

Outbreak of *Salmonella* Infections Linked to Backyard Poultry

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CDC and public health officials in several states are investigating a multistate outbreak of *Salmonella* Hadar infections linked to contact with backyard poultry (such as chicks and ducklings).

Latest Outbreak Information

At A Glance

- [Reported Cases](#): 97
- [States](#): 28
- Hospitalizations: 17
- Deaths: 0
- A total of 97 people infected with the outbreak strain of *Salmonella* Hadar have been reported from 28 states.
 - 17 people (34% of those with information available) have been hospitalized and no deaths have been reported.
 - 30% of ill people are children younger than 5 years of age.
- [Epidemiologic evidence](#) shows that contact with backyard poultry (such as chicks and ducklings) is the likely source of this outbreak.
 - In interviews, 38 (86%) of 44 ill people reported contact with chicks and ducklings.
 - People reported obtaining chicks and ducklings from several sources, including agricultural stores, websites, and hatcheries.

Advice to Backyard Flock Owners

You can get sick with a *Salmonella* infection from touching backyard poultry or their environment. These birds can carry *Salmonella* bacteria even if they look healthy and clean and show no signs of illness. Follow these tips to stay healthy with your backyard flock:

Wash your hands.

- Always wash your hands with soap and water right after touching backyard poultry, their eggs, or anything in the area where they live and roam.
- Adults should supervise handwashing by young children.
- Use hand sanitizer if soap and water are not readily available.

Be safe around poultry.

- Don't kiss backyard poultry or snuggle them and then touch your face or mouth.
- Don't let backyard poultry inside the house, especially in areas where food or drink is prepared, served, or stored.
- Set aside a pair of shoes to wear while taking care of poultry and keep those shoes outside of the house.
- Don't eat or drink where poultry live or roam.
- Stay outdoors when cleaning any equipment or materials used to raise or care for poultry, such as cages and containers for feed or water.

Supervise kids around poultry.

- Always supervise children around poultry and while they wash their hands afterward.
- Children younger than 5 years of age shouldn't handle or touch chicks, ducklings, or other poultry. Young children are more likely to get sick from germs like *Salmonella*.

Handle eggs safely.

- Collect eggs often. Eggs that sit in the nest can become dirty or break.
- Throw away cracked eggs. Germs on the shell can more easily enter the egg through a cracked shell.
- Eggs with dirt and debris can be cleaned carefully with fine sandpaper, a brush, or a cloth.
- Don't wash warm, fresh eggs because colder water can pull germs into the egg.
- Refrigerate eggs after collection to maintain freshness and slow germ growth.
- Cook eggs until both the yolk and white are firm. Egg dishes should be cooked to an internal temperature of 160°F (71°C) or hotter. Raw and undercooked eggs may contain *Salmonella* bacteria that can make you sick.

For a complete list of recommendations, visit the [Healthy Pets, Healthy People website section on backyard poultry](#).

Advice to Stores That Sell or Display Poultry

- Source birds sold from suppliers that have adopted the U.S. Department of Agriculture's (USDA's) best management practices to mitigate *Salmonella* contamination and those which voluntarily participate in the USDA's National Poultry Improvement Plan (USDA-NPIP) U.S. *Salmonella* Monitored Program.
- Provide health information to owners and potential buyers of poultry before purchase (see sample flyer below). This should include information about the risk of getting a *Salmonella* infection from contact with poultry.
 - A flyer describing the risk of *Salmonella* infections from contact with poultry and prevention recommendations is available.
- Place health information in clear view where poultry are displayed.
- Provide handwashing stations or hand sanitizer next to poultry display areas and tell customers to wash hands right after leaving these areas.

- Display poultry out of reach of customers, especially children, so customers cannot easily touch poultry.
- Clean and sanitize the areas where poultry are displayed between shipments of new poultry. Be sure to remove debris first so that the disinfectant is applied to a surface that is generally clean. Apply the disinfectant on the surface for the proper contact time listed on the disinfectant label.
- More information on displaying animals in public settings is in the 2017 Compendium of Measures to Prevent Disease Associated with Animals in Public Settings.

