

## **Upper Respiratory Infection in the Horse**

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Over the past several months, your equine veterinarian has doubtless had numerous calls to care for horses that are depressed and not eating well, with a cough and a runny nose. Most of these horses are suffering from viral upper respiratory tract infections, which are rarely serious but can be frustrating for horse owners and vets alike. Upper respiratory infections are analogous to the Common Cold in humans, and they are usually caused by Equine Influenza Virus and Equine Herpes Virus (Types I and IV). The illnesses caused by these viruses are more commonly known as “Flu” and “Rhino.”

Equine Influenza has been implicated as the primary cause of upper respiratory infection in horses. It most often affects mobile horse populations (race and show horses), and younger horses (ages 1 to 3) tend to be most severely affected. Flu is very contagious and it is spread through airborne virus particles, or by contaminated equipment or personnel. Infections are most common in winter and spring, and they are characterized by high fever, cough, nasal discharge, and reluctance to move. Once a horse is exposed to flu, he or she will develop clinical signs in 1 to 3 days. Clinical signs often persist for approximately 3 weeks.

Equine Herpesvirus (Rhinopneumonitis) often causes upper respiratory infection in weanlings, yearlings, and horses just entering training. Like flu, rhino is characterized by fever and nasal discharge, but a cough is less commonly present. Clinical signs usually develop in 3 to 7 days after exposure. Equine Herpesvirus-1 can also cause neonatal death, abortion, and neurologic signs in the horse.

We can arrive at a presumptive diagnosis of viral upper respiratory infection based on clinical signs. Nasal swabs can be obtained for virus isolation and PCR testing to determine exactly which virus is causing an infection. However, these tests are not often performed because flu and rhino viral infections are treated in the same way and it often takes several days to weeks to obtain test results. Another test that does often prove helpful is a complete blood count (CBC). A decrease in lymphocytes (a type of white blood cell) can indicate a viral infection. The CBC is especially useful in distinguishing a viral infection from a bacterial infection, as bacterial infection typically causes a rise in white blood cell parameters. Bacterial respiratory infections occasionally develop secondarily to viral infections. They are characterized by pus-like nasal discharge, prolonged fever, and sometimes pneumonia and difficulty breathing.

The treatment of viral respiratory infections is primarily supportive in nature. This entails confining sick horses to well-ventilated stalls or pens (preferably away from healthy horses), providing plenty of fresh, clean water and feed, and sometimes giving anti-inflammatory drugs like bute or Banamine. Some owners are surprised that their vet would opt not to treat their sick horse with antibiotics. Antibiotics, however, are only useful in killing bacteria; they have no effect on viruses at all, and can have serious side-effects. Unfortunately, there are no antiviral drugs that are economical and effective

enough for common use in the horse. If your horse develops an upper respiratory infection, he or she should have no forced exercise while sick, and for at least a week after clinical signs have subsided. In addition, any equipment used on a sick animal should be thoroughly disinfected.

You can help to prevent both Equine Influenza and Equine Herpesvirus in your horse by having your vet vaccinate regularly for both of these diseases. Young show horses and race horses are at particular risk, and would benefit most from vaccination. These vaccines may not prevent disease completely, but are likely to at least decrease the duration and severity of illness. Protection from these vaccines is relatively short-lived, so we recommend vaccinating young horses for flu and rhino every 4-6 months.

Unfortunately, most horse owners will encounter a viral upper respiratory tract infection in their herd sooner or later. However, with rest, careful monitoring, and supportive care per your veterinarian, your horse is likely to make a full, uncomplicated recovery.