

# Avian Influenza

Information for Municipalities

# Avian Influenza

## What is avian flu?

Avian influenza, also called AI, avian flu or bird flu, is a virus that can affect all species of birds. The virus can also affect mammals, including people, although that is relatively rare.

## Where it's been discovered

In parts of Asia and Europe, some wild and domestic birds have been infected with a specific type of avian influenza known as Asian H5N1. This is a very contagious type of virus that is deadly for birds. The virus has also spread from infected birds to people causing severe illness or death. In Manitoba, the risk of a major outbreak of avian influenza is low however it is wise to have an emergency plan.

## Is this a new disease?

Wild birds, particularly ducks and geese, have carried many types of influenza viruses for hundreds, perhaps thousands, of years. Wild birds may carry these viruses without any signs of disease. However, they can spread the disease to other birds, including domestic poultry. Although it is rare mammals, including humans, can also catch some types of avian influenza viruses from infected birds.

## Three different types of influenza

There are many variations of influenza. It is important to be aware of these three main, but very different, types of influenza:

- 1. Annual human influenza** – We are most familiar with human influenza viruses, commonly called the flu, that circulate every year. These viruses change slightly each year, so most people have some immunity. Scientists can track the variations to develop an annual vaccine to prevent the flu. For more information, see [manitoba.ca/health/flu](http://manitoba.ca/health/flu).
- 2. Avian influenza** – This is bird flu that affects birds and some mammals. In rare cases, these viruses can spread from birds to people. Avian viruses are watched carefully in case they undergo a major change that could potentially cause a human pandemic with significant illness and death among people. More information can be found at [manitoba.ca/avian](http://manitoba.ca/avian).

- 3. Pandemic human influenza** – A pandemic, or large scale outbreak, would be the result of a major change in an influenza virus, for which people will have little or no specific immunity. A pandemic influenza could cause significant illness and death among people around the world. Although the severity is unknown, it would be widespread. For further information, please visit [manitoba.ca/pandemic](http://manitoba.ca/pandemic).

### Don't feed wild animals

The risk of getting the Asian H5N1 avian influenza from healthy geese in parks, ponds and golf courses is considered extremely low. As always, there are some common sense precautions to take when around any wild animals that may carry diseases. To reduce the risk of being injured or picking up a disease from wild birds and animals, people should avoid feeding them or coming into direct contact with them or their feces. For more information see [manitoba.ca/conservation/wildlife](http://manitoba.ca/conservation/wildlife).

### Protect your pets

There are also common sense steps to take to deal with the potential interaction of pets, geese or other wild birds. If birds appear healthy, they are not likely to be a health threat. However, pets and people should avoid contact with goose, or any animal droppings. If contact does occur, thoroughly wash any skin or clothing that becomes soiled. If pets become soiled with goose or animal droppings, they should be thoroughly bathed before coming into contact with people.

People should avoid direct contact with sick or dead birds. If large numbers of dead or sick birds are discovered, call Manitoba Conservation at 1-800-214-6497 or 945-7273 in Winnipeg.

# Avian Influenza

## Migration can spread the virus

The degree of probability of an Asian H5N1 avian influenza outbreak in Canada is unknown. It is assumed that the virus would be introduced into North America through the migration of wild birds. The East Atlantic and East Asia/Australian migratory paths go over countries that currently have outbreaks and they overlap in the Arctic with several North American migratory paths.

Manitoba is on a major migratory path for wild bird populations, particularly ducks and geese. Given the spread of Asian H5N1 in Asia and Europe, Canadian scientists anticipate the virus will appear in North America at some point.

## Protecting Manitoba poultry

Manitoba's \$180 million poultry industry has 400 producers and farms, employing more than 1,500 people. Most farms are family-run operations with 10,000 to 30,000 birds per flock. Most large poultry farms are located in southeast Manitoba. There are three processors that package poultry products for sale to local and international markets.

It is important to know that Manitoba's poultry operations are clean, well-managed operations. Poultry operations, including those with small flocks raised outdoors, practise good biosecurity measures. Commercial or domestic flocks are unlikely to mix with wild birds that may carry avian influenza.

Poultry operations follow the best practices to protect valuable flocks and provide consumers with safe, reliable, high quality food products. Even so, it is wise to plan for possible avian influenza in both wild and domestic bird populations.

