Introduction to Bearded Dragon Care

Melissa Magnuson, DVM

Bearded dragons are fast becoming popular pets. These lizards are native to Australia and are accustomed to dry, very warm days and slightly cooler nights. They enjoy climbing rocks and basking in sunlight.

The information in this handout will help acquaint you with your new bearded dragon and its basic needs. This will help you provide excellent care and avoid many common problems. With proper husbandry, your bearded dragon will be happier, healthier, and more likely to live a longer life.

Housing

The primary goal of caging is to ensure your bearded dragon's safety. As a general rule, provide as much space as possible.

Enclosure size
At minimum:

- Length: at least twice your bearded dragon's length (nose to tail tip)
- Width: at least one full body length (nose to tail tip)

Your bearded dragon should be able to exercise and turn around completely without bumping into anything. Provide at least one hide, and multiple hiding places are recommended.

A full-grown bearded dragon can be up to 2 feet long, including the tail. Pets of this size need an enclosure at least 4 feet wide. Bearded dragons grow quickly, reaching nearly adult size in less than 6 months, so it is best to purchase an adult-sized enclosure from the beginning.

Enclosure materials and cleaning
Choose an enclosure with a solid bottom made from materials that are easy to disinfect, such as:

- Glass
- Hard plastic
- Stainless steel

Cleaning matters.

- Remove uneaten food daily
- Thoroughly clean and disinfect at least weekly
    - Wash with mild soap and water
    - Then disinfect with ½ cup bleach to 1 gallon of water
    - Rinse very well and dry completely before returning your bearded dragon

Commercial disinfectants may also be used (follow label directions). Examples include Betadine, Nolvasan, and Roccal.

Enclosure furniture and enrichment

Props are important for well-being:

- Logs, rocks, and sturdy climbing areas
- Plants (real or artificial)

Use caution with small artificial plants because some dragons may mistake them for food and ingest them. Rearrange furnishings periodically to reduce boredom. Clean decorations regularly.

Lighting and Heat

Bearded dragons need both heat and UV light.

UVB lighting

A UVA/UVB light should be used 10 to 12 hours per day year round. Bearded dragons that do not receive adequate UV light can lose bone density and become prone to fractures (similar to osteoporosis in humans).

Natural sunlight is an excellent source when available and safe. Be aware that windows and glass filter out much of the beneficial UV. A safe option during warm weather is placing a screen-topped enclosure near an open window or providing supervised outdoor time with access to shade.

Use a UV light that emits both UVA and UVB year round. These bulbs stop emitting adequate UV long before they burn out.

- Replace UVB bulbs at least every 6 months
- Date the bulb so you remember when to change it
- Fluorescent UV bulbs do not produce heat and must be used in addition to a heat source
- Place all lights so your bearded dragon cannot climb on them or touch them

Temperature gradient

Providing warm and cool areas allows your bearded dragon to regulate body temperature. This is crucial because reptiles cannot regulate their temperature the way mammals do.

- Basking area
    - Under 6 months: 95 to 110°F
    - Juveniles and adults: 90 to 100°F
- Provide a warm side and a cooler side so your dragon can move as needed

Bedding

Recommended bedding options include:

- Paper
- Indoor/outdoor carpeting or washable turf-style reptile carpet

Avoid:

- Corncob
- Wood shavings
- Sand
- Gravel

These substrates can be eaten and cause impaction, can harbor bacteria and fungi, and can irritate the eyes and respiratory system.

Diet

Bearded dragons eat both insects and plant material in the wild. Their nutritional needs change significantly as they grow, so feeding and supplementation must be adjusted based on age.

Juvenile Feeding (under 12 months)

Juvenile bearded dragons are growing rapidly and require daily feeding with a strong emphasis on protein and calcium.

Live Insects

- Feed daily, allowing your juvenile to eat as much as they want in 10 minutes
- Appropriate insects include:
  - Dubia roaches
  - Black soldier fly larvae (calciworms)
  - Crickets
  - Mealworms or waxworms (occasional treats)
- Insects must be no larger than the space between the eyes
- Remove uneaten crickets after feeding

Salad

- Offer a fresh salad daily, even if intake is minimal at first
- Include a mix of dark leafy greens and vegetables
- Chop into small pieces

Supplements for Juveniles

- Calcium without phosphorus and without vitamin D3:
  Dust insects or salad 3 to 4 times weekly
- Calcium without phosphorus and WITH vitamin D3:
  Dust 1 time weekly
- This supplementation is critical for proper bone development and prevention of metabolic bone disease

Adult Feeding (12 months and older)

Adult bearded dragons eat fewer insects and more plant material. A healthy adult diet is mostly vegetables and greens.

