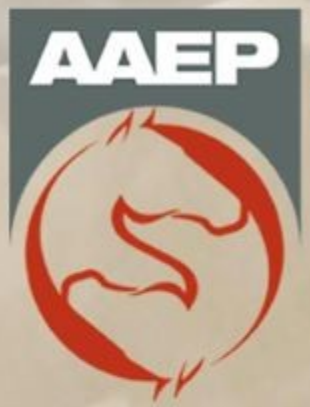


American Association of Equine Practitioners

Horse Health Education

EQUINE HERPES VIRUS (EHV):

What Every Horse Owner Should Know

www.aaep.org

OVERVIEW

Equine herpesvirus (EHV-1, EHV-4) is also known as rhinopneumonitis.

CLINICAL SIGNS

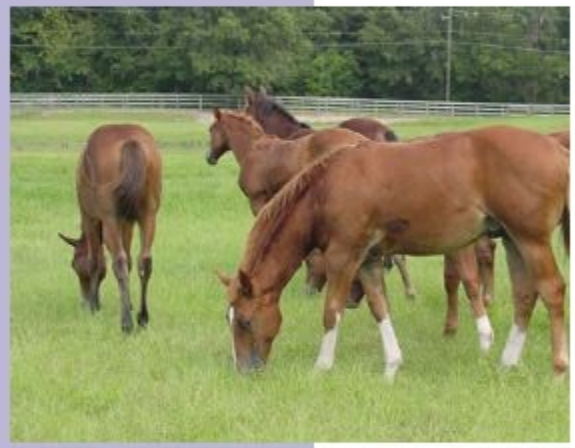
Equine herpesvirus has three clinical forms that include respiratory disease, abortion in pregnant mares and neurological disease.

CLINICAL SIGNS

EHV-1 causes respiratory disease, abortions and neurological disease.

EHV-4 causes respiratory disease and infrequent abortions. Only rarely has neurological disease occurred due to EHV-4.

RESPIRATORY DISEASE



Clinical respiratory herpesvirus infections most commonly occur in young horses, usually weanlings and yearlings.

Widespread outbreaks can occur, especially in dense populations and stressful environments.

Older horses are important in the outbreak since they can become subclinically infected, but shed virus.

RESPIRATORY DISEASE

Clinical signs of respiratory disease include mild fever, coughing and nasal discharge. The discharge is clear, but progression to a yellow thick exudate is common.

RESPIRATORY DISEASE

Incubation period may be as short as two days or as long as 10 days.

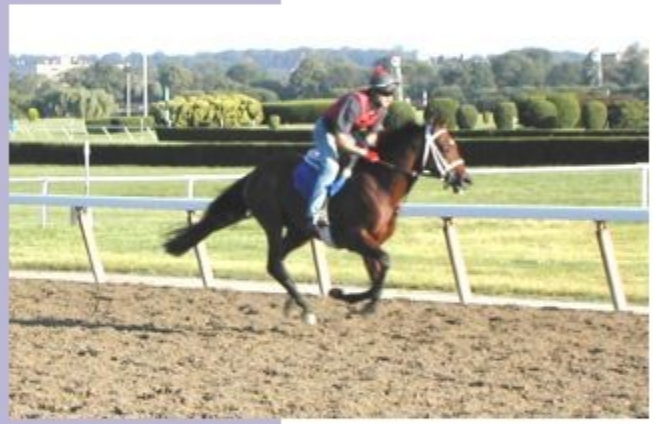
Outcome is dictated by minimization of stress and rest. Horses in training frequently can develop prolonged hypersensitivity of the lower airway that may cause a subtle decrease in performance.

ABORTION

There are usually no warning signs of abortion, which can occur as early as 90 days, with most cases occurring between seven and nine months of gestation.

(Red-bag abortions are common in horses infected with herpesvirus.)

