

Salmonella Outbreaks Linked to Backyard Poultry



Investigation Notice

Posted July 13, 2022

Fast Facts

- Illnesses: 572
- Hospitalizations: 92
- Deaths: 2
- [States](#): 48
- Investigation status: Active



Backyard Poultry and *Salmonella*

Backyard poultry, such as chickens and ducks, can carry *Salmonella* germs even if they look healthy and clean. These germs can easily spread to anything in the areas where the poultry live and roam.

You can get sick from touching your backyard poultry or anything in their environment and then touching your mouth or food and swallowing *Salmonella* germs.

What Backyard Flock Owners Should Do

- **Wash your hands**
 - Always wash your hands with soap and water immediately after touching backyard poultry, their eggs, or anything in the area where they live and roam.
 - Use hand sanitizer if soap and water are not readily available. Consider having hand sanitizer at your coop.
- **Be safe around backyard flocks**
 - Don't kiss or snuggle backyard poultry, and don't eat or drink around them. This can spread *Salmonella* germs to your mouth and make you sick.
 - Keep your backyard flock and supplies you use to care for them (like feed containers and shoes you wear in the coop) outside of the house. You should also clean the supplies outside the house.
- **Supervise kids around flocks**
 - Always supervise children around backyard poultry and make sure they wash their hands properly afterward.
 - Don't let children younger than 5 years touch chicks, ducklings, or other backyard 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.
 - Rub off dirt on eggs with fine sandpaper, a brush, or a cloth. Don't wash eggs because colder water can pull germs into the egg.
 - Refrigerate eggs to keep them fresh and slow the growth of germs.

- Cook eggs until both the yolk and white are firm, and cook egg dishes to an internal temperature of 160°F to kill all germs.

Call your healthcare provider right away if you have any of these severe symptoms:

- Diarrhea and a fever higher than 102°F
- Diarrhea for more than 3 days that is not improving
- Bloody diarrhea
- So much vomiting that you cannot keep liquids down
- Signs of dehydration, such as:
 - Not peeing much
 - Dry mouth and throat
 - Feeling dizzy when standing up

What Stores Selling Poultry Should Do

- **Source poultry from hatcheries that take steps to reduce *Salmonella* contamination.**
 - These hatcheries include those that have adopted the U.S. Department of Agriculture's (USDA's) best management practices to mitigate *Salmonella* contamination and those that voluntarily participate in USDA's National Poultry Improvement Plan (USDA-NPIP) U.S. *Salmonella* Monitored Program.
- **Clean and sanitize poultry display areas between shipments of new poultry.**
 - Be sure to remove dirt by cleaning first. Then apply the disinfectant on the surface for the proper contact time recommended on the disinfectant label.
- **Help keep your customers healthy.**
 - Provide handwashing stations or hand sanitizers 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 they cannot easily touch the poultry.

- Provide health information to owners and potential buyers of poultry before purchase. This [informational poster \[PDF – 1 page\]](#) describes ways to stay healthy with backyard flocks. Place it right beside flock display areas, and hand it out to customers.
- **Learn more about how to protect your customers and employees** from *Salmonella* and other diseases shared between animals and humans.
 - Read the [2017 Compendium of Measures to Prevent Disease Associated with Animals in Public Settings](#).

What Poultry Hatcheries Should Do

- **Use best management practices** to help prevent *Salmonella* in poultry.
- **Participate in the voluntary USDA-NPIP U.S. *Salmonella* Monitored Program** and certify that your flocks are monitored for *Salmonella* germs.
- **Provide health information to owners and potential buyers of poultry before purchase.** This [informational poster \[PDF – 1 page\]](#) describes ways to stay healthy with backyard flocks. This [graphic](#) can be printed as a sticker and placed on poultry shipping boxes.

Symptoms of *Salmonella*

- Most people infected with *Salmonella* experience diarrhea, fever, and stomach cramps.
 - Symptoms usually start 6 hours to 6 days after swallowing the bacteria.
 - Most people recover without treatment after 4 to 7 days.
- Some people—especially children younger than 5 years, adults 65 years and older, and people with weakened immune systems—may experience more severe illnesses that require medical treatment or hospitalization.

Investigation Details

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CDC and public health officials in many states are collecting different types of data to investigate multistate outbreaks of *Salmonella* infections with serotypes Enteritidis, Hadar, Infantis, Typhimurium, and Mbandaka.

Epidemiologic and laboratory data show that contact with backyard poultry is making people sick. Since the previous update on June 9, 2022, one additional strain (Mbandaka) and 353 new illnesses have been reported.

Epidemiologic Data

As of July 5, 2022, a total of 572 people infected with one of the outbreak strains have been reported from 48 states. Illnesses started on dates ranging from February 3, 2022, to June 22, 2022.

Sick people range in age from less than 1 to 102 years, with a median age of 32 years, and 130 (23%) are young children under 5 years. Of 559 people with information available, 304 (54%) are female. Of 278 people with information available, 92 (33%) have been hospitalized. Two deaths have been reported, one from Tennessee and one from Wyoming.

The true number of sick people in an outbreak is likely much higher than the number reported, and the outbreak may not be limited to the states with known illnesses. This is because many people recover without medical care and are not tested for *Salmonella*. In addition, recent illnesses may not yet be reported as it usually takes 2 to 4 weeks to determine if a sick person is part of an outbreak.

State and local public health officials are interviewing people about the animals they came into contact with in the week before they got sick. Of the 279 people interviewed, 196 (70%) reported contact with backyard poultry before getting sick. Of 175 people with information available, 42 (24%) reported eating eggs from backyard poultry before getting sick. Of 176 people with information available, 5 (3%) reported eating meat from backyard poultry before getting sick.

Of 195 people with information available, 125 (64%) people report purchasing backyard poultry since January 1 of this year. Nineteen of those people

purchased poultry from more than one location. People have reported purchasing poultry from 130 different retail locations across 36 states.

Laboratory Data

Public health officials in North Dakota, Tennessee, and Wisconsin identified outbreak strains in testing of poultry and poultry environments in stores and at people's homes.

Whole genome sequencing (WGS) was also used to identify any predicted antibiotic resistance for bacteria from 571 sick people's samples, 3 animal samples, and 9 environmental samples. Of the total 583 samples, 204 (35.0%) were predicted to be resistant to one or more of the following antibiotics: amoxicillin-clavulanic acid (0.5%), ampicillin (3.1%), ceftiofur (0.5%), ceftriaxone (0.5%), ciprofloxacin (8.9%), gentamicin (0.9%), kanamycin (0.2%), nalidixic acid (8.9%), streptomycin (22.6%), sulfamethoxazole (3.1%), tetracycline (22.5%), and trimethoprim-sulfamethoxazole (2.4%). Testing of bacteria from 3 sick people's samples using standard [antibiotic susceptibility testing](#) methods by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) confirmed these results (streptomycin, kanamycin, and ceftiofur were not tested by this method).

Most people with *Salmonella* illness recover without antibiotics. However, if antibiotics are needed, some illnesses in these outbreaks may be difficult to treat with some commonly recommended antibiotics and may require a different antibiotic choice.

Public Health Action

CDC always advises everyone to take steps to [stay healthy around backyard poultry](#). CDC is working with hatcheries and stores that sell poultry to educate new poultry owners and control the spread of *Salmonella* at hatcheries.