

# ***Salmonella* Infections Caused by Reptiles and Amphibians in Childcare Centers**

[Announcer] *This program is presented by the Centers for Disease Control and Prevention.*

[Tracey Hodges] Hello, I'm Tracey Hodges and today I'm talking with Dr. Neil Vora, who is an EIS Officer at CDC. Our conversation is based on his article about *Salmonella* infections in childcare centers caused by reptiles and amphibians, which appears in CDC's journal, *Emerging Infectious Diseases*. Welcome, Dr. Vora.

[Neil Vora] Thank you for having me. I'm happy to be here.

[Tracey Hodges] Dr. Vora, your article talks about animals in childcare centers. Can you tell us which animals should not be kept in childcare centers?

[Neil Vora] While animals provide many wonderful opportunities for education in a childcare center classroom, some animals put children at a higher risk for serious illness. Animals are a great educational tool for children, but it's important to select an appropriate class pet. Based on the age of the children, the pet or animal should be one that the children can safely interact with. Incidentally, this also applies to selecting a household pet.

[Tracey Hodges] What are some examples of risky animals and what makes them so risky?

[Neil Vora] Reptiles, like turtles, lizards, and snakes, and amphibians, like frogs and salamanders, commonly carry a type of germ called *Salmonella*. *Salmonella* germs can be found in the droppings of reptiles and amphibians, even if the animals appear healthy and clean. The germs can easily contaminate the bodies of these animals, and the water in tanks or aquariums where these animals live. These germs can spread to people and make them sick.

[Tracey Hodges] Dr. Vora, what happens when someone gets infected with *Salmonella*?

[Neil Vora] *Salmonella* is a type of bacteria or germ. People who become infected with *Salmonella* typically develop illness, including diarrhea, fever, and abdominal cramps. *Salmonella* infection can also cause serious illness, including brain, joint, or bloodstream infections.

[Tracey Hodges] Are certain people more likely to get a serious illness? What can be done to help protect them?

[Neil Vora] Yes, children younger than five years of age, people with weakened immune systems, and older adults are at particularly high risk for serious illness with *Salmonella*. This is why it's particularly important that pets or animals carrying *Salmonella* are not kept in day care centers.

Because of this high risk of serious illness, the CDC, the American Academy of Pediatrics, the National Association of State Public Health Veterinarians, as well as other organizations, have issued recommendations that reptiles and amphibians should not be kept in childcare facilities.

It's important to note that the CDC recommendations also apply to households with children younger than five years. There are many other animals that are safer and more appropriate to have in childcare centers. And you should also know that reptiles and amphibians should not be kept in other facilities, such as nursing homes, where there are people also at increased risk of severe infection.

[Tracey Hodges] Are people aware of the fact that reptiles and amphibians can spread *Salmonella* to people?

[Neil Vora] During outbreak investigations where disease detectives link illnesses with reptiles or amphibians, many of the sick people involved in the outbreaks say that they had no idea that these animals could carry germs that could make them sick.

[Tracey Hodges] In your article, you also talk about small turtles, and how they often spread *Salmonella*. What should people know about small turtles?

[Neil Vora] Small turtles have been making people sick for decades. Dozens of outbreaks, especially involving young children, have been linked to contact with small turtles, as well as other reptiles and amphibians. Since 2006, CDC has received reports of 11 multistate outbreaks, including six ongoing outbreaks, and more than 635 cases of laboratory-confirmed *Salmonella* infections linked to contact with small turtles and their habitats. These illnesses resulted in at least 109 hospitalizations and one death in an infant.

[Tracey Hodges] I'm curious to know if there are any laws or regulations to protect children from getting *Salmonella*?

[Neil Vora] Because of the high risk of *Salmonella*, selling small turtles with a shell less than four inches in length has been banned by the US Food and Drug Administration, or better known as the FDA, in the United States, since 1975. Despite the FDA's ban, small turtles continue to be sold in a variety of venues, including stores, flea markets, fairs, and from roadside or street vendors, and they continue to cause illness. The number of people getting *Salmonella* from reptiles would likely be higher without the ban on the sale of small turtles that has been in place for so many years.

[Tracey Hodges] Dr. Vora, how can people avoid getting *Salmonella* infections from other reptiles or amphibians?

[Neil Vora] There are some simple steps that can be taken to protect yourself and your loved ones from illness. One of the best ways is through thorough hand washing with soap and water. People should wash their hands thoroughly with soap and warm water immediately after touching reptiles or amphibians or anything in the area where they live and roam. Adults should always supervise hand washing for young children.

Don't let reptiles or amphibians roam freely throughout the house or in areas where food or drink is prepared, served, or stored, such as kitchens, pantries, or outdoor patios. Clean up the habitats outside the home. Use disposable gloves when cleaning and do not dispose of water that has

been in contact with reptiles or amphibians, or their habitats, in sinks used for food preparation or for obtaining drinking water. More information can be found online at [cdc.gov/salmonella](http://cdc.gov/salmonella).

[Tracey Hodges] Thank you, Dr. Vora. I've been talking with Dr. Neil Vora about his article, *Reptile- and Amphibian-associated Salmonellosis in Childcare Centers, United States*, which appears in the December 2012 issue of the CDC's journal, *Emerging Infectious Diseases*. You can see the entire article online at [cdc.gov/eid](http://cdc.gov/eid).

If you'd like to comment on this podcast, send an email to [eideditor@cdc.gov](mailto:eideditor@cdc.gov). I'm Tracey Hodges, for *Emerging Infectious Diseases*.

[Announcer] For the most accurate health information, visit [www.cdc.gov](http://www.cdc.gov) or call 1-800-CDC-INFO.