

The Green Iguana in Captivity

Green iguana ownership can either be wonderfully rewarding or difficult and frustrating, depending on whether the very specific needs of the iguana are met in its captive environment.

Careful attention to iguana diet is a must. More iguanas develop health problems because of improper diet than from any other single cause. As stated previously, green iguanas are herbivores. To be more exact, iguanas are folivores, meaning the bulk of their natural diet is composed of leaves. Iguanas in the wild spend a large part of each day searching for and consuming their food. Iguanas in captivity also need to spend time eating as well. A diet too high in calorie-dense foods does not allow the iguana to spend enough time engaged in the activity of eating. A balanced diet for the pet iguana should be as follows:

Dark leafy greens: 30-40% by volume

Choose as wide a variety as possible. Collard and mustard greens, kale, broccoli, escarole, spinach, swiss chard, parsley, and romaine are excellent choices, as are carrot and beet tops. Unsprayed dandelion leaves and flowers, and nasturtium and hibiscus blossoms from the yard are excellent additions. Avoid pale greens such as head lettuce and celery tops. *Wash* and chop all greens into appropriately sized bites.

Bulk vegetables: 30-40% by volume

Frozen vegetable mixes are excellent choices; as are peas, beans, carrots, beets, corn, and summer and winter squash. Sweet potatoes are a special favorite of most iguanas. Choose bulk vegetables that are fresh or frozen, not canned. Wash and chop all bulk vegetables into properly sized bites.

Fruit: 10-20% by volume

Bananas, grapes, papaya, melon, strawberries, kiwi, mango, oranges, peaches, pears, figs, etc. are all good choices. Wash and chop all fruits appropriately.

Calcium

Green iguanas in captivity have a high need for calcium that cannot be adequately be met through diet alone. An iguana is almost certain to develop metabolic bone disease without calcium added to its food. To date there has not been enough research into iguana nutrition to know exactly what amount these animals require, therefore, it is advisable to use a supplemental source of calcium several times weekly.

There are several brands and formulations of calcium for reptiles currently available. Choose a supplement that is at least 30% calcium by weight, and contains no phosphorous or vitamin D3. Phosphorous can bind calcium, making it unavailable to use, and dietary vitamin D3 has been implicated in kidney disease later in the iguana's life. Sprinkle the iguana's food lightly with calcium two to three times weekly.

Feed hatchling iguanas twice daily. Juveniles up to 24 inches can be fed 5-7 times weekly, and adults can be fed three or four times per week. Choose the greatest variety from all the food groups that you can. It is advisable to chop all vegetables and fruits and stir them together in such a way that the iguana cannot pick and choose its favorite food items, unbalancing its diet. Make sure there is always a fresh clean source of water for drinking.

A Word of Caution - Many owners of iguanas have been told that it is acceptable and even advisable to feed some form of animal protein to their pets. Dog and cat food, trout chow, scrambled eggs, hamburger and insects are consumed with relish by many iguanas, but can be very dangerous to their health and longevity. There is mounting evidence that animal proteins are

extremely damaging to the iguana's kidneys overtime, because their bodies are simply not designed to excrete the large amounts of proteins *contained* in these foods. Since iguanas can get all the protein they need from the plant foods they eat, it is recommended that the iguana owner avoid feeding animal proteins entirely.

Numerous commercial iguana diets are currently available for sale. Because the exact nutritional requirements of the iguana are not known, there is no regulation regarding the formulation and sale of prepared diets, and no yardstick to measure their adequacy. If you choose to feed a commercial diet, it is recommended that you avoid formulas that contain animal proteins, and supplement the diet with 10-25% fresh foods.

Temperature

The second most important requirement of the green iguana is temperature, and the second greatest cause of health problems in captive iguanas is improper temperature. Iguanas are tropical animals, and will fail to thrive at cooler room temperatures.

The bacteria in the iguana's gut cannot digest its food in cool temperatures, and nutrients are poorly absorbed, thus cool iguanas will not eat. Iguanas are not able to resist infection when they are too cool, and often develop abscesses or pockets of infection in their mouths and elsewhere.

During the daytime iguanas should be kept at 80-85 degrees Fahrenheit. Additionally, a "hot spot" or basking spot of 100-110 degrees is needed. The iguana will move from cooler to warmer places in its enclosure as needed, regulating its own body temperature. At night the temperature can drop to 75 degrees. Use under-tank heating pads designed for reptiles, and overhead lighting as safe heat sources. Make sure overhead lights are out of reach. Avoid "hot rocks" as they are unreliable, and often the cause of burns. Placing two or more thermometers throughout the enclosure, and monitoring them regularly is the only sure way to know whether the temperature is within optimal limits.

Light

Closely related to temperature is light. As stated previously, green iguanas in the wild spend a large part of each day basking in the sun. Ultraviolet rays from the sun are converted by the iguana's skin into vitamin D3, which is critical for normal metabolism of calcium. Every effort should be made to provide the captive iguana with opportunities to bask in natural sunlight. An added benefit to natural light is a faster growing animal with coloring that remains more vibrant.

