Salmonella Enteritidis in Poultry

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For many decades, it was thought that the interior of an egg (within the shell) was sterile. Recently it has been recognized that some bacteria may exist in the interior of an egg. One such bacterium is ***Salmonella enteritidis* (SE)**, which can colonize the reproductive tract of the hen. The interior of the egg becomes colonized before the shell is added to the developing egg (see the article "Avian Reproductive Tract—Female" for more information on the development of eggs). A small percentage of infected birds may excrete SE continuously or intermittently. The excretion of this bacterium can be reactivated by stress.

This bacteria is a public health concern. Consumption of raw or undercooked eggs that have been contaminated with SE can lead to illness. Symptoms include fever, abdominal cramps, and diarrhea.

Clinical Signs

A flock infected with SE, also referred to as **paratyphoid**, typically exhibits no clinical signs. Chickens younger than two weeks of age might exhibit such signs as listlessness, diarrhea, and ruffled feathers. Generally these young birds recover; however, they may harbor the bacteria in their guts for months.

Treatment

Infected flocks can be treated with antibiotics to reduce mortality and morbidity. After treatment, however, some chickens may become long-term carriers of SE and may lay contaminated eggs.

Prevention and Control

Most commercial egg producers regularly monitor their flocks for SE. Maintenance of a rigorous biosecurity program is important to prevent contamination of a flock. Vaccines are also available.