

Protecting Yourself from Avian Influenza A(H5N1) in Dairy Cattle



Introduction

Avian influenza, also known as “bird flu,” occurs naturally among wild birds and waterbirds and can infect domestic poultry, other birds and mammals. One type of avian influenza, a strain called A(H5N1), has recently been detected in dairy cattle in the United States.

Although human infections of A(H5N1) are rare, some workers are at higher risk of being exposed and becoming infected. This includes workers on dairy farms, workers caring for, transporting, and processing cattle, and workers handling or processing raw milk, also referred to as unpasteurized milk. Workers should take additional steps to minimize their risk of exposure to:

- Infected or potentially infected dairy cattle
- Contaminated environments, such as barns and animal pens
- Contaminated equipment, including milking equipment, shovels, vehicles, and other workplace objects
- Raw milk

This document provides employers and workers with information on A(H5N1) associated with dairy cattle and recommends additional control measures to minimize the risk of infection.

Symptoms of Avian Influenza A(H5N1)

People

People with A(H5N1) infection may not develop any symptoms, or they may only develop mild ones. However, some infections can lead to severe symptoms and even progress to death. Symptoms of A(H5N1) in people typically occur within one to five days after exposure to the virus, and sometimes longer.

Early symptoms of A(H5N1) infection in people can include:

- Tearing, redness, irritation of the eyes, and pink eye, also known as conjunctivitis
- Cough
- Fever
- Shortness of breath
- Sore throat
- Muscle aches
- Headache
- Diarrhea
- Runny nose
- Fatigue

Dairy Cattle

Signs of illness in infected cattle can include:

- Decrease in milk production, which is often sudden and significant
- Milk with a thicker consistency, similar to colostrum
- Low appetite
- Decreased feed intake

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- Decrease in rumination, or swallowing and chewing
- Respiratory signs, including clear nasal discharge
- Low energy, sluggishness, and lethargy
- Dry manure or diarrhea
- Dehydration
- Fever

Sources of Exposure to A(H5N1) from Dairy Cattle and Transmission to People

Workers are at higher risk of infection when they are exposed to infected dairy cattle or contaminated environments, equipment, objects, secretions, or raw milk. The virus has been found in the raw milk, lungs, muscles, and udder tissues of infected dairy cattle.

You may be exposed to A(H5N1) from dairy cattle when:

- Liquids such as raw milk, or droplets contaminated with the live virus, get into your eyes, nose or mouth
- Touching an object that is contaminated with the virus and then touching your eyes, nose, or mouth with unwashed hands
- Handling or having close contact with infected dairy cattle, including during milking
- Handling organs or other animal tissues, including lungs, muscles, other organs and soft tissues, and udders from infected dairy cattle carcasses

Dairy industry jobs that may have exposures to A(H5N1) include, but are not limited to:

- Farmer
- On-farm labourer
- Artificial insemination technician
- Farrier or hoof trimmer
- Milking operator
- Veterinarian and veterinary staff
- Bulk milk grader
- Dairy plant process worker
- Transport vehicle operator
- Equipment specialist
- Plant grader
- Laboratory worker testing raw milk
- Slaughterhouse worker
- Deadstock transporter
- Rendering plant worker

Each workplace is unique, and employers must take every reasonable precaution to protect workers. In workplaces where workers may have been exposed to A(H5N1), a [risk assessment](#) must be conducted, and the employer must use additional control measures. A [risk checklist](#) can help identify risks and control measures.

Workplace Control Measures

After identifying the risks to workers, employers must use the most appropriate control measures, keeping in mind the [hierarchy of controls](#). It is recommended to take a layered approach, where multiple control measures applied at the same time are more effective than a single control measure.

