Turtle Care Guide

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Turtles and tortoises are cold-blooded which means they cannot significantly raise or lower their body temperature independent of the environmental temperature. Their body temperature reflects the temperature of the surrounding air or water. Mammals and birds have the ability to raise or lower their temperature by increasing or decreasing their metabolism. Cold-blooded species don't have this ability and are therefore extremely susceptible to environmental temperatures. In fact, the regulation of external temperature may very well be the most important factor in determining the overall health of a captive turtle or tortoise.

Relative humidity also plays a very important role in the health of a tortoise or turtle. There are many different species of turtles and tortoises and therefore a wide variety of correct temperatures and humidity levels. This article will provide a general overview of the rough guidelines, but each individual species of turtle or tortoise should have the specific environmental needs researched and provided.

Temperature

Turtles and tortoises usually have an optimal temperature range between 71-86ºF. Tortoises from arid desert regions are usually on the higher end of this range, and species from dense jungle habitats will often be toward the lower end. The critical upper limit of temperature tolerance for most turtles and tortoises is 95ºF. If they are kept at this temperature for any extended period of time, death can occur. Most turtles and tortoises will stop eating as the temperatures rise above 83ºF. Natural temperatures are rarely steady, especially for tortoises or semiaquatic turtles. In the wild there is almost always a daily cycle of temperatures with the highest temperatures in the afternoon and lowest temperatures at night. Providing these fluctuations in temperature is very important for the health of the captive turtle or tortoise. Some tortoises will prefer to lie continually under a heat lamp, which can be unhealthy, so while the optimal temperature is a good guideline, it shouldn't necessarily be provided, at all times. Once again, creating a temperature and humidity environment as close to the species' natural environment is critical for longterm health.

Humidity

The second most important factor after temperature control is humidity. Humidity control can be difficult to monitor and is often overlooked, but the importance of proper humidity cannot be overstated. Improper humidity levels can lead to illness and death in all turtle and tortoise species.

Tortoise species from arid or desert-like environments are obviously going to need a low relative humidity, while those that live in a jungle setting are going to require a very high humidity. Dehumidifiers can help lower relative humidity and mist sprayers can help raise relative humidity. A wide variety of humidity controlling systems can be used, and many times the humidity can be affected by the type of substrate found in the living quarters. For tortoises requiring low humidity, sand, gravel, and rock coupled with good air circulation, may be a good option. Similarly, for species requiring high relative humidities, orchid bark, peat, and moss all work to hold moisture and help keep the relative humidity high.

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Diurnal cycles

Diurnal cycles are the daily cycles of light and darkness. Just as in their natural environment, captive turtles and tortoises need to have a regular diurnal cycle. For most species, 14 hours of natural or artificial light are adequate. A corresponding lowering of temperature during the night will also help replicate their natural surroundings.

Hibernation

The need for and length of hibernation varies widely between species. Even within a species some may hibernate, and others won't, depending on their localized climate. The hibernation requirements should be researched and followed closely for each individual species. Once you have determined the length and environmental conditions required for your species to hibernate, the following general guidelines can be followed.

- The temperature for hibernation should remain 40-50ºF with the optimal temperature around 41ºF.
- Animals should be hibernated with an empty stomach. A cool-down and fasting period of 10-14 days is usually required. If the animal's stomach isn't empty when it starts hibernation, the decaying material in the stomach can cause serious digestive damage.
- Sick or underweight tortoises or turtles should never be hibernated. Always have your turtle checked by a veterinarian prior to hibernation.
- Animals need to be well-hydrated prior to hibernation.
- Animals should be checked during hibernation. It is a myth that disturbing a sleeping turtle is harmful.
- Most small species can be safely hibernated for a 6-8 week period.
- Many temperate aquatic species of turtles also benefit from hibernating. In outdoor ponds, make sure the pond is deep enough so ice does not reach the bottom and that there is a layer of muck at the bottom for the turtle to burrow into. Some aquatic species move out of the water to hibernate, so be sure to check on the requirements of your individual species.

The environmental temperature, humidity, day length, and hibernation — along with proper nutrition — are the most important factors in maintaining a happy and healthy captive turtle or tortoise. Each species has very different requirements, so it is essential that you adequately research your specific species. Use high quality heating, lighting, and humidity controlling devices to ensure that you provide the right environment for your tortoise or turtle.

For more information on hibernation, see our article, Box Turtle Hibernation: Pre and Post-Brumation Care, on PetEducation.com.

References

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Jenkins, J. The Veterinary Clinics of North America Exotic Animal Practice. Saunders, Philadelphia; 1999.

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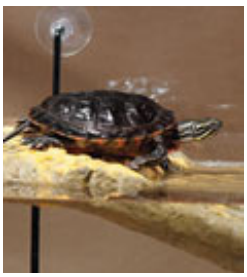

Turtle Dock

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