

Safety Measures for Handling Poultry

Our topics for this week are:

- Keeping poultry and handlers safer during poultry handling
- Poultry zoonoses
- Recommended sanitary practices for poultry handlers

Handler Safety

Most poultry protect themselves with escape by running or short flights. If escape is not possible, they will peck, scratch, and bat their wings. Chickens and turkeys may attack a handler perceived to be weak, particularly smaller children. Injuries can occur from poultry wings during panic flying within an enclosure or being improperly held. Aggressive chickens will peck and scratch, and roosters with spurs will use them to poke and scratch. Turkeys can inflict severe blows with their wings, but are less likely to do so than geese. Geese are much more aggressive and will also peck. Ducks are able to escape from predators in the wild more effectively than other poultry. Although most species of ducks sleep on the ground and are more vulnerable to predators, they can sleep literally with one eye open and escape by water or air. Ducks are less prone to resist handling with defensive pecking and scratching.

Ratites, especially ostriches, are unpredictable and potentially dangerous. Their natural predator is the African lion which they can usually outrun, and if necessary, fight with a forward kick that rips open a wound and can be fatal. Adult males during breeding season are especially dangerous. They have a powerful forward and downward strike with a leg and sharp claws on 2 toes that can rip a handler's abdomen open or tear a femoral artery. Emus and rheas also strike forward with their feet. They both have 3 toes with a sharp claw on each toe.

Male ratites are very territorial and aggressive during breeding season, especially ostriches. An agitated male will stand tall and bump its chest against objects, hiss, gape its mouth, and flap its wings. A handler should never go into a pen without an assistant nearby. Humans cannot outrun an ostrich. If a handler is charged in the open by a male ostrich, it is recommended to lay flat on the ground to avoid a forward kick. They cannot kick low at an object on or near the ground.

Ratites will peck at any shiny object. Handlers should not wear sunglasses or jewelry when around ratites.

Poultry Safety

Chicken pullets and turkey poults have their beaks trimmed because of territorial aggression and risk of feather picking and cannibalism. Hatcheries trim chick beaks using a beak-trimming machine at 6 to 8 days of age, but it can be performed up to 16 weeks of age. Turkey poults are trimmed at 2 to 5 weeks of age. It is done by cutting slightly more than one-half of the upper beak and blunting the lower beak. Beak-trimming machines cauterize the cut as it is made and prevents regrowth of the beak. If manual nippers are used, the beak will regrow.

The cause for feather picking and cannibalism can be varied, but overcrowding and boredom are factors. Providing at least 4 square feet of space for each chicken in a coop and 10

square feet in runs with an opportunity to forage, i.e. investigate and search for food often eliminates feather picking in chickens.

Chickens will also peck at rooster combs and roosters can cause injuries with their toes that lead to cannibalism of the injured bird. These problems are important in raising chickens in concentrated confinement. Preventative procedures used in commercial breeding of chickens is dubbing of the comb, removal of the comb of young roosters and toe dubbing, the removal of toes of breeding roosters.

The snood of turkeys is particularly vulnerable to being pecked by other turkeys. The snood may be excised up to 3 weeks of age in situations where fighting or pecking has been a problem. Clipping of the 2 inside toes to remove the nails may be done at hatcheries to prevent scratches and skin tears to other turkeys when the turkeys are older and kept in close confinement.

Proposed rules to the USDA to permit organic production of poultry labeling would prohibit beak trimming, desnooding, dewattling, and removal of combs. Poultry would have to be allowed sufficient room for freedom of movement and ability to engage in natural behaviors. The incidenc of lameness would also have to be monitored.

Although providing poultry room to forage outdoors can eliminate common aggression injuries, poultry with access to the outdoors are endangered by a wide variety of predators such as hawks, owls, foxes, coyotes, and roaming dogs, among others. Rodent control is important indoor and outdoors. In addition to eating grain and spreading disease, rats will kill chicks and poults.

Signaling handler presence by speaking in a normal tone and moving smoothly, rather than erratically, reduces the risk of birds piling up from being startled and smothering.

Key Zoonoses

Apparently healthy poultry pose little risk of transmitting disease to healthy adult handlers who practice conventional personal hygiene. The risks of physical injury are greater than the risks of acquiring an infectious disease. However, most poultry are not routinely handled and feathers can hide signs of many illnesses.