Salad

- Offer a fresh salad daily
- Adults may eat up to 90 percent plant material
- Use a wide variety of dark leafy greens and vegetables

Live Insects

- Offer insects 2 to 3 times per week
- Use the same insect size rule (no larger than the space between the eyes), see insects listed above.

Supplements for Adults

- Calcium without phosphorus and without vitamin D3:
  Dust salad 3 to 4 times weekly

- Calcium without phosphorus and with Vitamin D3:
  Supplement 2 times per month
- Over-supplementation can be harmful, so follow this schedule closely

Important Feeding Notes & Info

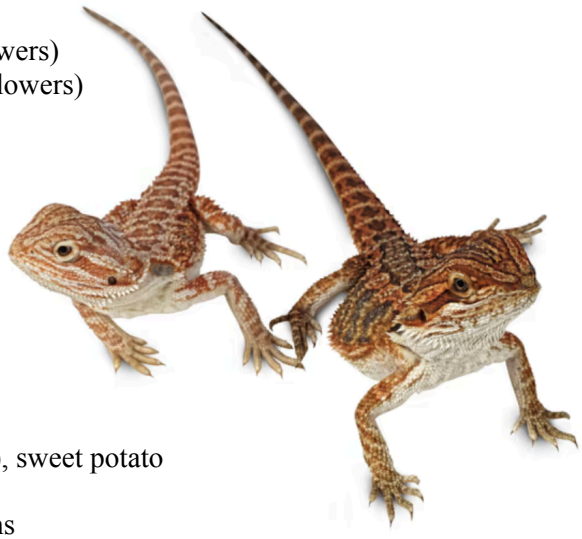
- Never feed insects larger than the distance between your dragon's eyes
- Do not house juveniles with adults; adults may injure or eat smaller dragons
- Juveniles should show steady growth (approximately 2 inches per month)
- A dragon that is not growing, losing weight, or refusing food may be ill and should be examined by a veterinarian

Vegetables and greens

- Provide a mix of at least three different vegetables and greens daily. Dark leafy greens provide more calcium than many other options. Vary what you offer to balance vitamins and minerals.
- Chop smaller pieces for juveniles and larger pieces for adults. You can hang a whole leaf for enrichment and natural feeding behavior.
- As bearded dragons mature, they eat less live prey and more vegetation. An adult may eat 90% plant material.

Suggested greens and vegetables

- Greens to try:
  - Romaine
  - Red leaf or green leaf lettuce
  - Butter lettuce
  - Mustard greens (including flowers)
  - Dandelion greens (including flowers)
  - Watercress
  - Escarole
  - Collards
  - Parsley
  - Turnip greens
  - Green onions
- Other foods to try:
  - Cabbage, Napa cabbage
  - Squash, carrots
  - Brussels sprouts
  - Mashed potato (raw or boiled), sweet potato
  - Cauliflower, broccoli
  - Green beans, yellow wax beans
  - Bok choy, radish
  - Red, green, or yellow bell peppers
  - Kale



Do not add butter or seasoning to any food.

Fruit treats

- Fruit can be offered occasionally in small amounts:
  - Watermelon, cucumber, papaya, cantaloupe
  - Mango, banana, apple, berries, kiwi

Foods to avoid or limit

- Do not feed tofu routinely. It is high in fat and can interfere with calcium absorption.
- Do not offer bird gravel.
- Avoid feeding any single vegetable or fruit exclusively. Variety matters.
- In excess, broccoli, Brussels sprouts, kale, cabbage, cauliflower, and bok choy can contribute to thyroid issues.
- Spinach, rhubarb, beets, and chard are high in oxalic acid, can bind calcium, and may contribute to gout over time.
- Do not add butter or seasoning to any food.

Optional additions

- Some adults may eat pinkie mice. Pinkies provide trace minerals and vitamins not found in insects or plant material and do not need dusting. Feed this no more than 2x per month for adults.

