



KINGSSNAKE CARE SHEET



The kingsnake, *Lampropeltis* species, originates from Northern America and parts of Central America. The biology of captive snakes is the same as those in the wild, so their environment in captivity should reflect their natural habitat as much as possible, to meet their welfare needs. These include: the need for a suitable environment; a healthy diet; to be housed apart from others; to ensure normal behaviour and to be protected from harm. This is a basic guide, so also do your own research before getting a kingsnake.

Biology

Kingsnakes occupy a large range of habitats in the wild including scrubland, forests and deserts. They are mainly terrestrial (live on the ground) and often hide in rodent burrows and under logs. Kingsnakes are mainly diurnal (active during the day), but when temperatures are hotter they may become more active at dawn or dusk (crepuscular), or at night (nocturnal). They are not venomous and kill their prey by constriction, feeding mainly on rodents, birds, other reptiles and amphibians.

There are many different colour and pattern variants of kingsnakes, called 'morphs', depending on locality in the wild and on breeding for particular colour or pattern traits in captivity.

Kingsnakes kept as pets in the UK are most likely to be captive bred. Before getting a kingsnake you must be sure that you are able to provide the correct care and associated costs for the animal's entire life. There are often kingsnakes available for rehoming, so check the RSPCA website:

www.rspca.org.uk/findapet

ENVIRONMENT

The enclosure, called a vivarium, must be secure to prevent escape and free from hazards that might cause injury. Good ventilation is essential to prevent the build up of harmful bacteria and it should be made from a solid material that is easy to clean and holds heat.

A kingsnake needs a vivarium which allows it to fully stretch out. Allow at least a third of the snake's length for the width and height, so a 180 cm long kingsnake will need a minimum 180 cm long, 60 cm wide and 60 cm deep vivarium. A hatchling kingsnake may be housed in a smaller vivarium and moved up sizes as it grows.

The vivarium should be placed in a safe location away from draughts and sources of heat, such as radiators or direct sunlight, as these can affect the temperature.

Temperature

Reptiles are 'ectothermic' meaning they use their environment to warm up and cool down, so you need to create a 'thermogradient'. This means positioning the heat source at one end of the vivarium, leaving the opposite end cool so that the snake can move around to regulate its temperature.

To create a 'basking zone', position a heat lamp at one end of the enclosure pointing downwards. Heat lamps must always be guarded to prevent burns, or injuries should the bulb shatter. A thermostat, a simple device that regulates the temperature, must be used with all heat sources. For the heat lamp, place the thermostat probe just above the substrate at the level where the animal will sit.

LIFESPAN

15–25 years in captivity

SIZE

Up to around 180 cm

TEMPERATURE

Hot end: 26–30°C
Cool end: 21–24°C

UV INDEX

Basking zone: 0.7
Gradient to zero in shade

HUMIDITY

40–55%

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Adjust the thermostat and check with a digital thermometer that the basking zone is 26 to 30°C. The cool end should be 21 to 24°C. Thermostats are not always accurate, so it is essential to record the basking zone and cool end temperatures daily using a digital thermometer at each end. An infrared thermometer can also be used to check the temperature in the basking zone and cool end daily. With normal household temperatures, turn off the heat source at night to simulate night-time, when it can safely drop to around 18°C, or use a day/night thermostat. If the room temperature drops lower than this, you will need a non-light emitting heat source at night, such as a ceramic heater or safely set-up heat mat, controlled by a thermostat.

Humidity

The correct humidity is essential to keep your snake's respiratory system healthy and for normal skin shedding. Lightly spray/mist the enclosure daily. Use a hygrometer to measure the humidity inside the vivarium, which should be around 40 to 55%. If it is too high, the vivarium will need more ventilation.

Light

Reptiles use natural daylight to set their day and night patterns. Sunlight contains visible light and ultraviolet (UV). Part of UV is called UVB, which allows reptiles to make vitamin D₃, vital for the animal to store and use calcium. Another part is called UVA, essential for their vision, as they can see many more colours when exposed to UVA.