Systemic Disease

Avian influenza (fowl plague) is an influenza A virus that is able to mutate to a form that can affect humans as a potentially fatal systemic disease with predominately respiratory signs. The disease in birds is highly contagious, affecting fowl, turkeys, pheasants, ducks and many wild species, but rarely waterbirds or pigeons. Clinically, there is a short course and very heavy mortality. Infected birds that survive have a nasal discharge, white spots on the comb and wattles, and swelling of the head and neck. Some strains, notably H5N1 and H7N9, have emerged as the cause of fatal, but rare, human infections. Precautions include keeping poultry away from wild birds and promptly reporting any possible cases of avian influenza to state agriculture and public health authorities. The risk of avian influenza in handlers of poultry that are apparently healthy and not overcrowded and stressed is extremely low, particularly if the poultry are protected from contact with wild birds.

Listeriosis (*Listeria monocytogenes*) is a common bacteria of poultry. Affected birds usually appear healthy. Transmission to humans is by ingestion of poorly processed poultry products, raw poultry, or undercooked poultry.

Tuberculosis (*Mycobacterium avium*) is a rare disease of poultry. Free range poultry may acquire it from wild birds and transmit it to handlers, but affected poultry do not appear healthy.

The systemic dimorphic fungal diseases, histoplasmosis and blastomycosis, can occur in birds and be transmitted in their feces. However, the infectious form develops in excreted fecal matter. These diseases are not transmitted directly from handling birds but possibly from their contaminated containments, such as roosts and cages.

Respiratory Disease

Ornithosis (*Chlamydophila psittaci*, called psittacosis in companion birds) is a bacterial respiratory disease of poultry caused by the same organism that causes psittacosis in caged companion birds. The bacteria can be transmitted to humans by exposure to infected bird nasal secretions or feces. Humans can develop pneumonia if infected with ornithosis.

Newcastle disease, is caused by a virus that affects domestic poultry, causing severe nervous and respiratory signs usually resulting in death of the bird. However, Amazon parrots may be able to carry the virus without signs. It can infect humans causing mild conjunctivitis and influenza-like illness.

Digestive Tract Disease

Salmonellosis can cause severe diarrhea and sometimes enter the bloodstream from the digestive tract to infect organs throughout the body. Overcrowding and other stresses cause increased transmission and susceptibility to salmonellosis. Basic sanitary handling eliminates most risk to handlers. Salmonella from poultry is primarily acquired from undercooked poultry or eggs.

Nearly all poultry should be considered carriers of Campylobacteriosis, even if they have no signs of disease. It is one of the most common causes of bacterial diarrhea in humans. Contact with poultry can be a source if the bacteria gain access to a handler's mouth. Most human cases are from drinking unpasteurized milk or eating undercooked poultry.

Skin Disease

The avian red mite (*Dermanyssus gallinae*) can be directly or indirectly transmitted to humans. The bite of the mite can cause intense itching and pinpoint red bites in the skin.

Erysipeloid is a bacteria that can be transmitted from infected turkeys to humans through cuts in human skin.

Sanitary Practices

A handler of poultry should wear appropriate dress to protect against skin contamination with feathers and skin scales or urine, and other body secretions. Basic sanitary procedures should be practiced, such as keeping hands away from eyes, nose, and mouth when handling poultry and washing hands after handling them. Eating and drinking in poultry containment or handling areas should be prohibited. Cleaning of food and water bowls and handling equipment should be done outside of human living quarters.

Special precautions are needed if sick poultry are handled, and sick poultry should be isolated from apparently normal poultry. New flock members should be quarantined for at least 2 weeks to reduce the risk of transmitting a disease that new birds could be incubating before introducing to the rest of the flock.

Now let's recap the key points to remember from today's episode:

- 1. A handler should never stand in front of a ratite.**
- 2. Chicken to chicken and turkey to turkey injuries increase with excessive confinement.**
- 3. Some strains of avian influenza can cause serious illness in humans.**
- 4. Salmonellosis and campylobacteriosis are often acquired from consumption or contact with uncooked poultry products, but the risk from handling poultry is less.**

More information on animal handling is available in my book, *Animal Handling and Physical Restraint*, published by CRC Press. It is also available on Amazon and from many other fine book supply sources.

Additional information is available at: www.betteranimalhandling.com

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.