

## Health Issues

Overall health is very important to your Leo and each one can present a health issue a little different. It is up to you to know their habits and personality in order to recognize if something seems off. Beside the personal emotional toll this can have the financial toll can also be burdensome. If you ever notice any health issues make sure to put the leo in quarantine(see Quarantine file for set up) so you can monitor him better. Keep in mind that no file or leo group etc will ever supplement a vet visit. This file will not have any details about medications or treatments to prevent people from providing random care because they believe the leo suffers a certain disease. This can lead to furthering the potential issue and make the situation worse.

Note: Be sure to read and familiarize yourself with the Quarantine file as this will be a necessity with most issues in this file.

Note: For disinfecting when indicated, never boil, bake or grill rocks as they can explode causing injury or death.

### Parasites:

**Cryptosporidiosis:** Also known as “Crypto” is an extremely contagious parasite and inevitably lethal. Once you have one animal that is infected, it might not be long till other reptiles also have it, **quarantine immediately!** Since *Cryptosporidium* Oocysts can live for months on surfaces strict precautions must be adhered too. Using separate feeding tongs is required and proper handwashing can limit the potential spread to other reptiles. This parasite causes diarrhea, vomiting, extreme weight loss and in advanced stages stick tail and emaciation. Often, Veterinarians can make a diagnosis with presented signs and symptoms. However, the most preferred method is having a fecal check completed. Some Vets will indicate that they can heal Crypto however, there is no cure and only palliative care can be provided. There are some treatments to alleviate symptoms but those will only make the leo live a bit longer but will not make it healthy again.

**Quarantine is needed.** Oocysts are resistant to bleach so disinfecting with a mixture of 6% Hydrogen Peroxide for 20m or Ammonia/water mixture for 20m. clean and disinfect the existing enclosure and items such as rocks and hides per previous guidelines. Wood can be baked at 150C/300F for 30min. In most cases, it is recommended to throw away all items due to the highly contagious nature of the parasite.



Photo courtesy of azeah.com

For more information on the collected information for *Cryptosporidium* please follow the link below.

<https://azeah.com/lizards/cryptosporidiosis>

**Oxyuroidea/Oxyurids:** Often known as Pinworm, is one of the most common parasites in leos and transmitted by fecal or oral routes. Often, they carry it and do not present symptoms. This parasite will not cause much harm in a healthy animal. However, once the leo is sick, stressed or gravid the parasite can easily cause issues such as diarrhea and weight loss even with normal eating and the fecals will have an extremely bad smell.

**Quarantine is necessary**, contact Vet, provide fecals as needed and the vet will help you with the treatment. Continue medications or treatment as prescribed and if the treatment is not working another course of action may be warranted.

The medication will not kill the eggs so continued quarantine will be necessary until clear. Items in the enclosure need to be disinfected, baked or thrown away. The cycle will need to be broken by ensuring eggs that are hatched are not spread and this process can take several weeks. Parasite will die after 2 weeks of being outside of the leo.

For more information on the above collected information for Oxyuroidea please follow the link below.

<https://www.sciencedirect.com/topics/immunology-and-microbiology/oxyuroidea>

**Flagellates:** There are many different Flagellated Protozoan that live in the gastrointestinal tract of reptiles and are common in low levels. Once their population reaches high levels they become problematic. Many healthy reptiles are asymptomatic carriers of some flagellated protozoan and are more common in wild caught(WC), pet shows or pet shops. Breeders can inadvertently produce infected reptiles. Testing will be conducted by fresh fecal exam, regurgitation or vomitus and symptoms are diarrhea, vomiting, weight loss, loss of appetite and dehydration.

**Quarantine is necessary**, clean and disinfect the existing enclosure and items such as rocks and hides for 15-30 min with 1 cup bleach per gallon of water. Wood can be baked at 150C/300F for 30min.

More information on the above collected information for Flagellated Protozoan follow the link below.  
<https://www.reptilesmagazine.com/flagellated-protozoans-of-the-gastrointestinal-tract/>

**Coccidiosis:** Coccidia Protozoa are most commonly found in the intestinal mucous membranes but sometimes also in other organs. They are often seen in low numbers in healthy reptiles. Increased protozoa leads to symptoms such as eating less or stopping eating, appear listless, or have a malnourished appearance and may present with bloody feces(melana) and diarrhea. Seek a vet visit and follow all treatment guidelines as prescribed as this parasite can be lethal if untreated. Treatment is species specific and method of diagnosis varies but can include complete blood count(CBC), X-rays, fecal exam, PCR testing and general medical exam.

