



Reference Issue Sheet for EPHOs and other health professionals.

Developed by EPHD, ISC with contributions from ECCC, PHAC and CFIA

Avian Influenza

Issue: Recent detection of highly pathogenic avian influenza (HPAI) H5N1 in birds in Canada and associated risk to food security and health of Indigenous Peoples.

Background: To date, there have been detections of HPAI (H5N1) in wild birds in all 4 Atlantic provinces, Ontario and BC, and in poultry in NS and NL, as well as widespread detections in the United States. Between January 13 and March 14, 2022, the US confirmed HPAI (H5N1) in wild waterbirds and raptors sampled from 21 US States. HPAI has now been confirmed in wild and/or domestic birds in all four North American flyways (Atlantic, Mississippi, Central, Pacific). With the northward spring bird migration, increasing numbers of HPAI detections may be seen across Canada. Since many Indigenous communities actively engage in spring wild bird and egg harvesting, it is important to communicate key precautions that should be taken to limit the spread of disease and minimize the risk to people.

The Canadian Food Inspection Agency's (CFIA's) response to avian influenza detections in the Atlantic provinces has been to control the movement of birds on and around small backyard flocks as well as commercial farms where HPAI H5N1 has been detected to limit the spread of the disease. All remaining live birds on properties within the control zones are humanely euthanized and safely disposed of to prevent further spread. CFIA also encourages all poultry workers to respect certain biosecurity measures. Guidance on best practices to reduce the risk of human infection has been developed by the Public Health Agency of Canada (PHAC), while Environment and Climate Change Canada (ECCC) is supporting partner organizations and provincial/territorial governments in their response to the HPAI outbreak.

Questions and Answers

What is Avian Influenza?

Avian influenza (AI) is a viral infection that is highly contagious among birds and is found in domestic poultry and wild birds including raptors, gulls, terns, shorebirds, ducks, geese, cranes and swans.

Wild birds and waterfowl in Canada and throughout the world are natural carriers of avian influenza viruses. These viruses typically cause little or no harm to most waterfowl and some wild birds, but may cause severe illness in some species. They can also spread to domestic poultry and, under certain circumstances, to people. There are many AI virus strains, which are usually classified into two categories: low pathogenic (LPAI) strains, which usually cause mild or no clinical signs in poultry and highly pathogenic (HPAI) strains, which can cause severe disease, accompanied by potentially high mortality rates among poultry.

What is the risk to humans?

The risk of HPAI (H5N1) infection in the general public is considered low. There is no evidence to suggest that the avian influenza virus can be transmitted to humans through the consumption of fully cooked game birds or eggs. In general, human cases of avian influenza are caused by close, prolonged contact with infected live or dead poultry or contaminated environments. While the risk of human infection with avian influenza viruses is low, individuals should be cautious when handling wild birds.

Globally, since January 2003, there have been 863 cases of human infection with avian influenza (H5N1) virus reported from 18 countries, however, only 3 human infections have been reported since 2020 (WHO). Approximately 92% of confirmed cases and deaths from H5N1 have occurred in five countries - China, Egypt, Indonesia, Thailand, and Vietnam. (Public Safety Canada <https://www.publicsafety.gc.ca/cnt/rsracs/pblctns/nml-pndmc-nflnz/index-en.aspx>). Fortunately, recent strains of H5N1 seen in North America appear to be less likely to infect humans and the risk of infection in the general public is considered low (US CDC <https://www.cdc.gov/flu/avianflu/spotlights/2021-2022/h5n1-low-risk-public.htm>).

What are precautions that the general public can take?

As a general guideline, members of the public should not handle dead wild birds or live birds ***that are acting strangely***. If contact with wild birds is unavoidable:

- Wear any available personal protective equipment (PPE) on hand (i.e. gloves, mask, eye protection)
- Pick up carcass with gloves or use a doubled plastic bag
- Avoid contact with blood, body fluids and feces
- Wash your hands thoroughly with soap and warm water

If you observe sick or dead birds and suspect that disease may be involved, contact your local Conservation Officer or the [Canadian Wildlife Health Cooperative](#) at 1- 800-567-2033.

