remedies. Drenching a sick animal may be a dangerous procedure. The use of anti-serum may be advisable for valuable horses, and the dehydration (loss of body fluid) which is usually present can best be corrected by procedures which the veterinarian is equipped to employ. Properly guided nursing is extremely important. Someone has wisely said that nursing a \$200 horse through an attack of sleeping sickness pays \$50 a day.

Beware of quacks and vendors of secret medicines and so-called cures. Remember, some sick animals will recover without treatment. Do not place credit where it does not belong.