

Care Cards

Snakes



I strongly recommend learning as much as possible about a specific snake prior to its purchase.

This is a good way to find out if you will be able to provide the proper housing, environmental conditions, heating, lighting, and food items for the animal. This will help prevent potential neglect that could lead to sickness, reduced biological functions, or premature death. Any person who wishes to purchase a boa or python must plan correctly and ask themselves some important questions before doing so. Only if you understand the commitment involved with owning such a reptile should you buy one. Unfortunately, many hobbyists will purchase a snake as a spontaneous decision. Often this occurs when a person sees an animal that they think is "neat" or "weird." Occasionally, a person will see a snake that is very expensive and they will think that with successful breeding they will become wealthy. These are all very poor reasons to purchase any pet.

Once a snake is brought home, it should be allowed to get acclimated to its new surroundings for a few days without being disturbed. Most snakes kept in captivity will be docile if handled gently and regularly. Take care when removing a snake from its enclosure to support as much of the body as possible. Never handle a snake within the first three hours after feeding or when the snake is preparing to shed its skin.

HOUSING

Reptiles are easily stressed. Tapping on the enclosure glass, inadequate housing, excessive handling, improper environmental temperatures, overcrowding, non-compatible cagemates, and many other factors can cause stress to a captive reptile. Many species of reptiles live singly and only tolerate others when mating.

Housing arrangements should always be designed with the animal's normal environmental conditions in mind. The more natural and realistic an environment, the more relaxed the snake will be. This will result in improved feeding, reproduction, and social activity. Traditionally, the larger the enclosure the more relaxed the pet will be. However, the animal's optimum levels for temperature, humidity, and lighting must not be compromised. You must know how large a potential snake might grow. To dispel a popular myth, snakes will **not** grow to the size of their enclosure and cease their growth at that point. Room should be provided for the animal to extend its full length, even if this means going around the interior of the enclosure walls. Normal **adult** values for size, weight, and length should be taken into account when preparing a housing unit for a rapidly growing snakes such as: boas, pythons, and other large snakes. The dimensions of the cage are additionally important. A tree dwelling snake will prefer a more vertical or taller enclosure, alternatively, a desert or ground species will be more comfortable in a horizontal or long enclosure.

The cage floor should be covered by some substrate item. Commonly used items include: indoor-outdoor, turf-type carpeting, newspaper, butcher's paper, gravel, stones, aspen, wood shavings or mulch, sand, crushed walnut, and a variety of new, specially prepared, multi-purpose, reptile bedding material. The cage flooring should allow ease of maintenance for the keeper and comfort and health for the animal. Gravel, sand, and soil may harbor harmful bacteria and may

introduce parasites. Newspaper, butcher paper, indoor/outdoor turf-type carpet are the most often utilized substrates. Do not use cedar or pine shavings with snakes; the fumes from these products may be toxic in an enclosed area. The choice of substrate item should be made by reviewing the natural geographical environment of each animal involved. Additional characteristics such as safety, heat transmission, ease of cleaning, compatibility when feeding insects, absorbency, and cost need also be considered.

Accidental ingestion of substrate material usually can be avoided by feeding the reptile in a separate enclosure. Heat transmission should always be evaluated when choosing a substrate material. Deep bedding materials may cover an under-the-tank heater, preventing normal heat exchange. This effect will be less significant when the reptile is being maintained at the upper end of its natural temperature range. Moist and dirty conditions are an invitation to opportunistic bacterial such as *Pseudomonas* and *Aeromonas*. Tropical reptiles housed with high humidity will require more frequent substrate cleaning to help prevent bacterial contamination. Disposable beddings are usually preferred in high humidity enclosures. For reptiles requiring very clean and dry enclosures, absorbent beddings such as shredded aspen will be necessary. Regardless of the material you choose, **it must be changed whenever it becomes soiled with fecal material.**

WATER AND HUMIDITY

Regardless of the cage accommodations, all snakes should be provided access to clean, fresh water a minimum of twice a week, although I prefer daily. Remember that many snakes will soak in their water and possibly urinate or defecate while soaking. *Pseudomonas* bacteria will grow rapidly in standing water. Water bowls should be cleaned regularly with antibacterial soap or a 5% bleach solution. Tap water is usually adequate for reptiles, however, bottled water should be used in areas with poor water quality. Aging or dechlorinating the water is not necessary.

