

VECTOR BORNE DISEASES

With increased water in the area due to the frequent winter and spring storms that brought record-breaking precipitation into the area health officials are anticipating increased mosquito activity this year. Mosquito bites can be more than just annoying and itchy. They can make you really sick. Protect yourself and your family by using insect repellent.

According to health officials, it only takes a few days of warm temperatures for mosquitos and other insects to become active. Mosquitos are vectors, an insect that can transmit a disease from one plant or animal to another, including humans, so residents need to take precautions to prevent being bitten.

Typically in northern Nevada, the diseases mosquitos occasionally carry are the West Nile, St Louis, and Equine Encephalitis viruses.

Dengue: Globally, dengue is most common arboviral disease, with 40% of the world's population living in areas with dengue virus transmission. Dengue is caused by any one of four dengue viruses spread by mosquitoes that thrive in and near human lodgings. When a mosquito bites a person infected with a dengue virus, the virus enters the mosquito. When the infected mosquito then bites another person, the virus enters that person's bloodstream. The case-fatality rate of patients with severe dengue can be reduced from 10% to 0.1% by the timing and quality of clinical care that patients receive.

Tick-borne diseases: Tick-borne diseases which afflict humans and other animals, are caused by infectious agents transmitted by tick bites. Tick borne illnesses are caused by infection with a variety of pathogens, including rickettsia and other types of bacteria, viruses, and protozoa. Tick-borne diseases including Lyme disease and Rocky Mountain spotted fever are serious public health problems, infecting tens of thousands each year. If you find a tick attached to your skin, there's no need to panic; tweezers can remove the tick effectively.

West Nile and other mosquito-borne viruses: The mosquito-borne virus that causes West Nile fever. One of the flaviviruses, a family of viruses also responsible for dengue, yellow fever, and tick-borne encephalitis virus. Like the other flaviviruses, the West Nile virus is a positive-strand RNA virus containing three structural proteins and a host-derived lipid bilayer. The West Nile virus is an icosahedral structure of about 500 angstroms in diameter. Most commonly, ticks attach to warm, moist, and hard-to-see parts of the body including the scalp, armpits, groin, skin folds, and other hairy areas. Ticks must be removed properly to minimize the chances of infection.

Avoid biting insects by taking the following precautions:

- Wear pants and long-sleeved shirts and apply repellent such as Deet, Picaridin, Oil of Lemon Eucalyptus, or other natural products to protect yourself from biting mosquitos. Two layers of repellent may be applied, one on the skin and a second on clothing.
- Repair tears in doors and window screens around your home or office, or keep them closed to keep mosquitos outside.
- Remove standing water or any objects that can trap or collect water around your property which make breeding grounds for mosquitos. Mosquitos can breed