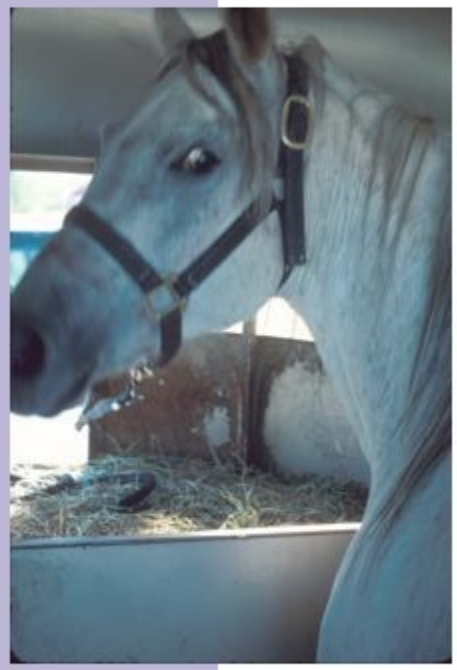
NEUROLOGICAL DISEASE



The neurological form of this disease can be fatal and is the greatest cause for concern at boarding facilities, racetracks and horse shows.

Most horses experience respiratory signs for one to two weeks prior to the development of neurologic signs.

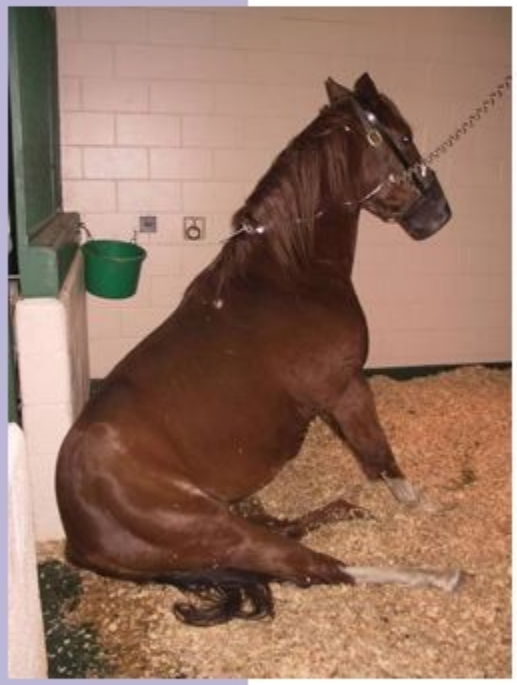
NEUROLOGICAL DISEASE



Stress (shipping or surgery) may trigger the onset of neurologic signs.

The virus will attack the spinal cord and brain stem.

NEUROLOGICAL DISEASE



The clinical signs commonly seen are:

- Hind end weakness
- Incoordination
- Toe-dragging
- Dog-sitting
- Urinary/fecal incontinence

HOW IS HERPESVIRUS TRANSMITTED?

- Transmission occurs via respiratory route with infective droplets obtained from coughing and snorting horses. Shedding of the virus in nasal secretions can occur for 14 days.
- Contaminated hands and equipment can spread the virus.
- Infection can be obtained from aborted fluids or tissues. Mares that abort transmit infection by the respiratory route.

HOW IS HERPESVIRUS TRANSMITTED?

- Without disinfection, the virus can actually survive several weeks.
- All horses have the potential to be carriers of the virus whether or not they demonstrate clinical signs.

WHAT ARE THE METHODS TO CONFIRM A HERPESVIRUS INFECTION?

- Detection of the virus from either nasal swab or blood by virus isolation.
- Polymerase chain reactions (PCR) tests can look for the virus in nasal secretions or whole blood buffy coat or placental and fetal tissue.
- Demonstration of relative drop in lymphocytes and neutrophils on a CBC.
- Demonstration of rising titer in serum collected two to four weeks apart.

TREATMENT

Because EHV-1 is a virus, it does not respond to antibiotics.

