

Equine Influenza

Equine Influenza is one of the most common equine respiratory tract infectious diseases. Much of the world is listed as endemic for the disease, including the United States. It is caused by an orthomyxovirus, equine Influenza A type 2.

The disease is sporadically introduced to herds or barns by an infected horse. Equine Influenza virus (EIV) is highly contagious and spreads in aerosolized droplets dispersed by coughing; contact with virus-contaminated feed and water buckets, tack, grooming equipment and even clothing. Even partially immune horses can become subclinically infected and shed the virus.[1] Viral shedding in nasal secretions usually begins around 48 hours post infection and typically lasts for 6-7 days. According to the American Association of Equine Practitioners (AAEP), the most important factors associated with risk of infection are:

1. AGE – horses 1-5 years old are most susceptible.
2. Serum concentrations of influenza virus-specific ANTIBODY: The importance of local mucosal protection is difficult to quantitate by methods currently available.
3. Frequent CONTACT with large numbers of horses.

Due to the rise in equine Influenza cases and the high risk of contagion, the United States Equestrian Federation initiated a rule change to take effect December 1, 2015. To compete in USEF events, horses must have both an EIV and equine Herpesvirus vaccine within 6 months. Vaccination options are available for both diseases, and veterinarians and horse owners should work together to create a vaccination schedule appropriate for their situation.

The clinical signs of fully susceptible horses include:

- Fever
- Depression
- Harsh dry cough
- Loss of appetite
- Nasal discharge
- Muscle pain and/or weakness

Though clinical signs may resolve within 7-14 days in uncomplicated cases, the OIE[2] cautions that complications due to secondary bacterial infection are common. It can take up to 6 months to completely eliminate the disease. The Texas A&M Veterinary Medical Diagnostic Laboratory (TVMDL) offers veterinarians options to diagnose influenza in horses with clinical signs suggestive of EIV.

Equine Influenza A1, A2, AK, KY (HI)

This test requires 1.0mL serum to detect antibodies via hemagglutination inhibition.

PRICE: \$19.00 with a \$6.00 accession fee.

TURNAROUND: The test is performed in the College Station lab on Monday and Thursday, with results in 2-3 business days.

Influenza A Matrix (IAV) (qPCR)

The influenza A matrix gene is detected from one of more of the following specimens: respiratory (tracheal, nasal) swabs, 1.0g fresh trachea or lung tissue or 1-2mL tracheal wash.

PRICE: \$30.00 with a \$6.00 accession fee.

TURNAROUND: The test is performed in the Amarillo and College Station labs Monday-Friday, with results in 1-4 business days.

Virus Isolation (Standard)

EIV can be isolated using one or more of the following: fresh tissue, semen, whole unclotted blood, swabs or fresh feces.

PRICE: \$30.00 with a \$6.00 accession fee.

TURNAROUND: Performed in Amarillo Tuesday and Friday, and performed in College Station on Tuesday, with results in 14-21 business days.

For more information on TVMDL's diagnostic services, visit tvmdl.tamu.edu.

[1] American Association of Equine Practitioners, aaep.org

[2] World Organisation for Animal Health (OIE), oie.int