



Tips for you and your pet turtle

Sound reptilian husbandry is the key to maintaining a healthy animal. Most of the health problems seen in reptiles relate directly to inadequate management and nutritional practices. With this information in mind, you can help your pet live a longer, healthier life by adopting a good feeding and management program.

This outline is a basic guide to turtle care and should by no means replace a good herpetology reference or the advice of a North Idaho Animal Hospital veterinarian who is knowledgeable in the area of management and diseases of turtles.

Important Definitions

Turtle: Any of an order (Testudines) of land, freshwater, and marine reptiles that have a toothless horny beak and a shell of bony dermal plates usually covered with horny shields enclosing the trunk and into which the head, limbs, and tail usually may be withdrawn.

Tortoise: A land turtle with a well arched, massive carapace. The legs are stump-footed without free fingers and toes but with claws. The carapace is mostly rigid.

Terrapin: Turtles of the coastal marshes. Terrapins rarely stray from salt or brackish water. Seven races are recognized, all of a single species.

Carapace: A bony or keratinous case or shield covering the back of a turtle.

Plastron: The underside of the shell of a turtle consisting typically of nine symmetrically placed bones covered with keratin.

General Information

Turtles can be found on every continent except Antarctica. There are over 250 different species of turtles, their habitat ranging from open sea to arid desert. Externally they are characterized by having a bony shell, horny plates, and a leathery body covering.

Tortoises can be found on every continent except Australia. Only one genus (4 subspecies), the Gopher tortoise, is indigenous to the United States. Well protected against predators, with stumpy feet and heavily scaled limbs, they may live to be 130 years old. All turtles are oviparous, or egg-laying. Turtles are poikilothermic, meaning that they require an outside source of heat to regulate their body temperature.

Environment

The Cage: Land species may be kept in an outdoor pen during warm weather if they have access to a burrow or shade area. Water turtles can be housed outside as well, provided that they have pools as well as basking areas. Even though there are no specific data on outdoor enclosure sizes, adequate room for exercise should be available. This depends on the number and size of turtles housed in the enclosure as well as available space. All enclosures must be escape proof at the bottom and top (30"

high bent inwards for tortoises) to prevent escape. In case of mixing of different species compatibility must be considered. Care must be taken to avoid injury and death from natural predators if outdoor housing is used. The pen should be moved periodically to provide fresh "pasture". If lawn pesticides and chemicals are used, do not house your turtle outside. Winter quarters can consist of an aquarium for small species, or a suitable polyurethaned wood enclosure. The enclosure should be 1' x 1' x 2' for turtles and 3' x 3' x 3' for tortoises.

Heating: The ambient temperature for turtles and tortoises should remain between 73-89° F. Heat can be provided by an infra-red heat lamp shining on one corner of the enclosure. If an additional heat source is needed, a heating pad may be placed under *not in* the enclosure. Regardless of the species, we recommend the use of a thermometer inside the cage to carefully monitor the temperature.

The body temperature of reptiles closely matches that of the room or the cage. If the temperature is too cold, the turtle's bodily functions slow down and the appetite becomes poor or nonexistent. At lower temperatures, reptiles are also more susceptible to disease. Temperatures that are too high can distress or kill a reptile.

Lighting: A "Vita-lite" or blacklight BL is absolutely essential to reptilian husbandry. Reptiles that are housed indoors must be exposed to a "Vita-lite" for at least 12 hours per day. It should be installed no more than 4' above the turtle. The bulbs lose their efficacy and should be replaced after approximately 6 months of use (even if the bulb is still functioning). If a black light (BL) is used, the exposure time should be decreased to 30 minutes per day. Glass or plastic shields should not be used because they filter out important ultraviolet light. Natural sunlight is the best choice, but shade must be provided.

Your pet should have approximately 12 hours of darkness per day.