Supportive treatment is the only option and is tailored to the individual patient, guided by the severity and range of clinical signs.

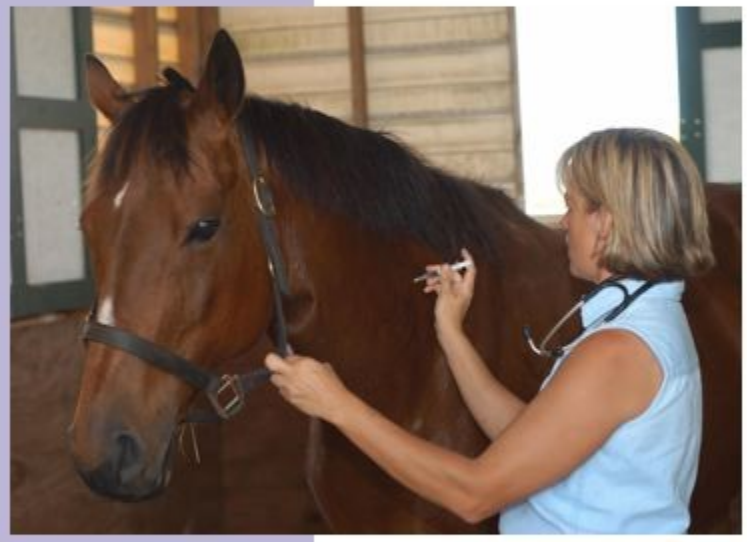
Antiviral drugs may be beneficial in the treatment of equine herpesvirus. Contact your equine veterinarian for more information.

TREATMENT

Supportive treatment usually includes anti-inflammatory drugs, fluids to maintain hydration and slinging the horse if unable to stand.

In most cases, horses that remain standing have a good prognosis, although recovery may take weeks or months. Horses that go down and are unable to stand have a poor prognosis.

VACCINATION



Vaccination for the respiratory form of EHV may not prevent the disease, but it will decrease the frequency and severity of clinical signs and more importantly, decrease shedding of the virus to other horses.

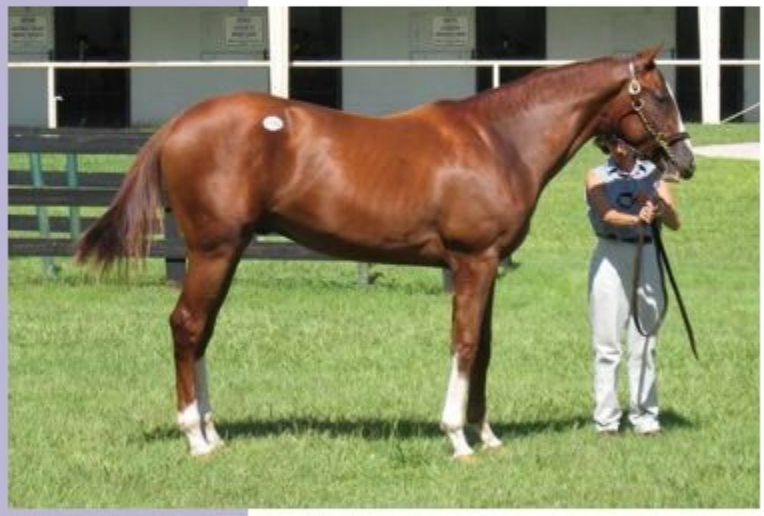
VACCINATION

The AAEP recommends the following vaccination schedule for EHV-1 and EHV-4 in the prevention of respiratory disease:

Foals/weanlings: First dose 4 to 6 months of age
Second dose 5 to 7 months of age
Third dose 6 to 8 months of age

