

## West Nile Virus and Wildlife

### Q. What is the West Nile virus?

A. West Nile virus (WNV) is a potentially serious, and sometimes fatal, illness transmitted by infected mosquitoes. This virus can infect a variety of species of mosquitos, birds, and at least 18 species of mammals, including humans and horses. The virus was first detected in the United States in New York in 1999. Since then it has spread throughout the country. Outbreaks flare up in the summer and continue into the fall.

### Q: What is the prevalence of West Nile Virus in Oregon?

A. West Nile Virus was first reported in Oregon in 2004 in birds, horses and humans. Since then, infected mosquito pools, humans, horses, or birds occur in Oregon every year with the disease now considered established throughout the contiguous 48 states. Bird species suffering severe population losses from West Nile Virus infection in Oregon are crows, ravens, jays, magpies, and sage grouse. For the most up to date information of the presence of West Nile Virus in Oregon, please go to [Oregon Public Health Authority](#).

### Q. How is it spread?

A: It is important to note that WNV is **not** easily spread through casual contact such as touching a person or animal with the virus. However, birds that are dying of the virus could spread the virus in rare cases. Most often, WNV is transmitted by the bite of an infected mosquito. Mosquitoes become infected when they feed on infected birds. Infected mosquitoes can then spread WNV to humans and other animals as they acquire a blood meal. The virus is located in the mosquito's salivary glands. During feeding, the virus is injected into the animal or human, where it can multiply, possibly causing illness. In a very small number of cases, WNV also has been spread through blood transfusions, organ transplants, and from mother to baby during pregnancy, delivery, or breastfeeding. For additional information regarding the transmission of WNV, please refer to the [Centers for Disease Control and Prevention](#) website.

### Q. What are the symptoms of illness associated with West Nile virus?

A. Approximately 80% of people (about 4 out of 5) who are infected with WNV will not show any symptoms. Up to 20% of people infected will have mild symptoms such as fever, headache, body aches, nausea, vomiting, and sometimes a skin rash on the chest, stomach, and back. Symptoms can last for a few days to several weeks. People typically develop symptoms 3 to 14 days after they are bitten by an infected mosquito. Approximately 1 in 150 people infected with WNV will develop severe illness. The severe symptoms can include high fever, headache, neck stiffness, stupor, disorientation, coma, tremors, convulsions, muscle weakness, vision loss, numbness and paralysis. These symptoms may last several weeks, and neurological effects may be permanent. If you experience these types of symptoms, you should contact your healthcare provider.

### Q: Who is most at risk?

A: **People over 50, those with high blood pressure or those who are immunosuppressed are more likely to develop serious symptoms of WNV.** Special care should be taken to avoid mosquito bites when outdoors enjoying Oregon's wildlife.

### Q. How do I protect myself from infection?

A. **The easiest and best way to avoid WNV is to prevent mosquito bites.**

- When you are outdoors, use insect repellent containing an [EPA-registered active ingredient](#). Follow the directions on the package.

- Many mosquitoes are most active at dusk and dawn, particularly in April through October. Be sure to use insect repellent and wear long sleeves and pants at these times or consider staying indoors during these hours.
- Make sure you have good screens on your windows and doors to keep mosquitoes out.
- Get rid of mosquito breeding sites by emptying standing water from flower pots, buckets and barrels. Change the water in pet dishes and replace the water in bird baths weekly. Drill holes in tire swings so water drains out. Keep children's wading pools empty and on their sides when they aren't being used.

**Q. Do all mosquitoes carry the West Nile virus?**

A. **No.** Less than 1% of all mosquitoes are actually carrying the virus. Of the ~90 known mosquito species in the northwest United States, only a small number have the potential to carry West Nile virus.

**Q: What is the impact of West Nile Virus on wildlife?**

A: **Thousands of wild birds have died from West Nile Virus since 1999.** Wild birds are considered the primary hosts for WNV. Corvids (ravens, crows, jays, magpies, etc.) are the group of birds most severely affected by the virus. These birds frequently develop severe neurological symptoms (incoordination, inability to flying, abnormal behavior) followed by death within 4-8 days. Sage-grouse also seem to be especially susceptible to the disease. Many other species of birds in the United States have tested positive for West Nile Virus, including songbirds, hawks, owls, eagles, waterfowl, woodpeckers, hummingbirds, although resistance to the virus appears to vary with species. A large or continuous die-off of birds in mid- to late summer may be a local indication of West Nile Virus activity.

Free-ranging mammal species have also tested positive for West Nile Virus, including caribou, squirrels, wolves, bear, and deer. There are few reports of deaths due to WNV in mammals with squirrels being more susceptible than most species. In general, mammals do not develop enough virus in their blood to spread the disease.

In Oregon, the USGS National Wildlife Health Center (NWHC) confirmed West Nile virus infection in greater sage-grouse and a northern harrier hawk found dead in Malheur County, Oregon, in August of 2006. This was the first isolation of the virus in sage-grouse in Oregon. During this die-off, 3 sage-grouse carcasses, 1 sick northern harrier, and evidence of more than 60 other dead sage-grouse were reported by a landowner near Burns Junction. Continued surveillance has been conducted by ODFW and USGS on live sage-grouse around the state.

**Q. Can I get infected by handling or caring for a sick animal?**

A. Although the potential exists with a severely infected bird and a highly susceptible human, there currently is no conclusive evidence that West Nile virus can be readily spread from sick animals to people either through contact. However, people should follow safety precautions when handling all wildlife by wearing protective latex, nitrile, or rubber gloves to prevent blood or pathogen exposure to bare hands. Game meat and game birds should always be fully cooked to an adequate internal temperature of 165 °F. If you find a sick animal, contact your local wildlife rehabilitator or our ODFW veterinary staff at **1-866-968-2600**.

**Q. Should I report dead birds?**

A. **Yes.** The presence of dead birds (especially crows, ravens, magpies, or jays) in an area may indicate that WNV is present. Please report these or other multiple dead birds that appear to have died for some unknown reason (not obvious trauma) to the ODFW wildlife health hotline at **1- 866-968-2600**.

### **Q. Should pesticides be used in wetlands, such as marshes or swamps?**

A. Natural wetlands provide many benefits: They improve water quality, reduce floods, and provide a rich and diverse natural habitat. In healthy wetlands, water levels fluctuate, constantly moving water around, which limits mosquito production. Also, birds and insects in a wetland area feed on mosquitoes and mosquito larvae, thereby reducing mosquito numbers. If a wetland is disturbed by humans, or if other life forms are eliminated through the incorrect use of pesticides, it is possible that the numbers of mosquitoes in a wetland actually may increase. Therefore, it is important to preserve the natural balance in a wetland by minimizing use of potentially harmful chemicals.

### **Q: Where can I get more information?**

- WNV in Oregon: [Oregon Public Health Authority](#)
- WNV in humans: [Center for Disease Control and Prevention](#)
- WNV in wildlife: [National Wildlife Health Center](#)
- Insect repellent and vector control:
  - [CDC Insect Repellent Information](#)
  - [What You Need to Know About Mosquito Repellent](#)
  - [Using Mosquito Fish \(gambusia\) for mosquito control](#)
  - [Northwest Coalition for Alternatives to Pesticides](#)
- Other
  - [Audubon Society of Portland](#): Living with West Nile Virus ([PDF](#))
  - [Facts about West Nile Virus](#) (Español) (pdf)