

Frequently Asked Questions about West Nile Virus and Wildlife

Q. *Where in the United States has West Nile Virus (WNV) been detected in wildlife?*

A. Since the virus was first detected in 1999, WNV has been detected in wildlife, primarily birds, in 45 states and the District of Columbia. A regularly updated map of regions reporting WNV in dead birds can be found at: http://westnilemaps.usgs.gov/us_bird.html

Q. *Are crows and raptors the only bird species with WNV infection?*

A. Since 1999, WNV has been detected in over 225 wild and captive bird species. This list is based on reports from public health, wildlife and veterinary diagnostic laboratories across the United States. To see a list of those species, [Click Here](#).

Q. *Are birds the only species that are susceptible to WNV infection?*

A. Birds are the natural host and reservoir of WNV. Although other animals, including several mammals and captive alligators, are susceptible to WNV infection, there is currently no evidence that animals other than birds naturally develop a high enough virus load to transmit the infection to an uninfected mosquito.

The list of animal species in which WNV infection has been detected has continually increased since 1999 and can be found [here](#).

Q. *Which bird species are responsible for maintaining the virus in the environment?*

A. There are theories that crows or house sparrows are the primary reservoir for WNV in the environment. However, these have not yet been substantiated, and it is not known which birds are the primary reservoirs circulating the virus in nature.

Q. *I'm not seeing the numbers of birds that I have seen in previous years. Is this because of WNV?*

A. The National Wildlife Health Center (NWHC) has been receiving reports from several regions of the United States about decreased numbers and species of birds being observed. Because WNV activity in the U.S. is associated with bird mortality, it is possible that the decline in bird sightings is due to WNV infection.

Q. *If birds are the natural host for WNV, why is WNV being detected in so many dead birds?*

A. Since this virus was not detected in the Western Hemisphere until 1999, it is likely that native bird populations in the U.S. were not previously exposed to the virus. It is not unusual for a new disease to cause high rates of infection or death because they do not have natural immunity to the infection. It is not known if or how long it will take for populations to develop sufficient immunity. Surveys of wild birds completed in the last three years have shown that some birds already have antibodies to WNV. Most bird testing and surveillance programs for WNV in the U.S. have been focused only on testing for the presence of the virus in the birds. Testing for other possible causes of death was not being conducted, so it is unknown if all of the bird deaths are due to WNV infection.

Q. *What is the effect of WNV on bird populations? Are these bird species, particularly the crows and blue jays, going to disappear completely?*

A. Unfortunately, at this time, we do not know if WNV is having an impact on bird populations. While we do know that the virus kills some species of birds, it is difficult to document the effect WNV has had on wild bird populations. Based on Christmas Bird Counts, Breeding Bird Surveys, and reports from bird enthusiasts, we know there have been declines in observations of many local bird populations. However, we do not know if this is a true decline or if the decline can be attributed to WNV. There are surveys of bird populations underway. It is not anticipated that the commonly seen species, such as crows and blue jays, will disappear from the United States.

Q. *What is the threat to endangered and threatened bird species?*

A. This is an issue of great concern, as these populations are already struggling to survive in the current environment. If some of these species are more vulnerable to fatal WNV infection, WNV may ultimately lead to their extinction or significantly set back the progress of the recovery programs.

Q. *Could the local mosquito control efforts, particularly the spraying of pesticides for adult mosquitoes, be killing the birds?*

A. Based on safety reports available from the EPA, many of the pesticides being used by local agencies for mosquito control are considered to have very low toxicity to birds. For more information, contact your local health department for information on the mosquito control methods being used in your area.

Q. *There have been many reports of increasing numbers of non-avian species infected with WNV. Has the virus changed?*

A. It is possible that there may have been a mutation in the virus that is causing a higher number of species to be affected. There is currently no evidence of significant mutation in the U.S. strain of WNV since its discovery in 1999, but many studies are still underway.

Q. *How do I know if an animal has WNV infection?*

A. Signs of infection in wildlife, like in humans, can range from no symptoms to severe symptoms of neurologic illness. Commonly reported signs in animals have included: weakness, stumbling, trembling, head tremors, inability to fly/walk, and lack of awareness that allowed them to be easily approached and handled. These signs do not necessarily indicate WNV infection, and the only way to confirm WNV infection is by laboratory testing of tissues for the presence of virus.