Then at 3 month intervals

VACCINATION

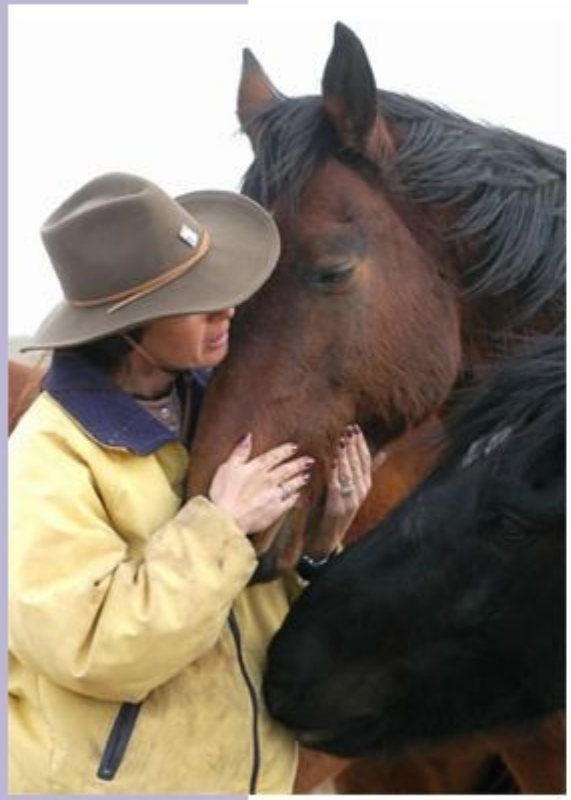


Yearlings:
Every 3 to 4 months

Horses in Training:
Every 3 to 4 months

VACCINATION

Vaccinate all broodmares at the beginning of the 5th, 7th and 9th month of pregnancy. It is important to vaccinate broodmares with vaccines specifically labeled for the abortion strain of EHV-1.



VACCINATION

There is no vaccination currently available that is labeled to protect against the neurological form of herpesvirus.

There has been some preliminary research that suggests the modified-live virus vaccine may minimize clinical signs, but has currently not yet been confirmed. However, this vaccine has been shown to limit viral shedding.

CONTROLLING AN OUTBREAK

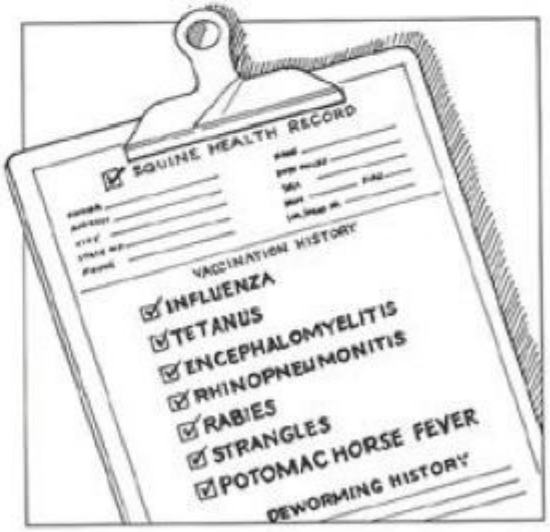
- Isolate all new arrivals to the farm for 21 days.
- Disinfect all areas of the barn and transport vehicle with either bleach (one part bleach to 10 parts water) or phenolic-based disinfectants. *Note: Phenolic-based disinfectants are better on organic matter.*
- Take rectal temperatures daily and isolate any horse with a fever.

CONTROLLING AN OUTBREAK

- Disinfect all diagnostic tools, such as endoscopes, after they are used on each horse.
- Keep mares that abort in isolated areas away from the rest of the broodmares.

CONTROLLING AN OUTBREAK

If you plan to transport horses during an outbreak, make sure to call ahead and confirm the requirements for vaccination. Some states request proof of vaccination within seven to 90 days of travel. The serial and lot number of the vaccine used for inoculation must also be recorded.



