Southwest Animal Hospital

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CARING FOR YOUR BEARDED DRAGON

GENERAL: Bearded dragons are spiny lizards native to hot sunny regions of Australia. They require high temperatures and artificial sunlight to thrive in Oregon. Their moderate size, attractive appearance and good personalities have made them popular reptile pets.

FOOD: Dragons are omnivorous (eating plants and animals) and eat a wide variety of foods. Baby dragons need more protein and calcium for growth and may show more carnivorous tendencies than adults. Much of the diet is protein based, such as silkworms, earthworms, soldier fly larvae, occasional pinky mice, and crickets or dubia roaches (feed the crickets & roaches a high calcium "gut loading" cricket diet for 2-3 days prior to using crickets as food, or they will be calcium deficient). T-Rex Calcium Plus or Mazuri are the only gut-loading products proven effective. Insects eliminate the gut loader quickly; they must be consumed within a few hours after gut-loading them. Mealworms, waxworms and other roaches are nutritionally poor. Insects can be 40-50% of the diet with adults, or more with juveniles. Also feed moderate amounts of a complete & balanced commercial bearded dragon food (usually pellets); decent alternatives include juvenile iguana food, box turtle food, or even tortoise food. These diets all contain a balanced vitamin-mineral mix and help ensure that no nutritional problems will occur; they are safer than using vitamin concentrates. If the pellets are not eaten, they can be softened with water, or ground to a powder and dusted onto the other food (insects and veggies). 5 to 15% of the diet can be pellets. Besides prey and pellets, the rest of the diet should be vegetables, mostly *leafy greens*, and may include dandelions, kale, collards, mustard, green leaf lettuce, cilantro, etc . Ideally use a nutritional guide to choose vegies with good calcium/phosphorous content. Healthy dragons are willing to eat a variety of veggies, and in adult animals 50%+ of the diet may be vegetables.

Vitamin + mineral supplements should *only* be used if no commercial diet is fed, and then used *sparingly*. Achieving a healthy balance with supplements is difficult. Never mix products; use a balanced vitamin-mineral powder with many vitamins + calcium and phosphorous provided, and put a tiny pinch on the food once weekly, no more. Reptocal and Reptivite are 2 brands which offer balanced formulations. Overdosing is a potential problem with using supplements; it is safer to rely on a commercial food which has the appropriate vitamins included.

HOUSING: Try to duplicate natural conditions. Large terrariums are best.. The most important factors are heat & light. The ideal daytime air temperature is 85-95^{0}F; temperature readings must be taken in the shade away from heat sources to be accurate. Below 80^{0}F or above 100^{0}F can cause stress and failure to thrive. Thermometers should be near the floor, under a solid shield (such as cardboard or wood), and not near a heat lamp, or they will read falsely high. The cage sides and top should be mostly solid, not screen, in order to trap heat. A reptile heat pad placed under the terrarium is one heating method. Hot rocks provide heat but must be covered to prevent direct contact which may burn the lizard. Heat lamps are useful but must be at a safe distance to prevent burns (at least 18 inches usually). Heat lamps must *not* be bright if used at night; the best are lightless ceramic-coated lamps; dim purple or red coated night bulbs may also be used. Monitor cage temperature at several spots with good mercury, digital, or dial type thermometers; avoid paper strip thermometers or temp guns which do not accurately read air temperatures. The terrarium can have a warmer side approaching 95-100^{0}F, and a cooler area around 85^{0}F. If the cage temperature is uniform then aim at 90^{0}F (in the shade) as an ideal temperature. Temperatures shouldn't fall below 75-80^{0}F at night.

Lighting requires special attention. You must provide both visible (white) light *and* ultraviolet light in the 280-320 nm spectrum (called UV-B). This mimics outdoor sunlight which dragons require. Our climate provides too little sunlight, and window glass or plexiglass filters out most of the sun's UV rays. Lack of proper lighting causes poor or picky appetites, poor growth, and bone disease. Provide correct lighting with a fluorescent "full spectrum" light. Reptisun (made by Zoo Med) and Arcadia provide strong UV levels; other brands with adequate UV output include Reptile Daylight (Energy Savers Unlimited), Reptiglo, & Reptasun (by Flukers). These are all fluorescent tubes; in

general no regular incandescent bulb produces good UV light. Fluorescents have a limited lifespan and should be changed every 6-8 months when in use. A good day length is 12-14 hours of light. These lights won't cause burns, and they need to be close to the pet to be effective, usually closer than the length of the light bulb. (A 24 inch tube should be within 18 inches of the lizard to be effective). Fluorescent tubes should run the entire length of the cage; bulbs smaller than 24 inches (including compact coils) are usually too weak to be effective. Avoid plastic or glass barriers between the light and the pet (these block UV). Minimize hiding from the light (such as in a dark cave); instead provide hiding shelter *behind* a plant or rock where the light is still strong, or cover part of the transparent cage wall with paper to allow hiding in that area. Call us for light sources.

