



Centers for Disease Control and Prevention  
CDC 24/7: Saving Lives. Protecting People.™

## Salmonella

# Multistate Outbreak of Human *Salmonella* Typhimurium Infections Linked to Live Poultry

Posted June 6, 2013 3:30 PM ET

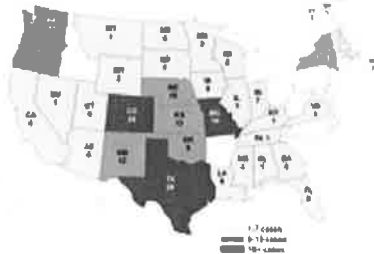
### At a Glance:

- **Case Count: 224** (</salmonella/typhimurium-live-poultry-04-13/epi.html>)
- **States: 34** (</salmonella/typhimurium-live-poultry-04-13/map.html>)
- **Deaths: 0**
- **Hospitalizations: 37**
- **Recall: No**

### More Information:

- [Advice to Consumers](/salmonella/typhimurium-live-poultry-04-13/advice-consumers.html) (</salmonella/typhimurium-live-poultry-04-13/advice-consumers.html>)
- [Signs & Symptoms](/salmonella/typhimurium-live-poultry-04-13/signs-symptoms.html) (</salmonella/typhimurium-live-poultry-04-13/signs-symptoms.html>)
- [Key Resources](/salmonella/typhimurium-live-poultry-04-13/key-resources.html) (</salmonella/typhimurium-live-poultry-04-13/key-resources.html>)

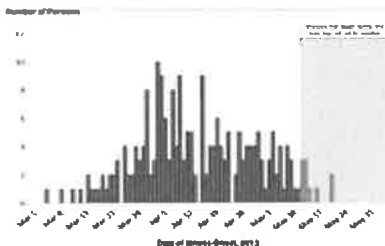
### Latest Case Count Map



[\(/salmonella/typhimurium-live-poultry-04-13/map.html\)](/salmonella/typhimurium-live-poultry-04-13/map.html)

[Click map to view updated & previous case count maps. \(/salmonella/typhimurium-live-poultry-04-13/map.html\)](/salmonella/typhimurium-live-poultry-04-13/map.html)

### Latest Epi Curve



[\(/salmonella/typhimurium-live-poultry-04-13/epi.html\)](/salmonella/typhimurium-live-poultry-04-13/epi.html)

[Click graph to view updated & previous epi curve graphs. \(/salmonella/typhimurium-live-poultry-04-13/epi.html\)](/salmonella/typhimurium-live-poultry-04-13/epi.html)

### Highlights

- **[Read the Advice to Consumers » \(/salmonella/live-poultry-04-13/advice-consumers.html\)](/salmonella/live-poultry-04-13/advice-consumers.html)**

- A total of 224 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 34 states.
  - The number of ill persons identified in each state is as follows: Alabama (1), Arizona (5), California (6), Colorado (24), Florida (2), Georgia (3), Illinois (1), Indiana (7), Iowa (5), Kansas (13), Kentucky (1), Louisiana (6), Massachusetts (2), Minnesota (2), Mississippi (4), Missouri (16), Montana (1), Nebraska (10), Nevada (1), New Hampshire (1), New Mexico (13), New York (15), North Dakota (5), Oklahoma (9), Oregon (10), South Dakota (7), Tennessee (1), Texas (26), Utah (4), Vermont (1), Virginia (1), Washington (17), Wisconsin (2), and Wyoming (2).
  - 26% of ill persons have been hospitalized, and no deaths have been reported.
  - 62% of ill persons are children 10 years of age or younger.
- Epidemiologic, laboratory, and traceback findings have linked this outbreak of human *Salmonella* Typhimurium infections to contact with chicks, ducklings, and other live baby poultry purchased from multiple feed stores and sourced from multiple mail-order hatcheries.
  - Investigations are ongoing to determine the source of the live poultry linked to this outbreak.
- Always wash hands thoroughly with soap and water right after touching live poultry or anything in the area where they live and roam. Do not let live poultry inside the house
  - [Additional recommendations are available \(/Features/SalmonellaBabyBirds/\)](#).
  - These recommendations are important and apply to all live poultry regardless of the age of the birds or where they were purchased.
- Mail-order hatcheries, agricultural feed stores, and others that sell or display chicks, ducklings, and other live poultry should [provide health-related information \(/healthypets/resources/posters.htm#poultry\)](#) to owners and potential purchasers of these birds prior to the point of purchase. This should include information about the risk of acquiring a *Salmonella* infection from contact with live poultry.
  - [Read the Advice to Mail-order hatcheries, feed stores, and others that sell or display live poultry \(/salmonella/typhimurium-live-poultry-04-13/advice-consumers.html\)](#).

