



# MONTANA FISH, WILDLIFE & PARKS

## HPAI Frequently Asked Questions

### What is avian influenza virus?

Avian Influenza (AI) virus is a naturally occurring virus of birds. AI viruses are classified into two groups, based on the severity of disease they cause in infected poultry. Low pathogenic Avian Influenza viruses (LPAI) generally cause no clinical illness, or only minor symptoms in birds. Highly Pathogenic Avian Influenza (HPAI) viruses are extremely infectious and fatal to poultry and some species of wild birds.

### Does HPAI infect humans?

Different HPAI viruses have different levels of infectivity for humans and cause symptoms of varying degrees of severity. Some HPAI viruses have infected people in other countries and caused serious illness and death in some cases. The H5N1 avian flu viruses that are circulating in wild birds and poultry in much of the world in 2022 are genetically different from earlier versions of the virus and emerged to become the predominant subtype of HPAI H5 in the fall of 2021. In contrast to previous H5N1 viruses, which still circulate to a lesser extent in several countries, at this time, only two human cases with current H5N1 bird flu viruses have been reported.

One infection occurred in December 2021 in a person in the United Kingdom who did not have any symptoms and who raised birds that became infected with H5N1 bird flu viruses.

A second human case was reported in the United States in April 2022 in a person who was involved in culling (depopulating) of H5N1 virus-infected poultry. The person reported fatigue and has recovered.

Although the [Centers for Disease Control and Prevention \(CDC\)](#) considers risk of HPAI spread to humans to be very low, Montanans should take precautions when handling game birds or any sick or dead bird they find. Whenever possible, avoid contact with sick or dead wildlife. Even if a bird is not suspected to have died from a contagious disease, gloves should always be worn if a dead animal must be handled for disposal.

### What precautions should be taken by hunters?

While there is no evidence that any human cases of avian influenza have ever been acquired by eating properly cooked poultry products ([CDC](#)), wild birds can carry HPAI viruses without developing symptoms. Bird hunters should follow these simple precautions when processing or handling wild game:

- Prevent dogs from consuming sick birds or birds that are found dead.
- Do not harvest or handle wild birds that are obviously sick or found dead.
- Wear disposable latex or rubber gloves while cleaning game or cleaning bird feeders.
- Clean harvested wild birds outdoors or in a well-ventilated area.
- Do not eat, drink or smoke while cleaning game.
- People and equipment that have been in contact with wild game birds should avoid contact with backyard poultry flocks.
- Wash hands with soap and water or alcohol wipes immediately after handling game or cleaning bird

feeders.

- Wash tools and work surfaces used to clean game birds with soap and water, then disinfect with a 10 percent solution of chlorine bleach—one part chlorine bleach to 10 parts water.
- Separate raw meat, and anything it touches, from cooked or ready-to-eat foods to avoid contamination.
- Cook game meat thoroughly to an internal temperature of at least 165°F.

## **Where does HPAI occur?**

HPAI H5N1 was detected in Southeast Asia in 1996 and has since spread across Asia into Europe and Africa. H5N2 was detected in a Texas commercial chicken flock in 2004. From December 2014 through June 2015, the U.S. endured a significant outbreak, with more than 200 cases of HPAI found in commercial and backyard poultry, as well as wild birds, across the country. The first known case of HPAI (H5N2) in Montana was detected in a captive Gyrfalcon in March 2015. Shortly after the virus was detected in the gyrfalcon, H5N2 was detected in a back yard poultry flock in Judith Basin County.

In December 2021, HPAI was once again detected in North America. Initial detection was in Newfoundland and Labrador. In February 2022, the virus was detected in a wild goose in Nova Scotia. HPAI was detected in South Carolina in January 2022 and has now been detected in all four bird migration flyways.