Q. *What should I do if I find sick or dead wildlife?*

A. A cluster of sick or dead animals in an area are not likely to indicate WNV infection, but may indicate other wildlife diseases of concern.

If you find sick or dead wildlife, contact your closest state or federal wildlife agency that may want to investigate some of these incidents.

Since many local health departments use dead bird reports to estimate WNV activity in an area, the wildlife agency may request that you contact your local health department to report a sick or dead bird also.

Q. *How do I handle a sick or dead animal?*

A. There is no evidence to indicate you can be infected with WNV by handling a sick or dead animal. However, there are a number of other potential infections that could result from handling an animal. To protect yourself from any such exposure, it is recommended to wear gloves or to put a plastic bag over your hand before touching the animal and to wash your hands with soap and water immediately afterward.

Q. *I have a bird feeder and/or a birdbath on my property. Am I at increased risk of catching WNV?*

A. At this time, there isn't evidence to indicate that humans can get infected directly from an infected bird. However, it is recommended to always follow general hygienic procedures. Birdbaths and feeders should be washed or disinfected regularly. Wash your hands with soap and water after touching the baths/feeders.

To prevent mosquitoes from breeding on your property, empty and clean birdbaths at least once a week and eliminate any other standing water in your area. Contact local health officials if you are concerned about potential mosquito breeding sites in your area.

Q. *By having the feeder/birdbath, am I increasing the exposure of other birds to infection by attracting them to a common place?*

A. Preliminary studies in the laboratory have shown the potential for direct bird-to-bird transmission, but there is no evidence that transmission in nature occurs among birds by routes other than by mosquito. Information on other diseases that can be transmitted at bird feeders and recommended measures to prevent transmission of these diseases can be found [here](#).

Q. I am a wildlife biologist/birdbander/rehabilitator and handle live birds on a regular basis. Should I be concerned about exposure to WNV?

A. Measures to protect from mosquito exposure are recommended. There is no evidence indicating direct bird-to-human transmission.

The NWHC has developed an information sheet that may provide guidance to those handling wildlife. The guidelines can be found [here](#). Consult with your supervisor and/or physician about measures you may want to take to prevent transmission of disease to yourself and to other animals.

Q. What about game birds? Should hunters be concerned about eating the game they catch?

A. Some game birds have tested positive for WNV. However, there is no evidence of human infection by consumption of properly cooked infected game. Hunters are likely at higher risk of infection by mosquito exposure, particularly in wetland environments. Protective measures should be taken to prevent mosquito exposure while hunting.

Also, WNV transmission to humans has been documented to occur by accidental injury in the laboratory and by blood transfusion. It is recommended that hunters wear gloves when dressing (cleaning) the birds to protect against accidental injury and exposure to blood. Immediately consult with a physician should an injury occur to discuss the risk of WNV exposure from the injury.

Other protective measures recommended to hunters are those that prevent exposure to any infectious organisms carried by game species, including washing hands with soap and water after handling carcasses and cooking the meat thoroughly.

Q. Can my dog or cat get WNV by eating an infected animal?

A. Experimentally, it was found that this may be possible. However, there has been no evidence to indicate transmission of WNV to cats or dogs that carry or consume infected animals has occurred naturally. Dogs and cats can get infected by the bite of a mosquito, thus minimizing their exposure to mosquitoes is recommended.

Q. Is there a vaccine available for birds?

A. At this time, there is not a WNV vaccine approved for use in birds. Many zoos and wildlife centers have been using the Fort Dodge horse vaccine (West Nile-Innovator®) in birds. The vaccine has not been tested for use in birds by Fort Dodge, and therefore, the safety and efficacy of use of this vaccine in birds is neither known nor guaranteed by Fort Dodge or the USDA. There are currently several studies underway investigating the use of this vaccine in captive bird populations. The recently licensed WNV vaccine by Merial (Recombitek Equine West Nile virus®) has been approved by the USDA for use in horses only. Similar to the Fort Dodge vaccine, the safety and efficacy of the Merial vaccine in birds is neither known nor guaranteed by Merial or the USDA.

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