Humidity is often overlooked by reptile owners. Desert animals will require higher temperatures

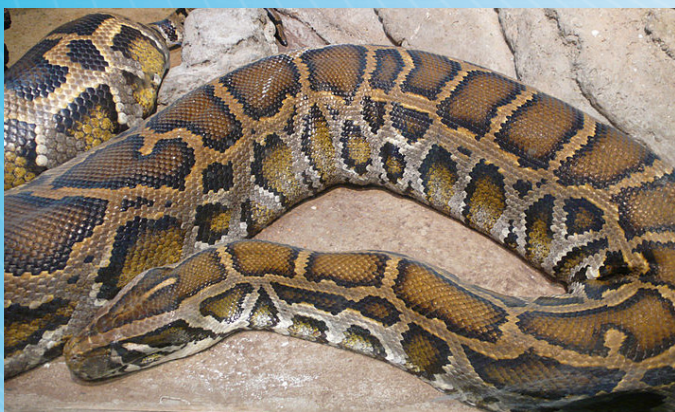
with low humidity levels of 20% to 40%. Tropical species prefer high humidity levels of 50% to 70%. Low humidity can result in dysecdysis (improper shedding). This occurs because humidity is necessary to moisten the old scales, separating them from the new ones. There are various methods for correcting a low humidity problem. A humidity box can be made by filling a plastic storage container with **damp** sphagnum moss and cutting an access whole for the snake in the container. Humidity can also be increased by frequently misting the reptile and its enclosure without causing excess dampness which could result in respiratory disease. Low humidity in large snake collections is best corrected with a room humidifier or vaporizer. High humidity combined with high temperatures will allow rapid growth of bacteria and mold within the enclosure. Excess humidity can be corrected by increasing the ventilation.

TEMPERATURE AND THERMOREGULATION

Snakes are ectothermic (cold-blooded) and require supplemental heat in captivity to help maintain normal body temperature. Reptiles maintain their preferred body temperature by moving back and forth between sunny and shaded areas, this process is called thermoregulation. Each species of reptile has its own preferred optimal temperature zone (POTZ). Proper body temperature is necessary for optimum metabolic processes including: digestion, growth, healing, reproduction, and proper immune system function. This is extremely important for sick, stressed, or injured snakes.

Tropical snakes should be housed with a daytime temperature between 90 and 98 degrees Fahrenheit. Normal night temperatures should range from 78 to 85 degrees Fahrenheit. Snakes should have a 10 to 15 degree temperature change from daytime to night. I recommend using several thermometers within the enclosure to monitor housing temperatures as well as temperature gradient within the enclosure.

For the majority of the year, a snake will need both primary and secondary heat sources to maintain proper temperature. Primary heat sources include:



incandescent bulbs over 60 watts, flood lamps, ceramic heaters, and occasionally floor or space heaters. Heat lamps should **never** be used as a heat source for basking snakes. They are too hot and will cause severe thermal burns if placed closer than 36 inches from the pet. A porcelain based fixture is required for any bulb over 60 watts to prevent cracking from overheating. Hot rocks should **never** be used as the primary heat source for a reptile enclosure. They do not heat the air within the enclosure, and may cause severe burns when used as the **only** heat source. Secondary heat sources are used to increase the temperature in a specific area of the enclosure helping establish a temperature gradient. Other examples of secondary heat sources include: under the tank heating pads or heating tape, and a 50 watt incandescent bulb located over a basking site.