Create a 'photogradient', from light to shade, by grouping your light with the heat source. The cool end will then be more shaded, just as in the wild. Fit a low output 2 to 7% reptile UVB tube, between one half and one third of the vivarium length, as far into the hot end as possible. Use a reflector of the correct length to direct the light onto your kingsnake. UVB decreases with distance, so follow the UVB tube manufacturer's recommendations regarding distance between the lamp and the snake. The UVB output decreases over time so the UVB output should be checked regularly using an appropriate UV Index (UVI) meter positioned at the level of the animal directed towards the UV lamp. Kingsnakes require a gradient of UVB within their enclosure ranging from UVI 0.7 in the basking zone to zero in the shade. The lamp must also be replaced according to the manufacturer's instructions. UV lamps must always be guarded to prevent burns, or injuries should the bulb shatter. Turn off all lights at night. Both your lights and heat lamp can be controlled using a simple plug-in

timer; 12 hours on during the day and 12 hours off at night. This photoperiod can vary seasonally in the wild; therefore you may need to adjust this for time of year.

Cleaning

Poorly maintained enclosures can become dirty quickly and pose a health risk to you and your snake. Animal waste must be 'spot cleaned' as soon as it appears. Once a month, use a reptile-safe disinfectant, available from pet shops, to fully clean the vivarium walls, glass and decorations, then rinse off well. Be careful as reptiles can carry *Salmonella*. Wash your hands before and after handling your snake or its equipment, to reduce the spread infection between you and your snake.

DIET

Water

A dish must be provided for drinking at the cool end, filled with clean, fresh water, replaced at least daily. This should be large enough for the snake to immerse itself completely and bathe. Sometimes the snake will foul the water, in which case it must be changed as quickly as possible.

Feeding

In the wild, kingsnakes consume a wide variety of prey but most are not easily available. Feed a diet of dead mice or small rats, available from pet shops. Hatchling kingsnakes start on one baby mouse, called a 'pinky', every 5 to 6 days and move up sizes as they grow; up to one adult mouse every 7 to 14 days. As a rule, offer prey that is slightly wider than the widest part of the snake's body. Feeding other prey such as chicks once a month or so, increases variation in the diet. Regular weighing is important to ensure that your snake does not lose weight or become obese.

Any frozen prey items must be fully defrosted and brought to room temperature before being offered. Feed outside of the vivarium to reduce the chance of the snake accidentally swallowing substrate. Offer food using tongs in a shallow, clean plastic tub, large enough for the snake to fit in comfortably but small enough that it will fit into the vivarium. Cover the feeding tub as kingsnakes prefer to eat in the dark. Once the snake has swallowed the prey, gently place the open box back in the vivarium and let the snake come out in its own time.

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BEHAVIOUR

Enrichment

It is important to provide opportunities for natural behaviour in captivity, called 'enrichment'. Kingsnakes are terrestrial (living mainly on the ground) but will climb if given the opportunity, so provide branches for this. If using natural branches, sterilise them with boiling water first. You can add moss, stones and securely placed rocks to create hiding places. Kingsnakes also require a water bowl large enough for them to fully submerge themselves.

Snakes will typically hide in small spaces such as animal burrows in the wild. Include many hides, but at least one at each end of the vivarium, so that the snake can choose the temperature without having to compromise feeling secure. Hides must be large enough for the snake to fit inside but not so large that its body does not touch the sides when coiled up. A hide containing moistened moss, called a 'humid hide', provides variation in humidity within the vivarium.

Substrate

Substrate is the name for the floor covering in your vivarium. It is important as it provides something for the snake to burrow under which helps it to feel more secure. Substrate also stops mess from spreading, though you must still clean it as soon as it appears.

Substrates such as organic soils or soil/sand mixes made for reptiles are recommended for kingsnakes. It is not recommended to use sand alone as it may irritate the skin. Dry, natural leaves can be added to provide cover and create a more naturalistic environment. Sterilise leaves with boiling water and then allow them to dry before use. A clean mix of 60% soil, 30% sand and 10% leaves is suitable for healthy snakes. Paper towels or newspaper can be used when you first get your snake, so that you can monitor its health more easily, but this does not allow for natural behaviours so it is recommended to only use this as a temporary substrate. For permanent housing of snakes, we recommend that owners provide a naturalistic



Bringing your kingsnake home

Always set up the vivarium and run it for a week before introducing your snake. This will allow time for you to adjust the heating and lighting and add your enrichment without disturbing the snake. Place the carrying container inside the vivarium and open it carefully to allow the snake to emerge. Close the door securely and turn the lights off to reduce stress until the following morning when you can check on your snake. It is best not to handle unnecessarily for the first week. Allow time for your snake to become used to its environment.

environment and also consider a bioactive system. Keepers can research how to do this using expert books on the topic, or specialist keeper member groups online.

