

The Incredible, Edible...And Now Safer Egg
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This past July, a new regulation was put in place to improve the safety of eggs and reduce the incidence of illnesses due to *Salmonella* Enteritidis bacteria. The final rule was published in the Federal Register on July 9th and is entitled “Prevention of *Salmonella* Enteritidis in Shell Eggs During Production, Storage, and Transportation.” The new regulation will require preventive measures during the production of shell eggs in poultry houses and requires subsequent refrigeration during storage and transportation. Information on the final rule may be found at: <http://www.fda.gov/Food/FoodSafety/Product-SpecificInformation/EggSafety/EggSafetyActionPlan/ucm170746.htm>

Salmonella Enteritidis can be found inside eggs that appear perfectly normal, and if the eggs are eaten raw or undercooked, the bacterium can cause illness. Eggs within the shell usually become contaminated on the farm, primarily because of infection in the laying hens. Bacteria can also be found on the outside of a shell egg due to contact with animal feces. While *Salmonella* Enteritidis can be transferred to the egg white or egg yolk, the organism only grows effectively in the egg yolk.

Beginning in the 1990's, FDA and the USDA have carried out a series of egg safety interventions. These efforts focused on proper refrigeration to limit the growth of *Salmonella* that may be inside an egg. Although these efforts made it more difficult for the pathogenic bacteria to grow, they did not prevent eggs from becoming contaminated initially on the farm. Since the measures in the new regulation address controlling the bacteria on the farm, *Salmonella* Enteritidis will be reduced in poultry houses, and consequently, in the eggs themselves.

Egg-associated illness caused by *Salmonella* has been identified as an important public health problem. *Salmonella* Enteritidis infections can be serious, even life-threatening, especially to the very young, the elderly, and people with weakened immune systems. Infected people may experience diarrhea, fever, abdominal cramps, headache, nausea, and vomiting. Some infected people may suffer from severe illness, arthritis, or even death. More information about *Salmonella* Enteritidis can be found at http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salment_g.htm.

FDA believes the new regulation is an important step to prevent the estimated 79,000 – 142,000 cases of foodborne illness and 30 deaths caused by consumption of eggs contaminated with *Salmonella* Enteritidis each year. FDA has estimated that the rule would provide \$1.4 billion in annual public health benefits, at an annual cost of \$81 million to the regulated industry, or less than 1 cent per dozen eggs produced in the United States. The new rule is part of a coordinated strategy between the FDA and the USDA's Food Safety and Inspection Service (FSIS). The FDA and the FSIS will continue to work closely together to ensure that egg safety measures are consistent, coordinated, and complementary.

Under the new regulation, egg producers will be required to:

- Buy chicks and young hens only from suppliers who monitor for *Salmonella* bacteria
- Establish rodent, pest control, and biosecurity measures to prevent the spread of bacteria throughout the farm by people and equipment
- Conduct testing in the poultry house for *Salmonella* Enteritidis. If the tests find the bacterium, a representative sample of the eggs must be tested over an 8 week time period (4 tests at 2 week intervals); If any of the four egg tests is positive, the producer must further process the eggs to destroy the bacteria, or divert the eggs to a non-food use
- Clean and disinfect poultry houses that have tested positive for *Salmonella* Enteritidis
- Refrigerate eggs at 45 degrees Fahrenheit temperature during storage and transportation no later than 36 hours after the eggs are laid.
- Maintain a written *Salmonella* Enteritidis prevention plan and records documenting their compliance.

In addition to the new safety measures being taken by industry, the retail food industry and consumers can reduce of foodborne illness by following safe egg handling practices. The FDA reminds the food industry and consumers only sell or buy eggs that have been properly refrigerated, make sure eggs in the carton are clean and not cracked, and cook eggs and foods containing eggs thoroughly. Recommended safe egg handling practices for retail can be found at: <http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/FoodLabelingNutrition/ucm059055.htm>.