

# Vesicular Diseases Reference Chart

	<b>Foot and Mouth Disease</b>	<b>Vesicular Stomatitis</b>	<b>Swine Vesicular Disease</b>	<b>Vesicular Exanthema of Swine</b>	<b>Senecavirus A</b>
<b>Etiology</b>	<i>Aphthovirus</i>	<i>Vesiculovirus</i>	<i>Enterovirus</i>	<i>Calicivirus</i>	<i>Senecavirus</i>
<b>Geographic Distribution</b>	Endemic in Asia, Africa, Middle East, parts of South America; U.S. free since 1929	North & Central America, northern South America	Italy	United States (eradicated in 1956)	U.S., Canada, Brazil, China
<b>Transmission</b>	Respiratory aerosols; oral consumption; direct and indirect (fomite) contact	Insect vectors (sand flies & black flies); contact, aerosol in humans	Ingestion of contaminated meat; contact with animals, feces	Ingestion of uncooked garbage contaminated with pork	Unknown
<b>Incubation Period</b>	Ingestion 1–3 days, exposure 3–5 days	Animals 3–5 (up to 21) days, humans 24–48 hours	Ingestion 2–3 days, exposure 2–7 days	18–72 hours	Unknown
<b>Clinical Signs by Species</b>	All vesicular diseases produce a fever with vesicles that progress to erosions in the mouth, nares, muzzle, teats, and feet. These five diseases are clinically indistinguishable from each other, particularly in swine.				
<b>Notification</b>	The SAHO and AD should be contacted IMMEDIATELY and informed of suspicions.				
<b>Cattle</b>	<b>Disease Indicators</b> Oral & hoof lesions; salivation, drooling; lameness; abortions; death in young animals	Vesicles in oral cavity, mammary glands, coronary bands, interdigital space	Not affected	Not affected	None (subclinical infection possible)
<b>Pigs</b>	<b>Amplifying Hosts</b> Severe hoof lesions; hoof sloughing; snout vesicles; less severe oral lesions	Vesicles, erosions, and ulcers on mouth, feet	Vesicles and erosions on legs and around mouth; lameness; salivation; neurological signs; more severe in young	Vesicles on feet, snout, mouth and tongue; deeper lesions on the feet	Lameness; vesicles on the snout, mouth, and feet; fever
<b>Sheep &amp; Goats</b>	<b>Maintenance Hosts</b> Mild signs if any	Rarely show signs	Not affected	Not affected	Unknown
<b>Horses, Donkeys, Mules</b>	Not affected	Most severe with oral and coronary band vesicles; drooling; rub mouths on objects; lameness	Not affected	Not affected	Unknown
<b>Humans</b>	Not common	Influenza-like illness, headache, rare oral blisters	Not affected	Seroconversion and mild meningitis in one lab worker	Unknown

## Vesicular Diseases Reference Chart (cont'd)

	<b>Foot and Mouth Disease</b>	<b>Vesicular Stomatitis</b>	<b>Swine Vesicular Disease</b>	<b>Vesicular Exanthema of Swine</b>	<b>Senecavirus A</b>
<b>Clinical Summary</b>	Salivation and lameness with vesicles; equines not affected	Horses are affected; less contagious—slower spread; lesions in one area of body	Pigs only; mild lesions; no mortality	Pigs only; deeper lesions; low mortality	Pigs only; lameness
<b>Morbidity &amp; Mortality</b>	Morbidity 100%; mortality less than 1%, severe in young	Morbidity varies, up to 90%; mortality low; death in young less common	Morbidity is low; lesions less severe; mortality not a concern	Morbidity varies, up to 100%; mortality is low	Data on morbidity lacking; mortality among adult pigs is low; mortality among neonatal pigs has reached 30–70% for a short duration (1–2 weeks)
<b>Differentials</b>	<b>Bovine herpes virus 1 (IBR), bovine viral diarrhea (BVD), bovine papular stomatitis, rinderpest, malignant catarrhal fever, epizootic hemorrhagic disease, bluetongue, contagious ecthyma, lip and leg ulceration, foot rot, and chemical and thermal burns</b>				
<b>Post-Mortem Lesions</b>	Single or multiple vesicles, ruptured vesicles with demarcation line, “dry” lesions in swine oral cavity, coronitis, hoof wall separation, “Tiger heart” lesions, rumen pillar lesions	Similar to FMD, but without heart and rumen lesions	Similar to FMD	Similar to FMD	No internal lesions
<b>Sample Collection</b>	<b>Before collecting or sending any samples, the proper authorities (AD and SAHO) should be contacted. Authorized samples should only be sent under secure conditions to authorized laboratories to prevent spread.</b>				
<b>Preferred Sample</b>	Epithelium from unruptured or recently ruptured vesicles in proper medium				
<b>Disinfection</b>	Disinfectants Registered by the U.S. EPA for Selected Foreign Animal Disease Agents can be found at <a href="http://www.aphis.usda.gov/animal_health/emergency_management/downloads/fad_epa_disinfectants.pdf">http://www.aphis.usda.gov/animal_health/emergency_management/downloads/fad_epa_disinfectants.pdf</a>				