## **What bird species are affected by HPAI?**

Domestic poultry such as turkeys and chickens are very susceptible to infection with HPAI. Wild waterfowl such as ducks and geese may carry the virus without exhibiting signs of illness; however, some infected waterfowl do develop disease. Birds of prey (falcons, hawks, eagles) also appear to be very susceptible to disease and may become infected by consuming infected waterfowl. Wild gallinaceous birds such as turkeys, quail, and sage grouse, and scavengers such as ravens, crows and gulls may be susceptible in some cases. The detection of HPAI virus in a chickadee in Minnesota during the 2015 outbreak indicates that a wide variety of bird species may be vulnerable to the HPAI viruses recently detected in the United States.

During the 2022 outbreak of HPAI in Montana, death caused by HPAI was confirmed in the following bird species: Great Horned Owl, Bald Eagle, Red-Tailed Hawk, Turkey Vulture, Snow Goose, Canada Goose, Wild Turkey, Great Blue Heron, Common Raven, White Pelican, Wood Duck, and Trumpeter Swan.

## **How does the virus spread from bird to bird?**

The virus is shed in oral and nasal secretions and feces of infected birds, and can be spread via aerosol, direct contact with infected birds, contaminated drinking water, or fomites (any inanimate object or substance capable of carrying infectious organisms) (Western, 2009). Raptors and wild mammals generally are infected by consuming carcasses of infected birds. The role of migratory birds in the spread of Highly Pathogenic Avian Influenza is still being investigated.

## **What are the symptoms of HPAI in birds?**

HPAI may cause significant disease in wild birds, depending on the specific virus and the host species. In some cases, birds can be infected and actively shedding virus without exhibiting signs of disease.

Symptomatic birds may exhibit any number of symptoms including respiratory distress, weakness, neurologic impairment (lack of coordination), seizures, and death, but are usually simply found dead.

## **Are wild mammals affected by HPAI?**

HPAI has been detected in small numbers of wild mammals including foxes, skunks, racoons, and coyote in Wisconsin, Michigan, Washington, Minnesota, Iowa, Alaska, Utah, and Canada. The cause of these mammals are likely being infected from consuming infected waterfowl. Montana's first confirmed HPAI positive wild mammal was a striped skunk that died in October 2022.

## **Are there guidelines for falconers regarding HPAI?**

Falcons can be infected with HPAI by consuming meat from infected birds. We recommend falconers avoid hunting wild birds and avoid feeding meat from wild birds (particularly from waterfowl) to falcons during the HPAI outbreak. It is important to keep in mind that many waterfowl species can carry the virus without showing any signs of illness. Falconers should practice good biosecurity and maintain separation between their falcons and wild birds.

## **What can Montanans do to help?**

Investigation of morbidity/mortality events in wild birds or other wildlife offers wildlife professionals the best opportunity to detect the highly pathogenic avian influenza virus. The public is encouraged to report unusual or unexplained cases of sickness and/or death of wild birds or other susceptible wildlife by calling their local wildlife biologist or the Bozeman Wildlife Health Lab: 406-577-7880, 406-577-7882.

HPAI outbreaks in wild birds are often characterized by the following:

- Mortality events involving waterfowl (ducks, geese, or swans) or other water birds (loons, grebes, coots, shorebirds, or wading birds such as egrets, herons, or cranes)
- More than 5 dead birds at one time in one location
- Mortality events involving individual raptors or other avian scavengers (ravens, crows, or gulls), particularly those observed near locations with on-going waterfowl mortality
- Mortality events involving any wild bird species that:
  - exhibit neurological signs, seizures, acute death, respiratory distress
  - are found near facilities harboring domestic birds (or wild/captive) in which HPAI has been detected

Wildlife health staff will work with local wildlife staff to determine the appropriate response to sick/dead bird reports.

Montanans should take precautions when handling game birds or any sick or dead bird they find. Whenever possible, avoid contact with sick or dead wildlife. Gloves should be worn if carcasses must be collected for disposal, and carcasses should be double bagged to prevent scavenging by raptors which may be infected from consuming these carcasses.