Growth monitoring

- Weigh and or measure juveniles weekly.
- Look for approximately a 2 inch increase in length each month.
- If your bearded dragon is not growing, contact us.

Water

Water should be available at all times in a low-sided bowl. Wash the container and provide fresh water daily.

Some juvenile bearded dragons prefer to drink droplets sprayed onto enclosure surfaces.

Taking your bearded dragon outdoors

Outdoor time can be beneficial when done safely.

- Only take your bearded dragon out when temperatures are 70 to 90°F
- Provide shade and supervise closely
- Use a harness and leash to prevent escapes
- Protect from predators such as dogs, cats, and hawks

Recommended exam schedule

- Juveniles: twice yearly exams
- Adults: yearly exams

Because signs of illness can be subtle, we recommend:

- A yearly fecal test for intestinal parasites
- A yearly blood test to evaluate calcium and phosphorus levels

This helps identify nutritional issues early and reduce the risk of metabolic bone disease.

Bathing

Soaking can support hydration and normal shedding. Warm water can also stimulate bowel movements.

Use a separate tub for bathing. Reptiles can carry salmonella and you should avoid using the same tub used by people.

- Use lukewarm water

- Water level should be at body height but never over the head
- Never place a weak or sick bearded dragon in deep water
- Clean and rinse the tub before and after use

Color changes during bathing are common. Increased puffing or breathing may occur as your dragon adjusts to water temperature.

Salmonella

Any reptile may carry salmonella, even if healthy. Many reptiles shed more when stressed. Stress is commonly caused by improper habitat and poor diet.

Assume your bearded dragon may shed salmonella at any time:

- Wash hands after handling your dragon or cleaning the enclosure
- Supervise children closely
- Use caution for immunocompromised individuals
- Teach older children the importance of handwashing after contact with reptiles or their habitat

Other diseases

Most diseases in bearded dragons result from:

- Dirty enclosures
- Poor diets or missing supplementation
- Cool temperatures
- Inadequate UV light

Many conditions develop slowly and can be missed until advanced. Learn what is normal for your bearded dragon, including appetite, activity, stool and urate appearance, and frequency of urination and defecation.

If changes persist for 1 to 2 days or you notice additional symptoms, please call for an appointment.

Emergency signs may include:

- Bloody stool or urates
- Heavy breathing or panting
- Seizures
- Bloody discharges
- Lameness

Call us immediately if you notice any emergency signs.

For more information:

The Bearded Dragon Manual
Philippe de Vosjoli, Robert Mailloux
Susan Donoghue, Roger Klingenberg, and Jerry Cole
Advanced Vivarium Systems, Inc. (2001)
ISBN: 1-882770-59-5

Additional reptile resources:

www.exoticpetvet.com/care-sheets.html
www.anaspid.org

Brumation in Bearded Dragons

Melissa Magnuson, DVM

Bearded dragons (*Pogona vitticeps*) are native to the arid regions of Australia. In the wild, they experience seasonal changes in temperature and daylight. One normal response to these changes is brumation, a period of reduced activity similar to hibernation in mammals.

Brumation can be surprising and even concerning to pet owners, especially the first time it happens. Understanding what is normal will help you care for your dragon safely and confidently.

What Is Brumation?

Brumation is a natural, seasonal slowdown in metabolism and activity. It allows bearded dragons to conserve energy during cooler months when food is less available.

In captivity, where temperatures and lighting are more controlled, brumation may still occur. Some dragons brumate every year, some occasionally, and some never do.

During brumation, a healthy bearded dragon:

- Sleeps most of the day
- Is much less active
- Eats little or nothing
- Does not lose significant weight
- Does not appear thin, dehydrated, or ill

Which Bearded Dragons Brumate?

- Adults are far more likely to brumate than juveniles
- Dragons under 12 months of age rarely brumate and should be evaluated if they stop eating
- Brumation usually occurs in fall or winter but can vary by individual and environment

Common Signs of Brumation

Normal brumation signs include:

- Lethargy and increased sleeping
- Hiding more often
- Decreased appetite or refusal of food
- Reduced bowel movements
- Less interest in interaction

These signs are expected as long as your dragon maintains body condition and weight.

