



# Pet Hospital of Peñasquitos

Full Service, Compassionate, Progressive, Veterinary Care for all your Pets

We treat your pets as our own

## COLUBRID CARE

Thomas H. Boyer, DVM, DABVP, Reptile and Amphibian Practice  
9888-F Carmel Mountain Road, San Diego, CA, 92129 858-484-3490  
[www.pethospitalpq.com](http://www.pethospitalpq.com) – [www.facebook.com/pethospitalpq](http://www.facebook.com/pethospitalpq)

Colubrids are members of a large family of snakes, the Colubridae, and are found on every continent except Antarctica. Commonly kept colubrids include the milk snakes, king snakes, rat snakes, corn snakes, water snakes, garter snakes, ribbon snakes, racers, whip snakes, bull snakes, gopher snakes, pine snakes, green snakes, and many others. They are more advanced evolutionarily than boids in that they lack pelvic vestiges, paired lungs, and the coronoid bone. Many do very well in captivity and are an excellent choice for novice to advanced snake keepers.

Aquariums do quite well for cages. Small specimens do much better in plastic shoe or sweater boxes. Secure fitting screen (such as a sliding screen) or peg board tops are important because these snakes can and will squeeze through very narrow openings. Once escaped they can be very difficult to find (check warmer, secluded areas first). Custom fiberglass or molded plastic cages also work well.

Cage temperature should be range from a low of 70 to 75°F to a high of 85 to 90°F (use a thermometer to check). The best way to heat cages is to keep the room temperature between 75 to 85°F and provide spot heat under one end of the cage with heat tape, heating pads or overhead 60- to 100-watt incandescent lights. Heat tape can be run along one end of a whole series of aquariums to provide localized hot spots. Hot rocks are not recommended. Temperate species can be hibernated during the winter if they are in good health (see handout on hibernating).

Newspaper or butcher block paper are excellent choices for lining the bottom of the cage. Both are easy to clean, cheap and easily detected if dirty or wet. Many colubrids like to crawl between sheets of newspaper. Aspen or pine shavings (not cedar shavings) or a sand gravel mixture also work well but are a bit harder to keep clean. Indoor-outdoor carpeting (Astro turf) looks good but is poorly absorbent and difficult to observe if wet. Place newspaper under it to increase absorption. If you use Astro turf make sure you have two so that a clean dry one can be replaced for the dirty one while it is being cleaned and dried. Crushed corn cob or walnut shells are not advisable. Of all the choices I find newspaper to be the best. A hide box and water bowl should be present for all species. A hardwood driftwood branch and some rocks are also appreciated.

Milk snakes and king snakes (Lampropeltis), rat, fox and corn snakes (Elaphe), and pine and gopher snakes (Pituophis), are generally mouse eaters in captivity, although many are lizard eaters in the wild. The early captive breeding of these egg laying genera with a multitude of color patterns helped fuel the current mass interest in breeding reptiles. Hatchlings should be fed pinkies one to three times per week. They should start consuming fuzzies as soon as possible because pinkies are lower in calcium. Adults can be fed killed, stunned or freshly thawed rodents once or twice weekly. Live rodents are not recommended because they can severely injure your snake. As with all rodent eaters no vitamin or mineral supplementation is necessary as long as the mice are well fed prior to feeding them to your snake.

Garter snakes and ribbon snakes (Thamnophis) eat fish, frogs, earthworms and rarely baby mice and are live bearers. Ribbon snakes are arboreal and should be provided with branches to increase vertical space. They tend to be nervous and are more difficult to maintain than garter snakes. They should be kept in dry cages as for other

colubrids with water bowls. Fish should be frozen for 3 days before feeding to prevent parasite transmission and can be floated in the water bowl to stimulate feeding. As with all snakes feed them separately or the snakes may eat each other. They shouldn't be fed fish exclusively, they will take pinkies if rubbed with fish.

Water snakes (Nerodia) are semiaquatic snakes. In the wild they are found in close association with water, yet spend much of their time out of water and basking. They should be housed individually in dry cages like other colubrids with a water bowl large enough for them to soak in. Water snakes are not aquatic snakes and should not be kept in water-filled aquariums! In the wild they feed primarily on fish but also will forage on amphibians, crayfish, birds, reptiles, worms, and invertebrates. Different species have different preferences. In captivity they eat goldfish, minnows, shiners, trout, and smelt. Goldfish, minnows, and smelt all contain thiaminase and can induce thiamine deficiencies in snakes fed them exclusively. To avoid thiamin deficiencies, frozen fish can be thawed in hot water (176°F) for five minutes to destroy thiaminase, or one can insert brewer's yeast or thiamine tablets into the mouth of fish before feeding them to the snake. Water snakes tend to have messy stools, consequently good cage sanitation is important to prevent skin lesions from occurring. They are live bearers. Wild-caught specimens can be difficult to adapt to captivity and usually have tremendous parasite burdens. Freezing feeder fish should help to decrease parasite transmission but regular fecals and treatment are also needed.

