

Salmonellosis in Reptiles

What is salmonellosis?

Salmonellosis is term applied to infection with any number of bacteria that belong to the group Salmonella. The most common symptoms are sudden start of headache, stomach pain, diarrhea, nausea, vomiting and fever. Infants and the elderly easily can become dehydrated. Infection can spread into the blood stream and other body sites can become involved in the infection. Deaths are uncommon, except in the very young, the very old, the debilitated and the immunosuppressed.

How does one acquire salmonellosis?

The bacteria are taken in through the mouth from contaminated food, water, or human/animal poop. Infected people or animals can be the source of the bacteria. A variety of pets and wild animals can hold these bacteria in their intestines.

Do reptiles get salmonellosis?

Yes. The association of salmonellosis and reptiles is a very ancient one in fact. Almost any type of reptile can be naturally infected. Among reptiles the bacteria can be passed on by infection of the eggs, through food, contact with other reptiles, and by eating poop (a typical baby behavior that helps establish normal intestinal bacteria). The bacteria rarely are linked with illness in reptiles, and a state of lifetime carriage and intermittent shedding of the bacteria results.

Humans become infected through handling reptiles, cleaning their enclosures, contact with water contaminated with reptile feces, and by use of reptile by-products in folk medicine, like rattlesnake capsules.

How often do people become infected from reptile salmonellosis?

During the 1960s and 1970s, public health authorities worked to stop the trade in pet turtles/tortoises because of the estimated 300,000 cases of salmonellosis in children attributed to contact with these small reptiles and their maintenance water. In recent years, iguanas have become the reptile pet of choice and are the source of an increasing number of salmonellosis cases among people. Deaths have occurred in young children as a result of salmonellosis acquired from iguanas.

Can you treat a reptile to rid it of salmonellosis?

Antibiotic treatment of infected reptiles does not result in cure, but rather the growth of

antibiotic resistant Salmonella. However, many importers of iguanas treat these animals to 'sterilize' their intestines and 'improve coloration', or so they say, but instead this practice probably increases the resistance of the bacteria to antibiotics.

Who should avoid contact with reptiles?

The following categories of people should avoid all contact, direct or indirect, with any reptile as the risks of serious, symptomatic infection with Salmonella are greatly increased.

- infants and children up to 5 years of age
- anyone with HIV/AIDS or other immunodeficiency diseases
- anyone who has had transplant surgery and is on anti-rejection therapy
- anyone who is on any drug that suppresses/alters immune function including: steroids, cancer chemotherapy, biological response modifiers and others
- anyone receiving radiation therapy
- due to the risk to the fetus women who are pregnant
- elderly, frail or people with poor nutritional status

What can I do to protect myself from getting salmonellosis from a reptile?

Good hygienic practices can lower the chances of passing Salmonella between reptiles and humans.

- after handling any reptile be sure to wash hands with soap and hot water, wash thoroughly for at least 30 seconds; an antibacterial soap is preferable (washing with water only is ineffective in eliminating Salmonella)
- keep reptiles out of kitchens and away from any surfaces where human food is stored, prepared or served
- do not use kitchen sinks to clean reptile accessories or caging materials
- do not touch food for human consumption after handling any reptile or their accessories
- do not touch dishes, pots, pans and other utensils used for human food after touching any reptile or their accessories
- keep reptile enclosures, water/food bowls and surfaces as clean as possible
- do not permit unsupervised handling of reptiles by children under 12 years of age
- teach children to wash hands thoroughly after handling any reptile
- do not handle any reptile or their caging materials with open cuts on ones hands, unless such cuts are well covered with dressings; rubber gloves are recommended
- when washing reptile enclosures/accessories avoid splashes to the face; if splashing and frequent handling is unavoidable consider wearing goggles and face-mask protection as well as surgical gloves

- do not use bathrooms or shower stalls for reptile related operations unless thoroughly disinfected afterwards
- talk to a pharmacist, physician, veterinarian or other health or pet care professional for advice on soaps and other products useful for disinfecting hands and surfaces
- disinfectant soaps, pump sprays or similar products should be carried whenever reptiles are going to be handled in the field, at swap meets or other locations where there may not be hand washing facilities

While some of the recommendations above seem very common sense, it surprising how many infections in children result from the reptile handler washing the animal's enclosure or accessories in a sink or other basin in a room used for preparing food or even bathing a child in the same basin that is used to wash the reptile or its related equipment.

Should reptiles be kept in a classroom or day care center?

Reptiles should not be kept in any childhood day care center. If reptiles are kept in school classrooms they should not be handled unless appropriate hand washing and clean-up facilities are available and made available to children and staff. The animals should not be allowed to wander around homes or classrooms, but should be confined to an enclosure appropriate for the species.