

Selected questions and answers on food hygiene in conjunction with bird flu - how can the consumer protect himself and his family?

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Concerned individuals are asking whether they can contract the bird flu virus (H5N1) from poultry meat and poultry products. The Federal Institute for Risk Assessment voices its opinion on this matter in the following questions and answers.

In principle, transmission of the pathogen via infected foods cannot be ruled out. At the present time, direct contact with infected poultry, however, seems to be the main route of transmission between poultry and human beings.

Since the virus is extremely sensitive to high temperatures, thoroughly heated foods are considered to be safe. Meat is thoroughly heated when it reaches a core temperature of at least 70 °C during heating. What consumers should look out for: the meat is no longer red or pink and no red meat juices are released.

There is no evidence of the possibility of human beings becoming infected from raw eggs or raw sausage products containing poultry meat from infected animals. However, it has been shown that the eggs of the infected animals may carry the virus on their shells or in the egg yolk and white. For that reason consumers in countries, in which bird flu has occurred in domestic poultry flocks, should - as a precautionary measure - refrain from eating raw egg products (beaten egg whites, tiramisu etc.). In the case of boiled eggs, care should be taken to ensure that both the egg yolk and white are no longer runny.

What is bird flu?

Avian influenza (bird flu) is a highly infectious disease for domestic poultry. It is characterised by a severe course of illness particularly in chickens and turkeys. Most of the animals perish; there are considerable economic losses. Bird flu is triggered by various flu virus strains. The sub-type H5N1 can also trigger influenza in human beings. BfR already published additional information on this subject in 2004 (http://www.bfr.bund.de/cm/208/gefluegelpest_infections_risiko_fuer_den_verbraucher_durch_lebensmittel.pdf). Further useful information can be accessed on the websites of the Friedrich Loeffler Institute (www.fli.bund.de), the Robert Koch Institute (www.rki.de) and the Federal Ministry of Food, Agriculture and Consumer Protection (www.bmelv.bund.de).

Where has bird flu occurred up to now?

Information on the current situation regarding the spread of bird flu is provided on the website of the Food and Agriculture Organisation of the United Nations (FAO) on http://www.fao.org/ag/againfo/subjects/en/health/diseases-cards/special_avian.html and on the website of the World Health Organisation (WHO) on http://www.who.int/csr/disease/avian_influenza/index.html

Can the bird flu virus spread to human beings?

It is very difficult for the bird flu virus to spread to human beings. In the case of the outbreaks involving H5N1, a virus variant that is also relevant for human beings, a total of 322 confirmed cases of human infections have been notified up to now to the World Health Organisation, of which 195 were lethal (situation as at 23 August 2007; updates: http://www.who.int/csr/disease/avian_influenza/country/en/index.html). Given the large spread and high infection density of the pathogen in the poultry population in Asian countries and the traditionally very close contacts between human beings and poultry, this is a very low number.

How can the bird flu virus spread to human beings?

Analysis of the current H5N1 outbreaks in Asia, Turkey, and Egypt shows that human infections with the avian influenza virus were caused by direct contact with infected poultry.

The bird flu virus is mainly transmitted through inhalation of contaminated dust particles or droplets. However, the virus can also be transmitted by means of smear infections with virus-containing discharges to mucous membranes. Individuals who have close contacts to poultry should take appropriate protective measures. More detailed recommendations can be accessed on the websites of the Federal Institute for Occupational Safety and Health (<http://www.baua.de>) and the Robert Koch Institute (<http://www.rki.de>).

Is there a risk of infection from the preparation and consumption of food?

According to the current level of scientific knowledge, direct contact with poultry is by far the most important transmission route of the virus from poultry to man. Little is known up to now about the virus being transmitted through the consumption of raw poultry meat products from infected animals. For reasons of preventive consumer protection, special attention should be paid to hygiene when handling and preparing raw poultry meat and poultry meat products.

As the virus is extremely sensitive to high temperatures, thoroughly heated foods are considered to be safe. Meat is thoroughly heated when it reaches a core temperature of at least 70 °C during heating. What consumers should look out for: the meat is no longer red or pink and no red meat juices are released. As a precautionary measure consumers should refrain from eating raw egg products (beaten egg whites, tiramisu, etc.). In the case of boiled eggs, care should be taken to ensure that both the egg yolk and white are no longer runny.

How can consumers protect themselves?

