



## **Avian Influenza (H5N1) Air Cargo guidelines for carriers:**

LAR (32<sup>nd</sup> ed.) Section 10.7 provides carriers and their intermediate handlers with the appropriate guidance material when dealing with health and hygiene requirements.

The subsections 10.7.1 through to 10.7.4 cover hygiene measures to be followed in order to prevent personnel and animal contamination as well as the cleaning and disinfection of air cargo compartments and animal holding areas.

Member airlines can obtain information on adequate disinfectant solutions or materials through their health authorities. No standard disinfectant solution is applicable to all diseases, hence the need for coordination with local authorities. Furthermore once a potential list of disinfectants has been established, members must coordinate with their maintenance and engineering departments, whom in turn shall liaise with airframe manufacturers, to establish which solution is most suitable in accordance with the applicable aircraft corrosion and damage prevention policies.

Regular contact with country specific health authorities should be maintained by all IATA member airlines.

In addition thereto disease specific questions can be addressed to the IATA animal care team by e-mail at: [larper@iata.org](mailto:larper@iata.org).

IATA is in regular contact with the Director in charge of animal health/welfare/international relations in the DG Consumer protection of the European Commission in Brussels, whom is in charge of avian influenza in the EU. The IATA animal care team has compiled the following brief for use by member airlines (see [attachment A](#)).

It is important to note that on an international basis, animal diseases are usually dealt with via the World Animal Health organization (O.I.E.) as well as the World Health Organization as may be appropriate. The OIE advises via email of any animal disease outbreak reported, this free service can be subscribed to via this link:

[http://www.oie.int/eng/info/en\\_listserv.htm](http://www.oie.int/eng/info/en_listserv.htm)

Moreover in case of disease outbreaks, diagnostic specimens are dispatched to health laboratories for identification purposes. For example in the EC due to avian influenza, numerous samples (virological and serological) are transported from several countries to the Community Reference Laboratory based in Weybridge (UK). Samples are sent from the countries affected including Croatia, Roumania, Greece, Turkey etc. to Heathrow for further transport to Weybridge. It is critical for these to arrive as quickly as possible to destination. A worldwide list of OIE reference laboratories and disease experts can be found at:

[http://www.oie.int/eng/oie/organisation/en\\_listeLR.htm](http://www.oie.int/eng/oie/organisation/en_listeLR.htm)

When appropriate packaging requirements are followed transportation by air should not affect timely deliveries. Shippers ought to be aware of the following link to the web page in our dangerous goods section under which the infectious substance falls and packing instruction 650 as in the most recent DGR manual.

[http://www.iata.org/whatwedo/dangerous\\_goods/download.htm](http://www.iata.org/whatwedo/dangerous_goods/download.htm)

## Avian Influenza

The following information has been compiled by the IATA animal care team and is meant for informational purposes only. This information does not constitute binding material, recommendations, or directives for any constituent member of IATA. This information is not intended to be complete and is provided only as a service to IATA's members. Each member is encouraged to consult both international and national sources of technical information on this issue including, but not limited to, the OIE, EC, the World Health Organization, and regional authorities such as the centers for disease control and national health organizations as well as poultry organizations and veterinary professional organizations for the most current information on this subject.

The recent finding of a virulent strain of Avian Influenza (H5N1) in a number of countries throughout the world is a cause for concern, but not necessarily for alarm. The organism is classified as an RNA virus with a lipid envelop. Physical characteristics of the virus allow it to readily mutate, sometimes allowing it to pass to nontraditional host species such as mammals including man. The lipid coat of the virus makes it very susceptible to a wide range of disinfectants. Detergents, dry conditions, and heat also rapidly deactivate it. Airframe manufacturers should be consulted for compatibility of specific detergents and disinfectants as well as use conditions of these agents in aircraft. The rather fragile nature of this organism makes basic sanitation measures effective in reducing the risk of spread and the risk of extended contamination of surfaces.

Wide ranges of birds, both domestic and wild, are susceptible to Avian Influenza. Susceptibility varies with the strain/and serologic variant of the agent as well as the clinical effects produced in any given species of bird. Thus, it is hard to make unconditional statements, as there can be multiple strains of Avian Influenza present that can be distributed differently throughout different bird populations. In general, however, Avian Influenza is most common in migratory water fowl especially ducks and geese. In these species and in other wild birds, the severity of clinical signs and the mortality rates may vary considerably and can be quite low. The virus has also been isolated from cage birds including mynahs, parakeets, parrots, cockatoos, weaver birds, finches and hawks. Domestic poultry such as turkeys and chickens appear to be particularly susceptible to the effects of the virus with more of these birds showing overt signs of illness and high mortality rates. The H5N1 strain present in Asia and other regions is particularly potent in that mortality reaches rates that often exceed 95 percent in domestic birds. This is in contrast to other Avian Influenza outbreaks such as the one that occurred recently in the Netherlands where the H7N7 strain infecting the birds did not appear to be particularly virulent and did not pose the same level of risk with respect to passage between mammals and birds.

The virus incubation period once a bird has been exposed ranges from as short as a few hours to three days until the bird begins to show clinical signs of the illness. In the case of large groups of birds, it may take as little as 14 days before the entire group is infected. The incubation period of the virus is dependent on the dose of the virus, the route by which the virus was acquired (respiratory, ingestion, etc.), the species of bird exposed, and the types of clinical signs used to diagnosis the disease. Most clinical signs occur between three and six days post-infection with antibodies to the virus developing by seven days. Once antibodies develop, the animals begin to decrease the rate of shedding of the virus thereby limiting the time for direct cross contamination between birds or to man.

