

Potential Zoonotic Disease From Chicken Eggs

*Eggs are laid through the cloaca, a chamber that receives feces via the rectum, urine via the ureters, and eggs via the reproductive tract. Thus, eggs have passed through a body cavity that is loaded with bacteria and other potential disease agents. Not only is the outside of an egg contaminated but so, too, may be the inside. When a freshly laid egg cools, a pressure differential occurs between the inside of the egg and the outside. Any fluid on the shell, which might be teeming with disease agents, is forced through the shell and into the egg.

LISTERIOSIS *L. monocytogenes*

Lateral deviation of the head with a tendency to circle and paralysis is commonly seen in birds. Fever, headache, nausea and vomiting are all seen in man. Preventive measures include wearing protective clothing when handling infected birds or their tissues, and washing hands thoroughly after working with eggs. Major mode of transmission is the oral route

COLIBACILLOSIS *E. coli*

Maybe the bacteria responsible for Hjarre's disease (coligranuloma), a condition in adult birds, characterized by granulomatous lesions in the liver, cecum, spleen, bone marrow, and lungs. In man, the bacteria can cause profuse and watery diarrhea, abdominal colic and vomiting. However, a few strains of *E. coli* may cause rapid disease and death! Preventive measures include wearing protective clothing when handling birds, eggs or body tissues, and washing hands thoroughly afterwards.

FOOD POISONING

Staphylococcus aureus infections in poultry may cause diseases ranging from skin infections to generalized septicemia. Symptoms in man are nausea, vomiting, abdominal pain, and diarrhea. Contaminated eggs can be a source of infection. Wear gloves and follow hygienic procedures when handling eggs and raw egg products.

SALMONELLOSIS *S. pullorum*

Poultry usually show no signs of infection, but may be shedding huge numbers of *S. pullorum* bacteria in their feces. All eggs should be considered a source of infection and persons should wear gloves and then wash hands after gathering eggs and/or handling raw egg products. A watery, profuse diarrhea for about 10 days is the typical symptom in humans, but some individuals will become seriously ill, especially infants, the elderly and anyone with a suppressed immune system.

CRYPTOSPORIDIOSIS

Transmission is fecal-oral route. Incubation period is 3-7 days. Symptoms are cramping, abdominal pain, profuse watery diarrhea, anorexia, and weight loss.

CAMPYLOBACTERIOSIS

Poultry are an important reservoir for *C. jejuni*. Transmission is the fecal-oral route. Incubation period is 1-10 days. Humans experience watery diarrhea, abdominal pain, fever, nausea and vomiting.

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PASTEURELLOSIS

All animals and birds may be colonized by this bacterium, especially throughout the respiratory tract and mouth. Human infection occurs through wounds made by bites or scratches and ingestion. May cause acute pneumonia or septicemic disease. Wear protective clothing and gloves.

PSITTACOSIS

Transmission is from direct contact or inhalation of desiccated feces. Incubation period is 4-15 days. Symptoms: fever, headache, generalized weakness, chills, upper or lower respiratory tract disease.