Advice to Mail-Order Hatcheries

- Mail-order hatcheries should provide health-related information to owners and potential purchasers before they buy any poultry (see example below). This should include information about preventing *Salmonella* infections from contact with poultry.
 - A flyer describing the risk of *Salmonella* infections from contact with poultry and prevention recommendations is available.
- Mail-order hatcheries should develop interventions to help prevent contamination and infection of poultry with *Salmonella*:
 - Best Management Practices Handbook: A Guide to Mitigation of Salmonella Contamination at Poultry Hatcheries
- Mail-order hatcheries should participate in the voluntary USDA-NPIP U.S. *Salmonella* Monitored Program, in which mail-order hatcheries certify their flocks are monitored for *Salmonella* bacteria that may cause illness in humans. The intent of this program is to reduce the incidence of *Salmonella* in day-old poultry in the hatchery and give the poultry industry a better opportunity to reduce the incidence of *Salmonella* in their products.

Symptoms of *Salmonella* Infection

- Most people infected with *Salmonella* develop diarrhea, fever, and stomach cramps 6 hours to 6 days after being exposed to the bacteria.
- The illness usually lasts 4 to 7 days, and most people recover without treatment.
- In some people, the illness may be so severe that the patient needs to be hospitalized. *Salmonella* infection may spread from the intestines to the bloodstream and then to other places in the body.
- Children younger than 5 years of age, adults 65 and older, and people with weakened immune systems are more likely to have a severe illness.
- For more information, see [Symptoms of *Salmonella* Infection](#).

Investigation Details

May 20, 2020

CDC and public health officials in multiple states are investigating a multistate outbreak of *Salmonella* Hadar infections linked to contact with backyard poultry.

Public health investigators are using the [PulseNet](#) system to identify illnesses that are part of this outbreak. PulseNet is the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC. DNA fingerprinting is performed on *Salmonella* bacteria isolated from ill people by using a standardized laboratory and data analysis method called [whole genome sequencing](#) (WGS). CDC PulseNet manages a national database of these sequences that are used to identify possible outbreaks. WGS gives investigators detailed information about the bacteria causing illness. In this investigation, WGS showed that bacteria isolated from ill people were closely related genetically. This means that people in this outbreak were more likely to share a common source of infection.

As of May 15, 2020, a total of 97 people infected with the outbreak strain of *Salmonella* Hadar have been reported from 28 states. A list of the states and the number of cases in each is on the [map of reported cases page](#).

Illnesses started on dates from [February 26, 2020, to May 1, 2020](#). Ill people range in age from less than one year to 87 years, with a median age of 37 years. Fifty-eight percent are female. Of 50 people with information available, 17 (34%) have been hospitalized. No deaths have been reported.

If antibiotics are needed, some infections related to these outbreaks may be difficult to treat with some commonly recommended antibiotics and may require a different antibiotic choice. WGS of 26 isolates from ill people [predicted antibiotic resistance](#) to one or more of the following antibiotics: amoxicillin-clavulanic acid (4%), ampicillin (4%), cefoxitin (4%), ceftriaxone (4%), gentamicin (4%), streptomycin (100%), sulfamethoxazole (4%), and tetracycline (100%). Testing of clinical isolates using standard antibiotic susceptibility testing methods by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) laboratory is currently underway.

Investigation of the Outbreak

[Epidemiologic evidence](#) shows that contact with backyard poultry (such as chicks and ducklings) is the likely source of this outbreak.

In interviews, ill people answered questions about animal contact in the week before they became ill. Of 44 people interviewed, 38 (86%) reported contact with chicks and ducklings before becoming ill. Ill people reported buying poultry from various sources, including agricultural stores, websites, and hatcheries.

Regardless of where poultry are purchased, these birds can carry *Salmonella* germs that can make people sick. Backyard poultry owners should always follow [steps to stay healthy around their birds](#).

This investigation is ongoing, and CDC will provide updates when more information becomes available.