Environmental Triggers

Brumation is triggered by:

- Shorter daylight hours
- Cooler ambient temperatures
- Seasonal changes in barometric pressure and light cycles

In many homes, natural seasonal light changes alone are enough to trigger brumation, even if you do not intentionally adjust the enclosure.

Lighting and Temperature Recommendations During Brumation

- Do not reduce UVB below 6 hours per day
- Maintain basking temperatures at 85–95°F
- Keep the cool side at 68–72°F
- Avoid dramatic drops in heat or prolonged cold exposure

These guidelines support normal physiology while avoiding immune suppression.

Feeding During Brumation

- It is normal for dragons to refuse food
- You may offer food once weekly, but do not force feed
- If food is eaten, ensure proper basking temperatures so digestion can occur
- Always provide fresh water in a shallow dish

When a brumating dragon is not eating, weight stability is the most important indicator of health.

Monitoring Your Dragon's Health

We recommend:

- Weekly weight checks using a gram scale
- Visual checks for:
    - Sunken fat pads
    - Wrinkled skin
    - Dehydration
    - Discharge from eyes or nose
    - Black beard, weakness, or tremors

Contact your veterinarian immediately if:

- Weight is steadily decreasing
- Your dragon appears thin or weak
- There is diarrhea, vomiting, or swelling
- Brumation signs occur in a juvenile
- You are unsure whether this is brumation or illness

Many illnesses can mimic brumation, including parasites, metabolic bone disease, and organ dysfunction. A veterinary exam is the safest way to distinguish between them.

How Long Does Brumation Last?

Brumation length varies:

- A few weeks for some dragons
- Several months for others

There is no “correct” duration. The key is stable weight and absence of illness.

Waking Up From Brumation

Bearded dragons will naturally become more active as:

- Daylight hours increase
- Temperatures rise
- Seasonal cues change

Reintroducing Food

- Start with leafy greens 3 times weekly
- Introduce insects once weekly at first
- Gradually return to normal feeding over several weeks

Adult dragons typically need fewer insects than juveniles after brumation.

Should I Force My Dragon to Brumate?

No.
Brumation should never be forced. Healthy dragons will enter and exit brumation on their own. Artificially lowering temperatures or withholding light can be harmful if done incorrectly.

Key Takeaways

- Brumation is normal and healthy for many adult bearded dragons
- Decreased appetite and activity alone are not emergencies
- Weight stability is critical
- Juveniles should not brumate without veterinary guidance
- When in doubt, a wellness exam provides reassurance and safety

If you ever feel unsure, we encourage you to schedule an exam. Early evaluation prevents serious problems and gives peace of mind.

Reptile Lighting: Why It Matters

Melissa Magnuson, DVM • Alexandra Kilgore, DVM

Proper lighting is one of the most important parts of reptile care, yet it is also one of the most misunderstood. Inadequate lighting is a leading cause of metabolic bone disease and other serious health problems in reptiles.

This handout explains what ultraviolet (UV) lighting is, why reptiles need it, and how to choose and maintain the correct lighting for your pet.

Understanding UV Light

Ultraviolet (UV) light is radiation that exists beyond the visible light spectrum. It comes in three forms:

- **UVA**
- **UVB**
- **UVC**

Only UVA and UVB are relevant and safe for reptiles.

UVA

- Helps regulate daily biological rhythms and behavior
- Important for normal activity, appetite, and reproduction

UVB (Most Critical)

- Essential for calcium metabolism
- Allows reptiles to properly absorb calcium from their diet
- Prevents metabolic bone disease, a painful and often fatal condition

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How UVB Works in the Body

UVB light activates vitamin D precursors in the skin, allowing reptiles to produce vitamin D3 naturally. Vitamin D3 is required for calcium to move from the gut into the bloodstream and into bones.

Research shows that:

- **Naturally produced vitamin D3** (via UVB exposure) is safer and more effective than oral supplementation in diurnal (day-active) reptiles
- **Some nocturnal species**, such as leopard geckos and corn snakes, can also benefit from low-level UVB exposure

Sunlight vs Indoor Lighting

Reptiles living outdoors receive UVB directly from the sun.

However:

- UVB does NOT pass through glass
- Placing a reptile near a window does not provide UVB

Indoor reptiles must be provided with artificial UVB lighting using bulbs specifically designed for reptiles.