Can I feed wild birds?

- **Do not feed wild birds by hand**
- Feeders at or near poultry operations / domestic animals should be removed
- Backyard bird feeders and baths should be cleaned regularly using solutions of 25ml bleach to 2L water (1:80 dilution), rinsed and let dry

What are precautions that hunters should take?

It is considered safe to hunt, handle, and eat healthy game birds. However, because exposure to avian influenza can occur when handling wild birds and waterfowl, we recommend that you:

- Avoid hunting game birds and waterfowl in areas where an outbreak of avian influenza has been reported or where sick or dead birds are found. Before you hunt, check that restrictions in your area have not changed.

- Do not handle or eat sick birds or birds that have died from unknown causes.
- When handling or cleaning game:
 - Minimize direct contact with blood, feces, and respiratory secretions of all wild birds
 - Always work in a well-ventilated environment
 - If working outdoors, try to stay upwind of birds to avoid inhaling dust, feathers and aerosols
 - Do not eat, drink, or smoke while handling birds
 - Avoid touching your face with unwashed hands
 - Wear gloves (for example, vinyl, latex, nitrile, rubber) as much as possible
 - Wash hands with soap and warm water immediately after you have finished. If you do not have access to water, use hand sanitizer or wipe with at least 60% alcohol
 - Keep young children and pets away from areas that could be contaminated
- After you are done cleaning game, thoroughly clean and disinfect tools and work surfaces with soapy water, and then use a household disinfectant or bleach solution (25ml bleach to 2L water)
- Immediately remove and wash and/or change clothing and footwear that may be contaminated with blood, feces or respiratory secretions
 - Not only does this protect your health, but also helps to prevent the spread of the virus to other birds and domestic poultry, as well as other people, animals or pets.
- **If you become ill after handling birds, contact your health care provider as soon as possible and inform them that you have been in contact with wild birds**

It is important to note that not all infected birds appear sick.

What precautions should be taken when harvesting eggs?

Highly pathogenic avian influenza virus can be found on the shell and in the whites and yolk of eggs laid by infected birds

While there is no documented evidence of humans getting avian influenza from handling eggs or consuming eggs that have been fully cooked, in order to reduce your risk of exposure to avian influenza and other pathogens, it is recommended that you:

- Avoid harvesting eggs in areas where an outbreak of avian influenza has been reported or where sick or dead birds are found.
- Practice good hand hygiene while harvesting and handling eggs
 - Wear gloves (e.g. vinyl, latex, nitrile, rubber) when handling eggs if possible

- Always wash your hands before and after handling eggs - use hand sanitizer when you can't use soap and water
- Avoid touching your face and don't eat, drink or smoke when handling eggs
- Separate clean and dirty eggs during collection and throw away cracked and very dirty eggs covered with feces
- Eggs should be dry cleaned only: rub dirt and debris off of eggs with a clean and dry paper towel, cloth, or brush
 - Washing or soaking eggs with water can affect the egg shell and allow germs to enter the egg
- Always wash all egg collecting and cleaning equipment with soap and water after use, and then disinfect using a bleach solution (25ml bleach to 2L water)

What precautions should be taken when accessing bird nesting areas?

Avian Influenza can spread between (different) bird communities by transferring potentially contaminated material (i.e., bird droppings (feces), dirt, fresh water) between bird nesting areas. While egg harvesting, there are steps you can take to help reduce the possible spread of avian influenza.

