Health news - Avian flu (bird flu)

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A number of Asian countries and, more recently, Romania and Turkey, have been affected by avian flu (bird flu) infecting their poultry stocks. In some of these countries, a small number of people have caught the bird flu virus from chickens.[1]

Scientists fear that the bird flu virus could merge with a human flu virus. This might result in a new, fatal flu virus that could be passed rapidly from person to person with potentially devastating results.

To keep the outbreak of bird flu virus under control, many of the affected countries are culling their poultry stocks to prevent further spread of the virus.

What is bird flu?

"Avian" refers to birds and "flu" is the common name for influenza. Avian flu is influenza that infects birds, including wild birds such as ducks and domestic birds such as chickens. Avian flu is caused by of influenza virus type A. There are 15 subtypes of influenza A, two of which affect birds. These are called the H5 and the H7 subtypes.[1]

These viruses are known as "highly pathogenic (disease-causing) avian influenza" (HPAI). They produce a severe disease in birds and are rapidly fatal, leading to bird flu epidemics.

One such bird flu virus (the H5N1 subtype) is currently infecting chickens in Asian countries and has recently been found in Romania and Turkey.

Why are we so concerned about bird flu?

The bird flu virus can occasionally jump between species and infect people who have been in close contact with infected birds.[1]

Most people who catch bird flu become very ill or die. Since 2003, 117 people have been infected and 60 of these people have died.[2]

How is bird flu virus passed from birds to people?

When a bird is infected with bird flu, it sheds the flu virus in its faeces, saliva and mucus. Other birds become infected by eating or inhaling the virus.

The virus can infect people who are in close contact with infected birds - for example by people inhaling dried faeces that have become trampled into dust or stuck to the feathers or other parts of the body of the infected bird.[1]

People cannot catch bird flu from eating cooked chickens.

Can bird flu be passed from person to person?

The ability of bird flu viruses to infect humans throws up this worrying possibility.

A bird flu virus could merge with a human flu virus to create a new virus. This new virus could then be passed between humans. If this happens with a highly pathogenic avian influenza virus, the result could be a pandemic of highly contagious flu.

What is a flu pandemic?

When a new, highly infectious form of a flu virus is formed it can rapidly infect a large number of people. The result is an illness that rapidly spreads round the world and may cause widespread loss of life. An example is the Spanish flu pandemic of 1918-1919 which caused an estimated 40-50 million deaths worldwide.[3]

How can bird flu and human flu viruses merge?

There are two ways in which a bird flu virus could merge with a human flu virus, creating a new virus that can be easily passed between humans:

In humans - if a person who already has flu comes into close contact with birds who have highly pathogenic bird flu, there is a tiny chance that the person could become infected with the bird flu virus. If this happens, the person would now be carrying both the human flu virus and the bird flu virus. The two viruses could meet in the person's body and swap genes with each other.[3]

In pigs - pigs are susceptible to both human and bird flu viruses. If a pig became infected with both viruses at the same time, it could act as a "mixing vessel", allowing the two viruses to swap genes and produce a new virus.

Has flu been passed between people?

There are signs that it might have been. It seems to have been passed between a child and her mother in Thailand, and in a family in Vietnam.[4]

However, so far there has been no sustained human-to-human transmission, ie it has not spread any further than between close family.[4]

Does this mean the human and bird flu viruses have merged?

No. Scientists have not discovered an influenza type a (H5N1) virus that contains both human and bird virus genes. This means that the bird flu virus has not merged with the human flu virus.[4]

These isolated cases of person to person transmission may have been caused by the basic bird virus being passed on due to close contact.

What are the symptoms of human flu?

Human flu symptoms are:

- fever
- cough
- sore throat
- muscle aches
- conjunctivitis

Cases of bird flu are more likely to cause breathing problems and pneumonia, and can be fatal.

Are there any treatments available for bird flu?

Antiviral medications used to treat human flu viruses may be effective at treating bird flu. [1] The antiviral drug called oseltamivir (Tamiflu) can reduce the severity of ordinary flu. There is evidence to suggest that the H5N1 bird flu virus responds to oseltamivir, which has led experts to suggest that it may also work against a pandemic strain.[5] Although, there are also reports of partial resistance to oseltamivir by some flu viruses.[6] The UK government is stockpiling supplies of oseltamivir.

Is there a vaccine to stop people getting bird flu?

There is currently no vaccine to prevent bird flu in humans. Currently available vaccines are not effective against the H5N1 strain of the virus. Scientists are working on developing a vaccine, but it is difficult because the virus frequently changes.[1]

What is the current advice for travellers to countries affected by bird flu?

As of October 17th 2005, countries affected by bird flu include Cambodia, China, Hong Kong, Indonesia, Japan, Kazakhstan, Korea, Laos, Malaysia, Mongolia, Philippines, Romania, Russia, Thailand, Turkey and Vietnam.[7]

The advice for travellers to these countries is to avoid places where live poultry are raised or kept, such as poultry farms and bird markets, and to avoid contact with sick or dead poultry. Travellers should not attempt to bring any live birds or poultry back into the UK. Travellers are also advised to make sure that chicken eaten in affected countries is cooked thoroughly.[1]

What can be done to contain the spread of bird flu?

In the countries that have been affected by bird flu, governments are attempting to contain the virus by culling affected poultry stocks. By removing the potential for the virus to spread through the countries' chicken populations, it is hoped that the virus will be contained and removed from circulation.

Further information

- The World Health Organisation
  www.who.int
- The US Centre for Disease Control
  www.cdc.gov
- Foreign and Commonwealth Office
  www.fco.gov.uk
- World Organisation for Animal Health
  www.oie.int

References

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