



# Introduction to Leopard Gecko Care

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Leopard geckos are native to the arid regions of Pakistan, India, Afghanistan, and Iran. Their generally calm temperament, manageable size, and straightforward husbandry make them a popular pet for both first-time reptile owners and experienced hobbyists. While considered one of the more forgiving reptile species, leopard geckos still require proper housing, heat, lighting, diet, and supplementation to remain healthy.

## Housing

A properly sized enclosure is essential for your leopard gecko's health and well-being.

- Minimum enclosure size: 20-gallon glass aquarium
- Larger enclosures are strongly encouraged
- Small plastic pet-store enclosures should be used for transport only, not permanent housing



Leopard geckos are primarily terrestrial. They benefit from:

- Secure screen top
- Multiple hiding areas
- Non-toxic plants, caves, and low climbing structures

If housing multiple geckos:

- Only house similarly sized leopard geckos together
- Do not mix species
- Monitor closely for bullying or food competition



## Substrate

Leopard geckos do not burrow or dig, and substrate choice is critical.

Recommended substrates

- Indoor/outdoor carpet
- Reptile carpet or felt

These are safe, easy to clean, and hygienic.

Do NOT use

- Sand (including calcium sand)
- Wood shavings or mulch
- Corn cob bedding
- Gravel or rock sand

Loose substrates can lead to:

- Dehydration
- Retained sheds
- Eye irritation or conjunctivitis
- Gastrointestinal impaction

If sand is used despite recommendations, feeding must occur in a separate container to prevent ingestion. Small-particle substrates are strongly discouraged.

## Humidity

Although leopard geckos are desert-adapted, they still require controlled humidity.

- Ideal humidity: 30–40%
- Periodic light misting helps maintain hydration

A moist hide should always be available to assist with shedding.

Use:

- Damp paper towels or sphagnum moss
- Swedish dish towels that are wet, rung out and shaped as a hide
- Replace daily to prevent bacterial or fungal growth

## Cleaning and Sanitation

- Remove uneaten food daily
- Clean and disinfect enclosure and furnishings every other week
- Use mild soap followed by a disinfectant:
  - 1 capful bleach to 1 gallon of water
- Rinse thoroughly and dry completely before returning your gecko

Commercial reptile disinfectants may also be used.

## Heat and Lighting

### Temperature Gradient

Leopard geckos require both warm and cool zones.

- Warm side: 80–85°F
- Cool side: 70–75°F

Provide:

- Heat lamp over one side of the enclosure
- Under-tank heating pad (thermostat recommended)

Heat rocks are not recommended due to burn risk.

### UVB Lighting

UVB light is required to maintain healthy leopard geckos.

- Prevents metabolic bone disease (MBD)
- Supports calcium metabolism

Guidelines:

- UVB lighting on during daylight hours year-round
- UVB between the hours of 4-5 pm are found to be most beneficial
- Fluorescent UV bulbs must be replaced every 6 months
- UV bulbs emit UV long before visible light burns out
- UVB bulbs do not produce heat and must be paired with a heat source

Natural sunlight can be beneficial when safely provided, but glass filters out UV light. Always ensure shade is available.

## Diet

Leopard geckos are insectivores.

### Feeding schedule

Prey size should never exceed the distance between the gecko's eyes.

- Juveniles:
  - Worms available at all times
  - Live crickets twice daily
- Adults:
  - Crickets and worms 3–4 times per week
  - Overweight geckos should be fed only 2x weekly



### Gut loading and supplementation

Proper nutrition depends on feeder insect quality.

- Gut-load insects 24–48 hours before feeding using:
  - Dark leafy greens (kale, endive)
  - Carrots (vitamin A source)
  - Commercial gut-load diets
- Supplement schedule
  - Calcium without D3: every feeding
  - Multivitamin with D3: weekly
  - Vitamin A supplement: every 1–2 weeks

Remove uneaten insects within 15 minutes to prevent stress or injury.

## Growth Monitoring

Juveniles should:

- Gain weight steadily
- Increase in length approximately 1 inch per month for the first 8 months

Failure to grow normally suggests illness or nutritional deficiency.

## Water

- Provide fresh, unchlorinated water at all times
- Use a shallow, easily accessible dish
- Wash and refill daily, clean with hot soapy water and rinse well

## Salmonella

All reptiles may carry salmonella, even when healthy.

- Wash hands after handling or cleaning
- Supervise children closely
- Immunocompromised individuals are at higher risk

\*While leopard geckos can tolerate some handling, excessive or improper handling can cause stress and illness.

## Health Issues

Common conditions

- Metabolic Bone Disease (MBD): rubbery jaw or limbs due to improper diet or UVB
- Retained sheds: especially on toes; often linked to dehydration or vitamin A deficiency
- Intestinal parasites: common in new or symptomatic geckos

We recommend:

- Fecal testing for all newly acquired geckos
- Immediate testing if diarrhea is present

Most parasites are treatable, except cryptosporidium.

## When to Seek Veterinary Care

Monitor for changes in:

- Appetite
- Activity
- Stool or urates
- Body condition
- Skin and shedding quality

Emergency signs include

- Bloating
- Bloody stool
- Heavy breathing

- Seizures
- Lameness
- Strictures on the body from retained shed
- Eyes sealed shut and unable to eat

## Preventive Care

- Annual veterinary examinations are strongly recommended
- Twice yearly fecal testing helps detect parasites early
- Early intervention significantly improves outcomes

*This handout provides general leopard gecko care guidelines. Individual needs may vary. Always consult a veterinarian experienced in reptile medicine with questions or concerns.*





# Ferguson Zones: Matching UVB to Your Reptile

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## 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.

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## 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.

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## 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.



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## 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.



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## 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.



# Reptile Lighting: Why It Matters

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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.

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## 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

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## 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.

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## 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.

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## 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.

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## 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
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## **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
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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.