



**American Association  
of Equine Practitioners**

**Horse Health Education**

# **VESICULAR STOMATITIS**

*my***HorseMatters**.com



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS



Many states have placed increased transportation restriction on any livestock (including horses) to control the spread of Vesicular Stomatitis (VS).



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

For example, some states will require all hoofed animals, including horses from Vesicular Stomatitis-affected states to be accompanied by an Official Certificate of Veterinary Inspection (OCVI), which states the following:

*“All animals susceptible to Vesicular Stomatitis (VS) identified and included in this OCVI for shipment have been examined and found to be free from clinical signs and vectors of VS, have not been exposed to the VS virus and have not been within 10 miles of a VS-infected premises within the last 30 days.”*



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In addition, animals originating from a VS-affected state entering the state will require prior permission.

*Give your veterinarian ample time when requesting a health certificate since this may take a few days to acquire permit notification for entry into certain states.*





## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

VS is a viral disease that occurs in the Southwest commonly affecting horses, cattle and pigs, but can also affect sheep, goats and wild animals.



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

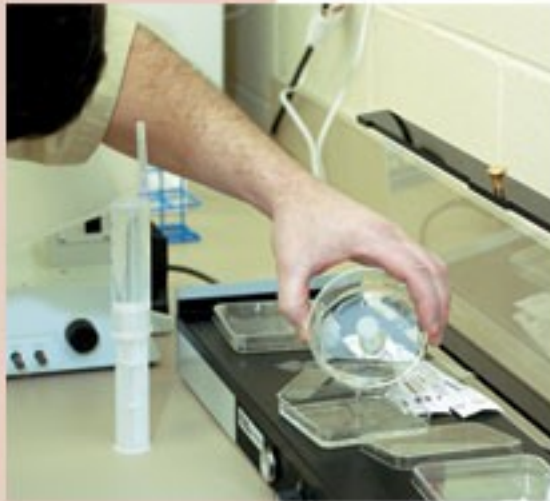
The major concern with this disease is that it mimics Foot & Mouth Disease (FMD), which has been eradicated in the United States since 1929.



*Cells of Vesicular Stomatitis*



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS



Introduction of FMD into the US would have tremendous economic consequences. Therefore, the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) monitors any disease that looks similar to FMD.

*The only way to distinguish VS from FMD in livestock is through laboratory tests. Horses are not affected by FMD.*



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### CLINICAL SIGNS

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The clinical signs of VS in horses include fever and blisters on the tongue, lips and coronary bands.





## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### CLINICAL SIGNS

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These blisters are so painful that the horse may refuse to eat, develop excessive salivation or become lame if the coronary band is affected.

*The incubation period ranges from 2 to 21 days.*

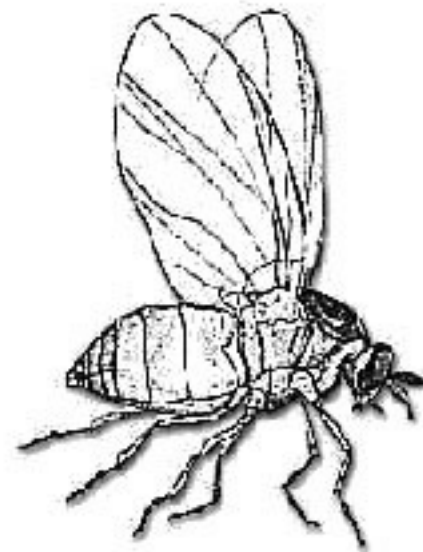


## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### TRANSMISSION

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How VS spreads is not fully understood, but it is believed to be transmitted by arthropods such as flies, mosquitoes and midges.





## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### TRANSMISSION

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*Ruptured vesicle on  
the equine gum*

Horses can spread the virus if the saliva from the ruptured blisters contaminates common areas such as water and feed buckets.



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### TRANSMISSION

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The morbidity rate (the risk that an animal will become sick from a disease) is variable and can be as high as 90 percent in a herd.

The mortality rate (the risk that an animal will die from a disease) for VS is low for horses. Affected horses may take 7 – 14 days to recover and can suffer weight loss from the inability to eat.

