

## Reptile-associated Salmonellosis

*Disease Fact Sheet Series*

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### **What is reptile-associated salmonellosis?**

Reptile-associated salmonellosis is a bacterial infection caused by *Salmonella* bacteria that are acquired through contact with reptiles. During the 1970's there were large numbers of cases of salmonellosis associated with small turtles, which led to a ban on their sale and resulted in decreases in salmonellosis cases. A recent trend toward owning imported reptiles, especially iguanas and snakes, has resulted in increasing reports of reptile-associated salmonellosis cases in the U.S.

### **Who gets reptile-associated salmonellosis?**

Any person can get reptile-associated salmonellosis, but it is more common in children, especially those under 3 years old.

### **What is special about reptiles and salmonellosis?**

Most reptiles are carriers of *Salmonella* even though they seem healthy. Antibiotic medication will not eliminate the bacteria in reptiles and may result in *Salmonella* bacteria that become resistant to antibiotics. When resistant bacteria are transferred to humans, the treatment of serious infections becomes more difficult.

### **How serious is the problem of reptile-associated salmonellosis?**

Many states have reported *Salmonella* infection in persons who had direct or indirect contact with a reptile. In some cases the bacteria caused serious bloodstream infection, bone infection or invaded the central nervous system requiring lengthy hospitalization and some cases have been fatal in infants. The CDC estimates that there are between 50,000 to 80,000 cases of reptile-associated salmonellosis annually in the U.S.

### **How are salmonella bacteria spread?**

Reptile-associated salmonellosis bacteria are spread by direct or indirect contact with fecal material from reptiles. The bacteria are also commonly found on the skin of reptiles. It may be spread indirectly, especially to children in the household, by handling the reptile or by touching surfaces or objects that had come into contact with a reptile.

### **What are the symptoms of reptile-associated salmonellosis?**

People infected with *Salmonella* may experience mild to severe diarrhea, abdominal pain, fever, and occasionally vomiting for several days. Bloodstream infections can be life threatening, especially in very young children, the elderly, or in persons with weakened immune systems.

### **How soon after exposure do symptoms appear?**

The symptoms may appear from 12-72 hours after exposure, but usually within 18-36 hours after exposure.

### **Where is reptile-associated salmonellosis found?**

There is a potential for reptile-associated salmonellosis to occur wherever people are exposed to reptiles or to persons and surfaces that were contaminated by reptiles. Any reptile can carry the *Salmonella* bacteria.

**For how long can an infected person shed *Salmonella* in their stool?**

The time period that a person can have *Salmonella* in their stool (after symptoms cease) is variable, usually several days to several weeks. During this time, the person can transmit the infection to others. Less commonly, infected persons can carry *Salmonella* for months, especially infants or people who have been treated with antibiotics. About 1% of infected adults and 5% of infected children under 5 years old shed *Salmonella* in their stool for over a year.

**What is the treatment for reptile-associated salmonellosis?**

Most people with salmonellosis will recover without antibiotic treatment. In severe cases, fluids may be needed to prevent dehydration. Antibiotics and anti-diarrheal drugs such as Imodium<sup>®</sup> and Lomotil<sup>®</sup> are not recommended for persons with intestinal infections. If *Salmonella* infection involves the blood or other non-intestinal tissues, antibiotic therapy is indicated.

**How can reptile-associated salmonellosis be prevented?****(Current CDC recommendations)**

- Persons should always wash their hands thoroughly with soap and water after handling reptiles or reptile cages.
- Persons at increased risk for infection or serious complications of salmonellosis (e.g., children less than 5 years old and persons with weakened immune systems) should avoid contact with reptiles.
- Pet reptiles should be kept out of households where children less than 5 years old or persons with weakened immune systems reside. A family expecting a new child should remove the pet reptile from the home before the infant arrives.
- Pet reptiles should not be kept in daycare centers.
- Pet reptiles should not be allowed to roam throughout the home or living area.
- Pet reptiles should be kept out of kitchens and other food-preparation areas to prevent contamination. Kitchen sinks should not be used to bathe reptiles or wash their dishes, cages, or aquariums. If bathtubs are used for these purposes, they should be cleaned thoroughly and disinfected with bleach after use.

Pet store owners, veterinarians, and pediatricians should provide information to owners and potential purchasers of reptiles about the risk for acquiring salmonellosis from reptiles.