



Zoo, Avian, Aquatic and Unusual Pets
Veterinary Consultancy

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Leopard gecko care



This fact sheet will give an overview of general Leopard gecko care. Please use this as a guide to aid you but note that further information on your species should always be carried out. It is imperative that the correct set up/husbandry requirements are met in order for your leopard gecko to thrive.

Leopard gecko facts:

Originally from semi-dry to arid deserts ranging through Northwest India to Pakistan, Iran and Afghanistan. They are famous for their striking leopard like appearance, fat storage tail and gentle, docile behaviours making them increasingly popular as pets

The average adult will grow to 25cm in length and they can live for anywhere between 10-20 years. Some even living longer than this! With this in mind they are a big commitment.

If threatened a leopard gecko can shed their tail as a defence mechanism. This is called autotomy and rarely happens in captivity where leopard geckos are handled with care and minimal stress.

Their scientific name is *Eublepharis macularius* but among owners and enthusiasts they are affectionately termed 'Leos'.

Housing:

Leopard geckos should be housed in a horizontal vivarium, with as large as possible floor area for them to explore. The minimum sized enclosure for an adult leopard gecko measuring around 25cm is 90cm X 45cm X 45cm (H X D X W).

Vivarium's can be made from a few different materials including wood, glass or plastic. Glass vivarium's are generally not ideal for terrestrial reptiles such as the leopard gecko that requires a lot of floor space and enjoy their privacy. They are also top opening which can sometimes make it difficult to reach your leopard gecko and clean the enclosure. Wood vivarium's wick up too much moisture which can cause health issues. Due to these drawbacks we tend to recommend a plastic style vivarium with a glass opening on the front only. These style enclosures offer more privacy for your leopard gecko but importantly are



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easy to clean. The enclosure should have a screen, mesh-style top to allow for ventilation but prevent escape. Place your enclosure away from direct sunlight ie. the window and away from radiators to avoid overheating.

On the bottom of the enclosure there are various substrates that can be used. In the wild, leopard geckos may take up small amounts of soil or sand when feeding which in a healthy leopard gecko will pass through the body with no problems. With a healthy adult gecko, in a well set-up enclosure, a soil/sand mix of approximately 50% organic soil (no added fertilisers), 50% sand can be used. Only use clean children's play sand or reptile sand - not builder's sand which can be sharp. This sand-soil mixture allows your leopard gecko to carry out normal digging behaviours.

However, due to the risk of impaction from having a soil/sand substrate many owners choose to use slate or 'reptile carpet' on the floor of the enclosure. This makes for easy cleaning but they should be provided with a tray or box filled with soil-sand mix to allow for natural digging behaviours and provide your leopard gecko with enrichment. This should be placed in the cooler end of their enclosure.

Do not use loose substrate which contains large pieces, such as wood chip as these are often mistakenly eaten, causing impactions which require surgery to be removed.

Within the enclosure stones, branches, logs and hides should be used to provide enrichment. These should occasionally be moved around or changed to mentally stimulate your leopard gecko.

Provide two to three hideouts (depending on your enclosure size) that are large enough to fit an adult gecko and enclosed enough to be dark and snug inside. Give each hideout a different purpose on where they are located ie. prepare a cool hide, a warm hide, and a hot hide. Within some hideouts, place coconut fiber or sphagnum moss in order to create a micro-humidity chamber which will help with shedding.

Spot clean your leopard geckos enclosure every day with a full clean out once a week.

- FBH (Federation of British Herpetologists), 2022. *Code of practice for recommended minimum enclosure sizes for reptiles*. (Online) Available at: <https://www.thefbh.org/news>

Heating:



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Leopard geckos are ectothermic meaning they require an external heat source to warm their bodies up to carry out normal metabolic processes. They are also crepuscular (active predominantly at dawn and dusk) and so do not bask frequently in sunlight. In the wild they will lie on rocks that have been heated by the sun during the day in order to warm themselves up. With this in mind there are a few options to provide them with heat in a captive enclosure.

A basking heat lamp, a ceramic bulb that does not emit light should be placed at one end of the enclosure. Under this main basking lamp place a piece of slate or rock which the leopard gecko can warm up on. Keep in mind this requires the heat lamp to be on for sometime for the rock to absorb any heat.

Alternatively, or as well as a heat lamp, a heat mat placed underneath the enclosure covering one half to one third of the bottom of the enclosure can be used.

The lamp and heat mat should be controlled by thermostats to avoid overheating and placed on a timer to provide 12 hours of heat.

With the correct set up a temperature gradient is then created. The warmest part of the enclosure is at the top and the cooler end at the bottom of the enclosure. Probe thermometers should be placed at the hot end of the enclosure (on top of the chosen substrate) and another placed at the cool end of the enclosure to ensure temperatures are correct. Alternatively, a thermometer gun can be used, and temperatures checked daily.

Night-time temperatures should not drop below 20 degrees.

Avoid placing rocks or wooden bridges close to the heat lamps as leopard geckos can climb onto these, become too close to the heat and burn themselves.

