

# Equine Herpes Virus (EHV-1)

## Arizona Equine Medical & Surgical Centre

### May 20, 2011

We have been getting many questions about the EHV-1 outbreak that has occurred recently, and want to provide our clients with the latest, most accurate information available. This article should help answer some questions that you may have. This article draws on available scientific knowledge and information from a USDA situation report that is dated May 19, 2011. We will post more information about the current outbreak as it becomes available. We want to encourage our clients to make informed, rational decisions and not to get caught up in some of the recent "hype" that is going on regarding this problem.

***What is EHV-1?*** This is a naturally occurring Herpes virus of horses. Three different disease states arise from this specific herpes virus based on age, stress and pregnancy. 1) "Rhino" which is a self-limiting upper respiratory infection of young horses (< 2 years of age), 2) Abortion in pregnant mares (most in the 3<sup>rd</sup> trimester but rarely at birth) and 3) **EHM** or equine herpes myeloencephalopathy which is a neurologic disease of the spinal cord, and rarely brain, in older horses that can result in death.

***How is EHV-1 spread?*** The EHV-1 virus is not a very "hardy" virus so it doesn't survive in the environment for more than several weeks. Horses become infected by direct contact with respiratory droplets (sneeze or cough) from other infected horses or placenta/fetal membranes from aborted fetuses. It is not spread via wind, dust or flies to our knowledge. Direct contact is required to become infected and good hand washing/hygiene should be protective. EHV-1 is not a pathogen for humans.

***What are the signs of EHV-1?*** While clinical signs of "rhino"pneumonitis include cough, nasal discharge and fever in young horses, and abortion signs are straightforward, the signs of **EHM** are neurological in nature. Albeit only 10% - 30% (approximately) of adult horses that become infected with EHV-1 develop **EHM**, the initial signs, following a 2 to 10 day incubation period, in horses over 3 years of age, are fever (102 to 106 degrees F), lethargy, and inappetance. Several days following the fever (avg. 6 days) infected horses that go on to develop **EHM** typically start to demonstrate neurologic deficits of the hind limbs, tail and rectum (knuckling, stumbling, weakness, difficult urination, flaccid bladder/tail, etc.). Some horses stabilize with mild deficits whereas others progress to severe incapacitation mandating humane euthanasia.

Horses that are over 5 yrs. of age and have a fever of 103.5 or greater seem to be at higher risk for **EHM** development.

***Can it be prevented?*** Yes and No. Strict biosecurity measures (quarantine and isolation) combined with good hygiene are the most protective measures against this disease. Limiting travel and exposure to actively shedding exposed horses is wise. Close monitoring of your horses' rectal temperature (AM & PM) is a valuable monitoring tool. Currently, active shedding of the virus by infected horses is thought to last less than 28 days. None of the current EHV-1 vaccines prevent primary EHV-1 infection or the establishment of the latent/carrier state. There is no vaccine labeled for prevention of **EHM**. Vaccines **may** reduce the severity and virus shedding of "rhino" and abortion but their protection against **EHM** is debatable. However, vaccination of non-exposed animals at risk for exposure can be considered if these animals have not been vaccinated within the previous 90 days. Foals should not be vaccinated before 5 months of age due to maternal antibody interference with vaccine.

***Where did the current outbreak begin?*** At the National Cutting Horse Association Western National Championship held in Ogden, UT from April 29-May 8, 2011.

***How many horses are involved?*** According to the USDA situation report dated May 19, 2011, which is reprinted below, there were a total of 308 horses **exposed** (not infected) at the show, and 729 horses that were exposed secondarily (these horses came into contact with the 308 show horses) prior to being quarantined.

***Nationally, how many horses are suspected to have the disease?*** There are a total of 45 horses that are suspected to have become infected with EHV-1. Of these 45 horses, 21 have been confirmed to have the disease. Of these 21, 13 are confirmed to have the neurologic form of EHV-1 (**EHM**). To date, 7 of these **EHM** horses have died or been euthanized. This information is accurate as of May 19, 2011.

