



AGAVE VETERINARY CARE  
AND EXOTIC ANIMAL HOSPITAL

## **Your Complete Bearded Dragon Care Guide**

Bearded dragons (*Pogona vitticeps*) make wonderful pets and are great for reptile owners of all experience levels due to their hardy nature and inquisitive personalities. With the right care, your bearded dragon can lead a long and happy life!

To provide the best environment for your bearded dragon, we suggest that you educate yourself on the needs of this species. As you investigate the requirements of bearded dragons, you will encounter lots of strong opinions, especially on the internet! It is our goal at Agave Veterinary Care to provide you with the latest information available from the most reputable sources. Ultimately, you'll need to watch how your bearded dragon reacts to its enclosure, temperature, and food and adjust accordingly.

### Life Stages:

Your bearded dragon will live through six general life stages:

- Embryo (55-75 days): The developing bearded dragon within the egg
- Hatchling (up to two months of age): After hatching, babies live off their resorbed yolk while they acclimate to the world, then start eating and growing vigorously within a few days. Unfortunately, not all individuals will survive this stage; it's typically best to start with a bearded dragon who has been eating and growing for a few weeks at least (5 inches in length or longer).
- Juvenile (two to four months): Juvenile bearded dragons will often start to become aggressive during this stage and need to be housed individually. Arm waving, a submissive gesture, often starts now.
- Subadult: At this stage, bearded dragons finish growing. Sexual maturity is reached and breeding occurs. Bearded dragons may brumate during this time in the winter.
- Mature adult: Mature adults are full grown individuals up to five or six years of age. As bearded dragons get older, they experience a decreased reproductive rate.
- Old age: This stage refers to bearded dragons six or seven years of age and older. For most, breeding has halted and females will often start to develop problems with follicles or eggs that may require surgery to remove the reproductive tract. The typical life span for a bearded dragon is typically eight to ten years with some individuals living until twelve years of age.

### Tank size:

Young bearded dragons can be kept in a 20 gallon long tank (~30 inches long) during the hatchling and juvenile stages. If you are getting a bearded dragon from a breeder, you may want to talk to them first about how to make the enclosure as similar to their previous “home” as possible to ease the transition for your dragon. A simple enclosure is ideal until your beardie acclimates to its new home, then you can add new items and décor slowly over time. Your tank should only have open glass on the front, with the sides and back covered so your beardie doesn’t feel exposed and threatened.

The absolute minimum tank size for a single adult bearded dragon is 40 gallons (usually about 3 feet long). For a proper temperature gradient and enough room to move though, a 48” long tank is ideal. The typical recommendation is 48” x 24” x 24” or 120 gallons (or larger).

Bearded dragons have a parietal eye or third eye that detects light on the top of their head and they typically feel threatened when approached from above. Many enclosures now have doors that open on the front for easy access which is far more convenient to use and is less threatening to your beardie.

Glass aquariums work well but are heavy and hard to move. More lightweight PVC/acrylic models are now available online.

Wooden enclosures are less ideal as they can retain moisture and are impossible to sanitize but do allow for greater customization.

### Substrate:

Substrate refers to what you keep on the bottom of the tank and is a hotly debated topic. Bearded dragons spend most of their time in nature on sandy soil. However, in nature they have access to a huge amount of space, so parasite infestation and waste build up are not a problem.

In captivity, it can be very difficult to keep the enclosure clean and the air quality appropriate with a loose substrate. For this reason, most veterinarians prefer using newspaper, paper towels (especially for juveniles) or slate tile as it is very easy to spot clean. Repticarpet can be used, but only if you wash it frequently and discard it when the fibers start to pull loose as it can trap bacteria and get caught on the toenails.

If you choose to use a loose substrate, you will need to spot clean it by scooping out the fecal and urate material with a cup to remove the waste and the surrounding sand. Never use calcium sand as it is prone to clumping and can result in sand impaction. Feed your bearded dragon on a small plate or lid to prevent accidental ingestion of the substrate. Finally, monitor your bearded dragon in the enclosure to make sure they aren’t eating it.

