



# Garter snake CARE SHEET



Garter snakes, *Thamnophis* species, have a wide range within North America. The biology of captive snakes is the same for those in the wild, so the environment should reflect their natural habitat as much as possible, to meet their complex welfare needs. These include the need for a suitable environment; a healthy diet; to be kept with, or apart, from others; to allow opportunities for normal behaviour and to protect them from harm. This is a basic guide, so also do your own research before getting a garter snake.

## Biology

Garter snakes have adapted to many different environments in the wild including scrubland and forests and they are usually found near water. Garter snakes are commonly available as captive bred but they are also wild collected. It is strongly advised that you only obtain captive bred or rescue animals. These snakes are now available in many captive bred colour morphs.

Garter snakes are diurnal (awake during the day) and very active. They are not venomous and eat small rodents, fish, insects and amphibians in the wild.

Most species can grow to around 100cm long and are fairly slender. They can live for 10 years or more and grow quite quickly. Before acquiring a garter snake, you must be sure that you are able to provide the correct care and associated costs for the animal's entire life. Check the RSPCA rehoming website for garter snakes:

[www.rspca.org.uk/findapet](http://www.rspca.org.uk/findapet)

## ENVIRONMENT

Garter snakes can be kept as a communal species or singly. The vivarium must be secure to prevent escape and free from hazards that might cause injury. It should be made from sealed wood or glass. Good ventilation is essential to prevent the build up of harmful bacteria which can cause respiratory infections and it should be made from a solid material that is easy to clean.

Snakes need to fully stretch out in their vivarium and to have at least a third of their length for the width and height, so a 100cm long garter snake will need a 100cm long by 33cm by 33cm vivarium at minimum.

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' - the warmest part that the snake can reach - position a heat lamp at one end of the enclosure pointing downwards. Heat lamps must 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. With a heat lamp you will need to use a dimming thermostat.

### LIFESPAN

10-15 years in captivity

### SIZE

Up to around 100cm

### TEMPERATURE

Hot end: 28 - 32°C  
Cool end: 22 - 24°C

### HUMIDITY

50 - 60%

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Adjust the thermostat and check with a digital thermometer that the basking zone is 28 to 32°C. The cool end should be 22 to 24°C. A reptile heat mat on one side of the vivarium is recommended for a smaller enclosure, such as for hatchlings. Use an on/off thermostat with the probe on the heat mat. Thermostats are not always accurate so it is essential to record the temperatures daily. Use two digital thermometers: one at the cool end and one at the basking zone.

With normal household temperatures, you can turn off the heat at night to simulate night-time, when it can safely drop to 16 to 20°C. If the room temperature drops lower than this, you will need non-light emitting heat source at night, such as a ceramic heater or heat mat, with a correctly set up thermostat.

## Humidity

The correct humidity is essential to keep your snake's respiratory system healthy and for normal skin shedding. Use a hygrometer to measure the humidity inside the vivarium, which should be around 50 to 60%. If it is too low, you can spray it with clean water. If it is too high, the vivarium will need more ventilation.

## Light

Reptiles need light cycles to set their day and night patterns. Sunlight contains visible light and ultraviolet (UV). Part of UV is called UVb, which allows the snake to top up vitamin D<sub>3</sub>, vital for it to store and use calcium. Another part is called UVa, important for their vision, as they can see many more colours under UVa.

Create a 'photogradient', from light to shade, by grouping your light with the heat source. Fit a low output, 2% reptile UVb tube, around one half of the vivarium length with one end in the hot end. The cool end will be more shaded, just as in the wild. Follow the UVB tube manufacturer's recommended distance from the snake. UVB output decreases over time, so the lamp must be replaced depending on the brand. Turn off all lights at night. All your lights can be controlled using a simple plug-in timer; 12 hours on, 12 hours off.

## Cleaning

Other than the predator avoidance behaviour 'musking' in garter snakes, they should not be dirty or smelly. However, poorly maintained enclosures can become dirty quickly and pose a health risk to you and your pet.

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 and decoration, then rinse off well. Be careful as reptiles can carry *Salmonella*. Wash your hands before and after handling or cleaning equipment to reduce the spread of infection between you and your snake.

## DIET

### Water

A dish must be provided for drinking, filled with clean, fresh water, replaced at least daily. This should be large enough to allow the snake to bathe. Sometimes the snake will foul the water in which case it must be changed as quickly as possible. Garters will also often sit in the water bowl for long periods which is quite normal. You can also spray the vivarium with a little clean water to allow the snake to collect droplets of water as they would in the wild.