***How many horses from Arizona are affected?*** As of May 19, there were 21 horses from Arizona exposed to the virus in Ogden, Utah and 67 horses were secondarily exposed. Three of these horses are suspected to have **EHM**. Of these, there has been one horse that died. This horse has been confirmed as a case of **EHM** infection according to the Arizona Department of Agriculture.

***How many farms from Arizona were exposed?*** There are 11 premises in Arizona that had exposed horses. Three of these farms had a suspected or confirmed EHV-1 case. The other 8 premises have exposed horses, but no suspected or confirmed cases.

***Are these farms quarantined?*** Yes, the USDA report states that all premises with exposed horses are under either voluntary or state mandated quarantine.

***Has Arizona Equine seen or treated any suspected cases?*** No, we have not seen any cases that are, or have been, showing any signs consistent with EHV-1 or **EHM**.

***Will Arizona Equine treat any suspected cases?*** We will not allow any horse with symptoms consistent with EHV-1 onto our premises. We will travel to a client's barn to examine and treat horses with signs, and will maintain the highest biosecurity protocols possible if called out.

***What does Arizona Equine recommend that its clients do currently?*** 1) Don't attend any shows or large gatherings of horses for the next 4 weeks. This will allow time for the authorities to make certain that the outbreak is confined to quarantined premises, and to verify that all affected premises have been quarantined. 2) If your horse has not been vaccinated recently (within the last 3 months) for Rhinopneumonitis, consider having him or her vaccinated with a quality vaccine as soon as reasonable possible. 3) If your horse shows any signs of EHV-1/**EHM**, arrange for us to come to your place to do an examination. 4) **RELAX** – the affected and exposed horses have been tracked and quarantined relatively quickly. The odds that this outbreak will spread are small. 5) If you need to come to our clinic for routine work, feel safe that we have not seen nor hospitalized any exposed horses, and that your horse will not pick up the virus at our hospital.

***Are there sources for more information?*** The following links have more information you can access via the internet. The USDA site will have periodic updates about the number of cases as they gain more information. This will change frequently, so you may wish to check this site periodically for the latest accurate information. We will update our web site as more information about this outbreak becomes available.

[http://www.vetmed.ucdavis.edu/ceh/ehv1\\_general.cfm](http://www.vetmed.ucdavis.edu/ceh/ehv1_general.cfm)

<http://www.azda.gov/>

<http://www.aphis.usda.gov/vs/nahss/equine/ehv/index.htm>

[http://www.aaep.org/EHV\\_resourcesowner.htm](http://www.aaep.org/EHV_resourcesowner.htm)

## **Equine Herpes Virus (EHV-1) Situation Report**

**May 19, 2011**

**[Copied from the USDA Web-site](#)**

### **Background**

Equine Herpes Virus (EHV-1) infection in horses can cause respiratory disease, abortion in mares, neonatal foal death, and/or neurologic disease. The neurologic form of EHV-1 is called Equine Herpes Virus Myeloencephalopathy (EHM). While EHV-1 and EHM are only officially listed as reportable diseases in some states, private veterinary practitioners are encouraged to notify their State Animal Health Officials of any suspected or confirmed cases, regardless of current official state reporting requirements.

Cases of EHV-1 and EHM have been identified recently in horses that attended the National Cutting Horse Association (NCHA) Western National Championship event in Ogden, Utah held from April 29 to May 8, 2011. The NCHA has notified State Animal Health Officials of horses from their states that were entered in the event and may have been exposed to the virus. State Animal Health Officials have contacted the owners of potentially exposed horses. Standardized recommendations were developed by state and federal officials and are being followed to isolate exposed horses, monitor them for clinical signs of EHV-1, and work with private veterinary practitioners to test and treat horses affected with the disease. Biosecurity procedures have been recommended for premises with suspect and confirmed cases to mitigate further disease spread.

