Investigation Details

Posted October 3, 2024

These outbreak investigations are over. Although any turtle can carry *Salmonella* germs that can spread to you and make you sick, turtles with shells less than 4 inches long are a known source of illness. Always take steps to stay healthy around your pet turtle.

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CDC and public health officials in several states collected different types of data to investigate multistate outbreaks of *Salmonella* Stanley and *Salmonella* Poona infections.

Epidemiologic, laboratory, and traceback data showed that contact with small turtles made people sick.

Epidemiologic Data

A total of 63 people infected with one of the outbreak strains of *Salmonella* were reported from 22 states (see map). Of these reported illnesses, 48 people were infected with the *Salmonella* Stanley strain and 15 people with the *Salmonella* Poona strain. Illnesses started on dates ranging from August 20, 2023, to August 12, 2024 (see timeline). Of 62 people with information available, 28 (45%) were hospitalized and no deaths were reported.

The true number of sick people in these outbreaks was likely much higher than the number reported, and the outbreaks may not have been limited to the states with known illnesses. This is because many people recover without medical care and are not tested for *Salmonella*.

Public health officials collected many different types of information from sick people, including their age, race, ethnicity, other demographics, and the animals they came into contact within the week before they got sick. This information provided clues to help investigators identify the source of the outbreak.

The table below has information about sick people in these outbreaks ("n" is the number of people with information available for each demographic).

Table of demographic information (n is the number of people with information available)

Demographics	**Information**
Age* (n=63)	Range from <1 to 78 years Median age of 8 years 35% <5 years 19% ≤1 year
Sex (n=63)	49% female 51% male

Table of demographic information (n is the number of people with information available)

Demographics	Information
Race (n=55)	51% White 42% African American/Black 7% Asian
Ethnicity* (n=55)	64% non-Hispanic 36% Hispanic

*The Poona Outbreak has higher proportions of children (47% are children one year or younger) and people who identified as Hispanic (62%).

State and local public health officials interviewed people about the animals they came into contact with the week before they got sick. Of the 53 people interviewed, 34 (64%) reported contact with pet turtles. Of the 29 people who reported the size of the pet turtle, 27 (93%) reported contact with pet turtles with shells less than 4 inches long.

Laboratory and Traceback Data

Public health investigators used the PulseNet system to identify illnesses that were part of these outbreaks. CDC PulseNet manages a national database of DNA fingerprints of bacteria that cause gastrointestinal illnesses. DNA fingerprinting is performed on bacteria using a method called whole genome sequencing (WGS).

WGS showed that bacteria from sick people's samples were closely related genetically. This means that people in these outbreaks likely got sick from the same type of animal.

WGS analysis of bacteria from 62 people's samples and three environmental samples did not predict resistance to any antibiotics. One isolate was predicted to be resistant to the following antibiotics: ampicillin, ceftiofur, ceftriaxone, ciprofloxacin, and trimethoprim-sulfamethoxazole. More information is available at the National Antimicrobial Resistance Monitoring System (NARMS) site. Most people with *Salmonella* illness recover without antibiotics. However, if antibiotics are needed, this resistance is unlikely to affect the choice of antibiotic used to treat most people.

In June 2024, samples were collected from a sick person's turtle in California for testing. This turtle was purchased from a street vendor. WGS performed by the Los Angeles County Department of Public Health Laboratory showed that *Salmonella* serotype Poona from the turtle was closely related to the bacteria from sick people.

In July 2024, samples were collected from one turtle and its environment in a sick person's home in Illinois for testing. The turtle was purchased from a souvenir shop. WGS performed by the Illinois Department of Public Health Laboratory showed the *Salmonella* Poona on the turtle and its environment were the same as the bacteria from sick people.

Twenty-six people in both outbreaks reported purchasing or receiving these small turtles from a variety of locations*:

- Souvenir shops, 7 (27%)
- Street vendors, 6 (23%)
- Online retailers, 5 (19%)
- Received as gift, 3 (12%)
- Flea market, 2 (8%)
- Swap meets, 1 (4%)
- Pet stores, 1 (4%)
- Social media, 1 (4%)

*percentages do not total 100 because of rounding

A common turtle supplier to these locations was not identified.

Public Health Actions

Although these investigations have ended, CDC always advises that you take steps to stay healthy around your pet turtle: wash your hands, play safely, and keep supplies and the pet area clean.

Do not buy small turtles with shells less than 4 inches long. A federal law bans the sale and distribution of these turtles as pets.