- Items to bring/wear: Rubber boots, gloves (multiple pairs), small brush for cleaning, hand sanitizer
- When travelling between separate bird communities (i.e., moving far distances between islands or on land):
 - Brush off organic material (i.e., dirt, bird droppings, plant matter) from clothing.
 - Remove organic material (i.e., dirt, bird droppings, plant matter) from rubber boots by stomping feet and/or using a brush to clean the bottom of the boots. After dry cleaning boots using a brush, you can use nearby salt water to rinse them.
 - Change gloves and/or wash hands/use hand sanitizer in between bird nesting areas.
- While in a bird nesting area, try to minimize contact with freshwater ponds or wet areas, if possible.
- When preparing and having meals on islands try to select a site furthest away from bird community activity.

How do you cook or prepare wild bird meat/harvested eggs?

There is no evidence to suggest that fully cooked game birds or eggs are a source of avian influenza infection for people.

To reduce your risk of exposure to avian influenza and other pathogens, it is important to follow these recommended guidelines:

- Cook game meat / eggs thoroughly

- Cook eggs to an internal temperature of 74°C (165°F) - Avoid consuming eggs raw or partially cooked (runny yolk); Also avoid using raw eggs in foods that will not be cooked, baked or heat-treated in other ways.
- Cook meat pieces and cuts to an internal temperature of 74°C (165°F)
- Cook whole birds to an internal temperature of 82°C (180°F)
- Follow general safe food handling practices such as:
 - Keeping raw meat separate from other food products to avoid cross contamination
 - Washing hands often, including before and after handling raw meat
 - Thoroughly cleaning contaminated tools and work surfaces with hot, soapy water and then using a household disinfectant or a solution of 25ml bleach and 2L water

The avian influenza virus can survive freezing, therefore, dead birds found and collected by community members for avian influenza testing by Indigenous conservation officers should be stored separately from other community freezer items (e.g. harvested wild meat and eggs). Good hand hygiene should always be practiced.

To find out if an AI outbreak has occurred in your area, contact your local provincial or territorial wildlife management office. Maps are available to show locations where AI has been detected in wild birds and poultry in North America: <https://www.usgs.gov/media/images/distribution-highly-pathogenic-avian-influenza-h5-and-h5n1-north-america-20212022>; The World Organization for Animal Health (OIE) also provides a useful map with more details: <https://wahis.oie.int/#/report-info?reportId=50780>. A Canadian-specific dashboard will soon be available at the Canadian Wildlife Health Cooperative (CWHC) website. Meanwhile, see: http://www.cwhc-rcsf.ca/avian_influenza_biweekly_reports.php for biweekly reports of AI in your province or territory.

Other useful links:

Public Health Agency of Canada (PHAC):

Wild birds and avian influenza – Handling guidelines (English): <https://www.canada.ca/en/public-health/services/flu-influenza/fact-sheet-guidance-on-precautions-handling-wild-birds.html>

Les oiseaux sauvages et la grippe aviaire - Conseils généraux sur la manipulation (French): <https://www.canada.ca/fr/sante-publique/services/grippe-influenza/fiche-renseignements-conseils-generaux-precautions-a-prendre-lorsqu-on-manipule-oiseaux-sauvages.html>

Environment and Climate Change Canada (ECCC):

“Avian influenza in wild birds” (English): <https://www.canada.ca/en/environment-climate-change/services/migratory-game-bird-hunting/highly-pathogenic-avian-influenza.html>; French:

« Influenza aviaire chez les oiseaux sauvages » (French): <https://www.canada.ca/fr/environnement-changement-climatique/services/chasse-oiseaux-migrateurs-gibier/virus-influenza-aviaire-hautement-pathogene.html>

Canadian Food Inspection Agency (CFIA):

Avian influenza (bird flu) (English) <https://inspection.canada.ca/animal-health/terrestrial-animals/diseases/reportable/avian-influenza/eng/1323990856863/1323991018946>

Influenza aviaire (grippe aviaire) (French) <https://inspection.canada.ca/sante-des-animaux/animaux-terrestres/maladies/declaration-obligatoire/influenza-aviaire/fra/1323990856863/1323991018946>