



Vesicular Stomatitis

Disease Name: Vesicular Stomatitis (VS).

Disease Type: Vesicular stomatitis is a viral disease of horses, donkeys, mules, cattle, swine and New World camelids that occurs in the Western Hemisphere. The disease is named for the characteristic vesicular lesions it causes in the form of blisters, crusts and ulceration of the lips, muzzle, nose, tongue, ears, sheath, teats, and/or coronary band.

Transmission: Vesicular stomatitis virus (VSV) is an insect-borne arbovirus predominantly transmitted by black flies, sand flies, and biting midges (*Culicoides* species). Other insect species may also be competent vectors of VSV. Infective virus is present within active vesicular lesions, and animals with active lesions are capable of transmitting the virus by direct contact, shared feed/water sources, and other fomites contaminated by infective lesions, vesicular fluid, and/or saliva.

Vesicular stomatitis is a zoonotic disease transmissible to humans by direct contact with the virus from lesions of infected animals. Symptoms resemble flu-like illness with fever, fatigue, and severe body aches as the most common presentation. People handling animals with lesions should protect themselves by wearing disposable gloves, being careful to avoid contact with saliva and secretions being dripped or snorted from the animal's nose and mouth, and thoroughly washing hands after handling lesioned animals.

Frequency: The disease is endemic in southern Mexico, Central America, and northern South America with sporadic outbreaks occurring in the United States during the summer months when certain climate factors favor the insect vectors migrating north.

Incubation period: 2 to 8 days.

Carrier status: Horses are not asymptomatic carriers of VSV.

Severity: VSV is rarely fatal, and most lesions resolve within 14 days. Painful oral lesions can make affected horses reluctant to eat or drink and may need supportive care in some cases.

Clinical signs:

- _Vesicle formation leading to ulcerative lesions on the lips, muzzle, nostrils and tongue. The tongue is often the most severely affected area.
- _Ulceration of the inner surface of the lips.
- _Crusting of the muzzle, nostrils, and/or inside the ears.
- _Excessive salivation secondary to the oral lesions.
- _Difficulty picking up and chewing feed.
- _Lameness due to painful erosions on the coronary band.
- _Lesions can occur on the udder, sheath, ventral midline, and inside of the ear.
- _Lesions can develop secondary infections resulting in slow-healing wounds.
- _Animals on pastures and with increased exposure to insect vectors are at increased risk of VS.



Diagnosis: Initial diagnosis is based on recognition of characteristic vesicular lesions. Infection is confirmed via laboratory testing for serum antibodies and/or virus identification in fluid samples from active lesions. Veterinarians are required to report suspected VS cases to state/federal animal health officials who will direct sample submission to an approved regulatory laboratory for diagnostic testing.

Treatment: There is no specific treatment for VS. Practicing good biosecurity and treating affected horses with pain relievers, anti-inflammatories, and supportive care as recommended by a veterinarian.

Prognosis: The prognosis for survival of horse with VS is good.

Prevention: Isolating all lesioned animals and placing the premises on immediate quarantine is required until all affected livestock have fully recovered and no active lesions are present. The State Veterinarian will work with your local veterinarian to determine and implement necessary quarantine procedures.

The following biosecurity procedures are also recommended to prevent virus spread:

- _Isolate animals with lesions from healthy animals, preferably by stabling.
- _Restrict movement of affected horses and their herd mates.
- _Do not move animals on or off premises before quarantine has been released.
- _Implement Insect control programs to reduce viral transmission on farms: • _Eliminate insect breeding areas
- _Conduct intensive manure management and removal
- _House horses indoors or give access to sheds or run-ins during the daylight and dusk hours when insect vectors are most active.
- _Promote air circulation in stables with open breezeways and fans
- _Apply insect repellants to the horse including the inner surface of the ears (location where black flies feed)

Requirements for new arrivals to a facility or event

- _During VS outbreaks, horses from affected regions should be considered high risk for transmitting VSV to unaffected facilities.
- _Require a recent Certificate of Veterinary Inspection (CVI) with a statement related to potential exposure to VSV and veterinary examination of the animal confirming absence of VS lesions.
- _Inspect newly arriving horses (including an oral examination) for vesicles or ulcerative lesions.
- _Wear disposable examination gloves and personal protective clothing during examination of horses. Change gloves between examinations.