Choosing the Right UVB Bulb

High-quality reptile UVB bulbs are essential. Brands commonly recommended include:

- Zoo Med
- Arcadia
- Reptisun

The type and strength of bulb needed depends on the species and natural habitat of your reptile.

Ferguson Zones: Matching UVB to Your Reptile

Reptiles are grouped into **Ferguson Zones** based on how much sunlight they naturally receive in the wild:

- **Zone 1:** Crepuscular or shade dwellers
- **Zone 2:** Partial sun or occasional baskers
- **Zone 3:** Open or partial sun baskers
- **Zone 4:** Full sun baskers

Knowing your reptile's Ferguson Zone helps determine:

- UVB intensity
- Bulb type
- Distance from the basking area

Ask your veterinarian if you are unsure which zone your reptile falls into.

Proper Placement of UVB Lighting

Correct placement is just as important as the bulb itself.

Fluorescent UVB Bulbs

- Reptile should be able to get within 12–18 inches of the bulb
- Use branches or logs to allow climbing closer if needed

Mercury Vapor Bulbs

- Must be placed at least 12 inches from the basking area
- These bulbs produce both heat and UVB and can overheat reptiles if too close

Screen Tops Matter

- Dense screen lids can block up to 50% of UVB
- Enclosures with heavy screening may require stronger bulbs or multiple fixtures

Measuring UVB

- Solar meters can be used to accurately measure UVB output and ensure proper exposure

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Bulb Replacement Schedule

UVB bulbs must be replaced regularly, even if they still look bright.

- Replace every 6–12 months, depending on the bulb model
- UVB output declines long before visible light burns out
- Date bulbs when installed to track replacement timing

Key Takeaways for Reptile Owners

- UVB lighting is essential for bone health and calcium metabolism
- Windows do not provide usable UVB
- Proper bulb type, placement, and replacement are critical
- UVB needs vary by species and natural habitat
- When in doubt, ask your veterinarian for guidance

If you need help selecting the correct lighting for your reptile or want your setup reviewed, please contact your veterinary team. Proper lighting is one of the most powerful tools you have to keep your reptile healthy.

Ferguson Zones:
Matching UVB to Your Reptile

Melissa Magnuson, DVM • Alexandra Kilgore, DVM

Zone 1: Crepuscular or Shade Dwellers

Very low UVB exposure

These species spend most of their time in shade, dense cover, or are active at dawn and dusk. They receive little direct sunlight in the wild.

Examples:

-
- Crested geckos
- Gargoyle geckos
- African fat-tailed geckos
- Corn snakes
- Ball pythons

Key point for owners:
These species still benefit from **low-level UVB**, but excessive UVB can be harmful.

Zone 2: Partial Sun or Occasional Baskers

Low to moderate UVB exposure

These reptiles move between shade and sunlight and bask intermittently rather than continuously.

Examples:

- (juveniles and non-dominant adults often fall here)
- Blue-tongue skinks
- Uromastyx (when not actively basking)
- Green anoles
- Some box turtles

Key point for owners:
UVB should be available, but animals must always have shaded areas to self-regulate exposure.

Zone 3: Open or Partial Sun Baskers

Moderate to high UVB exposure

These reptiles bask regularly and are adapted to brighter environments, but still retreat to shade.

Examples:

- Adult bearded dragons
- Veiled chameleons
- Panther chameleons
- Red-eared sliders and other basking aquatic turtles
- Spiny-tailed lizards

Key point for owners:
These species **require reliable UVB** to remain healthy and are at high risk for metabolic bone disease without it.

Zone 4: Full Sun Baskers

High UVB exposure

These reptiles live in very bright, open environments and bask for prolonged periods under intense sunlight.

Examples:

- Uromastyx species
- Desert tortoises
- Sulcata tortoises
- Rock agamas

Key point for owners:
Strong UVB is essential, but enclosure setup must still allow distance and shade to prevent overexposure.

Important Reminder for Clients

These zones are **general guidelines**, not rigid rules.
Factors that influence UVB needs include:

- Species
- Age
- Behavior
- Enclosure design
- Distance from the bulb
- Screen tops and materials

Always research species-specific needs before acquiring a reptile, and consult a veterinarian experienced in reptile medicine to confirm proper lighting for your individual pet.

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