

Green Iguana

The Green Iguana (*Iguana iguana*) is one of the most frequently purchased reptiles, but is unfortunately also the most frequently seen reptile in the veterinary office due to disease caused by inadequate diet and husbandry. Often you, the owner, is not given proper information as to the needs of the iguana at the time the pet is acquired and it may be weeks to months before the devastating effects of improper diet, internal parasites or incorrect housing conditions take their toll and the pet becomes ill.

This is a very brief overview of iguanas and their needs, but we highly recommend that you purchase a copy of *The General Care and Maintenance of the Green Iguana* by Philippe de Vosjoli (available at our clinic), which is an invaluable source of detailed information.

Iguanas are diurnal, arboreal, tropical lizards of Central and South America. They have been introduced into south Florida and are bred in captivity with increasing frequency (although primarily in Central America). In the wild, iguanas are virtually herbivorous, eating fibrous jungle leaves, flowers and fruits. They rely on fermentation of complex carbohydrates in their colon to produce 30 to 40% of the energy available from their diet. The required bacteria are acquired in hatchlings by eating the feces of adult iguanas. Iguanas facilitate this fermentation process and regulate their body temperature by basking in the sun, seeking temperatures above 85F (30C). Their social rank is reflected in the prominence of their basking sites. Adult animals may reach a length of 6 feet and weigh as much as 15 pounds, a fact that should be considered when purchasing that cute little green lizard in the pet store! Adult animals require a large amount of cage space and may be quite dangerous to handle. Their razor sharp teeth can inflict serious injuries, and the tail, when lashed, can also cause skin lacerations or eye injuries (not to mention their sharp claws)!

Housing

Providing the proper temperature, humidity and light requirements for an iguana is critical if the animal is to survive in captivity. Iguanas should be housed in large glass, plexiglass or wooden cages. A 20 gallon, or larger, aquarium is a good size to start with as these reptiles grow at a very rapid rate in the first several months of life. The cage should be lined with newspaper, artificial grass (astro-turf) or indoor-outdoor carpet, with ease of cleaning being the most important consideration. Do not use gravel, sand, soil or kitty litter because the iguana may eat pieces of these materials and then develop a potentially fatal intestinal impaction. These materials are also difficult on the animal's skin and can lead to skin disease if they become dirty or are continually damp.

A water bowl should be provided with fresh water changed daily for the animal to drink out of and soak in. The bathtub or sink is also a good place for a daily swim for your pet. Many pets will defecate only in the water, which can make it easier for cleanup.

Humidity in the tank can be provided by lightly misting the area once daily or with the use of a humidity box. (See attached sheet on construction of the humidity box.)

A hiding area is critical for the animal's mental wellbeing. The humidity box may be used for this, or any cupboard, wood or plastic container that is of sufficient size for the pet to enter and turn around in will suffice.

Temperature and Lighting

Iguanas are tropical lizards and should have supplemental heat added to their environment. We do not approve of "hot rocks" being used for this purpose. We frequently see serious thermal burns on the underside of baby iguanas caused by the uneven heating of the hot rock that, in some instances, have lead to death. There should be a temperature gradient in the cage, meaning one should not attempt to make the whole environment the same temperature. Under cage heating can be provided by a heating pad left on 24 hours a day and put UNDER the tank so the animal does not have direct contact with it. There are several types of specifically made reptile heaters of varying sizes available, some with thermostatic controls. In addition, the pet needs a "hot basking spot" provided in the cage by an overhead heat and light source. The temperature in this area needs to reach 90F to 100F. This light should be left on only 10-14 hours per day and should be turned off at night. Putting the light on a timer is helpful. Nighttime temperatures may drop to 70F to 75F. Allowing your pet to live at "room temperature" all the

time with no chance for thermoregulation will lead to serious health problems over time (it may take several years).

There is ongoing controversy about the usefulness of UV light in the captive iguana's environment. We know that certain types of UV light are important in helping Vitamin D production in the animal's skin, which in turn is essential in facilitating the absorption of calcium into the body. The question is whether the various light sources that claim to be most like sunlight are really doing the job. The answer is that there is no substitute for natural sunlight, and none of the light bulbs currently on the market can exactly reproduce sunlight. However, since we live in a climate that prevents us from keeping our pets outdoors all year (and UV rays are blocked out by glass windows) we recommend using light bulbs that provide at least some source of UV rays. Vitalite and Chromalux bulbs are two that we recommend currently and should be placed so that the pet is no more than 2 feet away from the light source. The advantage of Chromalux is that it is also a heat-producing bulb.

We highly recommend, during the warm summer months when the temperature is 80F or higher, that you expose your pet to natural sunlight. We recommend building an outdoor playpen with a shaded area where your pet can spend some time on nice days. Even if you put them on a harness and leash and "sunbathe" together with your pet when you can, the benefit can be tremendous.