### **Definitions for This Report**

*Exposed Horses:* Horses that attended the Ogden, Utah event from April 29 to May 8 and horses that subsequently came into contact with horses that attended the Ogden, Utah event (secondarily exposed).

*Exposed Premises:* Premises with exposed horses.

*Suspect EHV-1 case:* A horse exposed to EHV-1 that develops fever (rectal temperature above 101.5 °F), but has no neurologic signs at this time.

*Confirmed EHV-1 case:* A suspect EHV-1 case with laboratory confirmation of EHV-1 infection, but has no neurologic signs at this time.

*Suspect EHM case:* A horse exposed to EHV-1 that develops neurologic signs. (Posterior incoordination, weakness, recumbency with inability to rise, and/or bladder atony are most commonly seen in EHM cases.)

*Confirmed EHM case:* A suspect EHM case with laboratory confirmation of EHV-1 infection. **May 19, 2011 Page 2**

### Summary Information on Current Situation

- Owners of horses known to have been exposed in this incident have been contacted by State Animal Health Officials.
- Suspect and confirmed cases are reported to be under voluntary or state quarantine.
- Known exposed horses are reported to be under either voluntary or state quarantine.
- A total of 34 confirmed EHV-1 or EHM cases have been reported in 9 states (AZ, CA, CO, ID, NM, OR, TX, UT, WA)
- Of the 34 confirmed EHV/EHM cases, 33 cases are horses that were at the Ogden, Utah event.
- There are 7 horses associated with this incident that are dead or have been euthanized.

### Current Information by Affected State

*States not included in the tables below have reported there are no known exposed horses related to this incident currently within their state.*

*Table 1.*

<i>Horse Information on State</i>	<b># Horses exposed in Ogden, UT</b>	<b># Horses secondarily exposed</b>	<b># EHV-1 Suspect Cases</b>	<b># EHV-1 Confirmed Cases</b>	<b># EHM Suspect Cases</b>	<b># EHM Confirmed Cases</b>	<b># Dead or Euthanized</b>
Arizona	21	67	4	0	3	1	1
California	54	*	0	5	0	5	1
Colorado	30	68	19	7	0	2	2
Idaho	36	14	13	0	3	1	2
Illinois	1	9	0	0	0	0	0
Iowa	5	53	0	0	0	0	0
Minnesota	19	*	0	0	0	0	0
Montana	17	1	1	0	0	0	0
Nebraska	7	*	0	0	0	0	0
Nevada	7	8	3	0	0	0	0
New Mexico	9	*	3	1	1	1	1
Oklahoma	1	32	0	0	1	0	0
Oregon	20	120	0	2	0	0	0
South Dakota	4	*	0	0	0	0	0
Texas	26	323	*	*	1	1	0
Utah	*	*	1	5	2	*	0
Washington	34	0	0	1	4	2	0
Wyoming	17	34	1	0	0	0	0
<b>Total</b>	<b>308</b>	<b>729</b>	<b>45</b>	<b>21</b>	<b>15</b>	<b>13</b>	<b>7</b>

*Table 2. Premises Information State*

	<b># Exposed Premises</b>	<b># Exposed premises with suspect or confirmed EHV/EHM cases</b>	<b># Exposed premises with no suspect or confirmed cases</b>
Arizona	11	3	8
California	*	6	*
Colorado	10	6	4
Idaho	23	6	17
Illinois	1	0	1
Iowa	2	0	2
Minnesota	7	0	7
Montana	*	1	*
Nebraska	3	0	3
Nevada	7	2	5
New Mexico	6	2	*
Oklahoma	1	1	0
Oregon	16	2	14
South Dakota	2	0	2
Texas	16	2	14
Utah	*	3	*
Washington	26	7	19
Wyoming	43	1	42
<b>Total</b>	<b>174</b>	<b>42</b>	<b>138</b>