

Know your poultry zoonoses!

A zoonosis is basically a disease that can be transmitted from animals to man and in this short article we will summarise those that involve poultry.

Fortunately, very few poultry infectious diseases are directly transmissible to man.

Infectious diseases of poultry that are important in this context are highly pathogenic avian influenza (HPAI) H5N1, chlamydiosis, Newcastle disease, erysipelas, and avian tuberculosis.

● HPAI H5N1

The H5N1 strain of avian influenza can infect man and most cases are associated with direct contact with sick live birds or the carcasses of birds that have recently died.

One unfortunate victim of HPAI H5N1 picked up the infection from his sick fighting cockerel when he tried to clear its nasal passages by sucking the mucus out of his bird's nose!

No cases of man being infected from eating properly cooked eggs or poultry meat have been reported.

HPAI H5N1 usually causes high

mortality in chickens and the disease in man is a case of bad flu.

● Chlamydiosis

Pet psittacines are much more likely to be infected with this disease and pass it on to man, although chlamydiosis is occasionally seen in farmed ducks and turkeys.

Very few confirmed chicken cases have been cited.

Clinical signs in turkeys can include loss of appetite, loose greenish droppings and low mortality rates. More virulent strains can be associated with mortality and egg drops in breeder turkeys.

In man chlamydiosis appears as flu-like symptoms.

A common scenario for human infection from turkeys/ducks occurs at the processing plant when workers handling infected turkey/duck carcasses are exposed to aerosolised infectious particles.

● Newcastle disease virus

This virus infects chickens and turkeys. Most commercial poultry is vaccinated against Newcastle disease.

If people are in contact with live Newcastle disease virus, including the vaccine strains, this can result in conjunctivitis. This condition generally lasts for 5-10 days and resolves completely.

● Erysipelas

This disease is caused by the bacterium *Erysipelothrix rhusiopathiae* and turkeys, pheasants, ducks, geese and, rarely, chickens are affected. Most species of birds are potentially susceptible.

The disease in poultry is usually seen in older turkeys. Large numbers of this bacterium are present in infected carcasses.

People handling these carcasses can be infected by bacteria getting into their tissues through small scratches and cuts on unprotected hands and arms. A painful, hot swelling with a dark centre known as an erysipeloid results at the site of infection.

● Avian tuberculosis

This disease is caused by the bacterium *Mycobacterium avium*. Today, in many countries, it is only

seen sporadically in older backyard flocks. Avian tuberculosis causes progressive general debilitation with weight loss, decreased egg production and death in chickens.

Humans are considered relatively resistant to *M. avium* infection but more cases of this disease in man have been seen in recent years, particularly in immunosuppressed people.

However, it should be noted that most *M. avium* strains isolated from people differ from the common chicken strains of *M. avium*.

● External parasites

Most external parasites (lice, mites, etc.) are also specifically adapted to avian hosts and will not usually infest man for any extended length of time. However, some, notably mites, can infest humans working in the house. They bite and irritate the skin causing temporary discomfort.

The category of foodborne zoonotic pathogens, such as bacterial pathogens (salmonella, campylobacter, *E. coli*, etc) is a large topic and so is not considered here. ■