

# Virologist offers perspective on avian influenza outbreak

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Health officials around the globe, including the Centers for Disease Control and Prevention and the European Center for Disease Control and Prevention, are monitoring the ongoing avian influenza outbreak.

Also known as bird flu, the highly contagious viral disease typically spreads among birds, but can also infect livestock and, in rare cases, humans.

"Avian influenza is very common among [migratory birds](#) such as waterfowl," says Dr. Matthew Binnicker, director of the Clinical Virology Laboratory at Mayo Clinic. He adds that human infection is rare, occurring mainly through close contact with infected animals. Dr. Binnicker says that while the current risk to humans is low, it's crucial to take [preventive measures](#) and ensure diagnostic tools and treatments.

In this Q&A, Dr. Binnicker offers more context on the current influenza outbreak.

## **Q: What is the risk of bird flu transmitting to humans?**

A: Currently, the CDC is characterizing the risk to humans of this [avian influenza](#) outbreak as low. So, if we're on a scale of 1 to 10, we're probably at a 1 or a 2. Now, the concern is that we're seeing not only millions of infections in commercial poultry and backyard bird flocks that humans frequently come into contact with, but we're also seeing higher rates of infection in mammals.

## **Q: How is avian influenza transmitted?**

A: The birds will transmit avian influenza through their own respiratory mucosal secretions, much like we think about with other [respiratory viruses](#) in humans, or through contaminated feces. So a bird can become infected through exposure to contaminated soil or feces.

For humans, the transmission so far has been very rare.

## **Q: What are the symptoms of infection?**

Those individuals were infected by coming into very close contact with animals who had avian influenza. These individuals may have come in contact with a respiratory secretion from an infected bird or mammal, or a contaminated surface. It is possible for humans to inhale the virus, or to become infected through self-inoculation if they touch a contaminated surface and then introduce the virus into their eyes, nose or mouth.

A: In the wild, migratory birds often do not show symptoms of avian influenza infection. Wild birds are a reservoir for avian influenza viruses. In commercial poultry and backyard bird flocks, that's where we see more [severe disease](#). Since 2022, there have been over 60 million commercial poultry or backyard bird flocks killed or culled because of avian influenza infection.

In humans, avian influenza can present in a similar way to normal human influenza infection. As is the case with other respiratory viral infections, avian influenza in humans may cause a spectrum of illness, from mild disease to a severe lower respiratory tract infection. In the recent case in Texas, the patient only experienced conjunctivitis, which is redness and inflammation in the eyes.

## **Q: Can bird flu be prevented?**

A: The key preventive measure is to avoid contact with a sick or dead animal, especially birds. If you own a backyard bird flock or work in a commercial poultry facility, and there are birds that are sick or have died, do not come in contact with them.

And if it's impossible to avoid contact, it's important to take necessary precautions, including wearing eye protection, an N95 mask and gloves.

Those protective measures are going to help prevent an individual from coming into contact with avian influenza virus, either through inhalation of infected respiratory secretions or by self-inoculating the virus from a contaminated surface into the eyes, nose or mouth.

## **Q: What should the public keep in mind?**

A: Currently, the overall risk of widespread infection in humans is low. We know that this virus is transmitted efficiently among [wild birds](#), and since 2022, it has resulted in millions of infections in commercial poultry and backyard bird flocks. We've also started to see infection in many types of mammals, but so far, [infection](#) in humans is rare.

We need to approach this with a sense of preparedness. Now is the time to put tools in place in the event we see sustained, high rates of transmission in humans. These tools include testing, antivirals and vaccines, which can be rapidly deployed and hopefully prevent avian influenza from becoming a worldwide problem.

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