

Short questions

Brief responses

Why cannot people be vaccinated with the vaccine used for poultry?

Each vaccine is adapted to the species for which it is destined. The immune system of birds is different from man: a vaccine that works for birds will not necessarily be effective for people. In addition, the vaccine used in several parts of the world (e.g., Mexico) against avian influenza only provides immunity for a short time (several weeks) in vaccinated birds.

Why get vaccinated against human flu if this will not protect against avian flu?

(1) Because the human flu virus remains by far more wide spread among people than that of avian flu, (2) to avoid having someone accidentally infected by avian flu also become infected with human flu, which would facilitate the emergence of a potentially dangerous hybrid virus, and (3) to facilitate a differential diagnosis in the case of flu symptoms.

Bird flu or avian influenza?

The term avian influenza is preferable because it is less easily confused with the human disease (the flu) and it does not imply that birds are infected with a disease that resembles the human flu.

What does influenza mean?

Etymologically, influenza comes from the Italian «influenza di freddo», or influence of the cold. No distinction is made from a banal cold.

Are all viruses dangerous?

No, most are inoffensive or benign. Numerous types of influenza viruses pose no threat to people. Certain other viruses known as bacteriophages are used as biological tools to destroy pathogenic bacteria.

How many duplicated viruses can a living infected cell produce?

A sole virus that has infected one cell can lead to the production of several hundred new viruses in two or three days.

Has the H5N1 virus evolved since 1997, the date when research for a vaccine began?

Yes, it is continually evolving.

What is infectiosity?

The capacity of a pathogenic agent to establish itself in a host of a given species in order to multiply there.

What is an epizootic?

The sudden increase in the number of animals infected by a disease in a given region and during a given period of time.

What is an enzootic?

An infectious disease affecting one or several species of a region that does not tend to spread and which is permanently present at certain times of the year.

When does one speak of an epizootic or an epidemic?

The term epidemic is generic and may be applied to diseases affecting people, animals, and plants. The term epizootic refers specifically to an epidemic affecting animals. It is preferable to use this term in the case of avian influenza to avoid the suggestion that the disease is contagious between people, which has not been observed to date.

Should one speak of a panzootic?

Commonly the term panzootic refers to animal epidemics and the term pandemic is used for human epidemics. In the beginning of 2006, the H5N1 panzootic was confirmed, the H5N1 pandemic is still only feared.

What is a pandemic vaccine?

A vaccine against a virus capable of provoking a large scale epidemic.

Why would a genetic recombination of avian and human viruses be dangerous?

Genetic recombination may take place in a human or in an intermediary host such as a pig. The sudden change of antigens in a virus that has been recombined and adapted to a new species creates the conditions for a major epidemic in a population that has no pre-existing immunity.

▶ **Virulent or contagious?**

A virulent virus provokes a serious disease in the host. A contagious virus is transmitted easily from one individual to another. A contagious virus may not be very virulent. A virulent and contagious virus always is to be greatly feared.

▶ **What became of the Spanish Flu virus?**

Very mild pathogenic forms of viruses resembling the one that caused the deaths of 40 million people between 1918 and 1919 continue to circulate among wild bird populations without having changed considerably.

▶ **Is there an estimate of how many chickens there are in the world?**

Approximately 100 billion.

▶ **The H5N1 virus is an occasional pathogenic agent in man. Are there others?**

Out of 1,400 viruses, bacteria, fungus, champignons, protozoa and worms harmful to the health of people, 60% are shared with animals.

▶ **Are more and more pathogenic agents affecting people?**

Not necessarily, but it is true that new research methods has enabled the description of about forty such pathogenic agents since 1980 (for example, the Creutzfeld-Jakob disease prion, the SIDA virus, the SARS coronavirus).

▶ **What is behind the increase in health risks?**

An acceleration of trade, environmental change, global warming, an increase of immunodeficient populations (elderly or under treatment), a decrease in hygiene.

▶ **How many chickens can coexist on one industrial farm?**

Up to 1.25 million individuals in California (USA).

▶ **Did the current avian crisis begin in 1997 or 2003?**

In 1997, a HPAI H5N1 virus caused disease in both man and poultry in Hong Kong. Eighteen human cases were recorded, 6 of which were fatal. In December 2002 and January 2003, new outbreaks were reported in Hong Kong in poultry and wild birds. At the end of 2003 and beginning of 2004, multiple outbreaks occurred in Southern Korea and Indonesia, then in Vietnam, Japan, Taipei China, Cambodia, Laos, Thailand and China. Different strains of HPAI H5N1 probably had been circulating in South-East Asia for several years and were only reported in some places. A conjunction of triggering factors such as a cool and wet climate, increased density of domestic birds, and more intense commercial exchanges (New Year feast) were probably at the origin of the epizootic.

▶ **Is the clandestine poultry trade widespread?**

It is substantial but difficult to quantify. It was probably behind the dissemination of avian influenza from Nigeria to Niger, Burkina Faso, Cameroon, and the Ivory Coast.

▶ **I caught bird flu, will I recover?**

Poultry farmers have caught avian influenza and spontaneously recovered. Others died after a tardy diagnosis and a lack of support for vital functions during hospitalization. For those who fall ill, an antiviral treatment taken at the start of the infection improves one's chances of recovery.

▶ **How many deaths have there been in 2 years?**

One hundred and forty one deaths (17 August 2006) spread across a dozen countries, out of several million people that might have become infected. This figure is far lower than the number of deaths due to ordinary human flu (several hundred thousand per year worldwide).