



# CAL ZOO'S REFERENCE SHEET



## REPTILE ASSOCIATED SALMONELLA

California Zoological Supply was established in 1977 and is one of the nation's largest import/export companies of live, non-poisonous reptiles. We would like to bring to your attention a fact about reptiles. You may have read articles recently in your newspapers or seen on the TV news that there is an increase in reports concerning the salmonella bacteria in reptiles (particularly in Green Iguanas). If carrying the salmonella bacteria, reptiles have the potential of transmitting it to your other pets, or you. We would like to help in any way we can to reduce the risk of contracting or transmitting the salmonella bacteria. We have prepared this care sheet specifically for that purpose, at the same time reassuring you reducing your risk of contracting the salmonella bacteria can be simple.

What is salmonella? Salmonella, named after its discoverer, Daniel Edward Salmon (1850-1914), is a microscopic one-celled organism called a bacterium, or germ, that is transmitted from one animal to another orally. Contamination starts through transmission of the bacteria via the fecal matter. Reptiles can live with the salmonella bacteria throughout their lives without any ill effects or symptoms. Stress and other factors will initiate release of the bacteria from reptiles. A healthy human adult may contract, carry and reject the salmonella bacteria without even knowing it. Many people will get diarrhea for a day or two and be through, thinking they just had the flu. However you can get very ill from salmonella. If you are under the care of a physician, particularly if you are taking certain medications, you should avoid handling reptiles. Others at high risk of contracting the salmonella bacteria are: Children are under the age of 5 years since their immune systems are not fully developed, those with weakened immune systems, pregnant women and the elderly. You cannot tell if your reptile is carrying the salmonella bacteria just by looking at it. Most reptiles appear healthy even with the salmonella bacteria in their systems. It is best to assume all of your reptiles are carrying the salmonella. You can continue to enjoy your reptile pets and avoid contracting the salmonella bacteria as long as you handle your reptiles responsibly and with common sense. We suggest you follow the guidelines listed below.

The number one precaution you can take is to spray your hands immediately, after handling reptiles or their enclosure, with Zoo Med's WIPE OUT 3 Antimicrobial Hand Cleaner, or wash your hands with plain soap and warm water for at least 30 seconds (or use anti-bacterial soap). WIPE OUT 3 is a simple spray-on and wipe-in cleaner which kills bacteria including salmonella. The second thing you can do is keep your cage clean. This includes the water (and water bowl), substrate (bedding), cage furniture, and of course, the cage itself. DO NOT clean cages or cage paraphernalia in areas where food is stored or prepared! We recommend you thoroughly clean your cages thoroughly once a week. (Keep in mind, these guidelines are for all of your reptiles whether they appear ill or not). Here is an overview covering the proper way to clean your cages. NOTE: Do not bathe reptiles or wash reptile items in the bathtub or sinks. Use a separate container for this.

1. Remove the animals and put them in a secure container with a well-ventilated lid. You may also take this opportunity to soak your pet. For snakes: Put in just enough fresh water to slightly cover the body height. This will allow the snake to rest its head on its coils. For lizards and turtles: Add enough fresh water to leave ½ - 1 inch of the body dry. This procedure will help prevent accidental drowning. The water temperature should be tepid (75 - 80°F). If you can detect any heat to the touch, the water temperature is too hot. (Be sure to disinfect this soaking container when you are finished soaking your pet).
2. Throw away the substrate (bedding). If you are using a "permanent" substrate such as cage carpet, artificial turf, etc., spray it along with the water bowl, hot rock and all cage furniture with Zoo Med's WIPE OUT 2 Hot Rock and Cage Furniture Cleaner. Make sure all items get covered with the solution *completely*. Let stand for at least 5 minutes then wipe dry. (Be sure to completely saturate all items. Cage carpet and wood products may need to be air dried).
3. Spray the cage with Zoo Med's WIPE OUT 1 Terrarium Cleaner/Deodorizer. Again, let the solution stand for 1 minute. Dry the cage, set it up and return the animals. It's a good idea to keep more than one piece of carpet cut to fit each cage. Having a spare piece of substrate prepared, clean and dry is a great time saving measure. Cleaning the cage in this manner should be a habitual practice regardless of the circumstances.

Contracting salmonella seems to occur more often from iguanas and water turtles than other reptiles. However, all reptiles harbor salmonella equally. Therefore, we recommend these procedures be followed for any reptile you may keep. Never let your mouth come in contact with your reptile. The transmission of the salmonella bacteria occurs orally. For example, some people like to give their reptile an occasional affectionate kiss. This is a practice we do not recommend.

If your reptile has traveled through its waste, salmonella can easily be transmitted to others simply by touching the animal or surfaces where the animal has been. Always spray your hands with Zoo Med's WIPE OUT 3 after coming in contact with *any* animal. (You may also wash your hands with a quality anti-bacterial soap for at least 30 seconds). Do not allow your reptile to roam freely if anyone of high risk live in the house. If you allow your reptile to roam, be sure to spray the areas where the reptile was with Zoo Med's WIPE OUT, or a comparable disinfectant spray.

Chicken, eggs and meat are the highest source for salmonella transmission. This means raw cookie dough could be a hazard, DON'T EAT IT. The salmonella bacteria can also be transmitted to humans by cattle, pigs, dogs, cats, flies, ducks & their eggs, rats, mice, hamsters, rabbits, and cockroaches. Incubation occurs between 7 - 30 hours. On the average it takes 10 - 24 hours. The salmonella bacteria can also survive from weeks to years on surfaces exposed to the salmonella bacteria. Symptoms in humans can include headaches, fever & chills, nausea, vomiting, abdominal cramps & diarrhea. Contact your family physician for more complete symptoms of salmonella bacteria infection.

Do not attempt to treat your reptiles for salmonella. The salmonella may become immune to the treatment and will be harder to combat if it infects a human.

To illustrate how easy the salmonella bacteria is transmitted and how long it survives, here are two actual cases. CASE #1. A man kept a large snake as a pet. Understandably, he had a large enclosure for it. To make cleaning easier for himself, he would climb into the enclosure. His snake carried the salmonella bacteria. The man picked up the bacteria on his shoes. When he was done cleaning, he transmitted it to the carpeting where his young daughter often crawled. CASE #2. A man once owned a monitor lizard, which he eventually sold. The lizard's enclosure remained untouched for a few months. In time, he cleaned the enclosure. The soiled enclosure still contained viable salmonella bacteria! All the salmonella bacteria needs is slight physical contact to be transmitted. Be careful while preparing chicken, eggs or meat and when handling animals.

Thank you for taking the time to read our tips on avoiding reptile associated salmonella. Following these guidelines can only increase the enjoyment you have with your new pet. Reptile popularity is growing significantly and we believe the responsible keeping of reptiles will help ease the fears some may have towards these fascinating animals. With proper care, reptiles will give you and your family years of enjoyment and education. You may also want to refer to Cal Zoo's Reptile Associated Salmonella Q & A Sheet and the May 1995 issue of Reptiles Magazine for more information on the salmonella bacteria.

Following these guidelines will greatly decrease your risk in contracting and transmitting the salmonella bacteria. California Zoological Supply assumes no responsibility in cases of sickness or death in animal(s) and/or person(s) as a result of any procedures or processes mentioned in this care sheet. The preceding tips are not a guarantee that you will not contract the salmonella bacteria. They were prepared to be used as guideline only. Should you require further preventative measures regarding the salmonella bacteria we recommend you contact your family physician or your County Dept. Of Public Health (Veterinary Dept.). This care sheet is a guideline only. No guarantee is expressed or implied.

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