June 6, 2013

## Case Count Update

A total of 224 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 34 states. Since the last update, 78 new ill persons have been reported from Alabama (1), California (3), Colorado (8), Georgia (3), Illinois (1), Indiana (3), Iowa (3), Kansas (3), Kentucky (1), Louisiana (1), Massachusetts (2), Mississippi (1), Missouri (7), Montana (1), Nebraska (1), New Mexico (3), New York (7), North Dakota (4), Oregon (5), South Dakota (1), Tennessee (1), Texas (7), Utah (1), Washington (7), Wisconsin (2), and Wyoming (1). This outbreak of human *Salmonella* Typhimurium infections is not related to the current [outbreak of human \*Salmonella\* Infantis, Lille, Newport, and Mbandaka infections linked to live poultry \(/salmonella/live-poultry-04-13/index.html\)](#).

Among the persons who reported the date they became ill, illnesses began between and March 4, 2013 and May 20, 2013. Ill persons range in age from less than one year to 81 years, and 62% of ill persons are 10 years of age or younger. Fifty-one percent of ill persons are female. Among 141 ill persons with available information, 37 (26%) have been hospitalized. No deaths have been reported.

Illnesses that occurred after May 12, 2013 might not yet be reported due to the time it takes between when a person becomes ill and when the illness is reported. This takes an average of 2 to 3 weeks.

May 10, 2013

## Case Count Update

CDC is collaborating with public health and agriculture officials in many states and the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) to investigate multiple outbreaks of human *Salmonella* infections linked to contact with live poultry. This outbreak of human *Salmonella* Typhimurium infections is not related to the current [outbreak of human \*Salmonella\* Infantis and \*Salmonella\* Mbandaka infections linked to live poultry \(/salmonella/live-poultry-04-13/index.html\)](/salmonella/live-poultry-04-13/index.html).

Public health investigators are using the [PulseNet \(/pulsenet/\)](/pulsenet/) system to identify cases of illness that may be part of this outbreak. In PulseNet, the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC, DNA "fingerprints" of *Salmonella* bacteria are obtained through diagnostic testing with pulsed-field gel electrophoresis, or PFGE, to identify cases of illness that may be part of this outbreak.

As of May 7, 2013, a total of 146 persons infected with the outbreak strain of *Salmonella* Typhimurium have been reported from 26 states. The number of ill persons identified in each state is as follows: Arizona (5), California (3), Colorado (16), Florida (2), Indiana (4), Iowa (2), Kansas (10), Louisiana (5), Minnesota (2), Mississippi (3), Missouri (9), Nebraska (9), Nevada (1), New Hampshire (1), New Mexico (10), New York (8), North Dakota (1), Oklahoma (9), Oregon (5), South Dakota (6), Texas (19), Utah (3), Vermont (1), Virginia (1), Washington (10), and Wyoming (1).

Among the persons who reported the date they became ill, illnesses began between and March 4, 2013 and April 26, 2013. Ill persons range in age from less than one year to 70 years, and 66% of ill persons are 10 years of age or younger. Fifty-one percent of ill persons are female. Among 91 ill persons with available information, 27 (30%) have been hospitalized. No deaths have been reported.

This outbreak can be visually described with a chart showing the number of persons who became ill each day. This chart is called an [epidemic curve or epi curve \(/salmonella/typhimurium-live-poultry-04-13/epi.html\)](/salmonella/typhimurium-live-poultry-04-13/epi.html). Illnesses that occurred after April 14, 2013 might not yet be reported due to the time it takes between when a person becomes ill and when the illness is reported. This takes an average of 2 to 3 weeks. Please see the [Salmonella \(/salmonella/outbreaks/reporting\\_timeline.html\)](/salmonella/outbreaks/reporting_timeline.html) [Outbreak Investigations: Timeline for Reporting Cases \(/salmonella/outbreaks/reporting\\_timeline.html\)](/salmonella/outbreaks/reporting_timeline.html) for more details.