People should avoid any contact with wild birds. This applies in particular to perished animals and to regions where the H5N1 virus has been detected in perished wild birds (restricted areas, monitoring areas). People travelling to countries in which bird flu is spread widely amongst domestic poultry, should avoid any direct contact with poultry and their feathers, faeces, raw or inadequately heated meat and egg products. A special warning is issued about not visiting poultry markets or poultry farms. Compliance with the ban on importing poultry, other birds, poultry meat, eggs and other poultry products as well as feathers or untreated hunting trophies from the countries affected into the European Union is of the utmost importance in order to prevent more outbreaks of bird flu in domestic poultry flocks there.

When preparing poultry meat, general hygiene rules should be strictly complied with:

- Raw poultry products and other foods should be stored and prepared separately, particularly when the latter are not going to be reheated
- Appliances and surfaces which come into contact with raw poultry products should be thoroughly cleaned with warm water and washing up liquid
- Immediately dispose of packaging material, defrosted water etc
- Wash hands with warm water and soap
- Thoroughly cook poultry dishes. This means that a minimum core temperature of at least 70 °C must be achieved
- Eggs should be boiled before eating until the egg yolk and white are no longer runny, i.e. depending on size, eggs must be boiled for at least 6 minutes

Can animals contract this disease from trough water and can human beings contract bird flu from drinking water?

The surface water of bodies of water with a high wild bird population can, in principle, be contaminated with bird flu viruses. Under no circumstances should it be used, unless treated, for productive poultry.

Drinking water in Germany is mainly drawn from deep wells. This guarantees a high degree of protection from microbiological risks. Wherever drinking water is drawn from surface water, sophisticated technical methods are used to ensure it complies with the limit values and requirements of the Drinking Water Regulations. In this way, it is possible to rule out contamination of the drinking water with bird flu viruses with a high degree of certainty.

Can salad or vegetables carry bird flu viruses?

In principle, open grown salad, vegetables and fruit can be contaminated through bird droppings. They may also contain bird flu viruses. In order to keep the risk of virus transmission as low as possible, salad, fruit and vegetables are already roughly cleaned on the farm prior to storage. When preparing salads, fruit and vegetables in the home the customary hygiene rules should be complied with. Wash thoroughly prior to preparation or consumption in order to remove particles of earth and excrement. Vegetables that are heated offer additional protection from infection. The bird flu virus is, for instance, inactivated at temperatures above 70 °C.

Can milk contain the bird flu virus?

There are no indications that the bird flu virus H5N1 occurs in cattle. It is the case that influenza A viruses have been detected in cattle in the past but these were other sub-types. Nor are there any reports of the occurrence of viruses in milk. Pasteurisation (heating of milk to 72 °C for about 25 seconds) would also inactivate the viruses like it does other pathogenic micro-organisms.

How can consumers determine the origin of the eggs or poultry meat?

The code number of the packaging point must be displayed on the egg packaging. Details of origin of the eggs may be displayed but are not compulsory.

Poultry meat on sale on the market has the registration number of the slaughterhouse or cutting plant on the packaging or label. Any poultry from outside the EU carries details of country of origin.

There are clear regulations for the import of and trade in live poultry from livestock flocks and products derived from them.

Further recommendations on the hygienic handling of poultry meat (in German) can be accessed on the website of the Federal Institute for Risk Assessment (www.bfr.bund.de).

Can consumers become infected from eating mussels or fish carrying the bird flu virus?

Viruses can be transmitted to man through the consumption of raw or insufficiently heated mussels and trigger gastro-intestinal infections. The main ones are calici or hepatitis A viruses which are extremely resistant to environmental influences. By contrast, influenza viruses are more sensitive to environmental influences. The examination of samples from surface waters confirms the trend for the contagiousness of avian influenza viruses to decrease as salt content increases.

The risk of consumers contracting bird flu from mussels or fish contaminated with influenza A viruses is considered to be low.

Nevertheless, because of the unknown residual risk, consumers are advised not to eat raw mussels or raw fish collected or caught in regions in which the avian influenza virus has been detected. During preparation mussels and fish should, therefore, be heated for at least 10 minutes to 70 °C or more. This will definitely destroy the virus which is highly heat-sensitive.

Can we still use poultry dung as a fertiliser?

Poultry dung from healthy poultry flocks, which are not infected with the bird flu virus, on farms outside the restricted bird flu area, can still be used as fertiliser.

Poultry dung from infected or possibly contagious flocks must be “decontaminated”, i.e. disinfected. A number of effective methods are specified in the Animal Epidemic Act and in provisions based thereon. The disinfected dung may not be placed on the market but must be applied to arable land and immediately ploughed under. Infected dung may also be incinerated in waste incineration plants or cement works.