Enclosure temperatures:

Leopard Gecko:	Under basking lamp:	28-30°C
	Ambient (middle):	26-27°C
	Cool end:	22-24°C
	At night:	No lower than 20°C

UV Lighting:

There are many resources which will discuss leopard geckos being able to tolerate the absence of ultraviolet light due to them being a crepuscular species and some keepers do



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not routinely provide it. As long as the leopard gecko is provided with adequate calcium and vitamin D supplementation in their diet they will remain healthy. However, there is growing evidence that being exposed to low levels of ultraviolet B light for even two hours a day is beneficial for increasing levels of vitamin D in the body (Gould, et.al. 2018). Providing UVB light also mimics their normal habitat and maintains normal circadian rhythms.

For this reason, we recommend providing a low intensity UVB light strip light across the top of the enclosure with plenty of shaded areas and hides to mimic their natural environment. This should be timed to be on for the same hours we have daylight, ie. Longer in the summer and shorter in winter.

UVB strength is measured as a percentage. When buying a UVB light you will see this percentage on the side of the packaging. The strength required for leopard geckos is low at 5%. This is because they are efficient and absorbing vitamin D from their diet as well so we do not want to give them a vitamin D overdose.

Please have a look at the following website for further information:

<http://www.uvguide.co.uk/whatreptilesneed.htm>

Overtime UVB in the light degenerates, meaning although they are still producing light it is not the required UVB spectrum that your beardedie needs. This means the light needs to be changed every 10-12 months depending on the product you buy. The guidelines should be on the box as to when to change your light. Alternatively, you can check your lights UV output using a UV gun.

Always use a reflector with your UV light to ensure all the UV rays are going down into the enclosure.

Gould,A., Molitor, L., Rockwell, K., Watson, M. and Mitchel, M A., 2018. Evaluating the physiologic effects of short duration ultraviolet B radiation exposure in leopard geckos. *Journal of herpetological medicine and surgery*. 28 (1) pp.34-39. Available online at: <https://meridian.allenpress.com/jhms/article-abstract/28/1-2/34/137229/Evaluating-the-Physiologic-Effects-of-Short>

Humidity:

We need to provide the correct humidity to keep our leopard geckos suitably hydrated. Leopard geckos being desert dwelling species do not require high humidity and are usually content with a range between 30-40%. A hygrometer is used to measure the humidity. A



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water bowl should be placed in their enclosure and changed daily to allow them the option to drink instead of taking water from their food.

We also recommend placing coconut fibre or sphagnum moss inside a hide in order to create a micro-humidity chamber which will help with shedding.

Cage enrichment:

As previously mentioned, providing different hides and various sized branches or logs and stones should be placed within the enclosure for your bearded dragon to climb upon and hide.

Branches can be artificial or real, however do not use any branches that produce sap as this could cause damage to your leopard gecko. All branches and stones should be thoroughly cleaned before being placed into the environment. This can be done by soaking them in a product called F10 which is available to buy on the internet.

Commercially available hides can be placed throughout the enclosure or alternatively plant pots or logs that do not let too much light in can be used to allow your leopard gecko a safe place to rest.

Companions:

Generally, leopard geckos are solitary and can be very territorial, only sharing their space if mating. Living with another leopard gecko over a prolonged period can be very stressful for them. They often fight, biting off each other's toes or tails and even kill smaller leopard geckos. If you own more than one, it is advised to house them separately. This is also ideal if any health issues were to occur and helps prevent the spread of any infections.

Diet:

Leopard geckos are insectivores.

The following insects are suitable to feed:

House crickets, black crickets and small locusts (no bigger than your gecko's head).

Mealworms and waxworms can be given as occasional treats. They are extremely fatty and a regular diet of them can lead to obesity and a condition known as fatty liver.

All live food should be gut loaded. Gut loading is where the insect is fed high calcium supplements before being fed to your leopard gecko. Insects can also be dusted with a calcium (Cali-dust) and vitamin D3 powder (Nutrobal) immediately before being fed.



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If providing a UVB light be careful to not overdose your leopard gecko with vitamin D. Provide vitamin D on alternate days to avoid this.

If the insect is not eaten within 30 minutes they should be removed from the enclosure. As they may bite/attack your leopard gecko which can cause small wounds and abscesses to occur.

Medical conditions we most commonly see:

Many cases are connected to poor husbandry. Try to meet all their husbandry needs to avoid a vet visit. Conditions we may see are:

- Endoparasites (worms) This is why we ask you to bring a faeces sample in when coming to your appointment. This is something we can easily rule out at the clinic if we have a fresh sample to check.
- Nutritional secondary hyperparathyroidism (metabolic bone disease)
- Dysecdysis (Problems shedding)
- Impactions from a poor diet and poor choice of substrate ie. Wood chip.
- Obesity leading to other conditions

Insurance

Unfortunately, we can never predict what may happen to our leopard geckos, so we highly recommend getting pet insurance. A monthly fee can give you peace of mind knowing your pet is covered for the best treatment should anything happen. There are many insurance companies available, so we advise contacting each of them to find a policy that is right for you. We advise a policy that will cover your leopard gecko for its whole lifetime, for chronic illnesses and for the maximum amount that is available. If this is not possible then covering your leopard gecko for as much as you can afford will give you peace of mind should an accident or emergency occur.