Racers (Coluber) whip snakes, and coachwhips (Masticophis) are nervous high-strung snakes. Unlike most other snakes which rely on stealth to capture prey, racers chase down their prey, hence they are incredibly fast. They are not constrictors. Instead they seize prey and either swallows it alive or press larger prey to the ground with a body loop and chews on it until it dies. Consequently in captivity, one must be sure to offer killed or stunned mice. In the wild they feed on a wide variety of insects, amphibians, reptiles, birds, and mammals. They are persistent biters and lay eggs. Racers are easier to maintain than the difficult coachwhips and whipsnakes. Racers do well in 20- to 30-gallon aquariums with visual barriers. Adults feed well on mice; juveniles feed on lizards, frogs, or other snakes. Coachwhips and whipsnakes require much larger cages (six to eight feet long by two feet deep), visual barriers, little disturbance, and cage temperatures of 80 to 100°F. Hide boxes are essential for both.

One of the more common problems with colubrids is not eating or anorexia. Many temperate colubrids naturally cease feeding in the fall and winter and will not start feeding again until spring even if kept warm with long days. The author has seen colubrids cease feeding as early as August and had them presented as late as February. Even if kept warm with long days, many colubrids will not feed again until spring. If the snake is in good body weight and appears healthy, hibernation is recommended (see handout on hibernation). Snakes with signs of illness, recent illness, surgery, trauma, or severe emaciation should not be hibernated. A fecal examination several months prior to hibernation is useful. Tropical species should not be hibernated.

Another nonseasonal cause of anorexia is too cool environmental temperatures. Recall that cage temperature should not drop below 75°F at night and warm up to 85°F during the day. Providing a hide box and decreasing handling will get some anorexic snakes to feed. Parasites should be treated if present. Further workup by your veterinarian is often indicated if environmental parameters are adequate.

Blister disease or infection of the lower scales is common with damp, wet or unsanitary cage conditions. Clean cages are essential to good health! Wild caught snakes often have heavy parasite loads which can be detrimental in captivity. Mouth rot, pneumonia, mites, regurgitation and egg binding are also common problems. If you suspect any of these or other conditions contact your veterinarian as soon as possible because early treatment is much more successful. Over the counter treatments are generally much less effective than veterinary treatment.

Hibernation is not without risk but, if done correctly, the snake should emerge in the spring ready to eat. Hold colubrids off food for two weeks prior to cooling to allow all food to be digested. Heating sources then should be discontinued. Keep the colubrid at 60° to 70°F for another one to two weeks. At this point, the snake should be ready to enter the hibernaculum. Ideally one wants a draft-free dry area with little light that can be kept between 50° to 60°F for several months. A basement, garage, back porch, or north- or east-facing closet or window all can provide cool enough areas. Occasionally the temperature can drop to 45°F. Freezing is of course fatal. Temperatures in the 60s are too warm, instead of hibernating the reptile will metabolize its body fat and slowly starve. Temperatures should not fluctuate wildly. Have the owner purchase a minimum-maximum thermometer to monitor temperatures throughout hibernation; cold snaps may make hibernaculum too cold.

The snake can be hibernated in its cage or a plastic sweater box. The cage should not rest directly on cold flooring, but can be placed on newspaper. Clean water should always be available. If the snake starts to shed during hibernation, warm it up and allow it to shed, then return it to the hibernaculum. Have the owner check on the snake once every one to two weeks. Pneumonia is not uncommon during hibernation and is very dangerous. If signs of respiratory illness (excess mucus in mouth, gurgling breath sounds, nasal discharge) develop, warm the snake up to 80<sup>o</sup> to 90<sup>o</sup>F and begin symptomatic treatment without delay (see section on respiratory disease in the python and boa care section).

Most colubrids cease feeding in September, October, or early November, but considerable variation is to be expected even with conspecific animals under identical conditions. Length of hibernation depends on local temperatures, animal condition, and the owner's preference. Two to four months is average.

Colubrids breed in the spring after emerging from hibernation. In the spring the snake should be warmed up (75<sup>o</sup> to 85<sup>o</sup>F) for a few days and fed a small meal. Prey items can be increased gradually in size over the next few feedings. Females have ravenous appetites and should be fed as much as they will eat to prepare them for breeding. Some males may be so focused on breeding that they refuse to feed. Generally they will start feeding after the breeding season, in late June or July.