

# *Introduction to Leopard Gecko Care*

*By Kaci Karrick*

Leopard geckos are one of the most popular and beginner-friendly reptiles in the pet world—and for good reason. Their gentle temperament, manageable size, and relatively simple care needs make them an excellent choice for both new and experienced reptile keepers. However, like any pet, leopard geckos require a proper environment, nutrition, and attention to thrive.

This care guide is designed to provide you with everything you need to know to keep your leopard gecko healthy and happy. From setting up the right habitat to understanding their dietary needs and behavior, you'll find practical tips and clear information to help you become a confident and responsible gecko keeper.

Whether you're considering getting your first leopard gecko or looking to improve your current setup, this guide is here to support you every step of the way.

## Introduction

Leopard geckos are native to the dry, rocky deserts and grasslands of South Asia, specifically:

- Afghanistan
- Pakistan
- Northwest India
- Parts of Iran and Nepal

In the wild, they live in arid and semi-arid environments with loose, sandy or rocky soil, hiding during the day in burrows, under rocks, or in crevices to avoid the heat. They are crepuscular, which means they're active at dusk and dawn.

They are 7-10" (17-25 cm) long, with females generally being smaller. In captivity leopard geckos are known to live long lives: 15-20 years on average.

Leopard geckos are insectivores, which means that they eat primarily insects.

## Quarantine

When receiving your leopard gecko it is important to go through a quarantine process. Here are a few tips. Quarantine is a period of isolation used to monitor and protect your reptile (and your other pets) from potential illness or parasites—like mites or infections—after bringing them home or noticing health issues.

In reptile care, quarantine means:

- Keeping the animal in a separate enclosure, away from all other reptiles.
- Using separate tools (tongs, water bowls, cleaning supplies) for the quarantined reptile.
- Monitoring closely for signs of illness, parasites, or abnormal behavior.
- Lasting at least 30–60 days, depending on the situation.

Quarantine helps you catch and treat problems before they can spread to other animals. It's especially important after buying a new reptile or rescuing one.

## Why should I take my gecko to the vet?

Taking your leopard gecko to the vet—especially a reptile/exotics vet—is important for a few key reasons:

### 1. Health Checkups

Even if your gecko seems healthy, a routine wellness exam can help catch issues early (like parasites, weight loss, or organ problems) before they become serious.

### 2. When Something Seems Off

Signs your gecko needs a vet:

- Not eating for more than 10–14 days
- Weight loss or a shrinking tail
- Stuck shed, especially around toes

- Lethargy or unusual behavior
- Trouble walking or wobbly movements
- Swollen limbs or jaw (possible metabolic bone disease)
- Signs of respiratory infection (bubbling at nose, open-mouth breathing)

### 3. Parasite Checks

Geckos can carry internal or external parasites (like pinworms or mites). A vet can do a fecal test and provide the right medication if needed.

### 4. Injury or Emergency

If your gecko has a wound, broken tail, prolapse, or any kind of trauma, a vet visit is critical. A wellness check is also important to do when receiving a leopard gecko is to test for crypto.

“Crypto” in leopard geckos refers to Cryptosporidiosis, a highly contagious and often fatal parasitic disease caused by the protozoan *Cryptosporidium varanii* (formerly *C. serpentis* in snakes and *C. saurophilum* in lizards).

#### What Does Crypto Do?

In leopard geckos, Crypto primarily attacks the digestive system, leading to:

- Severe weight loss (especially a thin tail—known as “stick tail”)
- Chronic diarrhea
- Lack of appetite
- Lethargy
- Failure to thrive despite eating

It’s a long-term, debilitating disease that damages the intestinal lining, making it hard for the gecko to absorb nutrients.

#### How Do Geckos Get It?

- From contact with infected feces

- Contaminated enclosures or tools
- From other reptiles (Crypto is highly contagious)
- At pet stores, breeders, expos, or rescue situations

### Is There a Cure?

- There is no known cure, but some treatments (like certain antibiotics or antiparasitic drugs) may help manage symptoms.
- A gecko with Crypto often becomes a lifetime carrier, even if symptoms improve.
- Most cases are eventually fatal, and euthanasia is sometimes the kindest option in advanced stages.

