Several equine herpesvirus (EHV) infections affect horses — those belonging to the alpha herpesivirus family (EHV-1, EHV-3 and EHV-4) and those belonging to the gamma herpesvirus family (EHV-2 and EHV-5). EHV-1 most commonly causes uncomplicated upper respiratory tract infection, but in some cases, secondary viremia can result in equine herpes myeloencephalopathy (EHM), abortion and neonatal illness.

80-90% of horses have been infected with EHV-1 by the time they are two years of age. Once infected, most horses are latently infected for life and shedding of the virus may recrudesce under times of immunosuppression.

Initial clinical signs of EHV-1 infection can include pyrexia, serous nasal discharge and occasionally a cough. In pregnant mares, abortion commonly occurs 2-12 weeks after the initial infection. After the initial upper respiratory clinical signs, some horses develop a cell-associated viremia where infected leukocytes disseminate the virus throughout the horse which can result in vasculitis of the central nervous system resulting in neurological disease (EHM). Although there is a genetic mutation (D752) that results in higher order levels of viremia, thus making neurologic sequelae more likely or prevalent during an outbreak, any strain of EHV-1 can result in EHM. Classic clinical signs associated with EHM include hindlimb weakness, ataxia and urine dribbling due to inability to effectively empty the bladder. Horses can also experience cranial nerve defects and changes in mentation. In horses with EHM, there is an approximately 50% case fatality rate. If you have an EHM suspect, please contact the state veterinarian for further advice regarding quarantine measures as EHM is a reportable disease.

EHV-1 polymerase chain reaction (PCR) has become the diagnostic test of choice for EHV-1 due to its high sensitivity, specificity, and rapid turn-around time. EHV-1 PCR of nasal pharyngeal swabs provide information regarding ongoing shedding of the virus whereas PCR of buffy coat samples provide information regarding current viremia. Of note, horses may not begin shedding the virus until several days after the initial fever, so if an initial nasal swab is negative and clinical signs are consistent with EHV-1, repeat testing may be warranted.

Unfortunately, EHV-1 is highly contagious via respiratory secretions and fomite transmission. EHV-1 positive horses should be quarantined from the rest of the herd to limit transmission and routine biosecurity measures should be implemented by their caretakers to limit fomite transmission. Vaccination for EHV-1 is effective at decreasing nasal shedding and the incidence of abortion and respiratory disease but unfortunately has not been efficacious in preventing EHM. Thus, early identification of infected animals and early implementation of biosecurity measures remain paramount in decreasing the risk of horses developing EHM.

Treatment for EHV-1 respiratory disease is largely supportive in nature. Some research studies have found evidence to support the use of anti-viral medications (i.e., valacyclovir and ganciclovir) to decrease shedding and potentially decrease the severity of EHM in infected animals. However, both medications appear to work best when used before the onset of clinical signs of EHM.
Performance of a Mycoplasma hypopneumoniae (MHP) serum ELISA for antibody detection in processing fluids

Ronald Magnus BS PhD, Betty Armenta-Leyva DVM, Troy Depuy DVM MB, The 2023 ISU VDL publication has been accepted for publication in the Journal for Swine Health and Production.

This article has been edited for length. Please see attached full article for any additional text.

An increased frequency of monitoring porcine circovirus type 2 (PCV2) and/or porcine reproductive and respiratory syndrome virus (PRRSV) is increasingly being encouraged in commercial swine herds. However, routine surveillance based on DNA and antibody detection is crucial for tracking and managing the disease. Mycoplasma hyopneumoniae (MHP), a major pathogen of the porcine respiratory disease complex (PRDC), is one of the economically most important pathogens of swine, costing the U.S. swine industry approximately $400 million annually. Sow herd stability is key to the reduction of MHP losses in growing pigs because piglets, MHP-negative at birth, become infected by contact with sow舍中的微生物。因此，针对乳头炎的采样部位和细节必须专注于在断奶后母猪的乳头细菌群的建立情况。无公害化问题的严重性需要通过降低抗生素的使用和加强母猪和仔猪的健康管理来解决。为了在不同情况下有效地实施无公害化策略，需要进一步的研究来完善相关技术的应用。