**Quarantine is necessary**, clean and disinfect the existing enclosure and items such as rocks and hides for 15-30 min with 1 cup bleach per gallon of water. Wood can be baked at 150C/300F for 30min.

For more information on the above collected information for Coccidiosis follow the link below.  
<https://veterinarypartner.vin.com/default.aspx?pid=19239&id=7996794>

**Entamoebiasis:** Entamoeba Invadens is a commensal protozoan that lives in the gastrointestinal tract. More commonly found in Herbivorous reptiles however can present in carnivorous and insectivorous lizards. This amoeba can cause seizures, anorexia, diarrhea, Hepatitis etc. Sick leos will stop eating and start drinking a lot of water. A vet visit is needed and follow all treatment guidelines as prescribed. Without treatment the leo will die after 1-2 weeks.

**Quarantine is necessary**, clean and disinfect the existing enclosure and items such as rocks and hides for 15-30 min with 1 cup bleach per gallon of water. Wood can be baked at 150C/300F for 30min..

For more information on the above collected information for Entamoebiasis follow the link below.  
<https://www.sciencedirect.com/topics/immunology-and-microbiology/entamoeba-invadens>

**Ciliates:** This is a great indicator for other parasites as this one eats other dead parasites. Treatment for the cause will typically exterminate this organism.

**Mites:** Small moving red or black dots seen mostly under the arms. There are many types of mites and many are harmless to leos. Have a vet determine the type of mite if needed. Note: White dots are not mites but instead tell you that the leo is about to shed.

**Quarantine leo for the duration of the mite treatment** and typically 2 weeks to 1 month is needed to break the cycle.

Enclosure treatment would consist of substrate should be thrown away, cleaning and disinfecting with soap and water, provent-a-mite or other mite treatment safe for reptiles. Everything else should be baked, or thrown away. You need better ventilation and less humidity in the future. If mites are in a Bio enclosure there are other a few methods available for treatment to include Taurus mites which are predator mites that only eat other mites and will die off once the food source is depleted.

### **Health issues mostly caused my incorrect husbandry:**

**Abscess:** Typically caused by an injury where the skin is punctured, cut or torn. Bacteria, fungi or protozoa access the wound and tissue then multiply by feeding on the tissue. As the wound or injury heals the underlying infection will continue to grow into an abscess containing waxy pus. A vet visit is warranted to excise and drain the wound as needed. Follow any additional vet guidelines placed.



Photo courtesy of olathanimalhospital.org

**Respiratory Infection/Pneumonia:** Primarily caused by viruses or bacteria introduced by draught(drafts) of air, keeping the leo too cold/humid or unsanitary conditions. Leos cannot cough and therefore any mucus in the respiratory tract easily causes infections. Symptoms are decreased or loss of appetite, slightly open mouth for mouth breathing, faster rate of breathing, and mucus coming out of the mouth.



Seek a vet visit and follow all treatments and guidelines provided. **NO ESSENTIAL OILS!!**

**Eye Disease/Conjunctivitis:** Caused by draught(draft) of air, stress, dust/sand, too strong UltraViolet(UV), vitamin A deficiency or instruction of bacteria from unsanitary husbandry. Presents with redness and the eye will be swollen. Often it starts at one eye and spreads to the second, will often move out of light and have issues hunting.

Seek a vet visit and follow all treatments and guidelines provided. The eyes are very sensitive and you do not want to cause even more harm.

**Rectal Prolapse:** Primarily caused by a massive parasite infection, diarrhea or impaction and presents with the colon distending out from the anus. The primary goal at this time is to prevent the colon from drying out and becoming necrotic. Place the leo in quarantine and immediately on wet paper towels and keep moist. If needed, dirt or substrate can be rinsed off with saline solution. The leo can be placed in a sugar solution for around 90min.

Seek a vet visit and follow all treatments and guidelines provided. If everything goes well the vet will be able to put the intestine back in.



Photo provided by leopard-geckos.net

**Diarrhea:** Several issues can cause diarrhea which includes wrong feeders, excessive multivitamin or parasitic infection. Changing feeders and lessening the usage of multivitamins will normally stop the diarrhea after 1-2 day however, If the diarrhea persists, there could be an infection. Always provide fresh drinking water and multivitamin as needed(unless too much is causing the issue) to supplement the loss caused by the diarrhea.

