



Royal python CARE SHEET



The royal python, *Python regius*, originates from West Africa. The biology of captive snakes is the same as in the wild, so the captive environment 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 with or apart from others; to be able to express normal behaviour and to be protected from harm. This is a basic guide, so do your own research before getting a royal python.

Biology

Royal pythons originate from West Africa including Ghana, Togo and Benin, where they are still collected for the leather and meat trades. However, most in the UK pet trade are now captive bred. In their natural grasslands or forest habitats, they can be found in and around the grassland burrows or termite mounds during the heat of the day. They are 'crepuscular' (active at dawn and dusk) and can be viewed as being 'partial baskers'. 'Royals' are docile by nature and curl up into a ball when threatened, which is why they are referred to as 'ball' pythons in America. They are not venomous and use constriction to kill their wild prey. Royals have been bred to produce many colour and pattern variants called 'morphs'.

Before acquiring a royal python, you must be sure that you are able to provide the correct care and associated costs for its whole life. You can choose a reputable breeder or reptile shop, but there are likely to be many royal pythons 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 injuries. Good ventilation is essential to prevent the build up of harmful bacteria. It should be made from a solid material that is easy to clean and holds heat well.

A royal python needs a vivarium which allows it to fully stretch out. Allow at least third of the snake's length for the width and height. For example, a 120 cm long snake will need a minimum 120 cm long, 40 cm wide and 40 cm deep vivarium. Royals will become stressed in large, open 'bare' spaces, which is linked to predator avoidance behaviour. Therefore, they should have plenty of cover and multiple hides and be housed in an appropriate sized enclosure that is moved up in size as they grow.

Temperature

Reptiles are 'ectothermic' meaning they use their environment to warm up and cool down, so you need to create a 'thermogradient' - positioning the heat source at one end of the vivarium, leaving the opposite end cool so the snake can move around to regulate its temperature. To create a 'basking zone', use a 60–100 watt reptile heat lamp or Deep Heat Projector at one end of the enclosure pointing downwards. Heat lamps must be guarded to prevent your snake getting burnt, or injured, should the bulb shatter. All heat sources must be connected to a thermostat, a simple device that regulates the temperature. Place the thermostat probe above the substrate, at the same level as the animal. Adjust the thermostat and check the basking zone temperature using a digital thermometer until it reaches 30–32°C.

LIFESPAN

20+ years
in captivity

SIZE

Up to around
150cm

TEMPERATURE

Hot end: 30–32°C
Cool end: 24–26°C

UV INDEX

Basking zone: 1.0
Gradient to zero in shade

HUMIDITY

50–60% with
boosts up to 80%

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For smaller enclosures, such as for a hatchling, a reptile heat mat can be used but must be placed underneath the enclosure, or protected by a mat guard, so that the animal cannot come in contact with the surface of the mat. This must be used with an on/off thermostat, with the probe directly over the heat mat, set at 32°C.

Thermostats are not always accurate, so you must record temperatures at each end of the enclosure daily with an infra-red thermometer, at the same level as the animal. Use one digital thermometer for the basking zone and another in the cool end, which should measure 24–26°C. You will need to provide non-light emitting heat at night, such as a Deep Heat Projector, ceramic heater or reptile radiator, attached to a suitable thermostat.

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

Humidity

The correct humidity is essential to keep your snake's respiratory system healthy and for healthy skin shedding. Use a hygrometer to measure the humidity at the cool end, which should normally be around 50–60 percent. Mist the vivarium with clean water to boost humidity to around 80 percent, allowing it to drop in-between. If the humidity is constantly too high, your vivarium will need more ventilation to prevent build-up of bacteria and mould, which can cause illness.

Light

Reptiles use natural daylight to set their day and night patterns. Sunlight contains visible light and ultraviolet (UV). Part of UV, called UVB, allows reptiles to make vitamin D₃, vital for the animal to store and use calcium. Vitamin D₃ also interacts and regulates other core biological processes. Another part is called UVA, essential for a reptile's vision as they can see many more colours with UVA.

Create a 'photogradient', from light to shade, by grouping your light with the heat source so the cool end is more shaded, just as in the wild. Fit a reptile UVB tube, one half to one third of the vivarium length, into the roof of the vivarium in the hot end. Use a reflector of the correct length to direct the light onto your python. 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. Royal pythons require a gradient

of UVB within their enclosure ranging from UVI 1.0 in the basking zone to zero in the shade. The lamp must also be replaced according to the manufacturer's instructions. UV lamps must be guarded to prevent burns, or injuries should the bulb shatter. Turn off all lights at night. Lamps can be controlled using a plug-in timer; 12 hours on in the day, 12 hours off at night.

Cleaning

Poorly maintained enclosures become dirty quickly and present a health risk to you and the snake. Animal waste should 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 cleaning and handling your snake to reduce the spread of infection.

DIET

Water

A dish must be provided for drinking at the cool end filled with clean, fresh water, replaced at least daily. It needs to 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.