## Investigation Update

In interviews, ill persons answered questions about contact with animals and foods consumed during the week before becoming ill. Eighty-three (94%) of 88 ill persons interviewed reported contact with live poultry (e.g., chicks, chickens, ducks, ducklings) before becoming ill. Seventy-three (97%) of 75 ill persons with available purchase information reported purchasing live baby poultry from various locations of 13 different agricultural feed store companies in multiple states. Ill persons reported purchasing live poultry for backyard flocks to produce eggs or meat, or to keep as pets.

State health departments have tested samples collected from chicks in ill persons' homes and retail locations. Samples collected by New Mexico and Vermont yielded the outbreak strain of *Salmonella* Typhimurium.

Traceback investigations to determine the source of live baby poultry from homes of ill persons have identified multiple feed stores and mail-order hatcheries in multiple states. Investigations are ongoing to determine the source of the live poultry linked to this outbreak.

Contact with live poultry can be a source of human *Salmonella* infections. Some ill persons in this outbreak reported bringing the live poultry into their homes and kissing or cuddling with the live poultry. These behaviors increase a person's risk of a *Salmonella* infection from contact with live poultry. Always wash hands thoroughly with soap and water right after touching live poultry or anything in the area where they live and roam. Adults should supervise hand washing for young children. [Additional recommendations are available \(/Features/SalmonellaBabyBirds/\)](#). These recommendations are important and apply to all live poultry regardless of the age of the birds or where they were purchased.

Mail-order hatcheries, agricultural feed stores, and others who sell or display chicks, ducklings, and other live poultry should provide [health-related information \(/healthypets/resources/posters.htm#poultry\)](#) to owners and potential purchasers of these birds prior to the point of purchase. This should include information about the risk of acquiring a *Salmonella* infection from contact with live poultry.

---

## Initial Announcement

April 25, 2013

CDC is collaborating with public health and agriculture officials in many states and the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (USDA-APHIS) to investigate multistate outbreaks of human *Salmonella* Infantis, *Salmonella* Mbandaka, and *Salmonella* Typhimurium infections linked to contact with chicks, ducklings, and other live poultry.

Public health investigators are using the [PulseNet \(http://www.cdc.gov/pulsenet/\)](http://www.cdc.gov/pulsenet/) system to identify cases of illness that may be part of these outbreaks. In PulseNet, the national subtyping network of public health and food regulatory agency laboratories coordinated by CDC, DNA "fingerprints" of *Salmonella* bacteria are obtained through diagnostic testing with pulsed-field gel electrophoresis, or PFGE, to identify cases of illness that may be part of this outbreak. The USDA-NPIP is a program that is intended to eliminate certain strains of *Salmonella* that cause illness in poultry breeding flocks and hatcheries, but does not certify that these live poultry are free from other strains of *Salmonella* that may cause human illness.

In interviews, ill people reported purchasing live baby poultry (e.g., chicks, ducklings) from multiple feed stores and mail-order hatcheries. Investigations are ongoing to determine the source of the live poultry in these outbreaks.

Contact with live poultry, including baby or adult birds, can be a source of human *Salmonella* infections. These birds typically appear healthy and clean, but can be shedding germs that can make people sick. Always wash hands thoroughly with soap and water right after touching live poultry or anything in the area where they live and roam. Adults should supervise hand washing for young children. [Additional recommendations are available \(http://www.cdc.gov/Features/SalmonellaBabyBirds/\)](http://www.cdc.gov/Features/SalmonellaBabyBirds/). These recommendations are important and apply to all live poultry regardless of the age of the birds or where they were purchased.

Mail-order hatcheries, agricultural feed stores, and others who sell or display chicks, ducklings and other live poultry should provide [health-related information \(http://www.cdc.gov/healthypets/resources/posters.htm#poultry\)](http://www.cdc.gov/healthypets/resources/posters.htm#poultry) to owners and potential

purchasers of these birds prior to the point of purchase. This should include information about the risk of acquiring *Salmonella* infection from contact with live poultry.

This investigation is ongoing and CDC will update the public when additional information is available.

---

Page last reviewed: April 25, 2013

Page last updated: June 6, 2013

Content source: Centers for Disease Control and Prevention

National Center for Emerging and Zoonotic Infectious Diseases (NCEZID)

Division of Foodborne, Waterborne, and Environmental Diseases (DFWED)

---

Centers for Disease Control and Prevention 1600 Clifton Rd. Atlanta, GA  
30333, USA  
800-CDC-INFO (800-232-4636) TTY: (888) 232-6348 - Contact CDC-INFO

