Pet Turtles: Cute But Contaminated with *Salmonella*

he little glassy-eyed creatures may look cute and harmless, but small turtles can make people very ill. Turtles commonly carry bacteria called *Salmonella* on their outer skin and shell surfaces.

People can get Salmonella by coming in contact with

- turtles or other reptiles (lizards, snakes)
- amphibians (frogs, salamanders, newts)
- the habitats of reptiles or amphibians, like cages, tanks and aquariums)

Salmonella can cause a serious or even life-threatening infection in people, even though the bacteria do not make reptiles or amphibians sick. An example is the 2007 death of a four-week-old baby in Florida linked to Salmonella from a small turtle. The DNA of the Salmonella from the turtle matched that from the infant.

People infected with *Salmonella* may have diarrhea, fever, stomach pain, nausea, vomiting, and headache. Symptoms usually appear 6 to 72 hours after contact with the bacteria and last about 2 to 7 days. Most people recover without treatment, but some get so sick that they need to be treated in a hospital.



Centers for Disease Control and Prevention

Because young children are more vulnerable to the effects of *Salmonella*, since 1975, FDA has banned the sale of turtles with a shell less than four inches long.

All reptiles and amphibians are commonly contaminated with Salmonella. But it is the small turtles that most often are put in contact with young children, where consequences of infection are likely to be severe.

Who Is at Risk?

Anyone can get *Salmonella* infection, but the risk is highest in

- infants
- young children
- elderly people
- people with lowered natural resistance to infection due to pregnancy, cancer, HIV/AIDS, diabetes, and other diseases

"All reptiles and amphibians are natural carriers of Salmonella," says Vic L. Boddie II, Ph.D., a Consumer Safety Officer in the Food and Drug Administration's (FDA's) Center for Veterinary Medicine. "And unfortunately, if children come in contact with small turtles and become ill, they tend to get more severely sick than a healthy adult would." Because of this health risk, since 1975, FDA has banned the sale of small turtles with a shell less than four inches long.

"Young children find very creative ways to infect themselves," says Boddie. "They often put the small turtles in their mouths, touch the turtles, or even put their fingers in the turtle tank water and then into their mouths. Also, reptile tanks and equipment are sometimes cleaned in the kitchen sink, often cross-contaminating food and eating utensils."

Surfaces such as countertops, tabletops, bare floors, and carpeting can also become contaminated with the bacteria if the turtle is allowed to roam on them. The bacteria may survive for a long period of time on these surfaces.

Infection From Turtles and Frogs on the Rise

Infectious disease specialists estimate that banning small turtles prevents

100,000 Salmonella infections in children each year in the United States. But disturbingly, Salmonella infections from these animals still occur because some pet shops, flea markets, street vendors, and online stores still sell small turtles.

From May 23, 2011, to May 6, 2013, the Centers for Disease Control and Prevention (CDC) received reports of 391 Salmonella-related illnesses in 40 states and the District of Columbia, most of whom were children. Fortunately, there were no deaths. However, 63 people were so sick that they needed to be hospitalized. The investigation showed that shortly before most of the people became ill, they were exposed to a turtle by touching, feeding, cleaning the habitat, or changing the water in the tank. More specifically, six persons got sick after purchasing and handling small turtles from a souvenir shop, while others became ill and needed to be hospitalized from handling turtles purchased from a street vendor.

In many cases, health officials were able to link the *Salmonella* strains that caused the outbreak to strains that were found on many of the turtles (or their habitats) that belonged to the people who became ill.

More recently, frogs were named as the source of a *Salmonella* outbreak. As of July 18, 2011, CDC has received reports of 241 individuals in 42 states who were infected with *Salmonella* associated with water frogs, including African dwarf frogs. Water frogs commonly live in aquariums or fish tanks. Since 2009, there have been two major outbreaks associated with water frogs. These outbreaks generally affected children, requiring some infected individuals to be hospitalized.

Advice for Consumers

- Don't buy small turtles or other reptiles or amphibians for pets or as gifts.
- If your family is expecting a child, remove any reptile or amphibian from the home before the infant arrives.
- Keep reptiles and amphibians out of homes with children under 5 years old, the elderly, or people with weakened immune systems.
- Do not clean aquariums or other supplies in the kitchen sink. Use bleach to disinfect a tub or other place where reptile or amphibian habitats are cleaned.
- Always wash hands thoroughly with soap and water after touching any reptile or amphibian, its housing, or anything (for example, food) that comes in contact with the animal or its housing.
- Be aware that *Salmonella* infection can be caused by contact with reptiles or amphibians in petting zoos, parks, child day care facilities, or other locations.
- Watch for symptoms of Salmonella infection, such as diarrhea, stomach pain, nausea, vomiting, fever, and headache. Call your doctor if you or your family have any of these symptoms.

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