If you have a female bearded dragon who is laying eggs or showing signs of laying eggs (digging, restless, decreased appetite), you’ll need to construct her a dig box using moist potting soil packed at a 45 degree angle on one end of the enclosure.

Some bearded dragon keepers advocate for the use of a bioactive vivarium, meaning that the underlying substrate is kept wet for plants to grow roots, and bugs are kept in the enclosure to consume the bearded dragon's stool. The idea is that the enclosure is its own little ecosystem that requires less maintenance and is more natural. While some may find success with this type of enclosure, it's generally not recommended. First, trying to correctly balance the needs of the various organisms in the enclosures adds a level of complexity to the care of bearded dragons (which we find already quite complicated!) Second, the amount of surface area in a typical terrarium is extremely smaller than a bearded dragon's natural territory, which is very likely to cause excessive amounts of ammonia and waste products within the enclosure.

### Enrichment:

Another important step is adding hides, basking areas, and other enrichment items to your pet's home. First, make sure to provide a basking spot. Basking spots made of stone are ideal as they heat up under the basking light and provide additional heat to the body that most closely matches normal basking behavior in the wild.

Next, provide them with some places to hide. These can be with artificial hides found in pet stores or with homemade decorations. Providing hides will allow your beardie to feel secure as they adjust to their new environment and sounds. Many hides have a basking spot on top, doubling their usefulness.

Another enrichment option for both you and your scaly friend are plants and rocks. You can use either fake or live plants; be careful to secure both types well to insure that your beardie doesn't eat, break, or drop them upon themselves. Rocks fall into a similar category. You can use either fake or real rocks. Make sure to clean real rocks well and secure them to a stable surface so your dragon is safe to climb on them. NEVER use a "heat rock" that plugs in to provide heat as these can cause serious burns.

### Water:

Bearded dragons need daily access to fresh, clean water. Your bearded dragon should have a shallow bowl of water, big enough to climb into, at all times. The water should be changed daily or immediately if soiled. Gently mist your bearded dragon and the side of the tank with water twice daily for all bearded dragons. Soak your bearded dragon 2-3 times each week in a shallow bath to encourage passage of feces and provide another opportunity to drink. Keep the water warm and supervise. Many bearded dragons love to play in the water and will swim, put their head under the water, and scratch themselves. Make sure your bearded dragon's feet can touch the bottom at all times.

### Lights:

Bearded dragons need at least two types of lights: UVB light and a heat/basking lamp:

### UV Light:

UVB light should be provided every day. We recommend you put your light on a timer to provide 12 hours of UVB light every day, year-round. The UVB bulb should span the length of the enclosure if possible. Good options include ZooMed ReptiSun 10.0 T5 HO UVB, Arcadia Desert 12%, and Arcadia Dragon 14%. Pay attention to the recommended distance from the basking site for your bulb. The amount of UVB produced by the bulb will decrease with time. Bulbs should be replaced every six months. A UV bulb will continue to turn on and produce light even though it's not producing significant UVB anymore. The best thing to do is to set a reminder in your calendar for when it needs to be replaced. UVB monitors can be purchased if you want to monitor the UV output of your lights. They are expensive, but it may make sense to purchase one if you have a large reptile collection. Replace the bulb when the UV production starts to decline.

### Heat:

The goal of your basking lamp is to provide both heat and light to mimic the warmth of the sun and allow your bearded dragon to thermoregulate within its "preferred optimal temperature zone." You can use a ZooMed Repti Basking Spot or a 72W Halogen light bulb (can be purchased at a home improvement store) inside a dome heat lamp with a ceramic socket. You will need to change the position of the light relative to the basking site and/or use a dimmer to control the heat. You may need multiple bulbs to achieve the correct basking temperature and air temperatures desired. Make sure that your light fixture is rated for the wattage of the bulb you are using.

