

Zoonotic Disease: News You Can Use

October 2017



Multistate Outbreak of *Salmonella* Agbeni Infections Linked to Pet Turtles, 2017

The Centers for Disease Control and Prevention (CDC) and several states are investigating a multistate outbreak of human *Salmonella* infections linked to contact with pet turtles.

As of August 29, 37 people infected with the outbreak strain of *Salmonella* Agbeni have been reported from 13 states including one from New Jersey. Illnesses started on dates ranging from March 1, 2017 to August 3, 2017 and 32% of the 37 ill people were children 5 years or younger.

Epidemiologic and laboratory findings link the outbreak of human *Salmonella* Agbeni infections to contact with turtles or their environments, such as water from a turtle habitat.

Interviews conducted with 33 of the 37 ill people or family members revealed that 48% were hospitalized and 45% reported contact with turtles or their environments before getting sick. More than half of the people who were re-interviewed reported buying the turtle from a flea market, street vendor, or receiving the turtle as a gift. Samples that were tested and analyzed from turtles and turtle habitats were found to be linked to the human samples that were tested as part of this outbreak of *Salmonella* Agbeni infections.

Concerns over illness linked to people handling small turtles (i.e., shell less than four inches) has not been limited to the outbreak described above. From 2011 to 2013, eight outbreaks occurring across several states caused illnesses in 473 persons. More than 75% of cases were in children less than 10 years of age with many reporting turtle contact before they became ill. Several other outbreaks linked to small turtles occurred in 2015 with a total of 133 individuals reporting illness. The majority of cases, approximately 55%, reported contact with turtles before becoming ill and 41% of these cases were in children less than 5 years of age.

Investigators continue to see outbreaks linked to small turtles every year. Therefore, CDC works very closely with several federal agencies and state and local health officials to educate consumers and prevent illness. In investigations like these, partners at the state and federal level conduct traceback investigations, regulate the sale, and investigate farms and distributors. CDC recommends that turtles, reptiles and amphibians should not be kept in households with children less than 5 years of age, older adults (65 years and older) and people with weakened immune systems.

Reptiles, Amphibians and *Salmonella*

Salmonellosis is most commonly associated with consumption of raw and undercooked food. However, did you know that reptiles and amphibians such as turtles, lizards, frogs, and snakes can carry *Salmonella*, the bacteria that causes Salmonellosis? Children under the age of 5 years, older adults and those with weakened immune systems are at higher risk for more severe infections. Special considerations should be made before making a reptile or amphibian a family pet.



Sale of turtles in New Jersey

Because of the risk of infection, the Food and Drug Administration has banned the sale and distribution of turtles with shells less than 4 inches long as pets since 1975. In New Jersey, the sale or distribution of turtles of *any size* is prohibited; although, the Commissioner of Health may waive the ban of live turtles with shells 4 inches or greater if they are sold or distributed for the purposes of research, other zoological purposes, or for food. Turtles should not be purchased as pets or given as gifts.

How do people get *Salmonella* infections from reptiles and amphibians?

Reptiles and amphibians may carry *Salmonella* on their bodies, even when they appear healthy and clean. Anything they touch can be contaminated. The bacteria can get on cages, aquariums, terrariums and the water in which reptiles and amphibians live or swim. People become infected with *Salmonella* by hand to mouth contact. Usually, this happens when people handle reptiles or amphibians or their feces and then accidentally touch their mouths or forget to wash their hands before eating or drinking. It is important to thoroughly wash your hands immediately after contact since the germs can easily spread to other people or things.



What are the signs and symptoms of *Salmonella* infections?

Salmonella can cause diarrhea, vomiting, stomach cramps, and fever. Most people develop symptoms 1 to 3 days after exposure. The illness usually lasts 4 to 7 days and most people recover without treatment. If you or a family member develop diarrhea, fever, or other signs of illness after contact with a reptile or amphibian, contact a healthcare provider explain the reptile or amphibian exposure. Infants, older adults, and those with weakened immune systems can become very ill and may require hospitalization.

Advice for Pet Owners:

Reptiles and amphibians are not good pets for children under 5 years old, older adults, or those with weakened immune systems.

- Do not purchase turtles of any size or give them as gifts.
- Turtles and other reptiles should not be kept in child care centers, schools, or other facilities with children younger than 5 years.
- When cleaning the reptile's or amphibian's habitat:
 - Wear gloves and if possible, clean the habitat outside of the house away from gardens, crops and drinking water; clean the habitat in an area that is not frequently accessed by children, elderly or people with weakened immune systems.
 - If the habitat must be cleaned indoors, avoid cleaning in areas used for food or drink preparation.
 - After cleaning the habitat, remove and discard your gloves and thoroughly wash your hands.
 - Children under 5 years old should not be allowed to clean the reptile's or amphibian's habitat.
- Do not allow turtles to roam freely in the home or living area, especially in food or drink preparation areas.
- Wash hands thoroughly with soap and water immediately after handling turtles or anything in the area where they live or roam, or after contact with pet feces (droppings). Do not touch your face, other people, or any surface until hands have been washed.

Options for Unwanted Turtles:

Do not release unwanted turtles into the wild. Many pet stores, local animal shelters, zoos or turtle rescue groups accept unwanted turtles. Talk to your veterinarian about other options.

Advice for Healthcare Providers:

Healthcare providers should ask patients and patient caregivers about pet and animal ownership and should provide education about the risks of acquiring salmonellosis from pet reptiles and amphibians. Proper handwashing practices should also be emphasized.

Advice for Veterinarians:

Veterinarians can offer education to reptile and amphibian owners on the risks of acquiring salmonellosis from these animals and how to safely clean the animal habitat.

Resources and Additional Information: NJDOH Communicable Disease Service Phone: (609) 826-5964

- [Healthy Pets Healthy People, Reptiles and Amphibians](#)
- [Infographic: The Trouble with Tiny Turtles](#)
- [Turtles Kept as Pets](#)
- [Poster: After you touch amphibians or reptiles, wash your hands so you don't get sick!](#)
- [Public Health Law: State Turtle-Associated Salmonellosis](#)