### Prevention Is Key

- Quarantine new animals for at least 60–90 days
- Practice strict hygiene between enclosures
- Don't share tools, dishes, or decor between reptiles
- Get suspicious geckos tested by a reptile vet (Crypto can be diagnosed with a fecal test or PCR test)

### Enclosure Details

While older keepers like to say that a 20 gallon is efficient for a leopard gecko, especially for an adult this is false. The minimum for an adult is a 50 gallon

(36x18x18) at most and larger is always preferred. It is said that babies will be fine in a 20 gallon as well however — just get the 50 gallon. It'll save you money in the long run.

•A 4x2x2 (120 gallon) Is a GREAT size and I highly recommend it for an adult.

### Lighting ( Day time )

Leopard Gecko's are considered crepuscular which means they are up and moving around dusk to dawn. Leopard Geckos need a daytime bulb during the daytime and include a linear UVB. An appropriate basking bulb ( Emits white light & heat ) thrive, exo terra, Flickers, and more. Reptile Lighting is a

great source to reach out for any lighting questions that I may not be able to answer. A lot of keepers report they don't see their leopard gecko fully bask, however their leg or tail is out in the open. This is called Cryptic Basking.

### Temperature & Humidity

- **Basking surface temperature:** 94-97°F (34-36°C)
- **Warm hide temperature:** 90-92°F (32-33°C)
- **Cool end:** 70-77°F (21-25°C)

•The basking surface temperature is different from the warm side temperature. A basking surface is a surface of a solid object like a hide or slate underneath your basking bulb and UVB. This area is to be measured with an infrared thermometer gun because this gadget measures surface temperature and not air temperature like a digital thermometer & a hygrometer for humidity.

•You should have at least 2-3 digital thermometers in your enclosure. One on the warm side, one in the middle and one on the cool side. Digital thermometers & hygrometers can be purchased on amazon for a good price in packs. Analogs are **not** reliable!

### Linear UVB

Leopard Geckos are ground - Dwelling reptiles that are up at dawn & dusk. While they hide the majority of the time they still need a linear UVB to refrain from developing metabolic bone disease plus their calcium supplements & multivitamins. The options for UVB are Arcadia 2.5% or 7% UVB. This highly depends on your enclosure metal mesh lid blockage & how far away your lighting is from your gecko. This also determines the percentage if your gecko is albino or normal. UVB bulbs should be changed out every 6-12 months of usage — or longer if you use a solar meter. Some UVB bulbs can outlive 12 months. This can save a lot of money!

Rule of thumb though, for UVB usage.  
Lamp mounted over enclosure (mesh):

- Arcadia T5 SO ShadeDweller Max 2.5% — 8-14" / 20-35cm
- Arcadia T5 SO ShadeDweller 7% — 10-18" / 25-45cm

Lamp mounted inside enclosure (no mesh):

- Arcadia T5 SO ShadeDweller Max 2.5% — 10-18" / 25-45cm
- Arcadia T5 SO ShadeDweller 7% — 12-20" / 30-50cm

### HYPO-PIGMENTATION (UVI 0.7-0.5)

Lamp mounted over enclosure (mesh):

- Arcadia T5 SO ShadeDweller Max 2.5% — 12-14" / 30-35cm
- Arcadia T5 SO ShadeDweller 7% — 16-18" / 40-45cm

Lamp mounted inside enclosure (no mesh):

- Arcadia T5 SO ShadeDweller Max 2.5% — 14-18" / 35-45cm
- Arcadia T5 SO ShadeDweller 7% — 18-20" / 45-50cm

Listed from Reptifiles.com

### Nighttime Lighting

If you need to have a bulb for nighttime because your temperature inside the enclosure is falling below the preferred temperature ( 60°F / 16°C ) you will have to purchase a ceramic heat emitter. This bulb is lightless but provides the heat. We want pure darkness for bedtime as we do ourselves. There is a bulb called a Deep Heat Projector produced by Arcadia, this is to be listed as a better bulb for nighttime, however this is false. Reptile Lighting has tested & studied this DHP to be deemed as a middle ground between a basking bulb and a heat emitter. This bulb produces too much heat and mimics a basking bulb, which we don't want at nighttime. We want to heat the air just enough to keep them warm.

Colored Lighting is a hard NO.