## Managing an outbreak

Managing avian influenza is done through culling of birds on an infected farm. Because the avian flu virus spreads quickly among birds, infected birds must be culled quickly and efficiently to avoid widespread sickness and death among the flock.

# Information for Municipalities

## Avian flu in North American

There is also a North American strain of H5N1 avian influenza. It is not very contagious and has not caused the severe symptoms typical of a highly contagious strain. In late 2006, it was found in Michigan, Maryland, Pennsylvania and New York. In November 2005, the strain was found in two healthy ducks in Manitoba, however the discovery caused no issues for other wild birds or domestic poultry in Manitoba.

## Government response to avian flu

A federal/provincial wild bird surveillance program is in place across Canada to detect the virus. The virus could also be introduced into Canada from illegally imported birds or through contaminated feed accessible to birds. There are strict border controls in place to stop infected birds or meat from being brought into the country.

## If an outbreak occurs

If an outbreak does occur, its extent and duration is difficult to predict. In 2004, there was an outbreak of H7N3 avian influenza in Abbotsford, British Columbia. It affected three clusters of farms that covered a 20-kilometre radius. About 19 million birds on these farms had to be destroyed. The outbreak lasted from March to June, 2004, costing \$300 million to \$500 million in clean-up and industry losses.

## Responsibilities during an outbreak

Under the *Health of Animals Act*, the Canadian Food Inspection Agency (CFIA) is the federal agency responsible for managing an outbreak of avian influenza in Canada. Manitoba Agriculture, Food and Rural Initiatives and other provincial agencies, would also play an important role in any disease control effort. Manitoba Health is responsible for ensuring the safety of human health during an avian flu outbreak.

# Avian Influenza

In Manitoba there is a joint federal/provincial Avian Influenza Standing Committee, co-chaired by Public Safety and Emergency Preparedness Canada (PSEPC) and Manitoba Emergency Measures Organization (EMO), to manage any response to an avian flu outbreak in Manitoba. EMO will notify affected municipalities of any potential threats.

## CFIA responsibilities during an outbreak

To stop avian flu, the CFIA would establish two types of control zones. The infected zone includes a three-kilometre radius from any known infected location. The restricted zone refers to a 10-kilometre radius from any known infected location. A special order under federal laws may declare or designate a control area which would restrict the movement of poultry and poultry byproducts.

## Municipal responsibilities during an outbreak

Avian influenza is a reportable disease. That means any suspected or confirmed case must be reported to the Canadian Food Inspection Agency (1-800-442-2342) and to the province's chief veterinary officer (945-7663 in Winnipeg or 1-800-282-8069 toll-free).

If avian flu is confirmed, control measures must be immediately implemented through CFIA. Other federal and provincial agencies would also respond. Information about the situation, the response and the impact on people would be provided and widely shared.

Rapid containment of avian flu is important because it can prevent widespread problems for domestic poultry and swine, the wild bird population and, most importantly, the risk to human health.

## How municipalities can help

The federal and provincial government will respond to the situation. Municipalities would also be expected to initiate their emergency plans.

# Information for Municipalities

## Control

- Identify and pre-approve potential disposal sites for mass carcass burial, based on soil suitability and environmental plans.
- Identify locations within infected and restricted zones using municipal maps of farms and geographic information systems (GIS)
- Work with local residents to control movement of dogs, cats and other potential carriers.
- Notify owners of adjacent premises to keep susceptible animals (birds, pigs, etc.) contained indoors.
- Control effluent from infected locations. Do not allow it to drain onto roads, pastures or waterways.
- Control vermin, feral animals or wildlife if necessary.
- Clean and decontaminate (also referred to as C & D) heavy equipment, such as bulldozers needed for stamping out the virus.
- Use barricades to close roads and set up disinfection stations.
- Provide access to community buildings that may be used as emergency command posts, or staging areas.

## Prevention, preparedness, recovery

- Prevention
  - Implement zoning bylaws on minimum separation distances between barns.
- Preparedness
  - Develop, maintain and practise using an emergency plan.
  - Develop GIS maps of the municipality.
  - Identify and approve potential sites to be used for mass carcass disposal. Note: this is the most important part of a municipal emergency plan.
  - Do environmental assessments of potential disposal sites.
  - Maintain an inventory of municipal buildings, services and assets that can be used during an outbreak.
- Recovery
  - Identify resources for physical, economic and emotional support and provide them after the danger has passed.

