What is avian influenza and "bird flu"?

Like humans, birds have naturally occurring influenza (flu) viruses. There are many types of avian influenza viruses that are carried by wild birds throughout the world, but these viruses do not usually cause disease in these birds. Occasionally, these viruses can infect domestic birds such as poultry, but typically we do not see direct transmission of avian influenza viruses from birds to humans. "Bird flu" is a non-scientific term that refers to a specific virus (H5N1) that has been present in domestic birds in Asia since 1997. This particular virus has been associated with some human infections and deaths, among people who live with or have close contact with infected poultry.

What kinds of birds does avian influenza infect?

Naturally occurring avian influenza viruses in wild birds are generally associated with waterfowl (ducks and geese), gulls, and some species of shore birds and typically do not cause illness in these birds. The viruses occasionally "jump" from wild birds to domestic birds such as chickens, quail and turkeys. In some cases these viruses can cause severe disease in domestic birds, but in general the ability of influenza viruses to cause severe illness and death in birds is usually acquired after the virus has circulated over time in domestic bird populations. This happened with the highly pathogenic H5N1 virus ("bird flu") which has been circulating in domestic birds in Asia at least since 1997. Although this virus probably originated in wild birds, it has mutated and adapted to cause severe illness in domestic poultry.

Do we have avian influenza viruses and "bird flu" in the United States?

Avian influenza viruses are found naturally in wild bird populations in North America and occasionally infect domestic poultry. For example, outbreaks of avian influenza in US

poultry occur occasionally, and are often traced to birds from live bird markets. However, none of these outbreaks were caused by the same "bird flu" virus (H5N1) that has caused severe disease in birds in Asia, Europe and Africa. The U.S. outbreaks were quickly contained and there was no significant impact on human health. To date, the H5N1 "bird flu" virus has not been detected in the U.S. or other countries in North or South America

Do we have avian influenza viruses in Georgia?

Avian influenza viruses have occasionally been isolated from wild birds in Georgia, but we have not had any outbreaks in domestic poultry. Furthermore, Georgia does not have live bird markets like those that have been associated with recent outbreaks in other states.

What is unique about the H5N1 virus currently circulating in Asia, Africa, and Europe?

The H5N1 virus has been uniquely difficult to control in poultry flocks in affected continents. Despite the depopulation (euthanasia) of millions of domestic birds in affected countries, the virus continues to spread to other domestic birds and wild birds. In addition, the H5N1 virus spreading among birds in Asia, Africa, and Europe has caused human illness and deaths. The infection of humans with an H5 virus is rare; the influenza viruses that normally infect humans are H1 and H3 subtypes. Another unique aspect of the H5N1 ("bird flu") virus is that it has caused deaths in wild birds. This is virtually unprecedented, and many scientific questions remain concerning the role of wild birds in the spread of the H5N1 "bird flu" virus.

How have people gotten infected with the H5N1 virus?

Infected birds shed large amounts of virus in their saliva, nasal secretions and feces. Human illness has resulted from direct contact with birds and their feces or with environments heavily contaminated with infected bird feces. Hand butchering sick birds exposes people to high levels of the virus, and this activity has been associated with many of the human illnesses. Widespread human-to-human spread of the H5N1 virus has not occurred. All human cases of H5N1 infections have been restricted to Asia and more recently Africa and eastern Europe..

Does the virus travel easily from birds to humans?

No, the number of people that have become ill with bird flu is very small considering the size and duration of the outbreak among domestic birds and the large number of persons who likely have been exposed.

How is an avian influenza outbreak among birds different than an influenza pandemic?

An influenza outbreak among birds occurs when the virus spreads among birds and results in illness among infected birds. Influenza viruses that spread readily among birds can at times infect people, as we have seen in other countries with the current H5N1 bird flu. But bird flu viruses do not spread easily among people. If an influenza virus from birds or other animals acquires the ability to spread easily between people, this would represent the appearance of a new human influenza strain. If this new human influenza virus spread among people around the world, that would be an influenza pandemic.

What is the risk of the H5N1 virus currently circulating in Asia to cause a worldwide pandemic?

Flu viruses are constantly changing over time. The H5N1 virus could become a pandemic strain in one of two ways: 1) it could exchange genes with a human influenza virus and acquire the ability to easily transmit between people; or 2) it could mutate over time and adapt to humans.

How is H5N1 spreading in the world?

The H5N1 virus is spread between birds through contact with an infected bird's saliva, nasal secretions, or feces. The movement of infected poultry, contaminated poultry equipment, or people with virus-contaminated clothing or shoes can result in the international movement of the H5N1 bird virus.

Historically, the movement of poultry-adapted avian influenza strains does not involve wild birds. Recently, there has been some evidence that migratory waterfowl may spread the Asian H5N1 "bird flu" virus to domestic poultry across national borders, but the mechanism of this spread is not yet fully understood.

What is the risk of H5N1 arriving in Georgia?

