

WALNUT CREEK SUPPLY

THE COMPLETE CARE GUIDE

Ball Python

Enclosure, feeding, humidity and the famous feeding strike — everything a new owner needs



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New owner? Go straight to Section 1. It is written so you can set up a safe, correct home and get through the first 48 hours without reading anything else first.

Ball pythons are described everywhere as the perfect beginner snake, and in many ways that is true — they are docile, manageable in size, and genuinely curious once they settle in. The catch is that "beginner" is sometimes read as "easy to cut corners with," and that is where the reputation gets complicated. The most common ball python problems in the hobby are not about temperament or complexity. They are about enclosures that are too small and too dry, heat sources running without thermostats, and owners who panic when a ball python does exactly what ball pythons do: refuse food for six weeks and coil into a perfect, unimpressed ball. Get the humidity right. Get the gradient right. Use a thermostat. And when your snake decides she is done eating in October, read the feeding section before calling anyone. You are going to have this snake for twenty to thirty years. Start correctly.

SECTION 1

Quick Start: Your First 48 Hours

1. **Set up the complete enclosure before your snake arrives.** Minimum **4' × 2' × 2' for an adult** — equivalent to a 120-gallon footprint. Front-opening doors are strongly preferred over top-opening lids; a hand reaching in from above mimics a predator. Juveniles benefit from a smaller enclosure or a densely furnished large one — too much open, uncovered space causes feeding refusal in young snakes.
2. **Establish the thermal gradient and confirm it with probe thermometers before any snake goes in.** Warm side surface temperature **88–92°F**, warm air temperature at snake height **80–85°F**, cool end **76–80°F**, and ambient room temperature never below **75°F**. Use at minimum two digital probe thermometers — one on the warm side floor surface, one at the cool end. Stick-on temperature strips provide decorative information, not diagnostic readings.
3. **Connect every heat source to a thermostat — no exceptions.** A halogen flood lamp or radiant heat panel needs a dimmer thermostat; a ceramic heat emitter needs a pulse proportional thermostat. Under-tank heaters used as a secondary source must also be thermostat-regulated. **Never use a heat rock** — they develop unpredictable hot spots and have no safe use in any ball python enclosure.
4. **Get humidity to 60–80% before the snake arrives.** A moisture-retaining substrate — coconut fiber, cypress mulch, or a bioactive mix — combined with a tight-fitting lid and a large water dish does most of this work. Put your hygrometer in and let the enclosure stabilize for 24 hours. Open the lid slightly if humidity exceeds 85%; add a small damp sphagnum moss area or additional misting if it will not reach 60%.
5. **Add two opaque hides before the snake arrives.** One warm-side hide positioned directly over or adjacent to the hottest part of the substrate, one cool-side hide in the 76–80°F zone. Each hide should be just large enough for the snake to fit inside snugly — ball pythons feel secure through tight confinement, not open space. A hide that is three sizes too large provides no security.
6. **Fill the water dish and place it on the cool end.** Ball pythons drink from standing water and will occasionally soak, particularly before a shed. Use a heavy ceramic or stone dish wide enough for the snake to partially coil in and stable enough to resist overturning. Refresh daily.
7. **Lock every lid clip.** Ball pythons are **escape artists** and will locate any gap. A screen lid needs clips on every side; a sliding door needs all seals engaged; a wooden enclosure needs a latch that does not rely on friction. Test the seal before the snake arrives and check it every single time you close the enclosure.
8. **Place the snake in the enclosure and leave her alone for five to seven full days.** This is the hardest instruction and the most important one. No handling, no feeding attempts, no rearranging furniture, no introducing family members. She needs to locate her hides, map the thermal gradient, and establish that this space is safe. Check water and temperatures quietly once a day. Everything else waits.

9. **Offer the first meal on day seven or later.** Use a frozen-thawed or freshly pre-killed rodent — see the Feeding section for sizing and thawing method. If she refuses, that is completely normal. Wait five to seven days and try again. Some snakes take three to four weeks to eat in a new home. Patience here prevents a cascade of mistakes.
10. **Find your exotic reptile veterinarian before you need one.** Not every clinic treats snakes, and a ball python who looks vaguely unwell on Monday can be in genuine trouble by Thursday. Call ahead, confirm they see pythons specifically, and keep the number somewhere you will actually find it.

First-Time Starter Bundle

What needs to be in the house on day one, and what to look for in each category.

Essentials

- **An enclosure with the right footprint** — 4' × 2' × 2' minimum for one adult, front-opening preferred, lid or door sealing completely with no exploitable gaps. PVC reptile enclosures and wooden vivariums retain humidity far better than bare glass terrariums. Glass setups work but require more management to hold 60–80% humidity.
- **An overhead heat source on a thermostat** — a halogen flood lamp, a ceramic heat emitter (CHE), or a radiant heat panel wired to the correct thermostat type. The thermostat probe goes on the warm-side floor surface where the snake basks. Never power an overhead heat source without a thermostat attached.
- **Two calibrated digital probe thermometers** — one at warm-side substrate level, one at cool-end floor level. A handheld infrared temperature gun is useful for spot-checking surface temperatures.
- **A digital hygrometer** — positioned at mid-enclosure, away from the water dish.
- **Two opaque hides** — one warm-side, one cool-side. Each should have one entrance and be fully enclosed on all other sides. Smooth-interior ceramic caves, purpose-made plastic snake hides, and plastic food containers with an entry hole cut in the side all work well.
- **Moisture-retaining substrate at 3–4 inches depth** — coconut fiber, cypress mulch, or a bioactive soil mix. Depth is part of the humidity system, not just an aesthetic choice.
- **A heavy ceramic or stone water dish** — wide enough to partially soak in, stable enough to resist the snake's weight. Ball pythons soak before sheds and when mildly dehydrated.
- **Lid clips or door locks on every panel** — the most overlooked item on this list and directly connected to survival outcomes.

Ready to set up? Browse the essentials in our collections: [Reptile and Amphibian Enclosures and Reptile and Amphibian Terrarium Supplies & Accessories](#).