There are now some incandescent (screw type) round bulbs which *do* produce strong UV levels. These resemble regular light bulbs but are actually mercury vapor lamps; they produce high UV output and heat, so must be kept at a safe distance (at least 12-18 inches away). Their effective life span is uncertain; replace them yearly to be safe. These devices typically cost $45-$100, and when shut off must have a "cool down" period before they can be turned back on. Other "full spectrum" round bulbs which cost less and require no "cool down" cycle are simple filament- type bulbs, and do *not* produce good UV output. Vapor bulbs are best suited for very large, tall enclosures, and are not ideal for the average terrarium.

A small water bowl provides drinking water although dragons may drink sparingly. Some will take dewdrops if the cage is sprayed with water. Do not allow prolonged soaking and defecating in the water, as this contaminates the water source and may also cause skin infections. Artificial turf is a good cage bedding which can be cleaned and reused. Sand, gravel, corn cob, walnut shells, etc. are harder to keep clean and may cause intestinal blockages if eaten. Bearded dragons usually do OK on sand as they aren't prone to eating it, but if sand is used be sure that moist food (such as vegies) is fed on a plate so that sand doesn't stick to it. Calcisand (a calcium based sand) is digestible if eaten and is safer to use. Pelleted rabbit food can be used as bedding, but must be cleaned often if soiled; moist rabbit food spoils quickly.

COMMON DISEASES:

Osteodystrophy (Rickets): A calcium deficiency usually due to poor diet and/or too little UV light. Symptoms include weakness, tremors, soft jaw, swollen or crooked legs. Treatment is via injectable or oral calcium, and correction of diet and lighting.

C.A.N.V. fungus (yellow fungus): An aggressive, contagious fungal disease usually seen in new pets (they get infected at the breeder facility or pet store). Crusty yellowish to black skin sores develop and spread. This disease must be treated aggressively and is often fatal.

Stomach or bowel blockage: Dragons may develop blockages from swallowing bedding such as bark chips or gravel. Small amounts may be passed with the aid of oral mineral oil. Severe cases may need surgery to remove the obstruction. Cool temperatures slow the bowel and increase risk of blockage or constipation.

Heat burns/skin infections: Unprotected hot rocks, heat pads or heat lights can cause burns. Burned skin often becomes infected. Bacterial or fungal infection can also result from lying in contaminated water or on soiled flooring. Treatment: for mild infections, chlorhexidene or Betadine solution applied 2-3 times daily for 5-10 days may be adequate. For severe lesions, dead tissue may need surgery & antibiotics. Correct the habitat also.

Mouth rot and respiratory infections: These are usually caused by normal bacteria which take advantage of a stressed or weakened dragon; underlying factors such as cool temperatures or imbalanced diets often play an important role in causing these illnesses. Mouth rot causes red swollen gums and sometimes odor or drooling. Respiratory infections can cause mucus discharge in the mouth or nose which may resemble mouth rot, but the gums are usually normal. Both diseases are treated with antibiotics and correction of diet and environment.

Kidney disease: An occasional cause of death in older dragons. The causes are poorly understood, but damage to the kidneys may be caused by aging, low temperatures, overdosing of calcium or vitamins, infection, dehydration, or other illness. Signs are variable and may include lethargy, tremors, weight loss, appetite loss, and color changes. This may resemble calcium deficiency (rickets), but rickets is more common in baby dragons, whereas kidney failure affects older pets. Treat with a low mineral, low protein diet and fluid therapy; most severe cases do not survive.

Intestinal parasites: Two parasites are common in dragons: coccidia and pinworms. Coccidia are microscopic protozoa in the bowel; they can cause diarrhea, weight loss, straining to defecate and even colon prolapse (bowel protruding from the anus). Pinworms are a small white worm; they can cause signs similar to coccidia. Diagnosis is via examination of a fresh (within 24 hours) fecal sample. Treat using appropriate medication, and thorough cage cleaning. Pinworm eggs live for long periods in the environment and may reinfect a treated lizard. Coccidia are slow to clear from the gut and may require 3 weeks of medication to eliminate.

Appetite loss: This often results from husbandry stresses (low temperatures, inadequate UV light, short day length, noise/disturbances around the cage, etc). Any illness can also reduce appetite. Treatment includes correction of diet and environment, and treating disease if present.