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In addition to specific biosecurity control measures, consider additional control measures when working directly or in close contact with dairy cattle or environments and materials that are known or suspected to be infected with A(H5N1):

- Take appropriate precautionary measures and reduce contact whenever possible with:
 - Raw milk
 - Sick or infected dairy cattle
 - Carcasses from dairy cattle that have died, particularly from unknown reasons
 - Viscera and udders from lactating dairy cattle
 - Objects that may be contaminated with the virus, for example, buckets or equipment
- Whenever possible, always work in well-ventilated environments or outdoors
- Regularly wash hands with soap and water. If soap and water are not available, use hand sanitizer containing at least 60% alcohol
- Avoid touching the eyes, nose, or mouth with unwashed hands
- Clean and disinfect high-risk areas regularly, such as isolation and calving pens, milking parlours, and water and feed areas
- Clean and disinfect vehicles and equipment before and after use
- Establish work practices and controlled access zones to avoid potential cross-contamination by keeping vehicles away from high-risk areas
- Do not eat, drink or smoke in areas where dairy cattle are kept
- Use dedicated clothing and footwear when working on the farm, or appropriate disposable coveralls and boot covers, and safely discard them before leaving the farm
- Wash and change all clothes and shower after work
- Isolate sick cattle from the rest of the herd
- Practice good biosecurity measures as outlined in the [National Biosecurity Standards](#) and follow the Dairy Farmers of Canada's [proAction](#) program, if applicable

If workers cannot avoid direct or close contact with dairy cattle, carcasses or environments, equipment, materials and animal products, including raw milk, that are known to be or are potentially contaminated with A(H5N1), the following personal protective equipment is recommended:

- Waterproof gloves, including PVC, nitrile, chloroprene, or rubber gloves
- Safety goggles or face shields if there is a risk of splashing liquid
- Suitable masks, preferably a fit-tested N95 respirator
- Fluid-resistant coveralls
- Waterproof aprons
- Rubber boots or boot covers
- Head or hair covers

Follow proper [procedures](#) for putting on and taking off personal protective equipment:

- Clean and disinfect reusable personal protective equipment.
- Safely discard disposable personal protective equipment in a sealed plastic bag.

Emergency Preparedness and Response Plan

An emergency preparedness and response plan is useful in workplaces where avian influenza infection is a possible threat. This plan should outline how to prevent, detect, and respond to sick workers. It can be written as a policy and procedure.

While an [avian flu vaccine](#) is not currently available in Canada for public use at this time, the [seasonal influenza vaccine](#) can help reduce the chances of having both avian flu and seasonal flu at the same time and more severe illness.

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Workers who become sick should be encouraged to take time away from work. A sick leave policy can support this time off. They should also isolate themselves from others, follow measures to reduce the spread of respiratory viruses and seek medical attention, including getting tested to confirm or rule out avian influenza.

Individuals who work while sick are a risk to other workers. While person-to-person transmission of A(H5N1) is very rare, the risk may change if the virus changes. Additionally, sick workers may feel worse over time and can present a hazard to others if they are unable to work safely.

If human illness is suspected, clean and disinfect areas, tools, equipment, and other objects that may be contaminated. If the illness happened at work, conduct an incident investigation to determine the cause and help prevent recurrence or spread among workers.

If a worker develops life-threatening symptoms, call 911 for medical assistance. Inform their emergency contact and report the incident to external regulators, health and safety committees, [local public health authorities](#), and other relevant parties.

Reporting and Support

Workers exposed to the A(H5N1) virus may become ill, need time off work, or require medical attention. Any workers experiencing illness, even mild symptoms, after exposure to suspected or confirmed sources of A(H5N1) should contact their employer, healthcare professional, or [local public health authority](#).

Contacting the relevant public health authority will ensure timely testing and reporting of human illness to the Public Health Agency of Canada (PHAC), initiating an epidemiological investigation, and taking steps to help prevent further illness. Inform the [government department responsible for occupational health and safety](#) and the [workers' compensation board](#) if the reporting requirements for your jurisdiction have been met.

Highly pathogenic avian influenza of any subtype in any animal species should be reported to the [Canadian Food Inspection Agency \(CFIA\)](#). If dairy cattle or any other livestock being cared for or controlled by the workplace is suspected of having avian influenza, contact your veterinarian or your local CFIA district office.

Becoming ill with avian influenza can impact workers' mental health and may lead to increased stress, anxiety and depression. Mental health resources and support should be provided to all workers, including access to an [employee assistance program](#) if available.

Refer to the following mental health information resources:

- [Mental health support: Get help](#) – Public Health Agency of Canada
- [Mental health and wellness](#) – Public Health Agency of Canada
- [Mental Health in Agriculture](#) – Agriculture and Agrifood Canada
- [Mental health](#) – Canadian Centre for Occupational Health and Safety
- [Healthy Minds at Work](#) – Canadian Centre for Occupational Health and Safety

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