Enrichment

- **Cork bark tubes and rounds** — ball pythons use cork as a hide and perching surface. A large cork tube on the warm side adds a third enclosed space and encourages natural resting behavior.
- **Dense artificial foliage** — fake plants along the back and sides break sightlines and reduce ambient stress. Ball pythons in visually complex enclosures are measurably calmer than those in bare setups.
- **A sturdy climbing branch or bowed driftwood** — firmly anchored at a gentle incline so it cannot shift under the snake's weight. Ball pythons will use it for perching during their evening active period.
- **Sphagnum moss in a covered humid zone** — a small enclosed area packed with damp sphagnum gives the snake a supplementary moisture source during shed cycles.

- **A sturdy travel carrier** — a ventilated plastic tub with a hide inside. Essential for vet trips; a snake unfamiliar with the carrier before a stressful appointment is harder to transport safely.

Enrichment, one click away. Shop Reptile and Amphibian Accessories.

SECTION 2

Meet Your Ball Python

Wild ball pythons (*Python regius*) range across West and Central Africa — from Senegal and Guinea in the west through Ghana, Nigeria, and Cameroon to Uganda in the east — in the transition zone between savanna and forest edge. They spend the day coiled in rodent burrows or hollow roots and emerge after dusk to hunt, locating warm-blooded prey in complete darkness through the **heat-sensing pit organs** along their labial (lip) scales. When startled, the snake tucks its head under its body coils and rounds itself into a tight sphere — a passive defense, not an aggressive one. This disposition is precisely why ball pythons are among the most manageable pythons for regular handling: they signal stress clearly before escalating, rarely bite defensively once settled, and a well-kept adult handled consistently from youth is genuinely calm in hand.

Trait	Detail
Common name	Ball python (also: royal python)
Scientific name	<i>Python regius</i>
Native range	West and Central Africa — Senegal to Uganda
Wild habitat	Savanna grassland, forest edge, agricultural margins, termite mounds, rodent burrows
Adult length (female)	4–6 feet typical; occasionally to 6.5 feet
Adult length (male)	3–4 feet typical; occasionally to 4.5 feet
Adult weight	Females: 1.2–2.5 kg typical; males: 0.7–1.5 kg typical
Typical lifespan	20–30 years with good care; documented captive records exceed 40 years
Activity pattern	Nocturnal and crepuscular — most active after dark
Social structure	Strictly solitary — never house multiple ball pythons together
Temperament	Docile, curious, tolerates calm handling; defensive ball rather than aggression
Feeding method	Constriction — coils around prey and tightens until prey's heart stops

Sexual dimorphism

Ball pythons are **sexually dimorphic**: females are meaningfully larger than males. A female at 5 feet and 1.8 kg is entirely typical; a male of that size is large. Male ball pythons also have proportionally larger **pelvic spurs** — small claw-like vestigial limb remnants visible on either side of the cloaca — but spur size alone is not a reliable sex determination method; a vet or experienced keeper can probe or pop a hatchling to confirm. Female size and egg-production demands affect housing dimensions, feeding quantities, calcium requirements, and veterinary considerations throughout the snake's life.

What surprises new owners

The lifespan is the first genuine surprise. Twenty to thirty years is the realistic expectation, with documented animals exceeding forty years. That is a commitment on the scale of a dog — longer than many people own a car — and it deserves to be taken seriously before acquisition.

The second is feeding strikes. A ball python who refuses food for four to eight weeks in autumn and winter is doing exactly what ball pythons do. In the wild, the dry season brings reduced prey activity and a natural drop in feeding drive. A healthy adult can maintain body condition through a seasonal fast of several months. The difficulty is that new owners cannot immediately

distinguish a normal slow-down from early illness, and the panic response — force-feeding, cycling through five prey types in a week, adjusting the thermostat daily — makes both scenarios worse. The Feeding section covers this distinction in full. The third surprise is humidity: ball pythons require **60–80% relative humidity**, far above the 30–50% common in pet store setups, and most shedding and skin problems trace directly to substrate that cannot hold moisture and enclosure lids that exhaust it too quickly.

SECTION 3

Enclosure Setup & Layout

Footprint, height, and the semi-arboreal factor

The minimum enclosure for one adult ball python is $4' \times 2' \times 2'$ — similar in floor footprint to a 120-gallon aquarium. This is a genuine minimum, not a suggested starting point. A $4' \times 2' \times 4'$ or taller enclosure is the modern preferred standard, and the reasoning is specific: ball pythons are **semi-arboreal**. In the wild they regularly rest in the lower branches of trees and shrubs, drape across elevated vegetation, and use height as a vantage point after dark. Vertical space in a captive enclosure gets used, and a snake spending twenty-five years in a two-foot-tall box is being denied a behavior that is part of her normal repertoire.

For juveniles, too much open, unbroken space causes stress and feeding refusal. Start in a $24" \times 18"$ or $36" \times 18"$ enclosure — or densely furnish a larger one — and transition to the full adult size as the snake grows.

The thermal gradient

The gradient runs lengthwise from hot to cool. Ball pythons require a warmer cool end than most commonly kept reptiles — the 70–75°F cool end appropriate for a leopard gecko is too cold for a ball python and will drive her into a slow-down even when the warm side is correct.

Warm side surface: 88–92°F at substrate level. A snake who cannot reach correct surface temperature cannot fully digest her meals. **Warm side air:** 80–85°F at snake height. **Cool end:** 76–80°F — both ends must be correct; a warm side alone gives the snake no true thermal choice. **Ambient room:** never below 75°F. A room that drops to 65°F in winter needs a secondary overnight heat source in the enclosure.

The hides: tight, opaque, and non-negotiable

Ball pythons feel secure through **tight confinement**. A hide that allows the snake to fill the interior snugly — barely enough room to turn around — is a hide the snake will actually use. A hide three sizes too large has the same effect as no hide at all. Each hide should have one entrance and be opaque on all other sides; the snake cannot feel hidden if light passes through the walls.

Warm-side hide: directly over or immediately adjacent to the warmest part of the substrate. This is where the snake digests meals and spends most of the day. The highest-priority hide in the setup.

Cool-side hide: in the 76–80°F zone at the opposite end. A snake with only one hide is perpetually forced to choose between correct temperature and security. That chronic trade-off suppresses appetite and immune function over time.

