

Avian Influenza

Respiratory Protection and Avian Influenza Viruses FAQ's



The Australian Government Department of Health and Ageing has issued guidelines for responding to the risk posed by Avian Influenza viruses. The U.S. Centers for Disease Control and Prevention (CDC) and the World Health Organization (WHO) have also issued precautions that should be used with regard to avian influenza viruses.

For the most current information see the Dept of Health, CDC or WHO websites:

<http://www.health.gov.au/internet/wcms/publishing.nsf/Content/Home>

<http://www.cdc.gov/flu/avian>

http://www.who.int/topics/avian_influenza/en/

3M has also received a number of inquiries regarding respiratory protection and avian influenza viruses. Following are many of the most commonly asked questions and responses based on information provided by the CDC and WHO.

FAQ'S

Q. What is avian influenza or flu?

A. Influenza viruses that infect birds, such as the H5N1 virus, are called "avian influenza viruses." Avian influenza viruses do not usually infect humans; however, influenza viruses are constantly changing, and several instances of human infections have been reported since 1997.

Q. What are the symptoms of avian influenza?

A. Symptoms of bird flu in humans have ranged from typical flu-like symptoms (fever, cough, sore throat and muscle aches) to eye infections, pneumonia, severe respiratory diseases (such as acute respiratory distress), and other severe and life-threatening complications.

Q. How is avian influenza transmitted?

A. Birds that are infected with avian influenza viruses can shed virus in saliva, nasal secretions, and faeces. It is believed that most cases of avian influenza infection in humans have resulted from contact with infected poultry or contaminated surfaces. In such situations, people should avoid contact with infected birds or contaminated surfaces, and should be careful when handling and cooking poultry. Strict hand hygiene must also be performed.

Other means of transmission are possible, such as the virus becoming aerosolized and landing on exposed surfaces of the mouth, nose, eyes, or being inhaled.

Q. Can avian influenza be transmitted from person to person?

A. To date the CDC and WHO have reported that although there is evidence of limited person-to-person spread of infection, sustained human-to-human transmission has not occurred.

Q. How long can the avian influenza virus survive in the environment?

A. The duration that these viruses can survive in the environment depends on temperature and humidity conditions, but they may survive up to weeks in cooler and moister conditions.



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FAQ'S cont.

Q. What type of personal protective equipment (PPE) is recommended for those who are involved with disease control and eradication activities?

A. According to CDC and WHO, US NIOSH certified N-95, European CE certified EN143 P2 / EN149 FFP2, or comparable national/regional particulate respirators should be worn by workers who eradicate infected poultry. In Australia, the comparable products are Australian Standard AS/NZS1716 rated P2 particulate respirators. Higher level particulate respirators may also be used. Disposable gloves, protective clothing, shoe covers or boots, and safety goggles should also be worn by workers who eradicate infected poultry. Disposable PPE should be properly discarded, and non-disposable PPE should be cleaned and disinfected. Hand hygiene measures should be performed after removal of PPE.

Q. What type of personal protective equipment (PPE) is recommended for health care workers who are exposed to patients with known or suspected avian influenza?

A. According to CDC and WHO, because of the uncertainty in transmission and risk of serious disease, isolation precautions identical to caring for patients with severe acute respiratory syndrome (SARS) should be used. These include gloves, gown, eye protection and US NIOSH certified N-95, European CE certified EN143P2 / EN149 FFP2, or comparable national/regional particulate respirators. In Australia, the comparable products are Australian Standard AS/NZS1716 rated P2 particulate respirators. Higher level particulate respirators may also be used. Disposable PPE should be properly discarded, and non-disposable PPE should be cleaned and disinfected. Hand hygiene measures should be performed after removal of PPE

Q. What particle sizes will a P2 particulate respirator filter?

A. P2 is a rating given to particulate respirators in Australian Standard AS/NZS1716. A particulate respirator is given a rating based on its filtration efficiency when tested against particles that are the most difficult size to filter (approximately 0.3 microns in size mass median aerodynamic diameter). Class P2 respirators are required to be at least 94% efficient when tested against this particle size. The physics of particle capture means that the filtration efficiency improves against particles that are both smaller and larger than this size. The most commonly used respirators in health care settings are disposable P2 rated filtering face pieces.