Seek a vet visit, save a fecal sample and follow all treatments and guidelines provided.



Photo provided google photos

**Regurgitation:** Regurgitating undigested feeders does not necessarily mean that the leo is sick. It can also be caused by temperatures being too low or the leo simply eating too much in one sitting. If the temperatures are good and the intake of feeders is not excessive and regurgitation is happening frequently take the leo to a vet and if possible take a sample with you. The leo will need more water than usual during this time to prevent dehydration.

**Shedding Issues:** Unfortunately, shedding issues are more common than it should be. You will often hear keepers say they are normal and this is just not the case. Husbandry is the number one cause of shedding issues and more specifically, lack of or lack there of maintaining the humid hide as required. Other possible causes can be ambient humidity being too low, nothing “rough” for the leo to use to rub against to assist with shed, too low ambient temperature, Vitamin A deficiency, or skin infections.

**Stuck shed around the toes is an immediate issue that needs to be addressed.** Failing to do so causes pain, decreases or cuts off circulation and the toes may fall off or need to be amputated. Basic methods to treat are a sauna or a wet q-tip. A sauna can be as easy as a bowl/container, soaked wet paper towel, no higher than 90degrees, and place the leo on it for 30min. Then utilize a q-tip to gently wipe away or remove the shed. if bleeding starts, stop and soak a little longer and carefully try again. Do not pull hard on the shed to prevent injuries.



Photo courtesy of google images

For more information on shedding please visit the link below.

<https://leopardgeckoland.com/leopard-gecko-shedding/>

**Hemipenis Prolapse:** Primarily happens to males after breeding when they cannot get the hemipenis withdrawn back inside, resulting in decreased circulation, swelling and drying.

Place the leo in quarantine and immediately on wet paper towels and keep moist. If needed, dirt or substrate can be rinsed off with saline solution. The leo can be placed in a sugar solution for around 90min.

Seek a vet visit and follow all treatments and guidelines provided. If everything goes well the vet will be able to put the intestine back in.



Photo courtesy of google images

**Heatstroke:** Often referred to as Hyperthermia or heat exhaustion. A leo's body temperature is 86°F/30°C and an increase on an average of 4-6 degrees can lead to heatstroke. Leos like other reptiles rely on their environment to regulate their body

temperature and the inability to do this can increase body temps to dangerous levels. This condition is caused when a reptile is unable to properly regulate its body temperature due to external factors. These factors include heat sources not being properly regulated with thermostats, enclosures located too close to windows or simply during the summer when the temperature can become extremely hot and lack of proper ventilation.

Signs and symptoms of heatstroke are heavy panting/rapid breathing, shaking/staggering, disorientation, wobbly/unbalanced, loss of consciousness, restlessness, regurgitation, and lethargy. A leo will attempt to locate a cooler place in the enclosure attempting to cool down, lay against the glass, search for shade or will lay in the water dish.

**Failing to address this issue can result in death.** If you notice the above signs and symptoms, remove the leo out of the danger zone and place into a cool damp towel to slowly lower the body temperature. Caution must be adhered too when placing the leo in cold water as it may cool down too fast and can result in circulatory shock. Always ensure sure water is available and accessible.

Seek a vet visit and follow all treatments and guidelines provided.

**Broken Bones:** Typically caused by falling.

Seek a vet visit and follow all treatments and guidelines provided. The arm or leg may need to be externally immobilized or splinted. Depending on severity or location internal fixation may be warranted to ensure sure it heals properly or amputation may be required.

**Liver Disease:** Clinically known as Hepatic Lipidosis(Fatty Liver Disease) which is a result of an increase in fat in the liver which decreases liver function. This condition will often not present with symptoms for a long time. Causes of this condition is contributed by lack of varied diet (feeding only mealworms for example), feeding too often, not letting the leo brumate, medication overdose, poisoning, parasites or too low temperatures. Overweight leos also get liver diseases more often.

Signs and symptoms include yellow/green urate, bloated belly, poor body condition, digestion problems, regurgitation, decreased appetite over a period of time, immobility, yellow skin, eyes and mouth. The leo also might rub against stuff in the enclosure. Often, reptiles are dehydrated when presenting with this condition and ensuring water is available is a necessity. Chronic or acute cases have different timelines for recovery.

Seek a vet visit and follow all treatments and guidelines provided.

