

Mosquitoes and Relevant Equine Diseases  
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The Bend Bulletin recently reported that the wet winter and cool June could mean that we will have a hefty load of mosquitoes this summer. These pesky bugs not only make trail riding and summer horse camping undesirable, but can also cause significant disease to our equine companions.

### **Important Mosquito-Borne Diseases**

West Nile Virus (WNV) was first seen in the US in 1999 and has since then spread transcontinentally. In 2011, 30 states reported 87 cases of WNV, nearly equal in distribution between east and west of the Mississippi River. California had the most at 15 cases. Two cases were reported in Oregon, originating from Harney Co. and Malheur Co. So far this year, two equine cases have been reported (TX and PA) and two human cases have been reported (TX and CA). The fatality rate for horses exhibiting clinical signs of WNV infection is approximately 33%.

Eastern Equine Encephalitis (EEE) is primarily seen in the southeastern United States but has been found in all of the states east of the Mississippi River as well as some western states. In 2011, 10 states reported 60 cases of EEE, all in the eastern US. In 2008, there were 73 cases in Washington and California, though none in Oregon. In 2012 so far, 21 equine cases have been reported (eastern and central US). The disease has a high fatality rate - nine out of every 10 horses infected with EEE virus die from the disease. According to the Centers for Disease Control and Prevention, EEE is a rare illness in humans.

Western Equine Encephalitis (WEE) is recognized in avian hosts in the western United States, however clinical disease has been rare in the last 20 years. There have been no reported cases in the US this year.

Venezuelan Equine Encephalomyelitis (VEE) occurs in Central and South America, but has not been diagnosed in the United States for more than 35 years.

### **Clinical Signs**

Each of these diseases causes encephalitis which is inflammation of the brain and spinal cord. The most common signs reported are stumbling, muscle twitching, circling, head pressing, depression, weakness, partial paralysis, and death.

### **Protecting Your Horse**

The majority of mosquito-borne diseases that our horses may encounter are preventable by vaccination. Safe and effective vaccines for mosquito-borne illnesses are widely available. The vast majority of cases of any of these diseases occur in horses that have no history or an incomplete history of vaccination. Due to the availability of licensed vaccine products combined with an inability to completely eliminate risk of exposure, the American Association of Equine

Practitioners recommends vaccinating against EEE, WEE, and WNV annually for any horses traveling to or residing in the United States.

Other measures you can take to help decrease mosquitoes on your property and protect your horses from bites include removing potential mosquito habitats (standing water – water troughs should be changed once per week), fly sheets, and insect repellents.