### Temperatures:

You'll want to measure the air temperature on both sides of the enclosure, as well as the basking temperature. The gradient of air temperature should be 77-99F during the day. The surface temperature on the cool side should be 75-85F. For juveniles, 95-100F is a good starting place for the basking spot surface. Some adults like it hotter. If you see your bearded dragon spending all day on the basking rock you can incrementally increase the temperature to as high as 100-105F. At night, it's normal for the temperatures to drop to the mid 70s. If the temperature in your home falls below 68F, consider a ceramic heating element (that does not produce any light) to use at night. The use of red heating lights is not recommended as your bearded dragon needs true darkness at night.

The temperature gradient is critical to allowing your bearded dragon to thermoregulate. Watch your beardie throughout the day to see how it interacts with the environment and adjust accordingly. A bearded dragon that spends all day under the basking lamp is likely too cold. One that spends hardly any time there is likely too warm. The length of the enclosure is key to providing this gradient. If you have too small of an enclosure, you'll likely overheat your dragon, which can be deadly in a juvenile and cause chronic health problems in an adult.

Good tools for accurate temperature measurement include Zoo Med's Digital Thermometer Humidity Gauge and Etekcity Infrared Thermometer 774. The dial thermometers that stick to the side of the tank are inaccurate, as they measure the temperature of the glass and not the actual air temperature.

### Humidity:

Ideally you want humidity to stay between 30-60%. Excessively high humidity promotes growth of microorganisms and can predispose bearded dragons to respiratory infections. Low humidity can contribute to problems with shedding.

### Food:

The feeding habits of bearded dragons change dramatically as they age. Hatchlings and juveniles can consume about 90% live prey and only 10% plant material, but by the time they are adults they should be eating 65-90% plant material.

#### Plants/greens:

All bearded dragons should be offered a "salad" of vegetables every day. The salad should consist of leafy greens high in calcium and Vitamin A (arugula, bok choy, cactus pads, collards, endive, escarole, kale, mustard greens, spring mix, turnip greens, watercress), with smaller amounts of other vegetables added in (asparagus, basil, beet leaves, bell pepper, carnations, cilantro, carrot greens, cucumber, carrot (grated), clover, dandelions, fennel, mint, nasturtium, pansies, parsley, radicchio, spinach, thyme, sweet potato (grated), zucchini). The leafy greens should be sliced or chopped into bite-sized pieces. Vegetable matter should be cut into small pieces or shredded with a vegetable shredder.

#### Fruit:

Think of fruit as a special treat. Give no more than a few bite-sized pieces every month. Excessive consumption of fruit has been associated with periodontal disease in bearded dragons. Examples include apple, banana, mango, melon, berries, grapes, figs, papaya, or peaches.

#### Bugs (no bigger than the space between their eyes):

- Black soldier fly larvae
- Crickets
- Dubia roaches
- Discoid roaches
- Red runner roaches
- Hornworms
- Silkworms
- Snails

Gut load insects for 24 hours before feeding and dust with calcium powder every feeding (use a separate multivitamin powder once weekly for juveniles, every two weeks for adults).

Mealworms are not typically recommended for bearded dragons. They contain a lot of chitin in their shell that is hard to digest and too much phosphorus, which prevents the overall diet from having an ideal calcium: phosphorus ratio.

Dead insects should not be fed on a regular basis. They are nutrient poor and do not stimulate appropriate feeding responses.

Gut loading: Except for black soldier fly larva (which are naturally nutrient dense and high in calcium), all other insects should be fed a true gut loading diet for 24-48 hours before offering them to your dragon. The best way to gut load insects is to move them to a separate enclosure and offer only a commercially available gut loading supplement and water. Avoid offering any other foods except the gut loading material as the insects will preferentially eat other food options (the gut loading mix doesn't taste as good). Stick with reputable brands (Fluker's High-Calcium Mealworm Diet or Mazuri Better Bug Gut Loading Diet.) Gut loading powder should only be offered in the days leading up to feeding and is not meant for long term use in insects.

Dusting:

Dust with calcium carbonate without D3. Since you can overdose on D3, it's best to provide this vitamin less often than you provide the calcium. Dust the insects with calcium at every feeding unless you are feeding a multivitamin.

