

Kingsnake (*Lampropeltis spp.*)

Difficulty: Easy

Kingsnakes are a terrestrial species of snake that can be found all over North America, but mostly in the United States and Mexico. Kingsnakes come in many different varieties (there are around 45 recognized subspecies!), so they can be found in a wide array of habitats, from prefer tropical and subtropical broadleaf forests to deserts and xeric shrublands. Kingsnakes are known to be excellent climbers as well as swimmers, having adapted to conquer a variety of terrain.

Kingsnakes generally range from 3' to 5' long, although it varies from subspecies to subspecies. As for appearance, there are about as many different colors and patterns of kingsnake as there are subspecies! Some are red and yellow, some are gray and red, some are black, some are black and yellow, and some have more conservative patterns in gray and brown tones.

Kingsnakes are some of the most popular pet snakes in the United States, particularly the California kingsnake and Mexican black kingsnake. They're manageably-sized, fairly tolerant of being housed in sub-ideal conditions, and generally tolerate human interaction well.

With good care, kingsnakes can live 20 years or more.

Shopping List

- 48" x 24" x 24" reptile enclosure (preferably front-opening)
- Dual dome heat lamp with ceramic sockets
- 90w PAR38 halogen flood bulb, x2
- Plug-in lamp dimmer, x2
- Large, flat rock (for basking)
- Digital thermometer/hygrometer device with probes, x2
- Infrared thermometer ("temperature gun")
- 22" T5 HO forest UVB bulb (Arcadia or Zoo Med brand)
- 24" T5 HO light fixture with reflector
- Pressure sprayer
- Surge protector with digital timer
- 3-4" of naturalistic substrate
- Sphagnum moss
- Small black plastic box hide
- Additional hides/caves (at least 1)
- Environmental enrichment items (hollow logs, sturdy branches, live/fake plants, etc.)
- Water bowl
- Feeding tongs, at least 12"

Housing

Kingsnakes are active snakes that love to explore, so although they may seem small because of their slender build, experts recommend keeping them in no smaller than a 120 gallon (48" L x 24" W x 24" H) enclosure. This is based on the formula for calculating a snake's minimum space needs:

snake length x half snake length x half snake length = length x width x height

Of course, using a larger enclosure than the minimum is strongly recommended. Bigger is always better, especially for kingsnakes that are larger than 4' long.

Can multiple kingsnakes be housed together?

Kingsnakes are not social animals, and there is no significant benefit to the animal that would justify keeping two or more in the same enclosure. In fact, given that kingsnakes are known to be ophiophagus (snake-eaters), it's safest to house only one kingsnake per enclosure.

Lighting & UVB

Like many snakes, kingsnakes are crepuscular, which means that they are most active at night, particularly around sunset. Many people attempt to use this fact to argue that snakes do not benefit from, and are even stressed by, the presence of light in their environment. However, providing a light source is important to regulating the day/night cycle and associated hormonal rhythms. UVB lighting has also been proven to be beneficial to snakes' health. So although kingsnakes can technically survive without UVB, we strongly recommend providing it in order to promote optimum welfare in captivity.

UVB lighting can be tricky, because in order to get the right strength of UVB (UV Index, or UVI), distance and potential mesh obstruction must be considered. To provide appropriate UVB for a kingsnake, you will need a T8 Zoo Med Reptisun 5.0 or Arcadia T8 6% bulb, long enough to span half of the enclosure and placed on the warm side of the enclosure, preferably not obstructed by mesh.

The basking branch should be placed as follows:

- UVB mounted over mesh: basking branch 6-9" below UVB lamp
- UVB mounted under mesh: basking area 10-15" below UVB lamp

(These recommendations are approximations based on available data. For best results, use a Solarmeter 6.5 to determine the best placement to achieve a UVI of 2.0-3.0 in the basking area.)

UVB lighting should be turned off at night.

Heating

Humans are *warm-blooded*, which means that our body temperature is automatically regulated. Kingsnakes, however, are *cold-blooded*, which means that they have to move between areas of different temperatures in order to regulate their body temperature. Kingsnakes typically warm up by sleeping in warm patches of sunlight or warm burrows. In captivity, using a halogen flood heat bulb is the best way to replicate the type of warmth provided by sunlight.