Q. Should avian influenza patients wear a surgical mask?

A. Persons suspected of having avian influenza should be separated from others and asked to wear a surgical mask. If a surgical mask is not available, tissues should be provided and patients should be asked to cover their mouth and nose when coughing.

Q. Can a valved respirator be used for protection from Avian influenza virus?

A. A valved respirator is designed to allow for easy exhalation through a one-way exhalation valve. If a person is wearing a respirator to reduce their exposure to contaminated aerosols, a respirator with an exhalation valve would be acceptable.

Q. How do I clean my respirator after use?

A. Disposable respirators should not be cleaned; dispose of the respirator immediately after use according to facility policy. Reusable respirators may be disinfected using a mild bleach and water solution (0.1% sodium hypochlorite).

Q. Can disposable respirators be shared between people?

A. No. Disposable respirators should never be shared.



Q. How long can disposable particulate Respirators be used?

A. Disposable Particulate Respirators may be used until breathing becomes difficult, or they become damaged, dirty, or grossly contaminated with sweat/saliva. If contact transmission is of concern, it may be appropriate to dispose of the respirator immediately after each use. Otherwise, it may be stored and reused according to the facility's infection control policy and procedure.

Q. Can respirators protect you from biological agents such as Bacteria or Viruses?

A. Respirators are designed to reduce exposures of the wearer to airborne hazards. Biological agents, such as viruses, are particles and can be filtered by particulate filters with the same efficiency as non-biological particles having the same physical characteristics (size, shape, etc.). However, unlike many industrial particles there are no exposure limits established for biological agents. Therefore, while respirators will help reduce exposure to avian influenza viruses, there is no guarantee that the user will not contract avian flu. Respirators may help reduce exposures to airborne biological contaminants, but they don't eliminate the risk of exposure, infection, illness, or death.



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FAQ'S cont.

Q. What is the difference between a respirator and a surgical mask?

A. Respirators are designed to help reduce the wearer's exposure to airborne particles. The primary purpose of a surgical facemask is to help prevent particles from being expelled by the wearer into the environment. Some surgical masks are also designed to be fluid resistant to splash and splatter of blood and other infectious materials. Surgical facemasks are not necessarily designed to seal tightly to the face and therefore air leakage around the edges is likely. However, some respirators are designed to have the characteristics of both an approved respirator and a surgical mask.

Q. How important is respirator fit?

A. Fit is very important. If a respirator does not seal properly to the face, airborne hazards can penetrate or enter underneath the face piece seal and into the breathing zone. It is very important to always follow the donning instructions and do a user seal-check or fit-check before

entering the contaminated environment. Some countries, such as the US and UK, also require fit testing. A good fit can only be obtained if the face is clean-shaven in the area where the respirator seals against the face. Beards, long moustaches, and stubble may interfere with a good seal and cause leaks into the respirator. Many medical facemasks, not approved as respirators, do not seal tightly to the face allowing airborne hazards to bypass the mask around the edges and enter the breathing zone. Even those medical facemasks that may appear to seal tightly to the face, may not have been designed and tested to protect the wearer from airborne hazards. Therefore, they should not be considered an equivalent substitute for AS/NZS 1716 Standard compliant respirators.

Q. What 3M Respiratory protection is available in Australia to help protect against Avian influenza viruses?

A. There are a number of different products available. The table below lists suitable 3M P2 disposable respirators



3M P2 Disposable Respirators

3M™ Flat Fold Respirator 9320 P2

3M™ Valved Flat Fold Respirator 9322 P2

3M™ Health Care Particulate Respirator and Surgical Mask 1870

3M™ Health Care Particulate Respirator 1860

3M™ Cupped Respirator 8210 P2

3M™ Valved Cupped Respirator 8822 P2

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