A third hide in the mid-range — or a large cork bark tube positioned on the warm side as an elevated enclosed space — adds behavioral complexity and is worth including in any permanent enclosure.

Visual clutter, climbing, and sightline breaks

An unobstructed enclosure is a stressed snake. In the wild, ball pythons move through dense grass, under roots, and between tight gaps — almost never visible from above. Dense artificial foliage, flat cork pieces, and background panels on the rear and side walls break the open sightlines that keep a snake in a low-level state of alertness. Think of the floor as a ground plan where the snake is always within a few inches of cover. At least one sturdy branch or driftwood piece should be anchored in the warm zone at a gentle incline — ball pythons drape across elevated surfaces during their active evening period and will use the option. The branch must be fully secured; a snake applying her full body weight to an unstable piece will dislodge it, and falls cause spinal injuries.

Security

Test every seal and clip before and after every access. Ball pythons investigate every edge systematically and will find any gap.

SECTION 4

Substrate Guide

Substrate selection for ball pythons is primarily a humidity decision. The substrate must retain enough moisture to buffer the enclosure against humidity loss without becoming sodden or anaerobic, and the lid must balance ventilation — enough to prevent bacterial buildup, not so much that humidity exhausts within a few hours.

Substrate	Best for	Humidity performance	Notes
Coconut fiber (coco coir)	Adults and juveniles; most common starting choice	Excellent — retains moisture well without feeling wet at the surface; forgiving of irregular misting	Loose particles can cling to prey during feeding; a paper towel or tile feeding surface solves this
Cypress mulch	Adults; widely used in experienced collections	Very good — retains humidity, drains from the surface quickly so it does not feel wet to the touch	Chunky grade preferred over fine; finer grades compact over time and lose airflow; air out before first use
Bioactive soil mix (coco fiber + organic topsoil + sphagnum moss, roughly 60:30:10)	Adults in naturalistic permanent setups	Excellent, especially with live plants incorporated	Requires establishing isopod or springtail clean-up crew; more involved setup and monitoring; rewards with a self-sustaining, low-odour enclosure over time
Sphagnum moss (as a surface layer or dedicated humid zone)	Supplementary moisture zone; top layer during shed cycle	Outstanding moisture retention	Can go anaerobic if packed too deeply and kept too wet; as a top dressing over a coco fiber base it is excellent
Paper towel or unprinted newspaper	Quarantine, hospital setups, hatchlings during first 30 days	Poor — cannot hold humidity; requires more misting to maintain enclosure RH	Allows easy monitoring of droppings and shed output; zero impaction risk; useful for learning the individual animal
Aspen shavings	Dry-country colubrids	Poor for ball pythons — cannot hold humidity; dries out rapidly	Correct substrate for corn snakes and many kingsnakes; genuinely wrong choice for ball pythons and will result in chronic humidity failure
Cedar or aromatic pine shavings	Never, for any reptile	—	Aromatic phenols in cedar and in untreated pine are toxic to reptiles via respiratory exposure; no safe use case at any life stage
Calcium sand or fine play sand	Avoid outright	Very poor — holds almost no humidity; impaction risk if ingested incidentally during feeding	Occasionally marketed for reptiles; inappropriate for ball pythons at any age or stage
Reptile carpet (synthetic fiber)	Avoid for ball pythons	Cannot hold humidity	Fibers can catch and tear scales; harbours waste; not a humidity solution

The practical recommendation for most keepers: coconut fiber at 3 to 4 inches depth is the cleanest starting point. It is widely available, holds humidity reliably, is safe if incidentally ingested in small amounts, and spot-cleans easily. Cypress mulch is an equally strong alternative and has a more naturalistic appearance. Bioactive is the long-term upgrade worth moving toward once you understand how your specific enclosure and room conditions interact with humidity.

SECTION 5

Heat, UVB & Humidity — The 3 Numbers

These three parameters govern more of a ball python's long-term health than anything else in the setup. A snake in a correctly heated, correctly humidified enclosure with a stable gradient is a snake whose digestion, immune system, shedding, and behavior are all working as they should. A snake in a flat-temperature enclosure at 40% humidity is fighting every day without showing it until she stops eating, sheds in pieces, or develops a respiratory infection.

Parameter	Target value	How to measure it	What goes wrong when it's off
Warm side surface temperature	88–92° F	Infrared temperature gun pointed at substrate surface; probe thermometer resting on warm-side floor	Too low: poor digestion, feeding refusal, sluggish metabolism; too high: snake avoids warm side, thermal burn risk
Warm side air temperature (snake height)	80–85° F	Probe thermometer 3–4 inches above warm-side floor	Below 78°F: digestion compromised; above 88°F: heat stress, warm-side avoidance
Cool end air temperature	76–80° F	Probe thermometer at cool-end floor level	Below 74°F: metabolic slow-down, immune suppression, feeding refusal even with a correct warm side
Ambient room temperature	Minimum 75°F	Room thermometer; critical to monitor overnight in winter	Below 70°F at night: immune suppression, feeding refusal regardless of internal enclosure temperature
UVB (Ferguson zone 1–2)	UVI 1.0–2.0	Solarmeter 6.5R UV index meter; or manufacturer's published distance chart for the specific bulb model	Too low or absent: potential D3 deficit, reduced natural behavior; too high (above UVI 3): UV overexposure risk at close range
Ambient enclosure humidity	60–80%	Digital hygrometer at mid-enclosure, away from water dish and misting area	Below 55%: incomplete shedding, retained eye caps, chronic dehydration; above 85% with poor ventilation: respiratory infection risk

The UVB question: two honest positions

Many ball pythons in captivity are kept without UVB and survive for decades. This is true, and it is not a reason to dismiss the question. Current research shows that ball pythons in the wild — despite their crepuscular and nocturnal habits — are regularly exposed to low ambient UV at dusk, dawn, and during periods spent near burrow entrances. Ferguson zone 1–2 exposure (UVI 1.0–2.0, equivalent to the light in dappled shade at a forest edge) measurably improves D3 synthesis, calcium metabolism, natural circadian behavior, and activity levels in captive pythons. A 5.0 or 6% T5 HO fluorescent tube at the manufacturer-specified distance provides this level safely. Run it on a 12-hour photoperiod and replace it every 12 months — UV output degrades significantly before visible light does. If you choose not to include UVB, dietary D3 supplementation becomes proportionally more important, particularly in breeding females with active egg-production demands.

