

Salmonella Outbreaks Linked to Small Turtles



Investigation Notice

Posted September 29, 2021

This outbreak investigation is over. However, turtles of any size can still carry *Salmonella* germs that can make you sick. Do not buy turtles with shells less than 4 inches long, and always take steps to stay healthy around your pet turtle.

Fast Facts

- Illnesses: 87
- Hospitalizations: 32
- Deaths: 1
- [States](#): 20 and the District of Columbia
- Investigation status: Closed

Turtles and *Salmonella*

Pet turtles can carry *Salmonella* germs in their droppings even if they look healthy and clean. These germs can easily spread to their bodies, tank water, and anything in the area where they live and roam.

You can get sick from touching your turtle or anything in its environment and then touching your mouth with unwashed hands and swallowing *Salmonella* germs.

What You Should Do

Always take these steps to [stay healthy around your pet turtle](#):

- **Wash your hands**
 - Always wash your hands thoroughly with soap and water right after touching, feeding, or caring for your turtle and after cleaning its habitat.
 - Make sure young children wash their hands properly. Almost half of the people in these outbreaks were children under the age of 5.
- **Play safely**

- Don't kiss or snuggle your turtle, and don't eat or drink around it. This can spread *Salmonella* germs to your mouth and make you sick.
- Keep your turtle out of your kitchen and other areas where you eat, store, or prepare food.
- **Keep things clean**
 - Clean all of your turtle supplies while you are outside the house, if possible. Supplies include tanks, toys, and feeders.
 - If you clean the supplies while you are indoors, don't clean them in the kitchen or other areas where you eat or prepare food. Use a laundry sink or bathtub, and thoroughly clean and disinfect the area right after.

If you decide pet turtles are not the right fit for your family:

- **Don't release your turtle outside**
 - Call your local reptile rescue, animal shelter, or pet store for options about safely rehoming your turtle.
 - Releasing pets into the wild can disrupt wildlife and may be prohibited by law in certain states.

If you are thinking of getting a pet turtle:

- **Do not buy small turtles with shells less than 4 inches long.**
 - A [federal law](#) bans the sale of these small turtles. However, many people in these outbreaks had contact with small turtles. Small turtles are sometimes sold illegally as pets via online retailers and at pet stores, flea markets, and roadside stands.
- **Purchase or adopt pet turtles from reputable pet stores or pet rescues.**
 - Reputable pet stores do not sell small turtles with shells less than 4 inches long.
 - Ask the store or rescue if they have any tips on how to stay healthy around pet turtles and prevent getting sick from *Salmonella*.
- **Pick the right pet for your family.**
 - Pet turtles are not recommended for households with people at higher risk of getting severely ill. Consider picking a different pet if your household has someone who is younger than 5, aged 65 or older, or has a weakened immune system.

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What Businesses Should Do

- **Do not sell or distribute turtles with shell lengths less than 4 inches.**
 - The U.S. Food and Drug Administration [bans](#) the sale and distribution of small turtles. Follow federal, state, and local regulations regarding the sale and distribution of turtles.
 - Turtle farms should review their customer list to ensure customers are not selling small turtles as pets.
- **Educate customers** about how to stay healthy around turtles.
 - This [poster](#) provides information on how to stay healthy around turtles.
 - Consider putting the poster right by the turtle area and giving a copy to customers who are buying turtles.
- **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](#).

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.
- For more information about *Salmonella*, see [the *Salmonella* Questions and Answers page](#).

Investigation Details

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September 29, 2021

In December 2020, CDC and public health officials in several states began collecting [different types of data](#) to investigate a multistate outbreak of *Salmonella* Typhimurium infections. In April 2021, CDC and state officials began investigating a multistate outbreak of *Salmonella* Poona infections.

Epidemiologic, laboratory, and traceback data show that contact with small turtles made people in both outbreaks sick.

As of September 29, 2021, both outbreaks are over.

Epidemiologic Data

A total of 87 people infected with the outbreak strains of *Salmonella* Typhimurium (43 people) or *Salmonella* Poona (44 people) were reported from 20 states and the District of Columbia (see [map](#)). Illnesses started on dates ranging from August 27, 2020, to July 30, 2021 (see [timeline](#)).

Sick people ranged in age from less than 1 to 85 years, with a median age of 6, and 39 (45%) people were children under the age of 5. Of all sick people, 44 (52%) were female. Of 74 people with information available, 32 (43%) were hospitalized. One death was reported from Pennsylvania.

State and local public health officials interviewed people about the animals they came into contact with the week before they got sick. Of the 63 people who provided this information, 48 (76%) reported contact with pet turtles. Of the 33 people who reported the size of their pet turtle, 27 (82%) reported contact with pet turtles with shells less than 4 inches long.

Laboratory Data

Public health investigators used the [PulseNet](#) system to identify illnesses that were part of this outbreak. 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 \(WGS\)](#).

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

On January 29, the Pennsylvania Department of Health collected samples from a turtle habitat in a sick person's home for testing and found the outbreak strain of *Salmonella* Typhimurium. On May 4 and May 6, the Los Angeles County Department of Public Health and Orange County Health Care Agency in California collected samples from sick people's turtles and turtle habitats for testing and found the outbreak strain of *Salmonella* Poona. These testing results mean that people likely got sick from touching small turtles or things in their habitat.

WGS of bacteria from both outbreaks, including 85 samples from sick people, 3 samples from turtles, and 6 samples from turtle habitats, did not predict any antibiotic resistance. CDC's [National Antimicrobial Resistance Monitoring System \(NARMS\)](#) laboratory also conducted standard [antibiotic susceptibility testing](#) on bacteria from 7 people's samples and found no resistance.

Traceback Data

Sick people in both outbreaks reported getting their turtles from various places, including pet stores, roadside vendors, flea markets, and online stores. However, collecting purchase records is often difficult in outbreaks linked to small turtles because selling and distributing small turtles domestically is [illegal](#). Sellers often move around and do not release information on where turtles were purchased.

For the *Salmonella* Typhimurium outbreak, some people reported purchasing turtles smaller than 4 inches from pet stores. Two pet stores reported their turtles were supplied by Turtles & Tortoises Inc., a turtle farm in Florida. This turtle farm may not explain all of the illnesses in that outbreak. For the *Salmonella* Poona outbreak, a source of turtles was not identified.

Public Health Actions

CDC and state officials notified pet stores that were reported by sick people and turtle farms, including Turtles & Tortoises Inc., that they should not sell turtles with shell lengths under 4 inches as pets. Pet stores and turtle farms were also encouraged to educate customers about *Salmonella* risks from pet turtles.