The risk of H5N1 infection among birds in Georgia is very low at this time. No poultry or poultry products from countries affected with avian influenza are legally allowed to enter the U.S. If migratory birds in the Atlantic Flyway are infected (see http://www.pandemicflu.gov/are for map of migratory bird Flyways in North America), wild bird monitoring in Canada and more northern states will likely detect it before Georgia is affected. Travelers from affected countries could possibly introduce the virus to the United States through inadvertent or intentional movement of the H5N1 virus or infected birds.

If I see a dead bird in Georgia, is it likely to have bird flu?

There is surveillance for avian influenza among shorebirds, waterfowl, and poultry in the Southeast and Georgia, and this will detect the "bird flu" virus if present. Other wild birds such as pigeons, songbirds, crows, or sparrows are not generally infected with avian influenza viruses, so it is not beneficial to include them in a surveillance program. Plans for expanded wild bird disease surveillance across the U.S. are being implemented.

What can I do to protect myself from bird flu?

Travelers to affected countries are advised to avoid poultry farms and live bird markets during their visit. In addition, wild waterfowl or waterfowl showing signs of disease should be avoided in these countries. Although birds in Georgia are unlikely to be infected with bird flu, it is always a good idea to avoid contact with birds showing signs of disease. People who raise waterfowl or poultry should immediately report any suspicious disease in their birds to their flock supervisor or veterinarian. Those with pet birds, such as parrots, cockatiels, love birds or budgies should not worry about their pets getting "bird flu" if they have not been out of the country or in contact with birds from other countries.

Can I get "bird flu" by eating chicken?

No, there is a surveillance program to detect avian influenza viruses before they enter the food chain. In addition, there have been no human infections in affected countries as a result of eating commercially processed poultry products.

I see a lot of Canada Geese. Are these birds likely to be infected with the H5N1 "bird flu" virus?

Wild Canada Geese are the most common goose species found in Georgia, but these are nonmigratory populations. Thus, Canada Geese in Georgia are not considered to be at risk for H5N1 "bird flu" at this time.

Is my cat or dog at risk for "bird flu"?

No, the H5N1 "bird flu" virus is not in the U.S. or other countries in North or South America so cats and dogs that consume wild birds are not at risk of "bird flu". There have been a limited number of cat deaths in affected countries as a result of eating infected birds, but no human illness has resulted from contact with cats.

Will the human seasonal influenza virus vaccine protect me against bird flu?

No, the human influenza vaccine currently available does not protect against bird flu viruses. Clinical trials are underway now for a human vaccine to protect against the "bird flu".

Should I be stockpiling Tamiflu® or other antivirals to protect myself against bird flu or pandemic influenza?

No, it is not recommended that citizens stockpile antiviral drugs to protect against "bird flu" or pandemic influenza. The antivirals have limited usefulness in the prevention of flu, and the virus is capable of becoming resistant over time. Stockpiling Tamiflu® or other antiviral medications will also reduce already-limited supplies for the elderly and others at high risk for contracting seasonal influenza. Consequently, Tamiflu® and related drugs should only be administered under the guidance of a health care provider.

How is Georgia preparing for bird flu and a potential pandemic?

The Georgia Department of Human Resources, Division of Public Health and the Georgia Department of Agriculture are taking part in a number of prevention and preparedness activities, which include:

- The Georgia Poultry Laboratory assists with routine surveillance for H5 or H7 viruses in Georgia poultry
- Providers throughout the State of Georgia participate in the U.S. Influenza Sentinel Provider Surveillance Network
- Georgia is in the final stages of developing action plans for both Highly Pathogenic Avian Influenza and Pandemic Influenza. These plans provide the framework for state and local activities in the event of an outbreak in Georgia.
- Table top exercises including several state agencies and local public health have been conducted to evaluate Georgia's preparedness for a bird flu outbreak
- Laboratory capacity to detect novel flu subtypes among humans is being expanded in Georgia
- An in home hospital care plan is under development. This plan will limit the opportunity for spread of a pandemic virus among persons seeking health care.

For more information on bird flu in animals and humans:

U.S. Poultry and Egg Association http://www.poultryegg.org/AvianInf/avian.html

Georgia Department of Natural Resources http://www.georgiawildlife.com

Southeastern Wildlife Disease Study http://www.uga.edu/scwds/index2.htm

Georgia Division of Public Health http://health.state.ga.us

Georgia Department of Agriculture http://www.agr.georgia.gov click on "Divisions", "Animal Industry Division", then scroll to the bottom of the page and click on <a href="Avian Influenza and "Bird" Fluenza and Bird" Flue

U.S. Geological Survey http://www.nwhc.usgs.gov

Centers for Disease Control and Prevention http://www.cdc.gov/flu/avian

U.S. Health and Human Services http://www.pandemicflu.gov/

World Health Organisation http://www.who.int/csr/disease/avian influenza/avian f aqs/en/index.html

U.S. Department of Agriculture http://www.usda.gov/wps/portal/usdahome

U.S. Poultry and Egg Association http://www.poultryegg.org/AvianInf/avian.html