Thermostats matched to heat sources

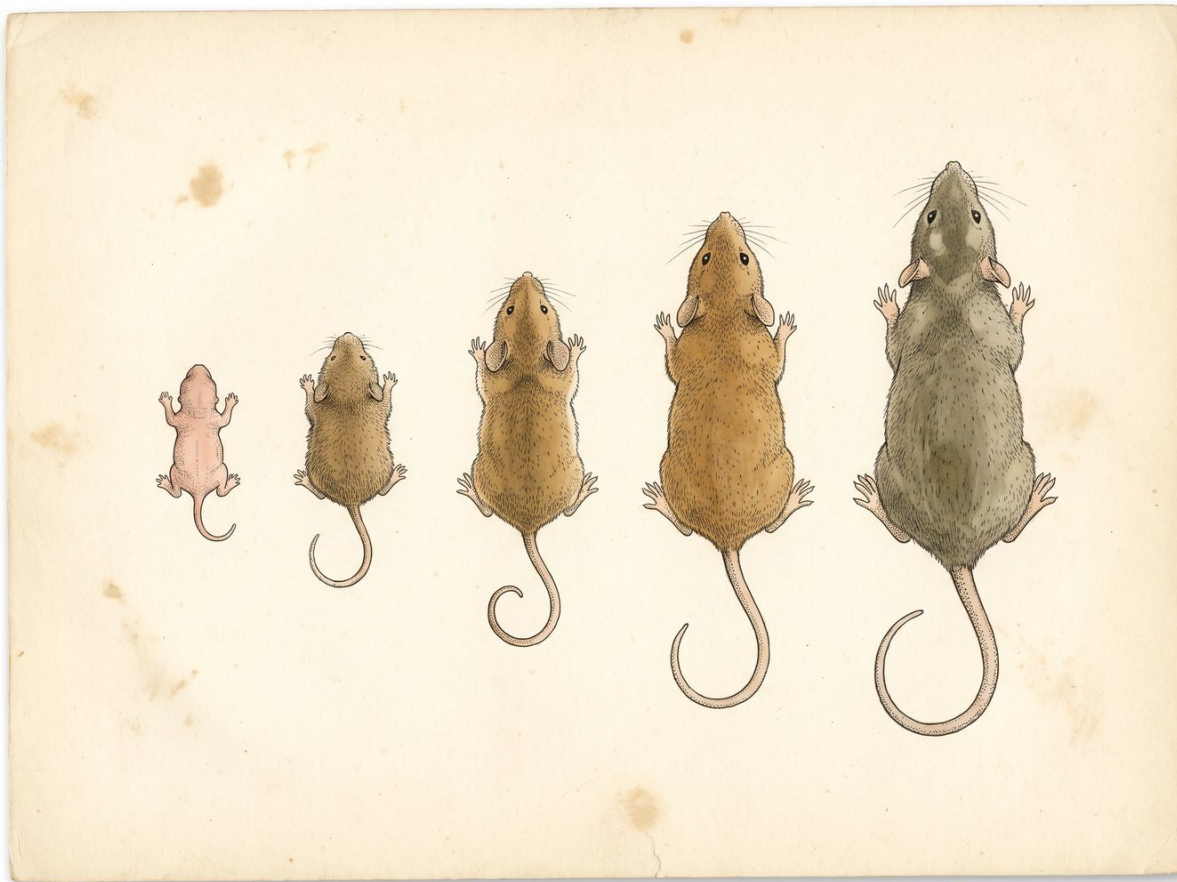
Heat source	Correct thermostat type	Why
Halogen flood lamp	Dimmer thermostat (proportional)	Smoothly reduces voltage to maintain surface temperature without visible flickering
Radiant heat panel (RHP)	Dimmer thermostat	RHPs perform best with smooth voltage regulation; on/off cycling is hard on the element

Heat source	Correct thermostat type	Why
Ceramic heat emitter (CHE)	Pulse proportional thermostat	No light output; handles pulsed power correctly; dimmer thermostats can damage CHE elements
Under-tank heater (secondary use only)	On/off thermostat with probe between mat and floor	Low wattage; on/off is acceptable as a secondary source; probe placement under the mat is critical

Ball pythons do not require a pronounced nighttime temperature drop the way desert reptiles do. If you want to offer a seasonal photoperiod variation — slightly shorter light days in autumn and winter — that is a legitimate choice that may reduce year-round feeding strikes, but it is not a required element of basic husbandry.

SECTION 6

Feeding & Nutrition



Prey sized to the snake's mid-body girth. Always frozen-thawed: live prey can and does injure snakes.

Ball pythons are **strict carnivores** whose entire nutritional requirement comes from whole warm-blooded prey. In the wild they kill by **constriction** — coiling around the prey animal and tightening each time it exhales until the prey's heart stops, typically within seconds. In captivity, that hunting drive is intact even when the snake is presented with a properly warmed frozen-thawed rodent. The goal of feeding management is to work with this biology, not against it.

Frozen-thawed and pre-killed only

This guide strongly recommends **frozen-thawed rodents** as the primary feeding method. Freshly **pre-killed** prey — dispatched immediately before offering, never frozen — is an acceptable alternative. **Live prey should not be used** under normal circumstances.

A live rodent will bite and fight. Bite wounds to the face and eyes become infected rapidly — large rats have blinded snakes left unsupervised with live prey. Frozen-thawed prey is safer, more hygienic, simpler to store, and accepted just as eagerly once the snake is conditioned to it.

How to thaw and present frozen-thawed prey: place the frozen rodent in a sealed bag and submerge it in warm — not hot — water at roughly 100–105°F. Hot water cooks the exterior before the interior thaws and produces a temperature inconsistency the

snake may reject. Allow 15–20 minutes for a mouse, 30–45 minutes for a rat; the rodent should be fully thawed with no cold spots before you offer it. Dry the exterior, confirm it is warmed to approximately 100°F, and offer with tongs rather than bare fingers — tongs keep your hand outside the strike range and prevent your fingers from carrying rodent scent.