Cage mates are **NOT** recommended. Iguanas are not social animals and the presence of a cage mate may result in serious injury or death. Another phenomenon that has been seen is the less dominant of the two iguanas will not grow properly and will be sicker than the dominant animal, even in the presence of abundant food and a good environment.

Diet

This is the single most difficult area to manage in the pet iguana. The most common disease problem that we see in pet iguanas is calcium and/or Vitamin D deficiency, which lead to stunted growth, softened and broken bones, muscle tremors, seizures and death. Juvenile iguanas have different dietary requirements than adult iguanas, and this whole subject is still a basis for much discussion. There are now available on the market various pelleted, ground and frozen iguana diets, many claiming to be "complete".

It is dangerous to use any of these foods as the total diet because dietary deficiencies are still seen even with their glowing claims. If prepackaged diets are used, they should comprise no more than 75% of the total diet with the remaining 25% fed in the form of plant material (see examples of plant material below). Vitamin and mineral supplementation may be eliminated altogether because the prepackaged diets already contain these materials.

If you are making up a diet of your own, you may want to follow these guidelines. (Again, we urge you to consult *The General Care and Maintenance of the Green Iguana* by Philippe de Vosjoli for additional suggestions.)

Juvenile "baby" iguanas (less than a foot in length from nose to vent – exclude the tail) can be fed a diet of 20% plant protein along with a variety of leafy vegetables, non-leafy vegetables and fruits. They should be fed daily.

Medium "adolescent" iguanas (1-1.5 foot in length from nose to vent – exclude the tail) can be fed about 15% protein and the rest as in the juvenile. These should still be fed daily.

Large adult iguanas (1.5 foot in length from nose to vent – exclude the tail or any time growth has stopped) can be fed 10% protein in the diet. Some adult pets may only eat 2 to 3 times a week. Concentrate on the leafy veggies and limit high phosphorus foods like zucchini and carrots.

All food should be chopped up in small pieces and mixed well and fed only in amounts that will be eaten within a few hours to ensure that ALL foods are eaten and ALL the supplements are taken in.

Examples of protein foods: tofu, rabbit, guinea pig or alfalfa pellets (put into a blender dry, ground into a powder and sprinkled over the food), wheat grass and alfalfa sprouts. **WE NO LONGER RECOMMEND USING ANIMAL**

PROTEIN SUCH AS DOG FOOD OR TROUT CHOW IN THE GREEN IGUANA DIET. Although the use of animal protein has caused rapid growth as a youngster, it is now one of the factors suspected of causing kidney disease as the animal ages.

Examples of plant material: Use at least 50% of the plant material as dark green leafy vegetables such as mustard greens, dandelion greens, kale, Swiss chard, endive, romaine lettuce, carrot tops, turnip and beet greens. This is to satisfy not only the dietary fiber requirements but also the calcium requirements. One should use a MINIMUM of three different greens daily. The excessive use of only one or two items may lead to nutritional disease. The rest of the plant material can be vegetables such as squash (of any type), green beans, pea pods, tomatoes, broccoli, okra, carrots, cooked sweet potatoes and fruits such as papayas, mangos, berries, melons and bananas. The more items mixed together, the greater the chances that nutrition is covered adequately.

Vitamin-mineral supplements may be advised when not using any prepackaged iguana foods and when otherwise on an excellent diet. (In cases of nutritional disease you may be instructed to use different guidelines):

Calcium/Vitamin D tablets: For baby and adolescent iguanas use a chunk the size of their eye every other day. For adult iguanas use the same amount, but only give 1-2 times a week. Buy chewable tablets as they are accepted more readily.

Calcium/Vitamin D powder: For babies and adolescents use approximately 1/16 tsp per every 6 inches of body length (exclude the tail) every other day. For adults, use the same amount but only 1-2 times a week.

Calcium only supplement: This is probably preferable for daily or frequent use as it prevents the potential overdose of vitamin D. Neocalglucon is a readily available, safe source of calcium that is a very palatable liquid. Use approximately .10 cc per each 100-200 grams of body weight daily or every other day in babies and juveniles. Use tone 1-2 times a week in adults.

Multivitamin supplement: For babies and adolescents use approximately 1/16 tsp per every 6 inches of body length (exclude the tail) every other day. For adults, use the same amount but only 2-3 times a week.

REMEMBER, THE BETTER AND MORE VARIED YOUR PET'S NATURAL DIET IS, THE LESS DEPENDENT YOUR PET WILL NEED TO BE ON SUPPLEMENTS. OVERSUPPLEMENTATION OF MINERALS AND VITAMINS IS NOT A SUBSTITUTE FOR A GOOD DIET, AND IN FACT MAY ITSELF LEAD TO DISEASE PROBLEMS. PROVIDE A WARM, HEALTHY ENVIRONMENT WITH EXPOSURE TO NATURAL SUNLIGHT, WHEN POSSIBLE, TO FURTHER ENHANCE YOUR CHANCES OF SUCCESS.