LIGHTING

All lighting fixtures should be installed to prevent the snake from coming into direct contact with them, and so that water cannot accidentally be

splashed on hot surfaces. Most snakes require a photoperiod (light/dark cycle) of approximately 12-14 hours of light daily. I suggest 14 hours during the summer and 12 hours during the winter, each photoperiod should run for 6 months. Snakes require a minimum of 8 hours of darkness for sleeping each night, this must be kept in mind when locating the enclosure in an area that receives late night activity. Although the cage lights may be off, the room lights, noise, or activity around the enclosure will prevent the pet from quality rest and will lead to unnecessary stress. Automatic timers are ideal for maintaining photoperiod. Several brands of full-spectrum ultraviolet lights are available. I recommend using a combination of both incandescent and fluorescent lights for maximum heat and ultraviolet stimulation. Additionally, I strongly advise one or two hours of direct, **unfiltered** (not through glass or plastic) sunlight daily. Natural exposure to unfiltered sunlight is the best husbandry practice owners can provide for their reptiles. Always provide a shaded area during sun exposure and **never use a glass or plastic container!** Wide-spectrum plant lights are of no use to a reptile. With artificial lights the ultraviolet radiation will eventually degrade to the point of being ineffective long before the fluorescent tube burns out. It is essential that these bulbs be changed whenever black bands appear around the ends of the tubes, or about every six to twelve months. Make sure the basking branch is under the artificial light source and is no more than 8 to 12 inches away.

There are two forms of artificial, full-spectrum lights available, incandescent and fluorescent. Incandescent, globe or bulb-like, lights will provide both heat and light. They provide a natural increase in temperature and should be located above designated basking sites. Fluorescent or strip lights provide a wider spectrum of ultraviolet light but no heat. They will help the reptile convert more D3 than incandescent lights. My preferred brands of lights are: ZooMed's Iguana Light 5.0 or Reptisun 5.0 for lizards and turtles and ZooMed's Reptisun 2.0 for snakes and amphibians. I recommend both types of lighting to insure proper heat and vitamin D3 synthesis; however, nothing can replace the benefits of natural, unfiltered sunlight.

FEEDING

All snakes are carnivores. Juvenile snakes are usually started on small items like mouse pups or fuzzies then moved up the rodent ladder as they mature. Some snakes may also prefer frogs, fish, rabbits, eggs, and chicks as their basic food source. If you keep more than one snake in the same enclosure, you should always separate them for feeding to avoid fighting over the same prey item. When offering adult rodents to snakes, always be aware of the potential dangers associated with feeding live rodents. Live rodents not killed by the snake can begin actually eating the reptile. Severe, potential life-threatening injuries can be inflicted on a snake by its food item. A snake that is not hungry or ready to shed may refuse to even defend itself from the attack of rodents and become severely damaged. Even live chickens have been known to peck at a sleeping snake and create problems.

I always recommend the owner watch the snake when offering live food. After 15 minutes without a positive striking and killing phase, with or without ingestion, the item should be removed and offered again at a later date. Many snake owners will avoid this situation by feeding either stunned or freshly killed rodents. Occasionally the snake will be reluctant to ingest a non-moving food item; however, over time they can be trained to accept this feeding style. Once this has been accepted by the snake, frozen, canned, or sausage-type food items may be instituted, which will be more economical and less messy.

Always feed snakes separately. If you keep more than one snake to a cage, you should separate them for feedings to avoid fighting over the same prey item. A snake can consume a food item that is equal to the diameter of the largest portion of its body, or approximately three times the width of the head. Offering smaller foods in greater numbers can often keep a snake feeding on a regular schedule and produce a nice growth rate in the animal. Single, large food offerings may be taken, but will sometimes throw the animal off a regular schedule.

Owners should chart the date and food items offered. Keeping information on shedding dates

can also be helpful in knowing when a snake may or may not feed. Most snakes will take a meal on weekly or every other week basis.