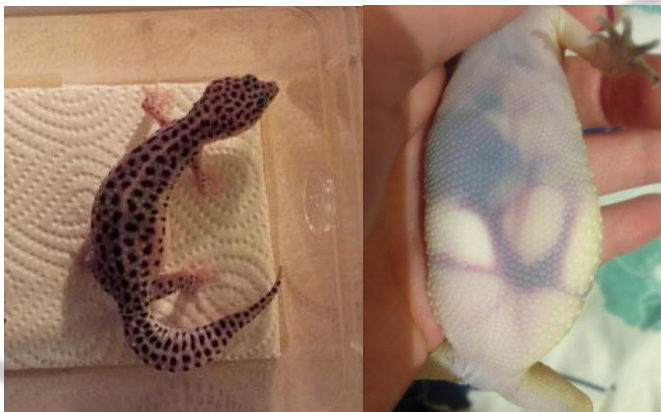


For more information on the above collected information for Liver Disease follow the link below.  
<https://veterinarypartner.vin.com/default.aspx?pid=19239&catId=102919&id=8017925>

**Egg Bound:** Clinically known as Dystocia and there are numerous causes of egg binding and is most common in first time egg production. The majority of cases in leos the eggs can be seen through the abdomen due to the thin skin. Causes can include Genetic/anatomical defect, malformed or overly large eggs, poor condition of leo, lack of proper nesting site, malnutrition, stress, Calcium deficiency (hypocalcemia) to name a few.

Leos can produce and lay fertile eggs whether they have mated or not and can happen during ovulation. If you have a leo in this situation you must monitor them for depression, lethargy and inactiveness. Provide enough layboxes, provide calcium as it is utilized in the production of eggs and D3, make sure the temperatures are correct .

If you visually notice dark blotches on the abdomen or problems passing the eggs **Seek a vet visit immediately and follow all treatments and guidelines provided. Failing to do so can lead to death within a few days.** The vet may inject calcium gluconate for low blood calcium or oxytocin to start the egg-laying. Surgical intervention may be warranted to remove eggs.



Photos courtesy of google images

Photo Courtesy of retileforums.co.uk

For more information on the above collected information for Egg Binding follow the link below.  
<https://www.petcoach.co/article/egg-binding-dystocia-in-reptiles-causes-signs-diagnosis-tre/>

**Mouth Rot /Stomatitis:** This is “one of the most common diseases to affect leopard geckos is mouth rot, which is where their gums and mouth get infected with small cuts or food stuck in their teeth”(leopardgecko.care). Bacteria collects in the wounds in the mouth (which can be caused by feeders). There might be pus in the mouth and the leo may reduce or stop eating due to pain. Mouth rot has proven to be fatal as the leo will fail to thrive(eat) and infection can become toxic.

Seek a vet visit and follow all treatments and guidelines provided. The vet will determine the type of bacteria and provide antibiotics as needed.



Photos courtesy of leopardgecko.care

For more information on the above collected information for Mouth Rot follow the link below  
<https://leopardgecko.care/2019/02/28/mouth-rot-in-leopard-geckos-faq/>

**Necrosis:** Commonly known as tissue death and primarily affects toes, nails or limbs. This condition is attributed to shedding issues, incomplete tail-drop, malnutrition, infections or poor husbandry.

Often, the toes or nails will fall off on their own and care must be taken to prevent further necrosis. If the surrounding tissue presents with inflammation, more severe underlying issues such as Sepsis(septicemia/blood poisoning) can result.

Seek a vet visit and follow all treatments and guidelines provided.



photo courtesy of google images

Photo courtesy of (Lexi Morales), LG AH, complete limb was amputated

**Kidney Disease:** Clinically known as Renal Disease often presents without symptoms for quite a while. Causes for acute renal disease is most attributed to infections or toxins being introduced. However, chronic renal disease is caused by husbandry issues, improper high protein diet, long term water deprivation, excessive vitamin D and low humidity.

You might notice odd urate, lethargy, swelling of joints, weakness/lameness of the legs, diarrhea, pale mucous membrane of the mouth and sunken eyes are early warning signs.

Seek a vet visit and follow all treatments and guidelines provided.

**Metabolic Bone Disease(MBD):** Caused by total or relative calcium deficiency. Clinical presentation is softened or rubbery bones as the body takes calcium out of the bones when there is not enough in the blood supply. Bones become deformed, breaking of bones is possible, severe decrease in mobility is noticeable. All bones in the body are affected by this condition to include soft jaws and deformed spine.