### Feeding

This is a species of snake that will consume a large variety of food sources in the wild but are normally fed on fish in captivity. A varied diet of defrosted freshwater fish and defrosted, young mice or rats is suitable for these snakes. In the wild, they consume many more types of prey but these are not available in reptile shops. It is vital that only fish low in thiaminase is used, because this can poison snakes. Salmon and trout are suitable as they are low in thiaminase. Speak to your reptile vet about other safe fish to feed. You can feed the occasional earthworm to increase the variation in the diet. These must be purchased from a pet shop, not collected from outside as those could have parasites. Some species won't eat earthworms and sometimes you just get picky individuals.

Regular weighing is a good idea, to help you monitor your snake's progress.

Garter snakes also must be offered a good supplement to provide the vitamins and minerals that are not available in captive diets. If you only feed filleted fish then your snake will miss out on important nutrients such as calcium. Your snake should accept food that has been dusted with supplement powders containing calcium. Supplements can be over-provided so always follow the instructions carefully.

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## BEHAVIOUR

### Enrichment

It is important to provide opportunities for natural behaviour in captivity, called 'enrichment'. Garter snakes are active and will climb if given the opportunity, so provide branches for this. If using natural branches, sterilise them with boiling water or in a hot oven first. You can add moss, stones and securely placed rocks to create hiding places. Garters are associated with water so require a water bowl large enough for them to fully submerge themselves. Small plants for climbing can be used, as can waterfalls or filtered ponds in larger vivaria. Make sure that the land area is kept dry to prevent skin problems.

Snakes will typically hide in small spaces such as animal burrows in the wild. Include many hides, but at least one at either 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.

Garter snakes can be fed a number of small food items placed around the vivarium to keep them stimulated.

### Substrate

Substrate is the name for the floor covering in your vivarium. Some substrates have been linked to a condition called impaction. Impaction is where non-natural substrates become lodged inside the digestive tract and causes a blockage. This is a potentially fatal issue and vet treatment is required if you suspect it. Impaction can also be caused by, too low temperatures and poor hydration.



### Bringing your snake 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 carefully to allow the snake to emerge. Secure the vivarium doors and turn the lights off to reduce stress until the following morning when you can check on your snake. Allow time for your snake to become used to its environment for the first week.

It is not recommended to use sand alone for snakes as it may irritate the skin. However, healthy snakes can be housed on a clean 60% soil, 30% sand and 10% leaf mixture. You can sterilise natural leaves with boiling water, then allow them to dry.

Substrates such as aspen or lignocel are soft materials that work well if kept in the dry area. You could also use paper towel as a temporary substrate.

## COMPANY

Garter snakes hibernate together in the harsh winter and emerge as a group in the early spring. Because they often come together in the wild, you can keep garter snakes in groups in captivity. When housing any reptile together you need to make sure each animal has access to resources. For example, you will need to make sure to have a large basking zone, so there is no competition for temperature.

### Handling

Garter snakes are not keen on being held for long periods. However, they may allow you to hold them for short periods, after they have settled in. Never grab your snake as this could stress it and may lead to struggling, biting or musking – when a strong smell is released from the snake - normal predator avoidance behaviours. The snake can be gently scooped up supporting the whole animal. The snake should not be taken out for so long that its core temperature drops. Five to ten minutes is a safe period, depending on the temperature outside of the vivarium.

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## HEALTH & WELFARE

A healthy garter snake flicks its tongue frequently and has 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 shed their skin and snakes shed in a complete piece. Shedding is more frequent when the snake is young. The snake may hide away for a period of time and use the humid hide, then it will rub against objects in the vivarium to remove the old skin.

If you notice that your snake still has shed over its eyes after a shed, these 'eye caps' will need removing possible. A specialist reptile vet can do this safely. 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. Issues with shedding are usually set-up related and can be prevented with adjustments so contact your reptile vet for help.

## Brumation

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

## Diseases & concerns

It is vital to provide a varied and well thought-out diet in captivity and that the heating and lighting systems are checked to be working well at all times.



## Transport

If you need to transport your snake, 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.

You should also register with a suitably qualified vet. Look out for abnormal droppings or weight loss. Garter snakes can suffer with mouth rot so be vigilant to any changes there.

Snakes can suffer from external parasites such as mites. Snake mites lodge underneath the scales and consume blood. Mites are very good travellers and can transfer between keepers. 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 carry disease so they are a serious concern.

Metabolic bone disorder, 'MBD' describes a range of nutritional diseases and imbalances in captive reptiles, but it often involves a lack of available calcium due to a deficiency of vitamin D<sub>3</sub>. Garter snakes may be more prone to this than snakes that eat rodent prey, so dusting food with calcium powder is important. Be sure to always follow instructions, otherwise they could get problems from vitamin overdose. For example, with a well-set UVb system, you will not need to provide high levels of dietary vitamin D<sub>3</sub>.

It is essential that you take time to research the diseases of garter snakes further. If you do get a garter snake, monitor its health daily and see a reptile vet urgently if you have ANY of the above concerns.

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](http://www.rspca.org.uk/exoticpets)