A lot of people think that reptiles cannot see color such as a red basking bulb. This is false — they can see more colors than we can! Colored lighting that includes red, blue, purple, or colored LEDs are harmful. few reasons:

### 1. Disrupts Natural Day/Night Cycles

Reptiles rely heavily on a consistent circadian rhythm (day/night cycle) for proper health. Colored bulbs often emit unnatural light spectrums that can:

- Confuse their internal clocks.
- Disrupt sleep cycles, especially at night.
- Lead to stress, lethargy, or a weakened immune system.

### 2. Poor Light Spectrum for UVB Needs

Colored bulbs do not provide proper UVB or UVA light, which are essential for:

- Vitamin D3 synthesis.
- Calcium absorption.
- Preventing metabolic bone disease.

So, even if a bulb produces heat, it doesn't replace the UVB that reptiles need during the day.

### 3. Reptiles Can See the Light

Many people assume reptiles can't see red or blue light, but studies show many reptiles can see more of the light spectrum than humans, including UV and infrared. That "invisible" light to us is actually very noticeable to them, making night bulbs stressful or irritating.

### 4. Causes Behavioral Changes

Some reptiles will avoid basking under colored

## Decorations

When setting up your leopard geckos enclosure it is important to make sure we have the right amount of clutter and hides. Hides are important for leopard geckos because:

1. They help them feel safe – Geckos are prey animals, so they need places to hide to feel secure and reduce stress.
2. They help with shedding – A humid hide keeps their skin moist, which makes shedding easier and healthier.
3. They help with temperature regulation – Different hides in warm and cool parts of the tank let them choose the right temperature for their needs.

In short, hides keep them happy, healthy, and stress-free. Ideally, they should have at least three: a warm hide, a cool hide, and a humid hide. A humid hide is one placed in the middle and it has either moss or paper towel inside that gets misted daily to provide a safe space that is humid & helps with shedding. A good hide to use is an enclosed hide like a cave or a tupperware with an entrance. In your leopard gecko enclosure you should also provide either real or fake plants. This helps fill up empty space for your gecko to feel more safe and secured.

## Good substrate options

temporary usage: Paper towel.

Paper towel is a good alternative that is safe to use temporarily when in quarantine. This should not be used long term due to causing joint issues on solid surfaces unless said otherwise by your veterinarian this is important especially if they have PICA.

Top soil play sand & excavator Clay: This is a great alternative to use to replicate a natural environment for your leopard gecko. The measurements for this is 40% organic top soil, 40% sand, and 20% clay. Make sure to read the packaging to correctly set up the clay. Mix thoroughly! Leopard Geckos should be provided at least 4 inches or more! They do burrow.

## Top Soil Safety

Find a top soil to use for your leopard gecko; these are very important to look for. Your top soil should be free of

- Peat Moss, Additives, Fertilizer, Manure, compost, Perlite, pesticides, chemicals, Dye free, or wetting agents.

When setting up your substrate I also recommend baking or freezing your substrate to remove any unwanted pests.

- Bake on a baking sheet in the oven at 200-250°F (93-121°C) for 30-60 minutes. stir periodically to thoroughly bake your substrate.

Or

- Freeze your substrate in a deep freezer ( whatever you may have ) for 48 hours.

## Safe soils

- Reptisoil - Pet stores / Online
- Glacial Bays (Green & white bag) Lowes
- Timberline (Red & White Bag) Home depot & Lowe's
- Scott's ( Iffy brand, sometimes you find trash & fertilizer in there when advertised to be free of fertilizer beads). Home depot & Lowes
- Make sure to check gardening stores too.

Rule of thumb when adding loose substrate is that your gecko is free of parasites, this is because if they indigest loose substrate and they are not 100% healthy and have proper husbandry they are likely to not be able to pass this substrate and cause impaction.

This is Important.

## Bad substrate

These substrates should never be an option for any reptile species.

- Reptile carpet — Harbors bacteria, Rips out claws and unnatural.

- Coco Fiber — Dusty, can cause respiratory issues, unnatural, and certainly causes impaction.
- Ground walnut shells — Sharp, impaction, and unnatural.
- Tile — Causes long term joint issues.
- Shelf Liner — Iffy subject however some issue causing joint issues long term and depending on brands they do emit chemicals causing toxicity.
- Calcium sand — Unnatural and deadly.
- Aspen Bedding — Unnatural, Causes toxicity, impaction risks.
- Coco chips — Unnatural and impaction risks.