Photos courtesy of

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Horse Health Education: EHV

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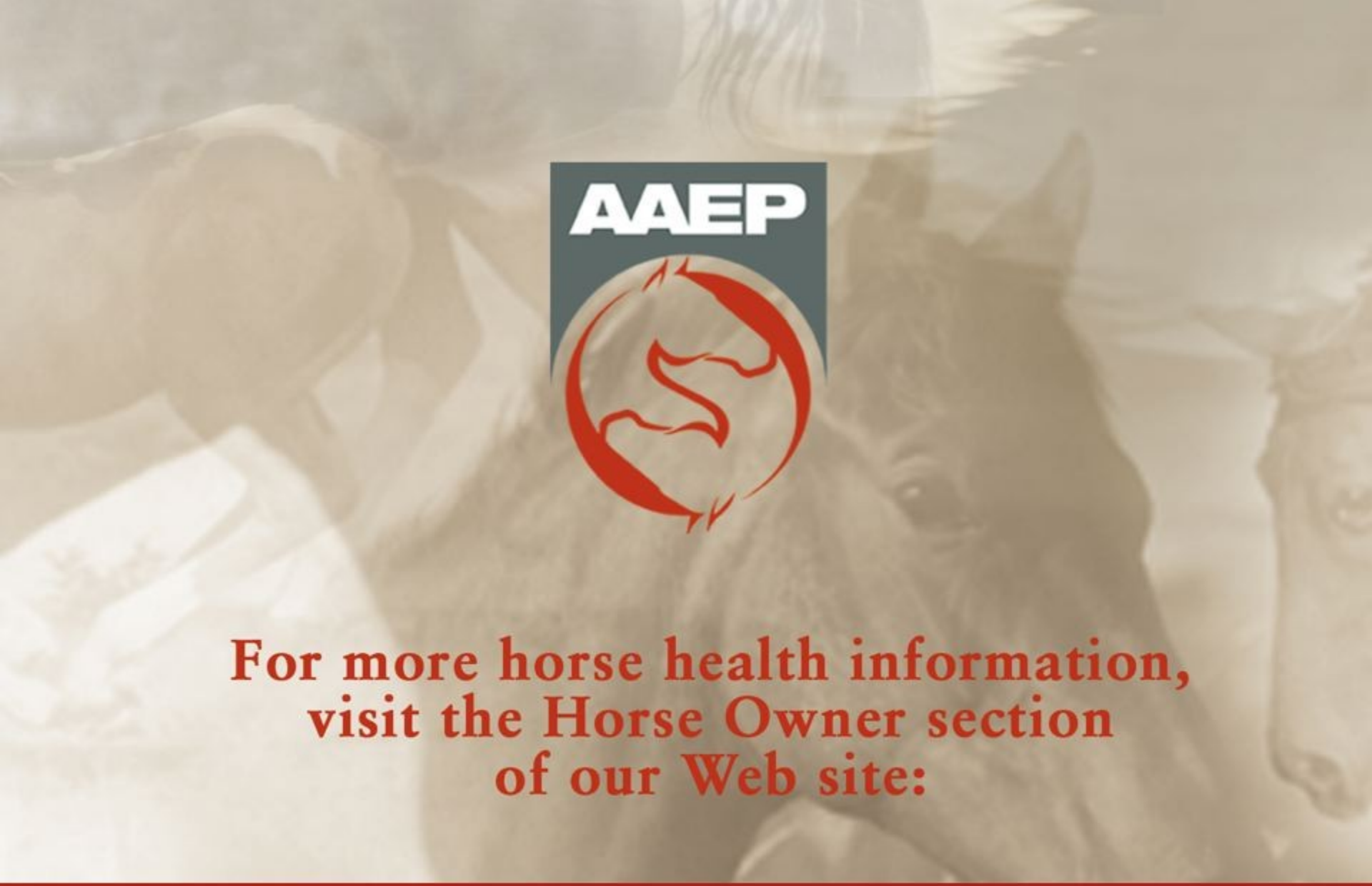

For more horse health information, visit the Horse Owner section of our Web site:

www.aaep.org