Humidity and Bathing: A humidity level between 50- 70% should be maintained for most species. Swimming pools should always be available for water turtles. **All** turtles should be provided with an area to dry off to prevent shell rot. Tortoises should have a large water bowl made available to them, as they will enter the water to drink and soak but not to swim. The water must be kept clean to prevent dangerous shell disease (rot) or ammonia build up.

Cage Substrate: Aquatic species require enough room for swimming, resting and basking. Soft shelled turtles should be provided with enough fine sand to burrow in, allowing the carapace to be nearly covered. Small rocks and pebbles should be avoided as turtles may ingest them and become impacted. Water turtles require a large swimming area. The water depth depends on the species requiring that the new owner become informed on specific requirements.

Species requiring brackish water, such as terrapins, must have one Tbsp. of non-iodized salt added per gallon of water. Water turtles require good filtration system and outside filters are recommended. The swimming water is easily fouled by fecal material and food. Feeding your turtle in a separate container will eliminate many health problems. Before returning the turtle to its aquarium be sure to rinse it off.

The aquarium should be cleaned periodically using a very dilute clorox and water solution.

Cage Accessories: Large rocks and logs for basking may be added to the aquarium. Sand for burrowing will provide your turtle with visual security or a place to hide. A large

box or non-toxic plant species can be added to serve the same purpose, as well as for their aesthetic value.

Feeding Requirements

Water Turtles: Water turtles will feed **only** if they are in water. Purina trout chow, dry fish flavored cat food, balanced tropical fish food, or turtle food may be used to feed adult turtles. Occasional whole food items such as guppies, bait minnows, goldfish, or earthworms should be offered. Adultwater turtles are omnivorous, predominantly feeding on vegetable matter and approx. 25% meat diet. Juvenile turtles are carnivorous, eating primarily meat to promote rapid growth and development. Seaweed, spinach, broccoli tops and leaves, mustard greens, grated carrots and carrot tops are among the better vegetable foods. Turtles should not be fed strictly muscle or organ meat, (such as hamburger or heart) because deficiencies will develop. Young turtles should be fed daily and adult turtles every third day. Feeding is best done in a separate tank to prolong water quality of the "home" tank.

Terrapins: Terrapins should be fed either a commercial terrapin diet,if available, or whole food items such as fish, crustaceans, mollusks, and insects.

Tortoises: Tortoises are mainly vegetarians but will occasionally eat insects, carrion, and small rodents. Vegetable matter should consist of native grasses, succulent plants, flowers. fruit of cacti, seeds, greens (mustard, collard, beet, turnip) bok choy, nappa cabbage, broccoli, kale, cau1fflower, green peas and pods, com, string beans, dandelions, nasturtium flowers and leaves, squash. pumpkin, romaine and butter lettuce, berries, apples, pears, peaches, plums, sugar-free breakfast cereal, whole wheat bread, and (soaked) dry dog food.

The colors green, red, orange, and yellow seem to attract tortoises in their food choices. Tortoises should be fed every other day, with fresh water available at all times. Color preferences for food items may also apply to other turtles.

Hibernation

Sick or parasitized animals should not be hibernated. Tortoises which are to be conditioned for hibernation should be fed a diet rich in digestible nutrients such as melons, figs, fruits and squashes one week prior to hibernation. Food and water should be restricted for 2-3 days prior to hibernation date. The optimum temperature for hibernation is 35-40° F. Before hibernating your animal it would be wise to do some reading on your particular species, to familiarize yourself with special hibernation requirements. Even though it is not generally done, water turtles can also be hibernated.

Signs of Illness:

- Runny nose
- Swollen eyes
- Coughing
- Gasping
- Swelling
- Weigh loss
- Loss of appetite
- Shell lesions

- Listlessness
- Lethargy
- Loss of equilibrium in water
- Open mouth breathing
- Deformed or Soft shell

Turtles, like dogs and cats, benefit from an annual examination by your North Idaho Animal Hospital veterinarian.

From Washington State University College of Veterinary Medicine