

# HAZARDALERT

## H5N1 (Avian Influenza) in Dairy Cattle

On March 25, 2024, the United States Department of Agriculture (USDA) confirmed that dairy cattle herds located in Texas and Kansas were infected with one of the [avian influenza viruses \(bird flu\) known as H5N1](#). Since the initial report, H5N1 has been found in [dairy cattle herds in several additional states](#).

### Background

H5N1 was first seen in the U.S. in [wild, migratory birds in 2015](#), and in agricultural poultry stock beginning in 2022. Since 2022, millions of birds have been culled because of bird flu infection in the United States. [H5N1 infections in mammals](#) have since been reported across the U.S., Canada, and other parts of the world. Most affected mammals (red foxes, bears, skunks, raccoons, opossums, seals, cats, mice, and others) prey on or scavenge birds for food. The recent infections among dairy herds are the first reported instances of H5N1 causing disease in cattle. It is unclear how dairy cattle were originally infected with H5N1.

While there is currently no evidence of person to person spread, a [small number of workers](#) exposed to infected animals have been infected with H5N1. People who work in operations with cattle and other livestock (dairy, meatpacking, etc.) and their byproducts (viscera, raw milk, etc.) should take extra precautions to reduce the risk of H5N1 exposure and illness. [CDC advises workers who may have been exposed](#) to potentially infected animals or animal products to monitor themselves for respiratory illness symptoms and conjunctivitis (red, irritated eyes) for at least 10 days and seek medical attention from their healthcare provider or local public health department if they have these symptoms.

### Identifying Worker Exposure

Workers who handle sick or dead animals and other materials that may be contaminated with H5N1 have the greatest risk of infection. Examples of higher-risk work tasks include, but are not limited to, handling or contacting:

- Sick birds, livestock, or other animals
- Carcasses of birds, livestock, or other animals that have died from unknown causes



Photo: USDA

- Feces or litter
- Surfaces and water that might be contaminated with animal waste (e.g., ponds, waterers, buckets, pans, troughs) on farms with potentially infected animals
- Raw milk
- Viscera and udders from lactating dairy cattle

Employers of farm [workers who handle livestock](#), veterinarians, and slaughterhouse workers must take [precautions to prevent worker exposure to and limit the risk infection from H5N1](#). A [hazard assessment](#) for work tasks in agriculture, animal care and husbandry, and dairy or meat processing centers identifies workers at risk of exposure to H5N1.

### Limiting Worker Exposure

Some workers who are exposed to dairy cattle are engaged in agricultural operations. OSHA defines "agricultural operation" as any operation involved in growing or harvesting of crops, the raising of livestock or poultry, or related activities conducted by a farmer on sites such as farms, ranches, orchards, dairy farms, or similar farming operations.

OSHA's safety and health standards for agriculture are found in [29 CFR Part 1928](#). Additionally, the General Duty Clause of the Occupational Safety and Health

Act (OSH Act) requires employers to provide their employees “employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm.”

[29 USC 654\(a\)\(1\)](#). Farming exemptions exist for small operations. However, the OSH Act and agriculture standards apply to farms with 11 or more employees or having had a temporary labor camp in the past 12 months. However, some OSHA-approved state plans enforce occupational safety and health standards at farms with less than 11 employees, and some OSHA approved state plans may have additional requirements.

For workers exposed to dairy cattle in non-agricultural operations, such as slaughterhouse workers, OSHA’s general industry standards applicable to occupational exposure to avian influenza viruses and reporting work-related illnesses include:

- Personal Protective Equipment ([29 CFR 1910. Subpart I](#)), including conducting a personal protective equipment (PPE) hazard assessment as required by 29 CFR 1910.132(d)
- Respiratory Protection ([29 CFR 1910.134](#))
- Information for Employees Using Respirators When Not Required Under the Standard ([Voluntary Use, 29 CFR 1910.134 Appendix D](#))
- Recordkeeping ([29 CFR 1904.7](#))

In situations where the use of a respirator is not required either by the employer or by an OSHA standard, the employer may offer or permit employees to use their own respirators as long as the employer determines that such respirator use will not in itself create a hazard. This is considered voluntary use under the Respiratory Protection Standard, see [1910.134\(c\)\(2\)](#). Employers may permit workers to voluntarily use N95s and other filtering facepiece respirators (FFRs) when working with cattle and other livestock. For voluntary use of elastomeric respirators in non-agricultural operations, employers must provide employees with a copy of [1910.134 Appendix D – Information for Employees Using Respirators When not Required Under the Standard](#), and follow requirements such as medical evaluations and cleaning (see [OSHA letter to Kevin Cochran, April 24, 2018](#)).

