

# Outbreaks of *Salmonella* Infections Linked to Backyard Poultry



## Investigation Notice

June 13, 2019 at 1:30 PM ET

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

### Latest Outbreak Information

#### At A Glance

- Reported Cases: 279
- [States](#): 41
- Hospitalizations: 40
- Deaths: 0
  
- Since the last update on May 16, 2019, illnesses in an additional 227 people and 20 states have been added to this investigation. Four *Salmonella* serotypes have also been added.
- A total of 279 people infected with the outbreak strains of *Salmonella* have been reported from 41 states.
  - 40 (26%) people have been hospitalized and no deaths have been reported.
  - 70 (30%) people are children younger than 5 years.
- [Epidemiologic and laboratory evidence](#) indicate that contact with backyard poultry, such as chicks and ducklings, from multiple hatcheries is the likely source of these outbreaks.
  - In interviews, 118 (77%) of 153 ill people reported contact with chicks or ducklings.
  - People reported obtaining chicks and ducklings from several sources, including agricultural stores, websites, and hatcheries.
- One of the outbreak strains making people sick has been identified in samples collected from backyard poultry in Ohio.

#### Advice to Backyard Flock Owners

- People can get sick with [Salmonella infections](#) from touching backyard poultry or their environment. Backyard poultry can carry *Salmonella* bacteria but appear healthy and clean and show no signs of illness.
- Follow these tips to stay healthy with your backyard flock:

- Always wash your hands with soap and water right after touching backyard poultry 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.
- 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.
- Children younger than 5, adults over 65, and people who have health problems or take medicines that lower the body's ability to fight germs and sickness shouldn't handle or touch chicks, ducklings, or other poultry.
- Don't eat or drink where poultry live or roam.
- Don't kiss backyard poultry or snuggle them and then touch your face or mouth.
- Stay outdoors when cleaning any equipment or materials used to raise or care for poultry, such as cages, or feed or water containers.
- 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 please read the article developed for retail stores

### **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 the 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 12 to 72 hours after being exposed to the bacteria.
- The illness usually lasts 4 to 7 days, and most people recover without treatment.
- In some people, the diarrhea 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.
- In rare cases, *Salmonella* infection can cause death unless the person is treated promptly with antibiotics.
- People more likely to get a serious illness are children younger than 5 years, adults older than 65 years, and people who have health problems or take medicines that lower the body's ability to fight germs and sickness.
- For more information, see the CDC [Salmonella](#) website.

### Investigation Details

**June 13, 2019**

CDC and public health officials in several states are investigating multiple multistate outbreaks of *Salmonella* infections with serotypes Agona, Anatum, Braenderup, Infantis, Montevideo, and Newport linked to contact with backyard poultry.

Public health investigators are using the [PulseNet](#) system to identify illnesses that may be part of these outbreaks. PulseNet is the national subtyping network of public health laboratories coordinated by CDC. DNA fingerprinting is performed on *Salmonella* bacteria isolated from ill people by using techniques called [pulsed-field gel electrophoresis](#) (PFGE) and [whole genome sequencing](#) (WGS). CDC PulseNet manages a national database of these DNA fingerprints to identify possible outbreaks. WGS gives a more detailed DNA fingerprint than PFGE. WGS performed on *Salmonella* from ill people in this outbreak showed that they are closely related genetically. This means that the ill people are more likely to share a common source of infection.

As of June 7, 2019, a total of 279 people infected with the outbreak strains of *Salmonella* have been reported from 41 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 January 1, 2019, to May 24, 2019. Ill people range in age from less than one year to 92 years, with a median age of 25 years. Fifty-seven percent are female. Of 152 people with information available, 40 (26%) have been hospitalized. No deaths have been reported.

[WGS analysis](#) of 24 isolates from ill people predicted [antibiotic resistance](#) to amoxicillin-clavulanic acid, ampicillin, cefoxitin, ceftriaxone, fosfomycin, gentamicin, kanamycin, streptomycin, sulfisoxazole, tetracycline, or trimethoprim-sulfamethoxazole. An additional 35 isolates from ill people did not show evidence of antibiotic resistance. Testing of five outbreak isolates using standard [antibiotic susceptibility testing](#) by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) laboratory confirmed these results (fosfomycin and kanamycin were not tested by this method). This resistance may affect the choice of antibiotic used to treat some people.

One of the outbreak strains making people sick was identified in samples collected from backyard poultry in Ohio. Additional testing in several states is being conducted.

In interviews, ill people answered questions about animal contact in the week before they became ill. Of 153 people interviewed, 118 (77%) reported contact with backyard poultry before becoming ill. Ill people reported buying poultry from various sources, including agricultural stores, websites, and hatcheries.

Backyard poultry from multiple hatcheries are the likely source of these outbreaks. Regardless of where poultry are purchased, they can carry *Salmonella* germs that can make people sick. Backyard poultry owners should always follow [steps to stay healthy around their poultry](#).

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