# Avian Influenza

## Avian influenza facts:

- Although avian influenza in humans is rare, humans in Asia and Europe have become ill with avian influenza.
- There has been little, if any human-to-human transmission of the disease.
- Most people have become ill through direct or close contact with infected birds.
- Scientists are monitoring avian influenza to detect any changes that could potentially cause human illness.
- It is not known if the next pandemic would come from this avian influenza or another source.
- Fully cooking domestic and wild poultry products, such as chicken, turkey, ducks, geese and eggs, will kill harmful viruses, including the avian influenza virus.

For more information, or to report a suspected case of avian flu, call:

Canadian Food Inspection Agency

1-800-442-23-42

<http://www.inspection.gc.ca/english/anima/heasan/disemala/avflu/avflue.shtml>



## Frequently Asked Questions

### What is H5N1 avian influenza?

H5N1 avian influenza is a type of influenza A virus. Since late 2003, the Asian strain of this virus has caused widespread outbreaks in domestic birds in several Asian and European countries. Rarely, this virus has also caused infections in humans.

### What does “high path” and “low path” mean?

Path is short for pathogenicity meaning the ability to cause disease. In this case, it refers to the ability to cause disease in chickens only. High path means the virus could cause severe disease and sickness in chickens. Low path means the virus could cause mild disease and sickness in chickens. It is important to note that what causes severe disease in chickens, may cause no, or only very mild, symptoms in people, pigs or other poultry.

### Does avian influenza occur in Canada?

In 2005, a Canadian wild bird survey identified some wild ducks that tested positive for avian influenza in several provinces, including Manitoba. A very small number of these birds were found to have H5N1 avian influenza, however the discovery caused no issues for other wild birds or domestic poultry in Manitoba. It was a North American strain, not the same strain circulating in Asia and parts of Europe, and not associated with human illness. Wild bird surveillance continues.

Although rare, avian influenza outbreaks have occurred among domestic birds in Canada. An outbreak of H7N3 avian influenza affected several B.C. poultry farms in 2004 and one farm in Saskatchewan in 2007.

### What are the symptoms of avian influenza in birds?

Mild strains of avian influenza may present no symptoms or may sicken and kill some birds.

# Avian Influenza

Strains that have mutated to a deadly form of avian influenza are quite obvious. It is not unusual for a deadly strain to kill half of a farm's chickens or turkeys in 24 hours. In laying hen flocks, a dramatic drop in egg production is often the first sign. Chickens and turkeys may display respiratory or nervous signs or die suddenly without first appearing sick. Ducks and geese may show little or no signs of illness with any form of avian influenza infection and, often, none will die.

Only a veterinarian's examination of the birds can tell if the mortality or egg production problem is being caused by avian influenza. Because signs of the disease vary from flock to flock, a veterinarian's expertise and laboratory confirmation is required for a diagnosis.

## What are the symptoms of avian influenza in people?

It depends on the strain of virus. Symptoms of avian influenza in humans have ranged from typical flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, gastro-intestinal problems, pneumonia, acute respiratory distress and other serious and possible, life-threatening complications.

People who work with infected birds will take personal protective measures such as wearing special masks and gloves. They may also be given preventive medications called anti-virals.

## What should people do if they think they have avian influenza?

People who believe they may be infected with avian influenza should go immediately to the nearest hospital. **All cases, and suspected cases of avian influenza, must be reported to Manitoba Health.** People who have had close contact with infected birds should tell the doctor or hospital right away.

## What do I do if I find a large number of dead wild birds?

Call Manitoba Conservation at toll free 1-800-214-6497 or 945-7273 in Winnipeg.

### **Will chicken and eggs be safe to eat?**

Eating properly cooked poultry in Canada is safe. The CFIA has import restrictions in place on poultry and non-processed poultry products from countries affected by avian influenza. To date, there has been no evidence that the virus is transmitted through contaminated food. Viruses (including flu viruses) are easily killed by cooking.

### **Can avian influenza cause a pandemic?**

Influenza viruses are constantly changing over time. For a pandemic to occur, a new influenza virus with major genetic changes would have to develop.

Avian influenza outbreaks in birds increase the chances of human exposure, particularly where there is close contact between humans and infected birds. If there are more human infections, this increases the chances that the avian influenza virus will adapt and “learn” how to directly affect people. Theoretically, it is also possible that a human influenza strain and an avian influenza strain could combine and develop an entirely new strain of influenza.

People would have no specific immunity to this new strain, which could spread from person to person, and cause illness.