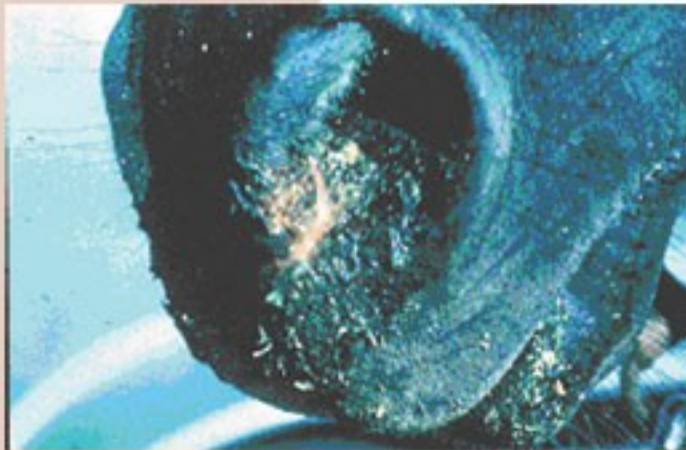




## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### TRANSMISSION

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Lesions on the equine nose

Humans can contract the virus if they come into contact with horses that are affected. The clinical symptoms in humans are similar to influenza including, fever, muscle aches, headaches and malaise.

*Individuals should follow proper biosafety methods when handling infected horses.*



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### CONTROLLING AN OUTBREAK

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There is not a specific cure for the disease. If a horse has symptoms consistent with the disease, the veterinarian must contact the State Veterinarian or the USDA - APHIS immediately.

At that time, a blood sample and an oral swab are collected from each suspect animal and the premises are quarantined pending laboratory confirmation of the disease.

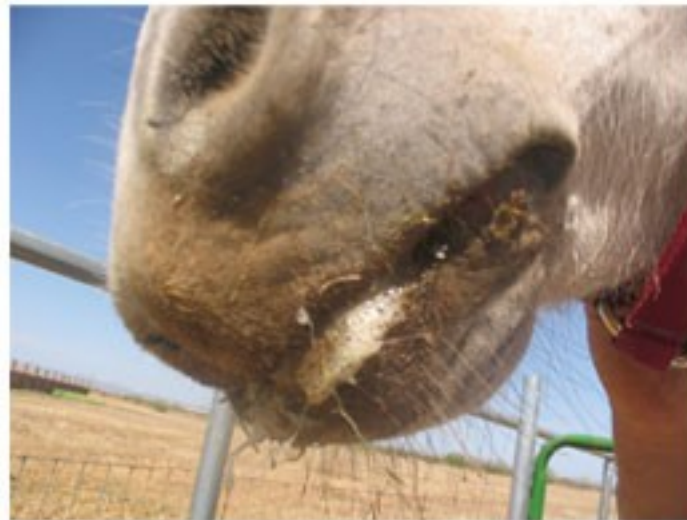


## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### CONTROLLING AN OUTBREAK

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Farms that have confirmed cases of VS are quarantined for 30 days after all clinical signs have resolved. All sick horses should be isolated from healthy horses.



Oral ulcers in the equine mouth





## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### CONTROLLING AN OUTBREAK

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When working on infected horses, protective latex gloves should be used. Make sure to provide good flying insect control on the facility since it is unsure how the disease is spread.





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Blister beetle on forage

Differential diagnosis for oral blisters in the horse:

- Blister beetle toxicosis
- Chemical stomatitis
- Periodontal gingivitis



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- Phenylbutazone toxicity
- Plant awn stomatitis or foreign body
- Uremia
- Yellow bristle grass ulcers



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### IMPACT ON THE EQUINE INDUSTRY

Outbreaks of Vesicular Stomatitis in 1995 involved 365 ranches in New Mexico, Colorado, Arizona, Utah and Texas. In 1997, a similar outbreak of VS was detected on 380 ranches in Arizona, Colorado, New Mexico and Utah.



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### IMPACT ON THE EQUINE INDUSTRY

In 2004, the Vesicular Stomatitis outbreak affected 405 horses in Colorado, New Mexico and Texas.

Prior to 2004, the last outbreak of the disease took place in 1998.

In 2005, VS was detected in several western states including New Mexico, Arizona, Utah, Colorado, Wyoming, Idaho and Montana.





## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

### IMPACT ON THE EQUINE INDUSTRY



These outbreaks have caused significant economic hardships for the horse industry due to the mandatory restrictions imposed on livestock travel at the local, state, national and international levels.



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The inability to ship horses to and from these states can result in lost revenue for the breeding, showing, racing and sales industry.



## HORSE HEALTH EDUCATION: VESICULAR STOMATITIS

For more information regarding Vesicular Stomatitis here are some additional resources:

State Veterinarians

<http://www.aphis.usda.gov/vs/sregs/official.html>

Federal Veterinary Services Offices & Veterinarians (AVIC)

[http://www.aphis.usda.gov/vs/area\\_offices.htm](http://www.aphis.usda.gov/vs/area_offices.htm)

State Resources for Vesicular Stomatitis Information

[http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/surveillance/vsv/vsv\\_stateinfo.htm](http://www.aphis.usda.gov/vs/ceah/ncahs/nsu/surveillance/vsv/vsv_stateinfo.htm)



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*Photos courtesy of:*

U.S. Department of Agriculture,  
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*Photos courtesy of:*





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