

Avian Influenza

Personal Protective Equipment (PPE) Guidelines



Information provided is intended as general guidelines for exposures.

Avian Influenza Outbreak:

Avian Influenza is a disease caused by a group of viruses that are particularly effective at spreading among birds. Avian Influenza is spread through contact with fecal droppings, saliva, and nasal discharges of infected birds. More information on avian influenza can be found on the [United States Department of Agriculture \(USDA\)](#) website.

According to the [Centers for Disease Control and Prevention \(CDC\)](#), the risk to the general public's health from bird flu viruses is low, however, some people may have job-related or recreational exposures to birds that put them at higher risk of infection. Anyone exposed to infected poultry should wear personal protective equipment (PPE).

Anyone anticipating contact with infected birds or affected operations should consult the [USDA](#) and [CDC](#) websites. Sick birds or unusual bird deaths should be reported to State/Federal officials either through the state veterinarian or through USDA's toll-free number at 1-866-536-7593.

Respiratory Exposures:

Working in affected poultry facilities involves exposures to dust, toxic gases, and disinfecting chemicals, in addition to the avian influenza virus. It is important to select respiratory protection for all of these exposures.

- Appropriate respiratory protection for **avian influenza and particulates (dusts)** is a NIOSH-approved particulate filtering respirator. All NIOSH-approved filter classes are appropriate (N, R, or P class with 95, 99, or 100 percent efficiencies). The [National Personal Protective Technology Laboratory \(NPPTL\)](#) offers a variety of resources to help you identify NIOSH-approved PPE. As shown below, disposable 2-strap filtering facepiece respirators (figure 1), half-face respirators (figures 2 & 3), or full face respirators are suitable (figure 4).
- **Hazardous gases and vapors** are commonly found in poultry buildings. **Ammonia** levels may be high during manure and litter removal, building clean-out, and composting of carcasses and litter. Respiratory protection should include ammonia or multi-gas cartridges approved for ammonia (shown in figures 3 and 4).
- **Cleaning and disinfecting compounds** contain ingredients that can be harmful to breathing. These may include aldehydes, ammonia compounds, acids, alcohols, and other ingredients. Select a combination cartridge that includes both the appropriate gas component (from cleaning compound label) and particulate filters (pink cover shown in figures 3 and 4).



Respiratory Exposures Continued...



CAUTION: Effective ventilation and use of respirators with multi-gas cartridges and P100 filters are recommended when any of these gases and dusts may be present. A particulate filtering respirator with only an N95 or P100 filter or cartridge is effective for dust and viruses, but it does not protect against hazardous gases.



WARNING: Use cleaning and disinfecting products only as directed. Some cleaning or disinfecting compounds may react with ammonia in litter to produce hazardous gases. Mixing cleaning or disinfecting products together can produce toxic gases. Consult the product label or manufacturer for additional information.

Important Respirator Use Information:

- You should consult a healthcare provider before wearing a respirator if you have a history of heart or lung disease.
- Respirators reduce exposure to airborne contaminants but do not completely eliminate the risk of exposure, infection, illness, or death.
- Respirators should be used in accordance with manufacturer instructions.
- Information on respirator programs is available at [Small Entity Compliance Guide for the Respiratory Protection Standard](#).
- Improperly fitted respirators do not provide the intended protection. Respirators should be fit-tested when possible. A **respirator seal check (fit check)** should be performed each time a respirator is worn. [Learn more about fit testing](#)
- A clean-shaven face should be maintained for the best fit and protection. A powered air-purifying respirator (PAPR) with a loose-fitting facepiece, hood, or helmet can be worn by individuals with facial hair.
- If you experience respiratory symptoms (examples: shortness of breath, wheezing, cough, chest tightness) during or after working with poultry, stop your work, **exit the building**, remove your respirator, and call your health care provider.
- For more information on respirator use in poultry facilities visit, [Respiratory Health on Poultry Farms](#).



Availability of Personal Protective Equipment

Many stores and online vendors sell PPE. Prior to purchase, ensure that respirators are National Institute for Occupational Safety and Health (NIOSH) approved and the correct type of PPE is used for the specific exposure. The [National Personal Protective Technology Laboratory \(NPPTL\)](#) offers a variety of resources to help you identify NIOSH-approved PPE.

PPE when Monitoring Bird Health

PPE should be worn when working in poultry facilities and while monitoring for avian influenza.

- **Gloves:** disposable nitrile or neoprene gloves that can be disinfected
- **Respirators:** minimum respiratory protection is a NIOSH-approved N95 disposable particulate respirator
- **Eye protection:** unvented goggles or full facepiece respirator
- **Foot protection:** disposable coverings or boots that can be disinfected
- **Protective clothing:** disposable coveralls or coveralls that can be disinfected
- **Head protection:** disposable headcover or hair cover



PPE - Depopulation, Removal and Composting

These tasks may involve increased exposure to ammonia, resulting in the need for increased respiratory and eye protection.

- **Gloves:** disposable nitrile or neoprene gloves that can be disinfected
- **Respirators:** half mask or full facepiece respirator with P100 filters and ammonia or multi gas cartridges (see page 1 for information on hazardous gases)
- **Eye protection:** unvented goggles or full facepiece respirator
- **Foot protection:** disposable coverings or boots that can be disinfected
- **Protective clothing:** disposable coveralls or coveralls that can be disinfected
- **Head protection:** disposable headcover or hair cover



PPE - Cleaning and Disinfecting

These tasks involve exposure to chemicals. **Check the product label for recommendations. Refer to the user instructions.**

- **Gloves:** disposable nitrile or neoprene gloves that can be disinfected
- **Respirators:** half mask or full facepiece respirator with a combination of P100 filters and multi-gas cartridges are appropriate for many disinfectants
- **Eye protection:** unvented goggles, or full-facepiece respirator
- **Foot protection:** disposable coverings or boots that can be disinfected
- **Protective clothing:** disposable coveralls or coveralls that can be disinfected
- **Head protection:** disposable headcover or hair cover



Additional Resources:

Proper removal of PPE and good personal hygiene reduce the potential of exposure to the avian influenza virus.

- **Recommendations for Worker Protection and Use of Personal Protective Equipment (PPE) to Reduce Exposure to Novel Influenza A Viruses Associated with Severe Disease in Humans**

Use of full-body PPE can increase the risk for heat-related illness. Understand the signs, symptoms, and prevention strategies using the below resource.

- **Heat Stress- (NIOSH)**

Instructional Videos:

Respirator Fit Testing Instruction:

- <https://www.cdc.gov/niosh/npptl/hospresptool/kit/fittesting.html>
- <https://aghealthandsafety.com/common-respirator-types-used-in-agriculture/>

Choosing a Respirator:

- <https://youtu.be/ObXy5GKpeko>

Caring for your Respirator:

- <https://youtu.be/V3GK4ru96vg>



Avian Influenza Informational Resources:

- **APHIS:** www.aphis.usda.gov/wps/portal/aphis/home/
- **CDC:** www.cdc.gov/flu/avianflu/index.htm
- **NASD:** <http://nasdonline.org/document/197/d000146/respiratoryhealth-on-the-poultry-farm.html>
- **NIOSH:** www.cdc.gov/niosh/topics/avianflu/
- **NPPTL:** https://www.cdc.gov/niosh/npptl/topics/respirators/disp_part/respsourceTypes.html
- **USDA:** www.usda.gov/

This resource was made possible through the collaboration efforts of:



Updated June 2022