

## Garter Snake (*Thamnophis sp.*)

### Difficulty: Intermediate

Garter snakes and ribbon snakes (*Thamnophis sp.*) are a terrestrial genus of snakes that can be found all over North and Central America. Garter snakes come in many different varieties (there are around 35 recognized species!), but they are generally found in fields, forests, wetlands, marshes, and residential areas near bodies of water. Garter snakes are best known as accomplished swimmers, but they are also known to occasionally climb as needed.

Because of the variety of species, garter snakes vary widely in length, from as short as 18" to as long as 51" (45-130cm). However, the majority are between 3-4' (0.9-1.2m) long as adults. Although there are many different species and subspecies of garter snake, they generally have a similar appearance: big round eyes, slender build, keeled scales, and stripes running the length of their bodies. In some cases, they may have speckling instead of or in addition to their stripes. Garter snake coloring can be as drab as gray-brown or as striking as red and blue.

Despite being some of the most common snakes in the United States, garter snakes and ribbon snakes are not very common in the pet trade. They can make great pets, however! They're manageably-sized, fairly hardy, and even tolerate being housed in groups. With good care, garter snakes can live 10 years or more.

Note: Some garter snake subspecies are federally protected and illegal to keep in the United States.

### Shopping List

- 48" x 24" x 24" front-opening enclosure (preferably hinged)
- Dual dome heat lamp with ceramic sockets
- 50w PAR38 halogen flood bulb, x2
- Two-socket rheostat
- Large, flat rock (for basking)
- Digital thermometer/hygrometer device with probes, x2
- 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
- >2" coconut fiber substrate or similar
- Small black plastic box hide
- Additional hides/caves
- Environmental enrichment items (hollow logs, sturdy branches, live/fake plants, etc.)
- 16" x 14" x 6" plastic tub (or similar)
- Calcium and multivitamin powder supplement
- 12" feeding tongs

### Housing

Different subspecies of garter snake grow to different lengths, so while 48"L x 24"W x 24"H is a good starting point, the actual minimum requirement for your particular garter snake may be different. Use this formula as

your guide, based on the expected adult length for your species:  $snake\ length \times half\ snake\ length \times half\ snake\ length = length \times width \times height$

Of course, using a larger enclosure than the minimum is strongly recommended. Bigger is always better! But whichever you choose, make sure it's EXTREMELY well-proofed against escape. Garter snakes are small and flexible, which means that they are essentially professional escape artists.

### **Can multiple garter snakes be housed together?**

Although the vast majority of snake species do best when housed singly, garter snakes are a possible exception! While garter snakes have been known to do well by themselves, they can also be housed in groups, and group housing seems to be particularly beneficial for decreasing stress in juveniles. Of course, more inhabitants means more space will be required to keep everyone comfortable: if you're keeping more than two together, you'll need to significantly increase the size of the enclosure.

Do pay attention to the sex of any garter snakes you're interested in housing together, however — since garter snakes are livebearers, if you house a male and female together, you're likely to eventually get surprised with lots of little babies!

As an additional note, certain species are somewhat prone to cannibalism, and shouldn't be cohabited as a safety precaution: Wandering garter (*T. e. vagrans*), checkered garter (*T. marcianus*), Coast garter (*T. e. terrestris*), Common garter (*T. sirtalis*)

### **Lighting & UVB**

As a general rule, lights should be on for 14 hours/day during summer and 10 hours/day during winter, with gradual adjustments in-between. Alternatively, you can sync your lights to local sunrise and sunset times using smart timers. For safety and convenience of placement, it's preferable to install all lamps on top of the enclosure, over a mesh top, rather than inside.

#### **UVB Lighting**

UVB lighting has also been proven to be beneficial to snakes' health. So although garter snakes 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 garter snake, you will need a [Zoo Med T5 HO Reptisun 5.0](#) or [Arcadia T5 HO Forest 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 or platform should be placed according to the following, with distance being measured between the UVB lamp and the height of the snake when on the basking surface.

- With mesh obstruction: 9-12"
- Without mesh obstruction: 12-14"

Use an [Arcadia ProT5](#) or [Vivarium Electronics](#) fixture for best results.

#### **General Illumination**

Garter snakes are known to be active during both day and night, which means that providing bright illumination during the day is likely to be beneficial in stimulating activity and natural behaviors. You will need a nice bright 6500K LED or T5 HO fluorescent grow light, long enough to span most of the enclosure's length. I prefer the [Arcadia Jungle Dawn LED Bar](#) and the [Bio Dude Solar Grow T5 HO](#).

## Heating

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

- **Basking area: 85-90°F (29-32°C)**
- **Cool side: 75-80°F (23-27°C)**

Heating should be turned off at night. Note that cool side temperatures above 91°F / 33°C are considered dangerous and may cause heat stress and, if unresolved, death by heat stroke.

Generally speaking, 50w 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 snake's coiled body. Two bulbs is enough for an adult garter snake. Create a warm hiding place for the snake to use by placing a black box hide under the heat lamps, with a flat basking stone on top.

To measure the temperatures around your enclosure, use digital probe thermometers — one placed on the basking surface and one on the cool end of the setup. Most reptile-brand digital probe thermometers function well.

## Humidity

Garter snakes generally need an **average humidity of 35-60%**, as measured by a digital probe hygrometer with the probe placed 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.

### How to create a swimming area for garter snakes

Garter snakes naturally live near bodies of water in the wild, and although the amount of time they spend in the water varies by species, they are generally proficient swimmers. For this reason, it's important to provide a basin of water on the cool side of the enclosure. A clear plastic storage bin or glass aquarium smaller than 20"L x 12"W x 8"H should be plenty.

Change out the water once weekly or whenever it gets soiled. Scrub the water dish with veterinary disinfectant such as Rescue or F10SC before refilling. Using a Python siphon makes emptying easier.

## Substrate

Garter snakes 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, coconut fiber, and the Bio Dude Terra Firma kit are the most soil-like commercial substrates for garter snakes. Shredded aspen may also be suitable if you live in a particularly humid climate. 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 at least 2” deep. Scatter 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 garter snake’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

Garter snakes are carnivores, which means that they need a diet of whole animal prey in order to get the nutrition that their bodies need. Newborns eat every other day. 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 (or up to 10% of the snake’s weight). By adulthood, the snake should be eating every 4-7 days.

Wild garters are known to eat a variety of prey, including earthworms, leeches, fish, tadpoles, newts, frogs, young birds, and small mammals. In other words, 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 ideas for garter and ribbon snakes:** earthworms (chopped as needed), guppies, platies, mice, button quail, quail eggs, Reptilinks

These can generally be purchased from high-quality feeder breeders such as Josh's Frogs, Layne Labs, RodentPro, and Reptilinks. Use soft-tipped feeding tweezers to reduce the risk of getting accidentally bitten when the snake strikes. If you are housing multiple garter or ribbon snakes together, it's best to feed individually via tongs to prevent accidental cannibalism. Alternatively, it also helps to chop feeder earthworms into head-size pieces.

## 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 RevitaliseD3 and Repashy CalciumPlus are both good supplements to use.