### How to feed my leopard gecko

Leopard geckos are strictly insectivores — meaning they only eat insects. Some feeder insects you'd typically use is

- Crickets
- Mealworms
- Hornworms
- Dubia roaches
- Discoid roaches
- Silkworms
- Black soldier fly larvae

### Good treat option

- Superworms (small)
- Wax worms
- Butter worms
- Hornworms

### Calcium supplements & Multivitamins

This is CRUCIAL. All insect feeders should be dusted with calcium powder. If you're not using a UVB light, be sure to use a supplement that includes vitamin D3 to prevent Metabolic Bone Disease.

Advancing Leopard Gecko husbandry & Advancing herpetology are great groups.

### Calcium WITHOUT D3

This supplement should be housed with your leopard gecko in a small shallow bowl at all times.

1. They need daily calcium – Calcium is essential for strong bones, muscle function, and overall health.
2. Too much D3 can be harmful – Vitamin D3 builds up in the body. If you give D3 every day, it can cause toxicity.
3. They self-regulate – When you leave a small dish of calcium without D3 in the tank, your gecko can lick it when they need it.

Leopard Gecko Advancing Husbandry on facebook is a great source to learn about calcium schedules.

### **Best calcium for leopard geckos with UVB:**

- Arcadia CalciumPro Mg
- Repashy Calcium Plus LoD
- Miner-All Indoor
- Zoomed Calcium

### **Best calcium for leopard geckos without UVB:**

- Repashy Calcium Plus HyD
- Zoo Med Repti Calcium with D3

Leopard geckos also need an occasional multivitamin. Dust insects with a multivitamin powder once a week for young geckos and once every other week for adult geckos.

## Decorations

Rule of thumb for leopard geckos is to have at least a minimum 3 amount of hides. You have a hot side, a humid hide in the middle and a cool shade, if you can provide more than the minimum please do it.

Best hides to use are naturalistic hides but the resin hides do the work as well.

- Cork rounds, flats, half's.
- Enclosed hides for a humid hide

Providing branches for climbing opportunities are also a great option to provide your leopard gecko too. People have said that because they are ground - dwelling they will never climb. This is false - Give them things to climb! they're very capable.

Replicating their natural environment can be very beneficial to your leopard gecko, there is a bunch of inspiration on Pinterest, advancing groups, and google!

## How to weigh my leopard gecko

Let's say:

- Your container weighs 50 grams.
- When you place your gecko in the container, the scale says 85 grams.

Two Ways to Do It:

1. Using the Tare Button (easiest):

- Put the container on the scale.
- Press Tare (it resets the scale to 0 with the container on it).
- Then place your gecko in the container.
- The number shown is just the gecko's weight — no math needed!

2. Without a Tare Button:

- Put the container + gecko on the scale. Let's say it reads 85g.
- Subtract the container's weight (50g).
- $85g - 50g = 35g \rightarrow$  your gecko weighs 35 grams.

### What is the typical weight of a adult leopard gecko?

Unfortunately this is a hard topic to talk about because ALL leopard geckos will be at a healthy weight and look different from somebody else's — who's gecko is healthier?

Leopard geckos as adults can reach up to 90 grams. Anything higher can potentially be dangerously obese unless they have GIANT in them. Being up to 90 grams does not indicate an unhealthy gecko — If their tail is NO LARGER than their head they are completely fine. Leg mass is also very important, they should not be too skinny, their tail should never be too skinny.

### Enclosure sizes

Ultimately your leopard gecko should be housed in a 120 gal (4x2x2) if they are completely healthy but even then — they all deserve the space as long as it's properly done.

## Juvenile Leopard Gecko Enclosure Sized

The smallest enclosure I recommend for a baby leopard gecko is starting out in a 50 gallon front opening enclosure, this is because if you're unable to upgrade to a 120 gal you're already at the minimum for an adult leopard gecko. A 50 gal can succeed with the proper ambient & gradient temperatures and decent room for a lot of their things they need.

## Adult Leopard Gecko

The minimum sized as posted above is a 50 gallon (36x18x18) front opening enclosure — Larger will always be suggested. Rule of thumb is do not go below 18 inches in width and height, this is due to proper room & height for their lighting.

