

Diseases That Can Be Transmitted from Reptile Pets to Humans

Our topics for this week are::

- **Captive-bred reptile diseases transmitted to humans**
- **Reptile pets and children**
- **Prevention of reptile disease transmission**

Other than bites and claw wounds, the only zoonotic disease of great significance from captive-bred reptiles in the United States is salmonellosis. There is a high degree of risk of acquiring salmonellosis from reptiles, including those that appear healthy. The morbidity and mortality of salmonellosis can be high, particularly in humans who are young, elderly, or otherwise have impairment of their immunity. Reptiles captured in the wild, particularly if the reptile is an exotic species, can have many other zoonoses.

Reptiles can carry salmonella bacteria in their digestive tract without symptoms. Infected humans can have diarrhea, vomiting, and fever if confined to the gastrointestinal system. Invasion of the blood stream may occur and result in sepsis, abscesses in various organs, and meningitis. Children, elderly, and immunocompromised people are at higher risk of infection.

Children less than 5-years-old should not handle reptiles, and households with children under 1-year-old should not keep reptiles in the house. The U.S. Centers for Disease Control and Prevention estimate that more than 70,000 people in the U.S. acquire salmonellosis from reptiles each year. Pet reptiles may be the cause for 5-11% of human salmonellosis in the U.S. Transmission is by direct contact with the reptile or objects or surfaces which they have touched. Salmonella can remain infective on objects and surfaces for days and even longer in wet wooden enclosures. The risk of salmonellosis is greatest with aquatic reptiles that defecate in water. Federal regulations ban the sale of turtles with shells less than four inches in length due to the risk of transmitting salmonellosis, especially to small children.

Edwardsiellosis is a disease of handlers' skin or digestive tract that can be acquired by exposure to reptile feces or feces contaminated water. Carrier reptiles can appear normal.

Campylobacteriosis can be transmitted to humans from reptiles, but there is no evidence it can be transmitted to healthy adults with a normal immune system.

Pentastomiasis (tongue worms) is a disease caused by respiratory worms of large exotic snakes. The worms pass eggs in snake feces and respiratory secretions which, if ingested by humans, will penetrate the intestines, become encysted and calcify. Eating under prepared snake meat can be a source of infection in addition to handling snakes. The incidence is primarily in wild caught snakes in foreign countries, but biopollution of tens of thousands of escaped Burmese pythons in Florida has become an important risk of pentastomiasis in the U.S.

Sanitary Practices

Reptile enclosures should not be located in or near human food preparation or storage areas. Enclosures should be spot cleaned daily with a thorough cleaning on a regularly scheduled basis. Cleaning should include disinfection with 5% bleach (sodium hypochlorite) followed by thorough rinsing before reintroducing the animal. Phenol or pine scent disinfectants should be avoided. All cleaning equipment such as sponges, buckets, and sinks should be cleaned and disinfected. Cleaning reptile enclosures should not involve soaking in bathtubs, basins, or laundry sinks. When cleaning reptile enclosures, gloves and protective glasses or goggles should be worn. Reptiles should not be allowed to roam freely in a home or living area, and they should be kept out of food preparation areas.

A handler of reptiles should wear appropriate dress to protect against skin contamination with skin scales or saliva, urine, and other body secretions. Reptiles should never be fed by hand nor allowed near a human's face. Hands should be washed after handling any reptile or objects touched by the reptile. Handlers should not eat or drink while handling reptiles.

Young children, the elderly, pregnant women, and people with immunosuppressive diseases or on immunosuppressive medications should not handle reptiles due to risk of salmonellosis.

If you have comments or you're interested in particular animal handling subjects, contact us at CBC@BetterAnimalHandling.com

Now let's recap the key points to remember from today's episode:

- 1. Salmonellosis is the major disease that can be acquired from captive-bred reptiles.**
- 2. Young children, under 5 years of age, should not handle reptiles and households with children under 12 months of age should not have a reptile in the household.**
- 3. Water proof gloves and protective glasses or goggles should be worn during thorough cleaning and disinfection of reptile enclosures.**

More information on animal handling can be found in my books, *Animal Handling and Physical Restraint*, *Concise Textbook of Small Animal Handling*, and *Concise Textbook of Large Animal Handling* all published by CRC Press and available on Amazon and from many other fine book supply sources.

Additional information is provided at: www.betteranimalhandling.com . This website has more than 250 past podcasts with notes on handling of dogs, cats, other small mammals, birds, reptiles, horses, cattle, small ruminants, swine, and poultry.

Don't forget, serious injury or death can result from handling and restraining some animals. Safe and effective handling and restraint requires experience and continual practice. Acquisition of the needed skills should be under the supervision of an experienced animal handler.