Employers should implement and train workers in [CDC protocols for protection from H5N1](#) and ensure these protocols are followed when workers perform the tasks identified above or when entering facilities not yet disinfected where animals have been sick or have died:

- Wash hands with soap and water before putting on PPE.
- Wear recommended PPE, including
  - Fluid-resistant coveralls
  - A [NIOSH Approved](#)® filtering facepiece respirator (FFR) (e.g., N95® or greater) or elastomeric half mask respirator with a minimum of N95® filters
  - Properly fitted safety goggles or a face shield
  - Rubber boots or rubber boot covers with sealed seams
  - Head or hair cover
  - Impermeable (fluid-resistant) gloves
- Use separate areas to put on (don) and remove (doff) PPE.
- Don (put on) PPE [in the prescribed order](#) in the designated area.
- Avoid touching your face (especially eyes, nose, and mouth) after touching contaminated material.
- Doff (take off) PPE [in the prescribed order](#) in the designated area.
- Clean and disinfect reusable PPE according to manufacturer’s instructions.
- Discard disposable PPE as biohazardous waste (a designated waste receptacle).
- Shower after removing contaminated clothing.
- Wear gloves and protective clothing while handling/laundering contaminated clothing and other washable items.
- Separate and seal contaminated laundry in bags or storage containers for transport.
- Launder contaminated clothing on-site where possible (do not wear contaminated items home).
- Wash contaminated laundry at the highest temperature possible.

Training, [using a language and vocabulary employees understand](#), will ensure the use of work practices that prevent infection, including proper care and use of personal protective equipment (PPE). The training must also emphasize the need to wash hands thoroughly or use hand sanitizer when soap and water is not immediately available to prevent the spread of potentially infectious pathogens.

For more information about related OSHA standards and guidance, see [OSHA’s Respiratory Protection Standards](#) and [OSHA’s Avian Influenza webpage](#).

## How to contact OSHA

Under the Occupational Safety and Health Act of 1970, employers are responsible for providing safe and healthful workplaces for their employees. OSHA's mission is to assure America's workers have safe and healthful working conditions free from unlawful retaliation. OSHA carries out its mission by setting and enforcing standards; enforcing anti-retaliation provisions of the OSH Act and other federal whistleblower laws; providing and supporting training, outreach, education, and assistance; and ensuring state OSHA programs are at least as effective as federal OSHA, furthering a national system of worker safety and health protections. For more information, visit [www.osha.gov](https://www.osha.gov) or call OSHA at 1-800-321-OSHA (6742), TTY 1-877-889-5627.

## For more information on this topic, see:

- Burrough ER, Magstadt DR, Petersen B, et al. Highly pathogenic avian influenza A(H5N1) clade 2.3.4.4b virus infection in domestic dairy cattle and cats, United States, 2024. *Emerg Infect Dis.* 2024 Jul [accessed May 21, 2024]. <https://doi.org/10.3201/eid3007.240508>
- U.S. Department of Agriculture (USDA) | [APHIS Recommendations for Highly Pathogenic Avian Influenza \(HPAI\) H5N1 Virus in Livestock For State Animal Health Officials, Accredited Veterinarians and Producers April 12, 2024](#)
- CDC | [Highly Pathogenic Avian Influenza A\(H5N1\) Virus in Animals: Interim Recommendations for Prevention, Monitoring, and Public Health Investigations](#)
- USDA | [Detections of Highly Pathogenic Avian Influenza in Mammals](#)
- USDA | [Detection of Highly Pathogenic Avian Influenza \(H5N1\) in Dairy Herds: Frequently Asked Questions](#)

*This hazard alert is not a standard or regulation, and it creates no new legal obligations. It contains recommendations as well as descriptions of mandatory safety and health standards. The recommendations are advisory in nature, informational in content, and are intended to assist employers in providing a safe and healthful workplace. The Occupational Safety and Health Act requires employers to comply with safety and health standards and regulations promulgated by OSHA or by a state with an OSHA-approved state plan. In addition, the Act's General Duty Clause, Section 5(a)(1), requires employers to provide their employees with a workplace free from recognized hazards likely to cause death or serious physical harm. There are 22 OSHA-approved State Plans, covering both private sector and state and local government workers and seven State Plans covering only state and local government workers. State Plans are required to have standards and enforcement programs that are at least as effective as OSHA's and may have different or more stringent requirements.*

