Risk assessment of acquiring Avian Influenza from Poultry Products: Lay Summary

Avian influenza (AI), also known as bird flu, causes infections in birds but can also infect other species, including humans. While a range of AI strains can infect birds, they can be grouped into two different types depending on the clinical signs they cause in poultry: high pathogenicity avian influenza (HPAI) and low pathogenicity avian influenza (LPAI). Both types of viruses can cause human illness if transmission occurs, with some strains of AI exhibiting human case fatality rates of over 50%.

Since October 2021, there has been a substantial increase in the number of AI infections reported in birds in the UK. The last FSA assessment on the risk of exposure to AI from the food chain was in 2015. Given the increased prevalence of AI in UK birds, the risk assessment was updated to make sure advice related to consumption of poultry products remains appropriate. This risk assessment did not focus on the currently circulating outbreak strain but considered any AI virus.

This risk assessment considered the risk of exposure in consumers to AI from poultry products, including commercial poultry, game birds, and table eggs. The risk from home processing of birds was also considered. The evidence came from published scientific literature, reports from other government departments and FSA research projects.

HPAI infections in birds often lead to severe clinical signs which would allow for detection of the illness before birds are slaughtered for consumption. LPAI infection may go unnoticed in birds, but the virus is unlikely to infect parts of the birds that will enter the food chain. In addition to this, there is very little evidence available that suggests AI can infect humans from consumption of AI-contaminated poultry products.

Risk of acquiring AI from handling and consuming poultry

The risk of acquiring AI from poultry products was considered on a UK population basis; subpopulations were considered for some situations when evidence indicated the activity (consumption or processing) was undertaken infrequently. The likelihood of infection for people in the UK from handling and consuming commercial chicken or turkey is **negligible (so rare that it does not merit to be considered)** with **low uncertainty**. For the consumption of farmed duck and geese and wild game birds, the likelihood is **very low (very rare but cannot be excluded)** with **medium uncertainty**.

Risk of acquiring AI from home processing birds

Given the difference in systemic infections between virus types, HPAI and LPAI were considered separately for home processing of birds. Since HPAI can be distributed in tissues throughout the bird and this pathway could potentially include exposure by inhalation, the likelihood of HPAI

infection in people handling and home processing game birds is **low (rare but does occur)**. For LPAI, the likelihood is **very low (very rare but cannot be excluded)**. Both of these situations are associated with **medium uncertainty**.

Risk of acquiring AI from consuming hen table eggs

The likelihood of infection for people in the UK from handling and consuming hen table eggs is **very low (very rare but cannot be excluded)** with **low uncertainty**. As for the severity of illness in humans from AI infection, this was considered **high (severe illness: causing life-threatening or substantial sequelae or illness of long duration)** with **medium uncertainty**. This reflects the high case fatality rate associated with AI infections in humans, even if mild infections are also possible.