COMPANY

Keep kingsnakes singly because they are a solitary and territorial species in the wild. They are known to eat other snakes as part of their diet and, if kept together in captivity, may attack or even cannibalise each other.

Handling

Kingsnakes can become used to handling with time, but they are not keen on being held for long periods. The snake can be gently scooped up, supporting the whole animal's body. Never grab the snake as this can cause stress which can lead the snake to struggle, bite or 'musk'; all normal predator avoidance behaviours. When a snake feels threatened it may pull its head back so the neck appears as an 'S' shape when viewed from above. If your snake does this it is better to leave it alone until another time.

The snake should not be taken out for so long that its core temperature drops. Around 10 to 15 minutes at a time is a safe period, depending on the room temperature. Keep other pets separate, regardless of how trustworthy they might have been in the past. Wait 48 hours after feeding before handling your snake to avoid it bringing up its food. Also avoid handling around shedding. Do not handle your kingsnake after handling prey items as the snake may smell food and try to bite; wash hands well first. Feeding the snake outside of the vivarium also helps, otherwise it will learn to expect food whenever the vivarium is opened.

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HEALTH & WELFARE

A healthy kingsnake flicks its tongue frequently and has clear, bright eyes. Its skin should be smooth and without blisters, which can be a sign it has been kept too damp.

Shedding

Reptiles have to regularly shed their skin and snakes shed in one complete piece. Shedding is more frequent when the snake is young and growing. The snake may hide away for a period of time and use the humid hide if you have provided one, then it will rub against objects in the vivarium to remove the old skin, which should come away easily.

If the snake has not shed completely, try bathing it in slightly warm water to soften the skin. Do not try to pull it off as you can damage the new skin underneath. If your snake often has issues with shedding, this is usually set-up related and can be improved with simple adjustments to the vivarium.

If you notice that your snake still has shed over its eyes after a shed, it should be taken to a specialist reptile vet. Do not try to remove the 'eye caps' yourself at home as there is a risk of serious injury to the underlying eye.

Brumation

Brumation is a natural energy saving process seen in some individuals over the cooler months. It is triggered by the reduction in natural daylight hours and air pressure. They may reduce the amount that they eat in this time; however, they should not lose weight so monitor your snake carefully.



Transport

If you need to transport your kingsnake, for example to the vet, it is important that it is done safely. Choose a suitable sized carrier; small snakes such as hatchlings can be transported in ventilated plastic containers with soft, absorbent paper. Adults can be transported in a tightly secured cloth bag, within a well-ventilated plastic tub to prevent injury. Avoid extremes of temperature; the addition of a heat pack may be required but make sure this will not over-heat. Keep transit time to a minimum to reduce stress.

Diseases & concerns

If your snake suddenly stops feeding, consult your reptile specialist vet. There are a number of reasons why this may happen; a problem with the vivarium set-up, illness, or it is sometimes linked to brumation.

Look for abnormal droppings or weight loss as these can be signs of internal parasites. Kingsnakes can suffer from external parasites, such as mites, which lodge underneath the scales and consume blood. If your snake spends unusually long periods of time sitting in the water it may be an indicator of mites. You may also notice small black specks on the snake or around the water bowl. Mites can carry disease so they are a serious concern.

Snakes can suffer from mouth rot, an infection of the mouth that can have a range of causes. Kingsnakes can suffer from respiratory infections, usually caused by too high humidity and poor ventilation.

It is essential that you take time to research the diseases of kingsnakes further. If you do get a kingsnake, monitor its health daily and see a reptile vet urgently if you have any of the above concerns. We advise keeping temperature and feeding records for your snake, in case your snake needs to be taken to a vet.

This care sheet is a basic guide only. Further information must be sought before you decide to take responsibility for any exotic pet. Find more information on our website:

www.rspca.org.uk/exoticpets