

SALMONELLA IN REPTILES: AN EMERGING DISEASE ISSUE

Some of you may remember the popularity of small turtles as pets—you know, the ones with the plastic container with the plastic palm tree in the center? The sale and distribution of those animals was banned by law in 1975 because of the problem of salmonella being transmitted to humans, especially children. The ban is estimated to have prevented approximately 100,000 cases of salmonellosis annually. The issue is arising again, this time with reptiles in general, especially iguanas. Reptiles are gaining in popularity as pets. Iguanas appear to be particularly popular, probably because they are relatively inexpensive, and are vegetarians making them relatively easy to care for.

The centers for Disease Control and Prevention (CDC) has been studying the issue of salmonella in reptiles. Below are summarized some of the highlights about this issue from CDC and other experts along with recommendations from CDC about keeping reptiles as pets.

- Most reptiles sold in the United States are wild caught and imported into this country.
- A high proportion of reptiles are symptomatic carriers of Salmonella. Fecal carriage rate can be more than 90%.
- Attempts to culture reptiles are sometimes not successful because of intermittent shedding. Treatment of reptiles with antibiotics has been unsuccessful and has led to increased antibiotic resistance.
- Numerous salmonella cases in humans have now been traced to reptiles. CDC estimates that 3-5% of the 2-6 million human salmonellosis cases each year may be attributed to reptiles.
- Direct contact with a reptile is not necessary. Environments may become contaminated leading to transmission, and people handling reptiles may transmit salmonella to others. The salmonella organism can reportedly remain viable in the environment for up to 30 months. Due to how reptiles are often housed (in aquariums), reptiles are likely to have fecal material anywhere on their body. Any time you touch a reptile, you are probably touching reptile feces. Anytime you let a reptile walk around on the carpet, you may be contaminating the environment.
- Salmonellosis can be a serious disease, especially in infants and young children. Complications can be severe and may include septicemia and meningitis.

CDC Recommendations for Preventing Transmission of Salmonella From Reptiles to Humans

1. Persons at increased risk for infection or serious complications of salmonellosis (e.g., pregnant women, children aged < 5 years, and immunocompromised persons such as persons with AIDS) should avoid contact with reptiles.
2. Reptiles should not be kept in child-care centers and may not be appropriate pets in households in which persons at increased risk of infection reside.
3. Veterinarians and pet storeowners should provide information to potential purchasers and owners of reptiles about the increased risk of acquiring salmonellosis from reptiles.
4. Veterinarians and operators of pet stores should advise reptile owners always to wash their hands after handling reptiles and reptile cages.
5. To prevent contamination of food-preparation areas (e.g., kitchens) and other selected sites, reptiles should be kept out of these areas. In particular, kitchen sinks should not be used to bathe reptiles or to wash reptile dishes, cages, or aquariums.

At this point, CDC is taking an educational approach to the problem of salmonellosis associated with reptiles, rather than seeking legislation to ban the sale and distribution of reptiles as was done with small turtles. Veterinarians are an integral part of this educational process. Just as we advise owners of dogs and cats about zoonotic diseases, especially when there are children in the home, so should we also advise our clients about salmonellosis in reptiles. We urge you to be especially vigilant in providing appropriate recommendations to childcare centers, particularly when young children are involved.

MVMA Zoonotic Disease Committee prepared this article. If you have questions or would like further information, please contact Dr. Mary Grace Stobierski at the Michigan Department of Public Health or Dr. Steve Halstead at the Michigan Department of Agriculture.