Prey sizing

Prey should be **no wider at its thickest point than the snake's body at its thickest point** — roughly the mid-body girth. Ball pythons can physically swallow larger prey, but doing so routinely increases regurgitation risk and digestive stress. When unsure, feed slightly smaller.

Snake life stage	Approximate weight	Appropriate prey type
Hatchling	Under 150 g	Pinky mouse or small fuzzy mouse
Young juvenile	150–300 g	Fuzzy to small hopper mouse
Growing juvenile	300–600 g	Hopper to weaned mouse
Sub-adult	600 g–1.2 kg	Weaned mouse to adult mouse or rat pup
Adult female	1.2–3 kg	Small to medium rat
Adult male	700 g–1.5 kg	Large adult mouse to small rat

Feeding schedule by life stage

Life stage	Age	Frequency
Hatchling	0–6 months	Every 5–7 days
Juvenile	6–18 months	Every 7–10 days
Sub-adult	18 months–3 years	Every 10–14 days
Adult	3 years and older	Every 10–14 days
Gravid female	Confirmed to be carrying eggs	Every 7–10 days while she continues to accept food
Seasonal fast (normal adult)	Autumn through winter	Continue offering every 10–14 days; if refused consistently, log weight and wait

Feeding strikes: the most important section in this guide

A ball python who refuses food is the single most common cause of new-owner distress in this species, and in the large majority of cases it is completely normal.

What a normal seasonal fast looks like: the snake is alert and moves at her usual evening time; her body weight is stable or showing only a modest gradual decline; there are no respiratory sounds; her eyes are clear; she has no visible physical changes. This pattern occurs most predictably between September and February, corresponding to the dry season in the native range. Males cycle more dramatically than females. A well-conditioned adult can fast for two to four months while losing only a modest amount of fat — not muscle — and resume eating normally when the seasonal window shifts.

What to do during a normal fast: offer prey on the regular 10–14 day schedule. Do not reduce the interval; it does not help and adds stress. Do not try a different prey type every week. Do not raise the temperature hoping to trigger feeding — confirm the gradient is correct and leave it. Do not handle. Weigh the snake on a kitchen scale every two weeks and log it. A gradual weight

decline over a two-month fast is expected. Muscle wasting — the body shifting from a rounded cross-section to an angular or triangular one — is not normal, and is the signal to call a vet.

When a feeding refusal is not normal: when accompanied by muscle wasting (not just fat loss), respiratory sounds or visible mucus, changes to the mouth or eyes, lethargy during the normally active evening window, or any concurrent physical symptom. The Common Challenges section covers each relevant distinction.

***Shop the food and supplies:** Browse Reptile & Amphibian Food and Live Feed Delivered!.*

SECTION 7

Shedding

A healthy ball python sheds her complete skin in one piece roughly every **six to eight weeks** as an adult, and every **four to six weeks** as a fast-growing juvenile. Frequency varies with growth rate, season, overall health, and individual variation. Shedding is entirely normal, is not painful, and should require no intervention from you if the enclosure humidity is correctly maintained.

The shed cycle

The first visible sign of an upcoming shed is the **blue phase**: the eyes shift from clear to a milky, opalescent blue-gray as fluid accumulates between old and new skin at the eye surface. Vision is significantly impaired; most ball pythons refuse food, become more defensive, and spend extended time in humid areas. Do not offer food or handle during the blue phase. After four to seven days the eyes clear — new owners often assume the shed is complete, but the clearing just means the fluid has redistributed; the actual shed is still two to five days away. Increase misting once the eyes clear. The shed itself usually happens at night: the snake rubs her nose on a rough surface to start a lip tear, then works the old skin backwards off her body. A complete one-piece shed that includes intact **eye caps** — the **spectacle** or **brille**, the transparent modified scale that permanently covers a snake's eye in place of eyelids — is a sign that humidity and hydration are correct.

Good and bad sheds

A good shed comes off in one or two large sections, the spectacle is intact and visible in the shed, and the skin feels supple rather than dry and papery. A bad shed comes off in multiple small fragments, leaves patches of gray retained skin on the body afterward, or is missing the spectacle — meaning it may still be on the snake's eye.

Retained eye caps are the most urgent shed complication. A retained spectacle — the eye cap that did not release with the rest of the head skin — appears as a slightly thickened, dull, or visually textured layer over one or both eyes. Left in place through multiple shed cycles, retained spectacles build up, press on the eye surface, and eventually cause permanent damage.

What to do for stuck shed or a retained eye cap: increase enclosure humidity to 75–80% for 24 hours. Offer a warm shallow soak — belly-depth water, head free — for 20 to 30 minutes. After soaking, run damp fingers along the body; softened shed usually slides off with minimal pressure. For a retained eye cap, place a damp paper towel in the enclosure and let the snake move across it — the texture sometimes loosens a spectacle the soak started to free. Do not attempt to pull a retained eye cap with dry fingers or tools; the risk of damaging the eye is real. If two soaking sessions do not release the cap, this is a veterinary appointment.

Do not peel dry retained shed — it is adhered to the underlying new skin, and pulling without softening first risks tearing the fresh layer and leaving raw tissue. Always soak first.

SECTION 8

Common Challenges & Solutions

Feeding strike (distinguishing normal fast from illness)

What you see: the snake refuses prey on one or more consecutive offering attempts — investigating with her tongue and retreating, or not emerging from her hide. **Why:** most commonly a seasonal cycling response (autumn through winter), a stress response to a recent move, a drifted thermal gradient, or the snake being in the pre-shed blue phase. Less commonly, illness.

What to do: verify the gradient is correct with fresh probe readings; confirm humidity is in range. If both are correct with no physical symptoms, offer prey every 10–14 days and log weight monthly. Do not force-feed, rapidly vary prey types, or handle. A fast of 6–10 weeks with no muscle wasting is normal. **When to call a vet:** muscle wasting visible as a triangular cross-section, a fast exceeding 10–12 weeks with measurable mass loss, or any concurrent physical symptoms.

