

LIZARDS AND SNAKES

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HOUSING

Reptiles should be housed in the largest vivarium possible. Reptiles can be scared of large open spaces but if multiple hides are providing then an enclosure can never be too large. The size of the tank should be sufficient to provide a temperature gradient from the hot basking spot to the lower end of its temperature range (see table below).

For snakes the tank should be at least $\frac{3}{4}$ of the body length on its longest side and if arboreal (a climbing species) then as long as the snake in height.

For lizards the tank should be roughly 3x the animal's length on its longest side and if arboreal 2-3x in height.

If the species burrows then allow at least 30cm of substrate. The substrate should be non-toxic and of a type that will not cause impaction. Examples are newspaper, astroturf, alfalfa bedding, newspaper based cat litter or carpet tiles. DO NOT USE woodchip, calcisand, shavings, sawdust or corn-cob bedding.

Maintaining humidity is important for individuals who would normally inhabit a humid environment such as Iguanas and Water Dragons. This can be provided with warmed water bowls, misting devices, waterfalls etc. During shedding all species should be provided with an area of increased humidity such as a hide box combined with a moist sponge, oasis or sphagnum moss.

TEMPERATURE

Reptiles are ectothermic and as such cannot generate their own heat. For this reason we must provide an adequate temperature range for them to live within.

Two heat sources are generally required. The primary source should maintain one end of the enclosure at the low end of the reptiles temperature range (see the table below). This should be attached to a pulse-proportionate thermostat and allow a night-time and season drop in temperature. Such devices include ceramic bulbs and heat mats.

Heat mats must be placed against a side wall and NEVER UNDERNEATH THE TANK. Animals will generally bury into substrate to cool down and if mats are placed beneath the tank then the opposite will occur. NEVER USE DIRECTLY HEATED OBJECTS SUCH AS "HOT ROCKS".

The secondary source should be used to generate the hot end of the tank (see the table below). In basking species a focal source of heat and light such as a incandescent light-bulb or in a large enclosure a mercury vapour lamp can be used. For non-basking species (i.e. snakes) a low wattage source that provides no light should be directed onto a substrate, such as slate, to absorb the heat, an example would again be a ceramic bulb or a red-light bulb.

A thermostat will attempt to keep the tank at the required temperature however during very cold periods it may struggle and during very warm periods, although it will turn off the heat source the

tank could still overheat. Therefore all tanks should have a maximum/minimum thermometer (ideally digital) to record the daily temperature range at both ends of the tank.

Species	Temperature Range (°C)	Night Time Temperature (°C)	Winter Cooling (°C)	Spot Temperature (°C)	UV-b Needed	Diet
Green Iguanas	29 - 32	19 - 25	20 - 21	≥40	YES	Herbivorous
Bearded Dragons	29 – 31	20 - 23	17 - 21	≥40	YES	Omnivorous
Water Dragons	28 - 31	20 - 23	17 - 21	≥35	YES	Carnivorous
Veiled Chameleons	27 - 29	21	NO	≥35	YES	Omnivorous
Leopard Geckos	25 - 29	19 - 22	NO	≥35	NO	Insectivorous
Corn/King Snakes; Royal/Burmese Pythons; Boa constrictors	25 - 29	19 - 22	13 - 16	≥32	NO	Carnivorous

UV LIGHT

UV light is required for most reptile species. Not only do most species require UV-B provision to stay healthy but latest research shows most reptiles can see in the UV spectrum of light and as such it is required for normal behaviour.

The previous table identifies those species that NEED UV provision but all reptiles should ideally be provided with some UV lighting. Even some nocturnal species would benefit from UV provision if possible.

Fluorescent tubes (e.g. Zoo Med Reptisun) usually need to be within 15-30cm of the individual and at least every 6m should be replaced or have their UV output checked (the bulbs UV output will reduce with time although it will still shine bright).

Mercury vapour lamps (e.g. Zoo Med, Powersun) are ideal for basking species as they provide both a source of heat and UV lighting. However, they need to be used in a large environment otherwise they can quickly overheat an enclosure.

Light sources should be used for 9-15 hours/day depending on the season.

If you wish to check your UV source is producing sufficient radiation and is the correct distance from your pet The Veterinary Hospital have a UV meter available for rental.

DIET

Water should be provided in a shallow dish and certain species will require misting to ensure adequate humidity (chameleons drink by licking water from foliage).

All uneaten insects and vegetation should be removed if uneaten to prevent contamination. Uneaten insects should be destroyed and not returned to the tub as this can lead to a build up of disease, especially faecal parasites.

Herbivores

Herbivorous reptiles should be fed a mixed and varied diet. Below is an example of an “Iguana salad” that will suit most herbivorous animals. Percentages represent the amount of daily diet should comprise this type of food.

- 30% = dark orange vegetables
 - Winter squash, red pepper, sweet potato, parsnip.
- 25% = green leafy vegetables (ideally home-grown, non-toxic weeds),
 - Dandelion, sow thistle, plantain, chickweed, milk thistles, sedum, honeysuckle, nasturtium leaves, hibiscus leaves.
 - Watercress, spring greens, coriander, Chinese cabbage, kale, broccoli, plantain, nasturtium leaves.
- 25% = green beans and peas,
 - Runner/French beans, mange-tout, peas in pods.
- 15% = chopped alfalfa hay,
 - High in protein, fibre and calcium – allows enough protein in diet without compromising calcium levels.
- 5% = fruit,
 - Blueberry, cranberry, raspberry, fig, papaya, melon, strawberry, grape, apple, peach, apricot, dates, bananas (in skin) and tomatoes

Commercially available pelleted diets should only be a small amount of the diet.

All reptiles should have their daily meal sprinkled with a calcium supplement (such as calcium carbonate powder) to help them meet their calcium requirements. Supplementation with Vitamin D 1-2x a week is also recommended (e.g. Nutrobal, Vetark).

Omnivores and insectivores

Many insectivorous reptiles will grow to become more omnivorous as they get older. Bearded Dragons are an example of this and once they are of an adult size (approximately 400g) they should be eating an 85% herbivorous diet as above.

Commercially available insects such as crickets, locusts, mealworms and waxworms are available but captive bred woodlice, millipedes and earthworms can also be offered.

These insects should be fed on a high calcium diet using such as dark leafy greens. Food rich in Vitamin A should also be offered, these are usually a deep yellow/orange colour, especially when feeding crickets as they cannot store Vitamin A in their liver.

The insects should also be gut loaded with an extremely calcium rich diet 24-48hrs before feeding to your reptile (e.g. Bug-grub, Vetark). Most commercial products fall short of the required values.

The insects can also be covered in a calcium powder but many will kick this off before it reaches your reptile (e.g. Nutrobal, Vetark).

Carnivores

Most carnivorous species will eat whole mammalian prey and deficiencies generally do not occur. The prey item should be heated ideally to blood temperature (39°C) not just room temperature.

Young snakes should be fed approximately 2 times a week and adults should really be fed once they exhibit normal hunting behaviour (approximately every 1-2 weeks in an average sized snake and every 3-4 weeks in larger individuals).