Clinical signs are extremely variable in birds and depend upon species, age, sex, the presence of other infections, the characteristics of the particular viral strain, as well as a variety of environmental factors that may influence concentration of infectious viral particles in the environment. The signs most commonly reported include pronounced depression and decreased activity; decreased food consumption and extreme weight loss; decreased egg production, hunched posture, listlessness and inactivity, ruffled feathers, and an overall droopy appearance.

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Mild to severe respiratory signs — including, coughing, sneezing, gasping, swelling of the head and face, and a bluish tint to the un-feathered skin indicating poor oxygenation — can occur singly or in various combinations. In general, respiratory signs are not as common as more general signs. Often birds die very quickly with death being the only real clinical sign.

Virus particles are shed primarily by breathing them out and through the feces. Fecal contamination of the feathers and of surfaces can result in exposure of people who handle the birds. Obviously, the more one handles infected birds, the greater the exposure. Exposure to the virus does not mean infection will occur in aberrant host species such as man. Eggs from commercially produced poultry are unlikely to be contaminated since they usually undergo washing with disinfectant solutions prior to packaging. Similarly, meat from poultry when cooked does not pose any threat since the virus is rapidly inactivated by heat.

### **Considerations for Air Transport**

In the case of pet birds, accepting live birds and associated support equipment potentially contaminated by the birds for carriage in the passenger cabin is not recommended. The proximity of birds and people in such an environment puts an unnecessary increase risk of transmission (albeit quite low) of a potentially virulent strain of Avian Influenza. Carriage of such birds, as well as birds originated from commercial sources or wild birds, in the cargo compartment of the aircraft is still appropriate provided that the necessary health certificate accompanies the shipment verifying, not only the health status of the animals themselves, but the source colony. Given the ventilation of the cargo holds of the aircraft and the separation of the cargo hold from the passenger cabin, the likelihood of transmission of agents to passengers is very low. Increasing air exchange rates within the cargo hold can further reduce the risk of transmission, as can regular cleaning and disinfection.

The transportation of eggs presents almost no risk although some authorities (depending upon the region or country) may issue bans on the transportation of these and poultry byproducts. To the extent possible, segregation of poultry and other birds from personnel support areas is recommended.

As with handling any animal, the use of personal protection equipment and personal sanitation is always prudent and recommended. In the case of Avian Influenza, the use of disposable gloves whose exterior surfaces can be disinfected readily are recommended for handling containers that allow the possibility of direct contact with birds or their soiled bedding. The use of a disposable facemask for respiratory protection is also recommended when working in confined spaces or with large numbers of containers of birds. Basic hand sanitation with soap or detergents is always recommended after handling animal containers of any species. The use of other personal protective equipment will depend upon the nature and duration of contact with birds during air transportation.

Next is an example of a general procedure that can be followed for staff exposed to Avian Influenza when poultry shipments are delivered to the accepting point during an outbreak:

1/ animal has AI but it is not known or detected at time of acceptance - apply the internal or veterinary crisis plans.

2/ animal has AI and shipment is in the warehouse: further action is based on information from the veterinary / health services.

When a shipment is suspected positive, the suspected shipment is put on hold and an embargo for the species concerned and a closure of the animal handling station is applicable - eventually applicable at origin only but could affect other stations. A sample is sent to a laboratory - if the results are negative the embargo is lifted and the animal station can be re-opened for acceptance of the species. If it is found positive by the laboratory, establish who has had either direct or

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indirect contact with the shipment and communicate this information back to HQ and inform/apply the worker(s) crisis plans.

### Summary

The recent concerns regarding Avian Influenza are valid but should be viewed in light of the most current information available from competent authorities. Of the over 100 human cases resulting in death reported, many of these were associated with prolonged direct contact with poultry often in a rural setting where exposure to wild birds is common. International bodies such as OIE and the World Health Organization, as well as regional health organizations for animals and man, are closely tracking the spread of Avian Influenza and the cases of human disease. Airlines should keep abreast of developments with respect to Avian Influenza through these and country-specific organizations to determine when and if the level of risk has changed and if additional measures regarding the suitability of various avian species for transport should be reexamined. Information regarding Avian Influenza can be found at many websites. The following sites are some examples of ones that should be monitored.

OIE update: [http://www.oie.int/download/AVIAN%20INFLUENZA/A\\_AI-Asia.htm](http://www.oie.int/download/AVIAN%20INFLUENZA/A_AI-Asia.htm)

And international joint conference WHO/OIE/FAO  
[http://www.oie.int/eng/manifestations/en\\_prep\\_manif\\_IA.htm](http://www.oie.int/eng/manifestations/en_prep_manif_IA.htm)

EC update:  
[http://europa.eu.int/comm/food/animal/diseases/controlmeasures/avian/index\\_en.htm](http://europa.eu.int/comm/food/animal/diseases/controlmeasures/avian/index_en.htm)

Q& A  
<http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/05/283&format=HTML&aged=0&language=EN&guiLanguage=en>

The US CDC has issued the following information:  
<http://www.cdc.gov/flu/avian/index.htm>

The Canadian Food inspection agency lists the following information:  
<http://www.inspection.gc.ca/english/animas/heasan/disemala/avflu/avflufse.shtml>