Respiratory infection

What you see: audible wheezing, clicking, or crackling during respiration; mucus or bubbles at the nostrils or inside the mouth; the snake holding her head elevated; labored breathing visible as exaggerated rib movement. **Why:** bacterial or viral airway infection, most often from chronically low temperatures combined with poor ventilation, or from immune suppression due to sustained stress. **What to do:** correct any temperature deficiencies immediately — a snake with a respiratory infection kept at low temperatures deteriorates rapidly. Isolate from other reptiles. **When to call a vet:** within one to two days of noticing respiratory symptoms. These infections respond well to antibiotics when caught early.

Inclusion body disease (IBD)

What you see: stargazing — the snake arcing her head and neck upward and backward in a posture she cannot correct; loss of coordination; inability to right herself when placed on her back; corkscrew body postures; misdirected strikes. **Why: inclusion body disease** is a fatal, progressive neurological illness caused by arenaviruses, most associated with boas but known to affect *Python regius* as well. There is no cure. It spreads through direct contact, mite transfer, and contaminated equipment. **What to do:** isolate immediately from all other reptiles; use separate tools and strict hygiene; contact a reptile vet — biopsy confirms the diagnosis. **When to call a vet:** the same day neurological signs appear.

Snake mites

What you see: small, dark, moving specks — roughly the size of a printed period — crawling on the snake's skin, floating in the water dish, and collecting in enclosure corners. The snake may rub against surfaces or soak more frequently than usual. Mites concentrate around the eye area, beneath chin scales, and in skin folds. **Why: snake mites** (*Ophionyssus natricis*) are the most common external parasite of captive ball pythons, reproduce rapidly, and are typically introduced through animals from expos or stores, second-hand equipment, or proximity to an infested collection. **What to do:** quarantine immediately. Remove and discard all substrate; scrub all enclosure surfaces with reptile-safe disinfectant; treat with a reptile-approved mite product following label timing exactly, including a second application to catch hatching mites. Soak the snake in lukewarm water to drown surface mites during the enclosure treatment. **When to call a vet:** heavy infestation, a sick or very young snake, or no response after two properly timed applications.

Stuck shed and retained eye caps

What you see: gray, papery retained skin after a shed, most commonly on the tail tip and around the head; a thickened or dull layer over one or both eyes that remains after the rest of the shed is complete. **Why:** humidity too low during the shed cycle, chronic dehydration, or no rough surface to initiate the skin tear. **What to do:** warm shallow soak for 20–30 minutes; gently assist with damp fingers. For retained eye caps, follow the soak with a damp paper towel surface. Never peel dry retained shed — always soak first. **When to call a vet:** retained eye caps after two soak sessions; constricted tail tip suggesting compromised

circulation.

Thermal burns

What you see: blistered, lifted, or discolored scales on the belly or sides; the snake avoiding the warm side; in severe cases, exposed tissue beneath lifted scales. **Why:** contact with a surface above a safe temperature from an unregulated heat source. Reptile pain response is slower than in mammals — a snake may not self-regulate off a hot surface before damage occurs. **What to do:** remove or correct the unregulated source immediately; move the snake to a clean, thermostatted enclosure on paper towel; keep the wound dry. **When to call a vet:** exposed or necrotic tissue, burns near the cloaca, or any wound showing signs of spreading infection.

Mouth rot (infectious stomatitis)

What you see: the snake wiping her mouth against enclosure walls; swelling or bruising in the gum tissue; in progressed cases, yellow or cheese-like material at the mouth margins; reluctance to eat. **Why:** bacterial infection of the oral mucosa, typically initiated by a feeder bite, an abrasion from rough decor, or immune suppression from chronic incorrect temperatures. **What to do:** examine the mouth under good light; address environmental stressors; a dilute chlorhexidine solution on a cotton swab can help in mild early cases. **When to call a vet:** within a few days — **mouth rot** (infectious stomatitis) spreads to bone quickly and requires antibiotic treatment.

Constipation and impaction

What you see: no stool in more than three to four weeks after feeding; a visibly swollen or lumpy abdomen; lethargy; in severe cases, visible straining at the cloaca with no result. **Why:** a prey item that was too large, chronic dehydration, incidental substrate ingestion, or — rarely — a foreign object. **What to do:** warm shallow soaks once or twice daily for 15–20 minutes; ensure humidity and water access are correct; gentle belly massage from mid-body toward the cloaca after soaking. **When to call a vet:** no stool after 48 hours of soaking; hardened abdomen; visible distress.

Egg-binding (dystocia) in females

What you see: a female visibly swollen and lumpy in the posterior third of her body; unusual restlessness along the enclosure walls; lethargy and appetite loss; no eggs deposited despite what appears to be active effort. **Pipping** — the process by which eggs are moved toward the cloaca and deposited — should complete within a reasonable timeframe once it begins. Even females who have never been with a male can produce infertile eggs and experience dystocia. **What to do:** if you keep adult females, maintain a laying box at all times — a covered plastic tub filled with slightly damp coco fiber, deep enough for her to half-coil inside, with an entry hole cut in the side. Warm soaks may help in very early mild cases. **When to call a vet:** any female straining for more than 12 hours without depositing; any female who appears systemically unwell alongside reproductive distress. Dystocia can be fatal without prompt veterinary intervention.

Obesity from overfeeding

What you see: a round, almost circular cross-section when viewed head-on; obvious fat deposits along the flanks and behind the head; sluggish movement; possible refusal of nutritious prey in favor of waiting for denser items. **Why:** ball pythons are adapted to infrequent, irregular feeding and are not designed for consistent, easily available meals. Overfeeding is extremely common. An obese ball python is at elevated risk for fatty liver disease, reproductive complications, and reduced lifespan. **What to do:** transition to correctly sized prey on a strict schedule; reduce prey size before reducing frequency; do not eliminate feeding entirely. **When to call a vet:** for a severely obese snake or one refusing all food for more than six weeks during a diet correction.