Feeding

Royal pythons feed on a variety of prey in the wild but in captivity; feed them a diet of frozen then thawed rodents, available from pet shops. You can also obtain multimammate mice, a rodent from Africa that more closely resembles their wild prey. You can also feed the snake a quail once a month or so to increase variety. As a rule, offer prey that is slightly wider than the widest part of the snake's body. Young snakes typically feed every 5–6 days and move up sizes as they grow. They should be fed less often when adult – around every 7–14 days depending on the weight of the animal. Regular weighing is important to ensure that your snake is not becoming underweight or obese.

Take care when feeding snakes within their vivarium, as there is a risk of the snake accidentally swallowing substrate. Offer food using tongs and monitor the snake until the prey has been swallowed. Snakes should not be handled for at least 48 hours after feeding.

Supplements provide the vitamins and minerals that are not available in captive diets. Your snake should accept food that has been dusted with supplement powders containing calcium. Supplements can be over-provided so always follow the instructions.

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BEHAVIOUR

Enrichment

It is important to provide a stimulating environment that promotes natural behaviours, called 'enrichment'. Royal pythons love to climb in the open in low light. As such, you will need to choose sturdy decoration such as branches that will support the weight of this heavy-bodied snake. If using natural branches, sterilise them with boiling water first.

Royal pythons like small spaces as they typically hide in animal burrows in the wild. Include many hides at both ends 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 cannot touch the insides of the hide when it is coiled up. Include a hide containing moist moss to create a 'humid hide'.

Substrate

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

Organic soils made for reptiles hold humidity well without going mouldy. If mould is forming even on this substrate then your humidity may be too high and your ventilation may be inadequate. This is one of the reasons to run your vivarium for a week in advance of getting the snake so that you can adjust the humidity. Natural leaves can be used to provide cover, create a more naturalistic environment and also hold humidity. Sterilise leaves with boiling water and allow them to dry before use. It is not recommended to use sand for royal pythons as it may irritate the skin.

For permanent housing of snakes, we recommend that owners provide a naturalistic 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.



Bringing your python 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 systems and add your enrichment without disturbing the snake. Place the tub or bag containing the snake 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. Instead, allow time for your python to become used to its environment.

COMPANY

We recommend housing royal pythons alone as they are a naturally solitary species and it is also easier to check the health of a snake kept in its own enclosure.

Handling

Royal pythons can become quite docile if handled carefully. Hatchlings have more of a tendency to strike and bite as they are shy but this usually resolves as they grow.

Gently scoop up the snake with one hand near the head and the other nearer the tail. Always support the whole animal and never grab as this can cause stress which can lead the snake to struggle or bite. When a snake feels threatened it may pull its head back so the neck forms 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 from the vivarium for so long that its core temperature drops. Around 10–15 minutes at a time is safe, depending on the room temperature. Wait 48 hours after feeding before handling your snake otherwise it could bring up its food. Also avoid handling during shedding as it may be defensive. Do not handle your python after handling prey as the snake may smell food and try to bite; wash hands well first.

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HEALTH & WELFARE

A healthy royal will be active and inquisitive. It flicks its tongue frequently and has clear, bright eyes.

Shedding

Reptiles have to regularly shed their skin and a healthy snake will shed in one single piece. There is no rule as to how often this will happen but it will be more frequent when the snake is young and growing. When it is time to shed, the snake may refuse food and use the humid hide. The snake will then rub its body against objects in the vivarium to remove old skin.

If you notice that your snake still has shed over its eyes even after a shed, then these 'eye caps' will need removing as soon as possible. A reptile specialist vet can do this safely.

If the snake has not shed completely, try bathing it in slightly warm water to soften the stuck shed. If your snake often has issues with shedding, this is usually dietary/set-up/humidity related and the issue can be resolved with simple adjustments to the vivarium and the snake's care.

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. Do not try to encourage brumation in your royal python.

Fasting

Royals have a reputation for going off their food. There are a range of reasons that might cause the snake to stop feeding. For example, there may be a problem with the set-up causing the snake to become stressed. Sometimes this is seasonal and appears to be linked to brumation. In general, pythons have low energy output so may not feed as often as other types of snake. When choosing a royal, find out how it has been feeding before you acquire it and avoid taking on one that has not been feeding well. If your snake suddenly stops feeding, consult your reptile specialist vet who may be able to identify the cause and provide help.

Transport

If you need to transport your royal python, for example to the vets, 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 use 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

Look for signs of weight loss or diarrhoea as these can be signs of internal parasites. Constipation could be a sign that the snake is poorly hydrated or that the basking temperature is too low for proper digestion.

Snakes can also suffer from mouth rot, an infection of the mouth that can have many causes. External parasites, such as mites lodge underneath the scales and drink blood. If your snake is spending long periods of time in the water, this may indicate that it has mites. Mites can also spread disease so they are a serious concern.

Royals are also prone to respiratory infections. These are usually caused by too high humidity and poor ventilation. A whistling sound when the snake breathes is one of the symptoms, as is seeing the snake reaching up and gasping for breath.

Metabolic bone disease, 'MBD' describes a range of nutritional diseases and imbalances, but it often involves a lack of available calcium and the related full-spectrum of natural minerals due to a deficiency of vitamin D₃ and mineral supply.

It is essential to research these diseases further before getting a reptile. If you do get a royal python, monitor its health and behaviour daily and see your 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/royalpython