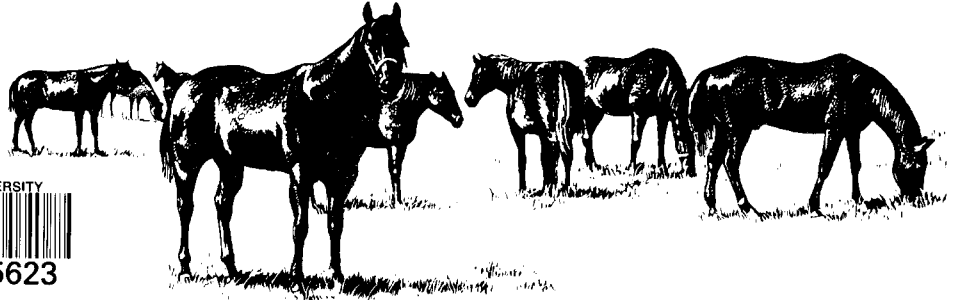


EQUINE RHINOPNEUMONITIS

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Several Forms of the Disease

Equine Rhinopneumonitis is a *Herpesvirus* infection of horses that may occur in three forms: the respiratory form, which may appear very similar to horse flu, the abortion form, and the encephalitic (nervous) form.

The upper respiratory tract of horses serves as a reservoir for the virus causing "rhino." This is most frequently observed in areas of high horse population. The virus may be spread by direct contact, air-borne routes, feed and water contamination, and possibly by improper routes of vaccination.

- The virus enters through the nasal route then reaches the circulatory system and is spread to all parts of the body including the fetus of a pregnant mare. The virus has been found in the blood for up to 24 days following infection; it may be spread farther to the nerves and to other body tissue cells.
- Spread of the virus may occur even if the horse possesses antibodies to the virus.

Clinical Signs of Rhinopneumonitis

- 4.3 The respiratory form of rhinopneumonitis is primarily observed in young or newly weaned horses, but it may be seen in susceptible horses of all ages; it may appear very similar to equine flu.
- ✓9 The severity of the infection varies with the susceptibility, which is usually greatest in young horses.
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Symptoms of the respiratory form include fever (102 to 107°F) for up to seven days, a watery nasal discharge that becomes thick and tenacious as the infection progresses, swelling and inflammation of the lining of the nostrils, depression and retarded appetite. Ocular discharge is common in foals. The symptoms last up to two weeks. The infection in older horses (or horses that have recovered from infection within the last three to six months) is usually accompanied by mild symptoms or no symptoms at all.

- The **reproductive form** is characterized by abortion and usually occurs one to three months following a respiratory outbreak in colts. Abortion is often not preceded by clinical signs of disease and usually occurs during the last months of pregnancy. Abortion is seldom accompanied by complications and the placenta is expelled following abortion.
- The fetus may be expelled dead, or weak foals may be born sick at term and usually die within three days. Conception occurs readily following abortion. Aborted mares have some resistance to future infection but cases have been reported where abortions occurred on every other pregnancy.

- Abortion has occurred following inoculation of pregnant mares with modified-live rhinopneumonitis virus vaccine.

The **encephalitic form** has been reported to occur in mares during outbreaks of abortion



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caused by the rhinopneumonitis virus; affected mares were down, as paralyzed, and appeared dull; several mares died. A nervous form of equine rhinopneumonitis infection sometimes occurs in foals following outbreaks of the respiratory form of the disease.

Cause is a Herpesvirus

Three **Herpesviruses** are associated with a group of diseases of horses including rhinopneumonitis. These viruses are designated as **Equine Herpesvirus 1, 2 and 3** (EHV-1, 2 and 3).

✕EHV-1 is the causative agent of rhinopneumonitis. EHV-2 does not cause abortion. It is widely found in the horse population and primarily known as the cause of mild respiratory problems. EHV-3 is the cause of venereal disease of horses, causing vaginitis in mares, but has little influence on fertility. It is not as widely spread in the horse population as EHV-1 and 2.

EHV-1, 2 and 3 are not related to other **Herpesviruses** causing diseases of domestic animals such as pseudorabies and IBR.

Prevention

Because EHV-1 infection is widely spread among the horse population, outbreaks are common.

Vaccines are available to prevent EHV-1 infections, but some basic immunological facts

related to the disease should be kept in mind. It is well documented that (1) infection or reinfection can occur in spite of existing blood titers to EHV-1, and that (2) the infection or reinfection may occur in spite of existence of antibodies in the blood serum.

✕ Recovery from the respiratory form of rhinopneumonitis usually provides a temporary immunity of three to five months, while mares aborting from EHV-1 usually have protection for a longer period.

The present vaccines for EHV-1 infection in horses will not prevent all abortions and in some instances vaccination of pregnant mares with modified-live virus vaccine appears to initiate abortion.✕A killed-virus vaccine is recommended for pregnant mares during the fifth, seventh and ninth months of gestation to aid in prevention of EHV-1 abortion. **Vaccines should be used under the supervision and consultation with a veterinarian. The instructions for their use, as provided by the manufacturer, should be followed explicitly.**

Treatment

✕ There is no specific treatment for horses affected by EHV-1 infection. Administration of antibiotics will reduce risk of secondary bacterial complications in cases of respiratory forms of rhinopneumonitis. Treatment should be given under veterinary recommendation and/or supervision.

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