A 55 gallon is too narrow, this is not acceptable and anything under 50 gal is not suitable either.

75 gal, 120 gal and up are fine.

## What is impaction?

A lot of newer keepers & older keepers are suck on the fact that loose substrate is the devil and should not be used — wrong. Substrate is absolutely recommended and should be provided as long as you have

- Correct Husbandry
- Healthy Leopard Gecko
- UVB / HEAT & proper supplements.

Impaction in reptiles is when they can't poop because something is blocking their digestive system. It can happen if they eat something they can't digest, like sand, rocks, or too much hard food. It's serious and needs

quick care. A healthy gecko will be able to pass the majority of the things they accidentally eat.

### How do I handle my leopard gecko?

Here's how to handle your leopard gecko safely and gently:

1. Wash your hands before and after handling.
2. Approach slowly from the side—not from above—so you don't scare it.
3. Scoop, don't grab. Slide your hand under its body and lift gently.
4. Support its whole body, especially the belly and tail.
5. Stay calm and still—avoid quick movements.
6. Keep handling short at first (a few minutes), then build up as it gets used to you.
7. Never grab its tail—they can drop it as a defense mechanism.

### Dropping their tail - Defense mechanism

Leopard geckos drop their tails as a defense mechanism. If they feel threatened or are grabbed by the tail, it detaches to distract predators—giving the gecko a chance to escape. The tail keeps moving for a bit after it drops, which helps with the distraction.

It's called autotomy, and while the tail can grow back, it won't look the same and takes a lot of energy to regrow. So it's best to handle them gently to avoid stressing them out.

If your leopard gecko drops its tail, here's how to treat it at home: TAKE TO A EXOTIC VETERINARIAN IF YOU CANNOT TREAT OR IT GETS WORSE.

1. Keep the tank clean – spot clean daily to prevent infection.

2. Switch to paper towels instead of loose substrate.
3. Rinse the tail stump gently with clean, lukewarm water if dirty.
4. Apply a reptile-safe antiseptic (like diluted Betadine or chlorhexidine) once a day.
5. Keep stress low – avoid handling for a while.
6. Watch for signs of infection – swelling, pus, bad smell.

If it doesn't start healing or looks infected, a vet visit is needed.

### Cats & Dogs are not friends with your gecko.

It can be dangerous for your cat or dog to interact with your reptiles for a few reasons:

1. Predator instinct – cats and dogs might see reptiles as prey and try to bite or play rough.
2. Stress – reptiles get easily stressed by fast movement or loud noises, which can make them sick.
3. Injury risk – even a playful paw or nip can seriously hurt a reptile.
4. Disease spread – reptiles can carry salmonella, which can be passed to pets (and humans).
5. Cross-contamination – dogs or cats might bring in bacteria or parasites that are harmful to reptiles.

### Safe cleaning products

Keeping your reptile clean is very important to do daily even if you have a bioactive enclosure and a clean up crew. Here is safe products to use on your enclosure to wipe down with.

- F10 or Rescue

- chlorhexidine (Diluted)
- ivermectin (Veterinary assisted) Strong substance
- Vinegar & Water

## Bioactive & Naturalistic

### Naturalistic Enclosure:

- Looks natural, but doesn't have a full living ecosystem. You can use spring tails & isopods as long as you feed them.
- Decor includes rocks, wood, hides, and sometimes fake or real plants.
- Uses safe substrates like loose substrate if properly maintained.
- Easier to clean than bioactive but still visually appealing.

### Bioactive Enclosure:

- A self-cleaning mini-ecosystem.
- Has live plants, beneficial microorganisms, and clean-up crew (like isopods and springtails).
- Uses a layered substrate that supports plant and microbe life.
- Still needs maintenance, but spot cleaning is often reduced over time.

For leopard geckos, bioactive setups can work well, but you need to make sure:

- Humidity is well-controlled (they like dry environments with a humid hide).
- The clean-up crew thrives in arid conditions (some do!).

