

# Avian Influenza

## BACKGROUND

Avian influenza, or bird flu, is an infectious disease of animals, caused by viruses that normally infect only birds, and sometimes pigs. There are many types of avian influenza viruses, including the H5N1 strain. In rare cases avian influenza viruses also infect humans.

Avian influenza has been seen in bird populations for at least 100 years. Although sporadic human cases of avian influenza have occurred in the past, only 3 cases of suspected person-to-person transmission of avian flu have ever been documented.

In domestic poultry, avian influenza can either be low pathogenic, causing mild symptoms, or high pathogenic, which spreads quickly through entire flocks, with a severity that can kill all the birds within 48 hours.

Wild migratory birds have probably carried influenza viruses for centuries, with no harm. They usually carry the low pathogenic form. Evidence suggests they can introduce the low pathogenic form to domestic poultry, in which the virus mutate to a high pathogenic form.

Many experts agree that the Influenza A H5N1 strain identified in 2003 is particularly dangerous. This virus is considered to be a novel virus because it has not been previously identified in the human population. People are at risk of being infected with the virus from direct contact with contaminated poultry or their feces. Another risk is that the H5N1 virus will change into a type that is passed easily from person to person.

If that occurs, many people will likely become ill and die as the global population is exposed. The Influenza A H5N1 virus could be the next strain of influenza virus to result in a pandemic that could potentially kill millions of people worldwide.

Currently the spread of the Influenza A H5N1 virus has been primarily through contact with infected poultry and wild birds. During the early part of 2005, the virus spread throughout the countries of Southeast Asia. During the summer of 2005, several outbreaks were identified among poultry flocks as far west as the Ural Mountains in Siberia.

According to the World Health Organization, from December of 2003 to September 8, 2006 there have been 244 laboratory confirmed cases of H5N1 in humans in 10 countries. Of those, 143 people have died, for a 59% case fatality rate. For updated numbers, please visit [http://www.who.int/csr/disease/avian\\_influenza/country/en/index.html](http://www.who.int/csr/disease/avian_influenza/country/en/index.html).

Human-to-human transmission is suspected in a couple of isolated cases, and "clusters" of cases among family members were reportedly identified in rural Vietnam in late 2005. As of today, sustained human-to-human transmission has not occurred and genetic reassortment, or mutating, of the virus has not been detected.

However, with the identification of suspected, isolated human-to-human transmission in Asia, the world seems to be moving closer toward a possible pandemic. Unfortunately, once sustained human-to-human transmission occurs, the virus will spread rapidly throughout Asia and into other countries.

It is estimated that the United States will have very little time to prepare for a pandemic once it has begun. Some estimates suggest the virus could travel around the world in as little as four days. With that in mind, once sustained human-to-human transmission occurs, some experts suggest the United States would have approximately 1 to 6 months to mount a response.

Local, state and federal health officials are currently preparing for another pandemic, whether it comes from H5N1 or another strain of influenza. Increased disease surveillance systems will alert health officials early to a potential outbreak. Emergency plans are being tested, evaluated and revised. Public education campaigns are being developed.

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