CAGE CLEANING GUIDELINES

Salmonella is perhaps the most recognized zoonosis associated with reptiles. Infected animals shed the organism in their feces. Owners should be aware of this when handling reptiles or their feces. Most infections occur within the first month of exposure to the pet. Contamination usually occurs when owners place objects or food in their mouth after handling contaminated material. Symptoms include fever, diarrhea, vomiting, dehydration, abdominal cramps and in extreme cases, death. In infants and the elderly, Salmonellosis can be a serious infection sometimes requiring hospitalization.

The difference between cleaning and disinfecting is that cleaning only removes debris while disinfecting kills bacteria and other organisms. The two most commonly used disinfectants are bleach, or sodium hypochlorite and Nolvasan, or chlorhexidine diacetate. Bleach should be mixed at four ounces or one half cup to one gallon of water. Nolvasan should be mixed at two ounces or one quarter cup to one gallon of water. The disinfectant should be applied to all cage surfaces and left in contact for ten minutes before removing. The cage should be thoroughly rinsed and allowed to dry before returning the reptile. Bleach and its fumes can be toxic. Good ventilation and protective items should be used when disinfecting. Cage materials can be soaked with the same mixture for disinfecting. A minimum of thirty minutes contact time will be necessary before rinsing. Thoroughly rinse the items and, if possible, allow them to air dry in direct sunlight for several hours before returning to the cage.

A basic sanitary routine is necessary when owning a reptile. Reptiles should not be housed in the kitchen or any other areas where food may be prepared or eaten. Always thoroughly wash your hands with antibacterial soap after handling the animal, its dishes, the cage or any cage accessories. Never handle your pet while eating, drinking or smoking. Do not kiss your pet



or place it in your mouth. Do not rub your eyes or mouth when handling your pet or cleaning any reptile soiled items. Water and fecal material should be placed in the toilet instead of the sink or bathtub. Reptiles should have their own pool for soaking or swimming rather than using your sink or bathtub. If you must use a family sink or bathtub for your pet, be sure to thoroughly clean the area with antibacterial soap and also a diluted (5%) bleach solution after the reptile is finished. Always wear face protection and gloves during any cleaning process. **Make sure small children learn and follow these hygienic guidelines.**

Proper handling and restraint of different reptile species should be stressed to minimize bites and scratches. **Any bites or scratches from reptiles should always be treated as contaminated injuries.** The wounds should be promptly scrubbed with an antibacterial soap and plenty of water as soon as possible. Topical or systemic antimicrobial therapy should always be started following any bite or scratch. Serious wounds should always be immediately examined by a physician to help prevent or stop any excessive

tissue damage. Occasionally, a tetanus booster will be necessary following a puncture wound.

DR. BRUCE'S WORDS OF WISDOM:

The growth rate of a healthy reptile is dependent on three things: Heat, activity, and food. The warmer they are (over 98°F is too high) the more active they will be, the more they will eat, and the faster they will digest their food, enabling them to eat again much quicker than reptiles kept at below-optimum temperatures.

Mortality rates in reptiles are primarily caused by to two main problems: Inadequate temperatures and inappropriate diets. With proper care your pet should enjoy a long and healthy life. If any of the major, basic necessities are not provided, your reptile may end up stunted, sick, deformed, or dead.

Reptile appetites may be stimulated following exposure to natural, unfiltered sunlight. Care must be taken to protect the reptile from overheating. Never place a reptile outdoors in a glass or plastic enclosure. Always mist the reptile frequently with water and provide a shaded area for cooling off. Avoid leaving you reptile unattended during peak sun hours (11 a.m. to 2 p.m.). If the reptile is not accustom to direct sun exposure, only leave them outside for 20 to 40 minutes at a time.

Any captive animal that does not adapt to it's new living condition, will live in a constant state of stress. A reptile who is not properly socialized will become stressed each time it sees or comes into contact with people. This will create a vicious cycle of running away, scratching, tail-lashing, and even biting whenever it is held. An untamed reptile is no fun to own and most owners will either stop trying to hold them or try using thick gloves or a towel. This not only scares the reptile more, but can lead to broken bones from excess pressure. To help socialize and tame your pet we recommend handling them twice a day for a minimum of fifteen minutes.