Because ultraviolet light cannot penetrate glass, placing the iguana in a wire cage outdoors, when temperature and weather permit, is recommended. Make sure there is always a shady retreat available, if the iguana becomes too warm. Iguanas cannot sweat, and overheating is a possibility in the summer sun.

When sunlight is not an option, full spectrum fluorescent lighting such as a Vita-Lite should be provided. Place ultraviolet lighting no farther than 24 inches from the iguana, making sure there is no glass or plastic in between. Leave ultraviolet lights on for at least 10-13 hours per day. Iguanas also need about 10 hours of darkness per night to sleep.

Housing

Captive iguanas should be provided with the largest enclosure possible. Their phenomenal growth rate will quickly cause them to outgrow a 10 or 20 gallon aquarium. Most iguana owners eventually will need to build their own iguana habitat. Choose a design with solid sides to keep in heat. Height is important, to allow room for climbing. Provide several limbs and rocks for the iguana to climb on. Replace them when they become too soiled to clean thoroughly.

Avoid using live houseplants to decorate with, as they will quickly be consumed and some may be toxic. Newspaper and Astroturf are the best choices for substrate. Other materials such as tree bark can harbor bacteria, and corn cob bedding and kitty litter are too dusty, and dry out the environment too much. The cage and furnishings should periodically be disinfected with a one-to-ten solution of bleach, then rinsed and dried thoroughly.

Bathing

Iguanas love to soak in a tub of water. Because of the risk of salmonella, never allow your pet iguana to swim in the bathtub. Instead, provide a bowl in its enclosure large enough to allow its whole body inside. Change the water daily as many iguanas will also use their water bowl as a toilet. Daily spray misting in the morning is also recommended. It is thought that many captive iguanas may be chronically dehydrated.

Health Concerns

Iguanas that are unwell tend to exhibit similar symptoms for a variety of problems. These are often observed when disease is present. Prompt medical treatment is advisable to diagnose and appropriately treat your pet. Symptoms to look for:

- Lethargy
- lack of appetite
- sudden color changes

Metabolic Bone Disease

For most among captive iguana health problems is. Although other Causes exist, metabolic bone disease is usually caused by inadequate levels of calcium in the diet. The symptoms range from mild cases which exhibit lethargy and lack of appetite, through moderate cases which may have abscesses and fragile bones that fracture easily, to severe end-stage cases with rubbery bones, spinal deformities and neurological signs such as tremors and twitching of the extremities.

Veterinary care is a must for animals with metabolic bone disease.

Abscess

An abscess is a pocket of infected material that commonly develops in mouth and jaw areas, as well as on limbs and tails. Abscesses need to be opened and cleaned by a veterinarian, and sometimes require antibiotic treatment as well.

Kidney Disease

This is on the rise in captive iguanas. Iguanas with kidney disease are lethargic and do not eat well. Animal protein in the diet and chronic dehydration may be factors in the development of kidney disease. Kidney disease is diagnosed by a blood test.

Broken Tails

This is a common result of accidents such as falls, and owners trying to capture an escaped pet. Most tails heal fine without medical treatment. Excessive bleeding may require a trip to the vet. Broken tails can regenerate, although often the new tail is not as colorful, and the tip may be more blunted. Broken toes are also frequent injuries. Broken toes often heal, although occasionally a splint will help the toe heal with better alignment.

Nose Rubbing

A behavior that often causes injury to pet iguanas is nose rubbing. Nose rubbing usually indicates that the iguana feels exposed or insecure in its enclosure. Providing more seclusion may help stop this behavior and allow the nose to heal.

Nasal Discharge

If there is excess of the usual salt discharge, this may indicate respiratory illness. Antibiotics are used to treat respiratory disease.

Egg Binding

Occasionally this is a problem with mature females. A lack of calcium causes soft eggs which the female is unable to lay. Spaying is often the only way to save the female's life.

Aggression

Male iguanas that have reached sexual maturity often exhibit aggression. Neutering the aggressive male is sometimes necessary.

A Word about Salmonella

Many pet reptiles including green iguanas are known to harbor *Salmonella* bacteria in their digestive tracts. This bacterium does no apparent harm to the reptile but does pose a significant health risk to certain humans. *Salmonella* bacteria can cause serious illness and even death in people. It is often asked whether an iguana can be brought for examination to determine the presence of *Salmonella* and after treatment it will no longer carry the organism. This is not usually a reliable option, because the iguana can pick up the bacteria again from its environment and the owner can never be sure the animal is *free* of this bacteria.

A few simple precautions are recommended for all reptile owners:

1. Iguanas should not be kept in households where people have a disease that affects their immune system. Immuno-suppressed people do not have the physical means to resist infections.
2. Iguanas should not be kept in households with infants and toddlers. Children this young are too likely to put contaminated objects in their mouths, and do not have a well developed enough immune system to resist the bacteria.
3. Never wash your pet's dishes or enclosure where human dishes are washed or food is prepared. Never allow your iguana to swim in the bathtub. Bacterial contamination can occur in all these areas.
4. Always wash your hands after handling your iguana, its furnishings, or cleaning its enclosure. Teach children to do the same.

Faithfully following these simple precautions will enable you to safely enjoy your pet iguana for many years.