Escape and recovery

What you see: the snake is not in her enclosure. **Why:** one loose clip, one latch not fully engaged, one underestimated gap. **What to do:** search the room systematically — ball pythons seek warmth and tight spaces, so check near heat sources, behind appliances, in closet corners and clothing piles. Leave the empty enclosure open with a warm hide inside; escapees often return to

a familiar heat source. Damp paper towels on the floor show a visible crossing trail. **When to call a vet:** if found severely dehydrated, cold-stunned, or injured.

Quick reference

What you see	Likely cause	What to do	Vet urgency
Food refused; alert at evening, maintaining weight	Normal seasonal fast	Offer on schedule; log weight every 2 weeks	Only if muscle wasting begins
Wheezing, mucus at nostrils, elevated head	Respiratory infection	Correct temperatures; isolate	Within 1–2 days
Stargazing, loss of coordination, won't right herself	Inclusion body disease (IBD)	Isolate immediately	Same day
Moving specks on skin, soaking excessively	Snake mites	Quarantine; treat enclosure and snake	Heavy infestation or sick snake: soon
Patchy retained shed, cloudy or thickened eye surface	Stuck shed or retained eye cap	Warm soak 20–30 min; damp paper towel surface	Retained eye caps not releasing after 2 soaks: same week
Blistered or lifting belly scales	Thermal burn	Correct heat source; paper towel substrate	Exposed or necrotic tissue: same day
Mouth swelling, yellow discharge, mouth-wiping	Mouth rot / stomatitis	Dilute chlorhexidine rinse; address stressors	Within a few days
No stool 3–4+ weeks after feeding, swollen belly	Constipation / impaction	Warm soaks; gentle belly massage	48 hours with no response
Female straining, swollen rear, no eggs after 12 hours	Dystocia / egg-binding	Warm soak; if no result, vet immediately	Same day if active straining continues
Round cross-section, fat deposits along flanks	Obesity	Correct prey size; strict schedule	If refusing all food for 6+ weeks
Snake not in enclosure	Escape	Systematic search; leave warm hide open	If found dehydrated, cold, or injured

SECTION 9

Handling

A well-kept ball python handled regularly from a young age is a genuinely manageable snake — calm during transfer between hands, tolerant of calm contact, and clear in her communication when she has had enough. Getting there requires respecting the early timeline and reading the signals she gives throughout.

How to pick up a ball python

Approach from the side, never from above — a hand descending from above looks like a predator. Slide your primary hand under the snake's mid-body, bring your second hand under the rear third, and lift slowly and evenly. Never grip the neck. Once off the substrate, let her "treadmill" from hand to hand rather than being gripped still. A snake who is moving is a snake who is not tensing, and a ball python who feels unsupported will coil around your arm in response.

Reading defensive signals

Ball pythons communicate stress before they escalate, and reading these signals correctly is the skill that makes handling consistently positive.

The ball: the snake tucks her head under her coils and rounds herself into a sphere — retreat, not threat. A balled snake should be returned to her enclosure and approached another day.

Hissing: a clear warning. End the session.

Musking: ball pythons can release a pungent secretion from glands near the cloaca when threatened — harmless but unpleasant. Wash your hands. Common in juveniles.

Tight S-curve posture: the snake is in strike range. Rarer in ball pythons than many species but does occur in hatchlings. End the session and evaluate the approach. A bite from a ball python is a row of small puncture wounds — not dangerous, and not a reason to stop handling; it is a reason to examine what triggered the response.

When NOT to handle

- Within 48 hours of feeding — handling this soon can cause regurgitation, which is stressful and carries health risks on re-ingestion.
- During the blue phase of a shed cycle — vision is impaired and defensive responses are elevated.
- During an active feeding strike — adding handling adds stress.
- For the first five to seven days after arrival in a new enclosure.

Children

Ball pythons are suitable for careful children under adult supervision. Children should handle seated on the floor, never at standing height, with an adult's hands underneath as a safety net. Teach them to let the snake move rather than grip, and to return her immediately if she balls.

SECTION 10

Routine Care Calendar

How often	What to do
Daily	Confirm the water dish is full and clean; replace if fouled
Daily	Check warm-side and cool-end temperatures with probe thermometers
Daily	Check enclosure humidity; mist if below 60%
Daily	Spot-clean — remove any visible feces, urates, or shed fragments
Daily	Observe the snake at dusk: active? Alert eyes? Normal posture?
Daily	Confirm the lid or door is fully secured with all clips engaged
Every 5–14 days	Offer food on the correct schedule for life stage; log whether accepted or refused
Weekly	Replace and scrub the water dish in hot water with mild unscented soap; dry fully before returning
Weekly	Weigh the snake on a kitchen scale; record and compare to the previous week
Weekly	Inspect the snake's full body during or after handling for skin changes, retained shed, wounds, or any swelling
Weekly	Check all enclosure seals and lid hardware
Monthly	Deep clean — remove all decor; scrub all interior surfaces with a reptile-safe disinfectant; dry fully before replacing substrate and furniture
Monthly	Partial or full substrate replacement depending on the system; dispose of soiled areas promptly
Monthly	Photograph the snake from above for a body-condition baseline you can compare over time
Monthly	Review the food and weight log; note any trend in mass or feeding behavior
Every 6 months	Audit the thermal gradient with fresh probe thermometer batteries; replace any probes reading inconsistently
Every 12 months	Replace the UVB bulb regardless of visible light output
Annually	Exotic reptile vet wellness check including fecal exam; twice annually for breeding females or snakes over 15 years old

SECTION 11

When to See a Vet

Ball pythons mask illness well. By the time most symptoms are clear, the condition has usually been developing for some time. The rule: **when you are not sure whether to call, call.**

Go today — same-day or emergency:

- Any prolapse of tissue from the cloaca — visible tissue that cannot be retracted
- Open-mouth breathing, audible wheezing, clicking, or respiratory crackling
- A snake who cannot right herself, is unresponsive, or limp to gentle touch
- Active straining in a female with no eggs after 12 or more hours
- Wound with exposed tissue or bleeding that does not slow within a few minutes
- Thermal burn with exposed or visibly necrotic tissue
- Sudden loss of coordination, stargazing posture, or seizure-like movements
- An eye that is sunken, collapsed, or has a retained cap pressing on the eye

Book within a few days:

- No stool for four or more weeks with no response to soaking
- Retained shed or eye cap not releasing after two soaking sessions
- Progressive muscle wasting — body cross-section shifting from rounded to angular
- Mouth tissue that is red, swollen, or showing any discharge
- Respiratory sounds that appeared recently and have not improved in 48 hours
- Any new firm lump anywhere on the body
- A visibly gravid female showing no interest in the lay box over several days

Find your exotic reptile vet now, before you need one. Confirm they see pythons specifically — not every exotics practice has python experience. Bring a temperature and feeding log, a weight record, and a fresh fecal sample in a sealed container.

