

Outbreak of *Salmonella* Infections Linked to Pet Turtles

Final Update



Investigation Notice

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This outbreak investigation is over. Always wash your hands after touching pet turtles or their environments. Read more about how to [stay healthy around turtles](#).

CDC and public health officials in several states investigated a multistate outbreak of human *Salmonella* Oranienburg infections linked to pet turtles.

Final Outbreak Information

At A Glance

- [Reported Cases](#): 26
 - [States](#): 14
 - Hospitalizations: 8
 - Deaths: 0
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- A total of 26 people infected with the outbreak strain of *Salmonella* Oranienburg were reported from 14 states.
 - A total of 8 hospitalizations were reported. No deaths were reported.
 - [Epidemiologic, laboratory, and traceback evidence](#) indicate that contact with pet turtles was the likely source of this outbreak.
 - In interviews, 16 (73%) of 22 ill people reported contact with a turtle.
 - The outbreak strain was identified in samples collected from a pet turtle's habitat.
 - As of January 9, 2020, this outbreak investigation is over.

Advice to Pet Owners and Pet Retailers

Turtles can carry *Salmonella* germs in their droppings, even while looking healthy and clean. These germs can easily spread to their bodies, tank water, and habitats. People can get sick after they touch a turtle or anything in their habitats.

People who own or come in contact with turtles should take steps to stay healthy around their pet:

- **Wash your hands.**

- Always wash hands thoroughly with soap and water right after touching, feeding, or caring for a turtle or cleaning its habitat.
 - Adults should supervise handwashing for young children.
- **Play safely.**
 - Don't kiss or snuggle turtles, because this can spread *Salmonella* germs to your face and mouth and make you sick.
 - Don't let turtles roam freely in areas where food is prepared or stored, such as kitchens.
- **Clean habitats, toys, and pet supplies outside the house when possible.**
 - Avoid cleaning these items in the kitchen or any other location where food is prepared, served, or stored.
- **Pick the right pet for your family.**
 - Children under 5 years of age, adults aged 65 and older, and people with weakened immune systems are at a greater risk for serious illness. Households with these people should consider a different pet.
- **Educate customers and employees.**
 - Pet stores, breeders, or others that sell or display turtles should provide [educational materials](#).

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, adults 65 years 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

January 9, 2020

CDC and public health officials in several states investigated a multistate outbreak of human *Salmonella* Oranienburg infections linked to contact with pet turtles.

Public health investigators used the [PulseNet](#) system to identify illnesses that were 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.

A total of 26 people infected with the outbreak strain of *Salmonella* Oranienburg were reported from 14 states.

Illnesses started on dates ranging from [May 29, 2019, to October 31, 2019](#). Ill people range in age from less than 1 year to 80 years, with a median age of 25. Seventy-three percent of ill people were female. Of 24 ill people with information available, 8 hospitalizations were reported. No deaths were reported.

WGS analysis did not identify antibiotic resistance in the 23 bacterial isolates available from ill people. Testing of five outbreak isolates using standard [antibiotic susceptibility testing](#) methods by CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) laboratory confirmed these results.

Investigation of the Outbreak
[Epidemiologic, laboratory, and traceback evidence](#) indicate that contact with pet turtles was the likely source of this outbreak.

In interviews, ill people answered questions about animal contact in the week before they became ill. Of the 22 people interviewed, 16 (73%) reported contact with a pet turtle. Of the 8 people who reported the species of the pet turtle, 7 (88%) reported contact with red-eared sliders. The outbreak strain of *Salmonella* Oranienburg was found in samples collected from an ill person's pet turtle.

Ill people reported buying pet turtles from pet stores or receiving them as a gift. Among the 10 people who remembered where they purchased their turtle, all 10 reported purchasing or having contact with turtles purchased from various Petco stores. CDC has made Petco aware of the investigation and is working with the company to update their educational materials for customers who purchase pet turtles.

Among 11 people who knew the size of the turtle, 9 reported contact with a turtle that was four inches or larger. Previous *Salmonella* [outbreaks](#) have been

linked to turtles with a shell length less than four inches. Due to the increased risk of *Salmonella* illness linked with these small turtles, the U.S. Food and Drug Administration banned the sale and distribution of turtles with shells less than four inches long as pets.

Regardless of where turtles are purchased or their size, turtles can carry *Salmonella* germs that can make people sick. Pet stores should provide information about *Salmonella* to customers and pet owners should always follow [steps to stay healthy around their pet](#).

As of January 9, 2020, this outbreak investigation is over.