- **Basking surface:** 90-95°F (32-35°C)
- **Cool side:** 75-80°F (23-27°C)

Specific optimal basking temperatures may vary by which subspecies you're keeping. Heat sources should be turned off at night.

Generally speaking, 90w PAR38 halogen flood bulbs should be plenty to achieve your target basking surface temperature. The basking rock should be placed on top of the black plastic hide box, which will act as your warm hide. If you notice that they're getting too hot, dial it down with a plug-in lamp dimmer. If your basking surface is too cool, you need higher wattage bulbs.

You will need multiple heat bulbs to create a large enough basking area to evenly heat your kingsnake's coiled body. Two bulbs should be enough for an average kingsnake.

To measure the basking surface temperature, use an infrared thermometer (a.k.a. temperature gun). To measure the temperature of the warm hide, use a digital probe thermometer. The Etekcity 774 is a good infrared thermometer, and most reptile-brand digital probe thermometers function well.

Humidity

Kingsnakes generally need an **average humidity of 40-60%**, as measured by a digital probe hygrometer with the probe place in the middle of the enclosure. Humidity levels that are consistently higher or lower than this range can make your pet unwell, although it is normal for humidity to be higher on the cool end and lower on the warm end, as well as higher at night. Specific optimal humidity levels may vary by which subspecies you're keeping.

To raise humidity in your snake's enclosure, you can use a pressure sprayer to mist the habitat as needed. It's also a good idea to place moistened sphagnum moss inside the cool hide to create a humid retreat. Check and change this moss regularly to prevent mold growth. Placing a layer of leaf litter on top of the substrate can also help maintain humidity.

Substrate

Kingsnakes are healthiest and happiest when they are housed on a substrate (a.k.a. "bedding") that imitates the conditions of their natural habitat and facilitates moderate humidity levels. Soil is generally best for meeting this need.

Zoo Med Reptisoil, Lugarti Natural Reptile Bedding, Zilla Jungle Mix, and coconut fiber are the most soil-like commercial substrates. Hemp bedding or shredded aspen may also be suitable in a pinch, although do note that shredded aspen does not tolerate moisture well. Alternatively, you can use a DIY mix of 40% organic, additive-free topsoil + 40% Zoo Med Reptisoil + 20% play sand.

Provide a substrate layer that is around 4" deep. Provide a generous layer of clean leaf litter on top to help retain humidity and give your snake something to explore.

Feces and urates should be removed daily, and contaminated substrate should be scooped out and replaced. Substrate should be completely replaced once every 3-4 months.

Décor

Decorations play an important role in your kingsnake's enclosure as environmental enrichment. Enrichment items encourage exercise, stimulate your snake's natural instincts, and help promote overall wellbeing. And, of course, they make the enclosure look nice!

Décor ideas: additional hideouts/caves, cork logs, sturdy branches, sturdy live or artificial plants

Food

Kingsnakes are carnivores, which means that they need a diet of whole animal prey in order to get the nutrition that their bodies need. How often they need to eat can be estimated by age:

Hatchling kingsnakes eat newborn pinkie mice every 5-7 days. As they grow and get older, increase the size of the prey, keeping the prey only a little larger than the snake at its widest point. By adulthood, the kingsnake should be taking 1-2 adult mice every 14-21 days.

Although mice are the most common feeders, snakes need to eat more than just rats and mice to truly thrive. The key to providing a healthy, balanced diet for your pet snake is VARIETY. Provide as varied of a diet as you possibly can, and you will be rewarded with a healthier, less picky pet!

Prey item ideas: mice, young rats, young quail, quail eggs, chicks, green anoles, small snakes

It's best to offer frozen-thawed prey rather than live to your pet snake. This is safer for the snake and generally considered to be more humane as well. Use soft-tipped feeding tweezers to reduce the risk of getting accidentally bitten when the snake strikes.

Supplements

Snakes can survive without vitamin or mineral supplements, but using them occasionally is a good way to help prevent nutritional deficiencies. Every once in a while, lightly dust the prey item with a 50/50 mix of calcium and multivitamin before thawing.

Arcadia Earthpro-A and Repashy CalciumPlus LoD are both good supplements to use.

Water

Your kingsnake should have free access to a large bowl of fresh, clean water daily. It should be large enough for the snake to curl up inside if it's in the mood for a soak. Scrub the water dish with veterinary disinfectant at least 2x/month.