SECTION 12

FAQ

What do ball pythons eat?

Ball pythons are strict carnivores and eat exclusively whole warm-blooded prey — in the wild, primarily small rodents and occasionally small birds. In captivity, frozen-thawed or freshly pre-killed mice and rats are the correct and strongly preferred food source. Live prey should not be used: a live rodent will bite and scratch, and the resulting wounds are serious infection risks. Prey should be sized to match the snake's mid-body girth — hatchlings start on pinky or fuzzy mice and progress to appropriately sized rats as adults. Ball pythons do not eat insects, fish, fruit, or any plant material.

How big does a ball python get?

Females are significantly larger than males. A typical adult female reaches 4 to 6 feet and 1.2 to 2.5 kg; a typical adult male reaches 3 to 4 feet and 0.7 to 1.5 kg. Most captive adults sit comfortably between 3.5 and 5 feet. Growth continues slowly past three years but the most dramatic increase occurs in the first two to three years.

How long do ball pythons live?

With good care, **20 to 30 years** is the realistic expectation, and captive records exceed 40 years — a longer commitment than most dogs. The factors most consistently associated with reaching the upper end of the range are correct temperatures throughout life, humidity maintained at 60–80%, a feeding protocol that avoids chronic overfeeding, and regular veterinary care that catches problems early.

What size enclosure does a ball python need?

The minimum for one adult is **4 feet × 2 feet × 2 feet** — the footprint of a 120-gallon aquarium. A taller enclosure, 4' × 2' × 4' or larger, is the currently preferred standard because ball pythons are semi-arboreal and use vertical space. Front-opening doors are strongly preferred. Juveniles do better in a smaller or densely furnished enclosure — open, exposed space causes feeding refusal in young snakes. Whatever dimensions you choose, the enclosure must seal completely and hold 60–80% humidity reliably.

Why won't my ball python eat?

The most common reason is a normal seasonal fast. Ball pythons naturally reduce or stop feeding between September and February, and a healthy adult can fast for two to four months without muscle loss. Other normal causes include the pre-shed blue phase, a recent move, and in males, breeding season cycling. A feeding refusal becomes a veterinary concern when accompanied by muscle wasting, respiratory sounds, mouth or eye changes, or lethargy during the evening activity window. Verify the gradient is correct, confirm humidity is 60–80%, and offer prey every 10–14 days. A snake who is active at her normal evening time and maintaining weight is almost certainly in a natural slow-down.

How often do ball pythons eat?

Hatchlings eat every 5 to 7 days; juveniles every 7 to 10 days; adults every 10 to 14 days. Ball pythons are built for infrequent, large meals. Feeding more often than the schedule calls for — even when the snake accepts eagerly — leads to the obesity common in captive ball pythons. Consistent intervals with correctly sized prey produce a healthier snake.

Do ball pythons need UVB light?

UVB is increasingly recommended for ball pythons, though many are kept for their full lifespan without it. Current evidence shows that low-level UV — a Ferguson zone 1 to 2 lamp providing UVI 1.0 to 2.0, equivalent to the light near a burrow entrance at dusk — measurably supports D3 synthesis, calcium metabolism, and natural activity patterns. A 5.0 or 6% T5 HO tube at the manufacturer-specified distance achieves this safely on a 12-hour photoperiod. Replace it every 12 months even when it still

visibly lights — UV output degrades before visible output does. If you choose not to include UVB, dietary D3 supplementation becomes proportionally more important. The honest answer: UVB probably helps, doesn't harm a correctly set up enclosure, and the case for it has grown steadily stronger over the last decade.

What humidity does a ball python need?

Ball pythons require **60 to 80% relative humidity** — significantly higher than most commonly kept reptiles and well above the 30 to 50% common in pet store setups. Sustained humidity below 55% causes incomplete shedding, retained eye caps, and chronic dehydration. The tools for achieving the correct range are a moisture-retaining substrate at 3 to 4 inches depth, a well-fitting enclosure lid, a large water dish, and misting as needed.

Can ball pythons live together?

No. Ball pythons are solitary in the wild and receive no benefit from companionship in captivity. Housed together, they compete for hides, basking positions, and food — the dominant snake accessing resources while the subordinate experiences chronic stress that manifests over weeks as weight loss, skin problems, and immune suppression rather than immediate fights. Two snakes who appear peaceful are almost always in a dominant-subordinate relationship; the subordinate's decline is easy to miss on a casual check. One ball python per enclosure is the standard, and it exists for good reason.

How do I know if my ball python is healthy?

A healthy ball python has a smooth, complete skin surface; clear, alert eyes (except during the pre-shed blue phase); a clean, closed mouth with no swelling or discharge; a clean cloaca; regular, well-formed stools within one to two weeks of feeding; and active movement during her normal evening window. She sheds in one or two large pieces on a regular cycle and maintains or slowly gains weight on a correct feeding schedule. Her body cross-section is rounded — not angular or triangular. The two most useful monitoring tools are a written weight log and a shed record; a tail that is gradually thinning and increasingly fragmented sheds are often the first signs of trouble well before anything is visible to a casual check.

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SECTION 13

Every Purchase Gives Back

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Ball pythons are among the most frequently surrendered reptiles in the country. Most arrive at rescues malnourished and dehydrated, the survivors of ten-gallon tanks, sand substrate, and heat rocks. The animals are never the problem — accurate husbandry information is still harder to find than it should be. If you're reading this guide, you're already doing the work those animals never had done for them. And if you can adopt rather than shop — reptile rescues in every region have healthy ball pythons waiting for a keeper who knows what they're doing.

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