## Safe live plants

Here's a list of safe plants for a leopard gecko bioactive enclosure, focusing on ones that can handle low humidity, dry conditions, and warm temps:

#### Safe, Arid-Friendly Plants:

1. Haworthia – Compact succulents, non-toxic, easy to grow.
2. Aloe Vera – Safe, but make sure it's not too big or top-heavy.
3. Echeveria – Pretty rosette-shaped succulents, non-toxic.
4. Snake Plant (Sansevieria) – Tough and hardy; best in corner areas.
5. Jade Plant (Crassula ovata) – Tolerates dry environments well.
6. Zebra Plant (Haworthiopsis fasciata) – Similar to aloe, but smaller.
7. Sedum varieties – Many are safe and thrive in dry conditions.
8. Ponytail Palm (Beaucarnea recurvata) – More decorative, safe and drought-tolerant.

#### Tips:

- Always use pesticide-free plants.
- Rinse thoroughly before planting

#### Clean up crew

For a leopard gecko bioactive setup, you'll want isopods that do well in drier conditions, since leopard geckos need low humidity. Here are the best options:

#### Arid-Friendly Isopods:

1. Porcellionides pruinosus ("Powder Blue" or "Powder Orange")
  - Very active breeders.

- Tolerate a range of humidity, including drier spots with a moist hide.

- Good clean-up crew.

2. *Porcellio laevis* ("Dairy Cow" isopods)

- Hardy and larger.

- Tolerate low humidity better than tropical isopods.

- Great for visible, active clean-up.

3. *Porcellio dilatatus*

- Tough species.

- Does well in semi-arid setups with moist hides.

- Not too flashy, but efficient cleaners.

4. *Armadillidium vulgare* ("Common pillbug")

- Very drought-tolerant.

- Can curl into balls when threatened.

- Slower to breed but long-lived.

Tips for Keeping Isopods in a Dry Setup:

- Include a moist "isopod corner" with leaf litter and sphagnum moss.

- Use plenty of cork bark and hides to give them shelter.

- Feed with bits of veggies, fish flakes, or isopod-specific food.

How to house Isopods

Housing isopods is actually pretty simple and fun! Here's how to do it, whether you're breeding them separately or adding them to a leopard gecko enclosure:

If You're Keeping Isopods in a Culture Bin (for breeding or backup):

Supplies:

- Small plastic tub with lid (shoebox-sized works)
- Air holes or mesh ventilation
- Moisture-retaining substrate (like coco fiber + leaf litter)
- Sphagnum moss (for a humid zone)
- Cork bark or egg cartons (for hides and climbing)
- Leaf litter (for food and bedding)

Substrate:

- Mix of:
- Coco fiber or organic soil (no fertilizers)
- Leaf litter (oak is great)
- Crushed eggshells or cuttlebone (for calcium)
- Optional: Sand mixed in for drier species

Moisture Zones:

- Keep one side moist, the other dry.
- Mist only the damp side every few days—avoid making it soggy.

\*\*Feeding: Veggie scraps, ( carrot, zucchini, cucumber), fish flakes ( Fluval is a good brand), isopod chow, calcium source ( crushed egg shell, cuttlebone)

Grow Lights

I personally recommend Barinna or Arcadia Jungle Dawn LED.

## Socialization

Here's a simple, step-by-step guide to socializing your leopard gecko, especially if they're new, shy, or not used to handling:

### 1. Let Them Settle (First Few Days to a Week)

- Don't handle it yet. Just let them get used to their new space.
- Make sure they have hides, proper heat gradients, and feel secure.
- Minimize loud noises and vibrations near the enclosure.

### 2. Build Trust With Presence

- Sit near the enclosure daily and talk to them softly.
- Offer food with tongs to associate your presence with something good.
- Keep movements slow and predictable.

### 3. Hand Introduction (After Trust Builds)

- Start by placing your hand flat in the enclosure for a few minutes at a time.
- Let your gecko approach you on their terms—don't grab them.
- You can gently touch or nudge them under the chest when they seem calm.

### 4. Begin Handling (Short & Low)

- Gently scoop from underneath—never grab from above.
- Sit on the floor or a soft surface for short handling sessions (5-10 min).
- Let them walk across your hands or lap.

## 5. Make It Routine

- Handling consistently, but not excessively—3–5 times a week is great but give them the choice.
- Keep sessions calm and positive; reward with treats or food.
- Watch for signs of stress (tail waving, running, hiding).

## 6. Be Patient

- Every gecko has their own personality—some take days, others weeks or months.
- Stay calm, consistent, and gentle.