Dust with multivitamin including D3 every two weeks in lieu of the calcium powder.

Stick with reputable brands (ZooMed, Repashy, Fluker's). ZooMed ReptiCalcium without D3 and ZooMed ReptiVite with D3 are our favorites.

You can shake the bugs in a clear plastic container including the powder, or apply with a salt/pepper shaker.

Gut loading diets and the multivitamin powders should be kept away from intense heat and replaced every six months to ensure their efficacy. Insects can be purchased at local pet stores or online, or you can raise your own insects at home.

Specific Feeding Recommendations Based on Age:

Hatchlings: Insects three times daily, offer vegetable matter daily (75-90% bugs, 10-25% salad)

Crickets need to be one to two weeks old, about ¼ of an inch. Small Dubia roaches or small black soldier fly larva are also good options. Don't overload the enclosure with crickets as this can be overwhelming for the bearded dragon. Remove any uneaten crickets after 30 minutes. Keep track of how many they eat each time, and increase slightly every day. Offer insects two to three times daily. Feeding a variety of insects and salad greens during this time is important since bearded dragons are more inquisitive and will be more open to trying new things. Remove any uneaten foods by the end of the day. Don't worry if your baby isn't eating a lot of greens at

this stage, but continue to offer them daily so they are used to them and have an opportunity to eventually try them.

If your hatchling isn't eating it could be caused by any number of problems. Double check your tank temperatures and make sure your beardie isn't too exposed and that noise isn't excessive. Give your beardie a break from handling and offer appropriate sized insects.

Don't offer hatchlings any snacks, treats, or fruits during this time. Stick with the "staples" of the diet as they are forming good eating habits, taste preferences, and need high quality nutrient dense food for their rapid rate of growth.

Juveniles: Insects twice daily, offer vegetable matter daily

This is a period of rapid growth. Your beardie will still get most of its nutrition from insects offered twice daily. Introduce new invertebrates such as Dubia roaches, black soldier fly larva, silkworms, or small hornworms to vary the diet.

Subadults: Offer insects once to twice daily and continue to offer vegetable matter daily (50-60% bugs, 40-50% salad).

The crickets can gradually be increased in size to up to 1 inch. Superworms, Dubia roaches, black soldier fly larva, and occasionally other feeder roaches, silkworms, butterworms, and hornworms can be offered. Salads should start to make up a larger part of the diet. Since they are eating more salads and less insects, you can try adding a light sprinkling of calcium and vitamin/mineral supplement to the salad as you do with the insects, but only if your bearded dragon tolerates it.

Adults (12+ mo): Insects 1-3X/week, vegetable matter daily (15-30% bugs, 70-85% salad). Your bearded dragon should move away from eating insects daily, to eating insects one, two or three times weekly depending on the dragon. Adults should be allowed to eat as much salad as they want, as long as it's nutritionally diverse and balanced. Look for vegetable matter high in calcium and Vitamin A.

Bearded dragon pellets are available for purchase, but are not typically recommended as they lack feeding trials and are very low in water content. Some experts recommend softening the pellets in water and applying them to the salads as a sort of "dressing" to improve the nutritional content of the salad.

In case of a severe weather event or emergency, you may not be able to access insects or fresh produce for your bearded dragon. In an emergency situation, it's typically good to have an alternative on hand. Repashy Grub Pie gel mix, Zoo Med's Can O Crickets/Can 'O Worms, or Critical Care Omnivore are decent options.

Brumation:

Brumation, similar to hibernation, is a period of time where bearded dragons slowly stop eating, become less social, and begin to hide. This tends to happen in the fall or winter and can last anywhere from a few weeks to a few months. During this time, your bearded dragon does not need to be fed, however you should continue to monitor their weight and offer water. During brumation, bearded dragons become very lethargic in order to save energy and maintain their weight as they sleep through the next few months. If you notice your dragon has lost more than 5-10% of its body weight, immediately contact your veterinarian to schedule an appointment.

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