**The majority of causes lie with the keeper due to him/her not providing enough or any calcium/ Vitamin D3.** The utilization of UVB is very beneficial to naturally synthesize D3 in place of D3. The leo might need injections with calcium. MBD cannot be reversed and only prevented from getting worse. However, some improvement may be seen over time.

Seek a vet visit and follow all treatments and guidelines provided.



Photo Courtesy of Reptifiles.com



Photo courtesy of google images

For more information on the above collected information for Metabolic Bone Disease follow the link below.

<https://www.vetstream.com/treat/exotis/reptile/diseases/metabolic-bone-disease>

**Burns:** Caused by failing to properly regulate all heat sources with thermostat or failure of thermostat. The hot spot should never be above 104°F/40°C. See Care Sheet and Heat file for proper hot spot temperatures.

Clean the wounds daily with sterile saline solution or diluted water/Iodine solution the color of tea. Triple antibiotic ointment without pain reliever can be applied for a

maximum or one week or until the wound starts to heal over. When in doubt on any treatment, seek the advice of a vet. Larger or more severe burns may need antibiotics to prevent an infection.

Seek a vet visit as needed and follow all treatments and guidelines provided.



Photo courtesy of Google images

**Impaction:** This is caused by the accumulation of substrate, food, foreign debris or anything else in the intestinal tract. This can happen from improper husbandry, low temperature, eating prey too large, dehydration, parasite and illness. Initial treatment consists of a lukewarm bath with a gentle message 10min/day as well as a drop of paraffin oil on the nose for the leo lick. If home treatment does not help you need to seek a vet, as additional interventions may be needed to include surgery to remove the impaction.



FIGURE 6-21 Radiograph of fatal gastrointestinal impaction in a Leopard Gecko (*Eublepharis macularius*) with so-called "digestible sand" sold as reptile bedding.



For more information on the images and above collected information for Impaction follow the link below.

<https://jeffpackham42.wixsite.com/leopard-gecko-guide/impaction>



**Vitamin A Overdose/Deficiency:** An overdose or elevated vitamin A is clinically known as Hypervitaminosis A which is a nutritional disorder. Vitamin A is essential in maintaining normal epithelial tissue(Skin), vision, growth, reproduction and immune function. Excessive or overdose symptoms include dry, flakey skin, red skin after shedding to name a few. Primarily caused by overdosing supplements. This can lead to organ damage due to vitamin A failing to be excreted and staying in the body where it is stored and finally causing the damage.

Hypovitaminosis A is a deficiency in vitamin A which is a nutritional disorder. This deficiency can lead to improper shedding, vision or eye conditions, low fertility and overall lethargy.

A Proper varied diet is essential and Crickets especially need to be gut loaded with vitamin A as they do not maintain it within their body. Vitamin supplementation greatly assists in maintaining vitamin A however, care must be taken when providing a multivitamin by following manufacturer recommendations.

For more information on the above collected information for Vitamin A follow the link below.

<http://www.geckotime.com/vitamin-a-deficiency-in-leopard-geckos/>

**Vitamin D Deficiency/Overdose:** Hypovitaminosis D is a deficiency in vitamin D which is a nutritional disorder and is essential for growth and general health. A deficiency in vitamin D will not allow calcium to be absorbed into the bloodstream. This is caused by lack of calcium w/D3, no UV-light, and failing to provide multivitamin as needed. There are numerous complications associated with this deficiency such as MBD. A proper varied diet of getloaded feeders dusted with calcium w/D3 or Dusted with calcium when UV is utilized.

An overdose vitamin D or D3 Toxicity is clinically known as Hypervitaminosis D which is a nutritional disorder. Though it is extremely rare in reptiles it can still be a serious problem. Vitamin D allows Calcium to be absorbed into the bloodstream and excessive vitamin D allows too much Calcium to be absorbed. This can eventually lead to over calcification of organs, tissue and areas where calcium is not needed such as kidneys, joints and muscles. Symptoms include but not limited to weight loss, constipation, increased thirst, fatigue and lethargy.

**Overweight:** A proper varied diet is essential to help maintain a healthy weight for your leo. If the diet contains too many fatty feeders such as meal or wax worms the leo can become overweight. Knowing what a healthy leo should look like will help you identify a weight issue sooner. Prolonged weight issues can lead to decreased activity and organ damage such as fatty liver disease and shortened life.

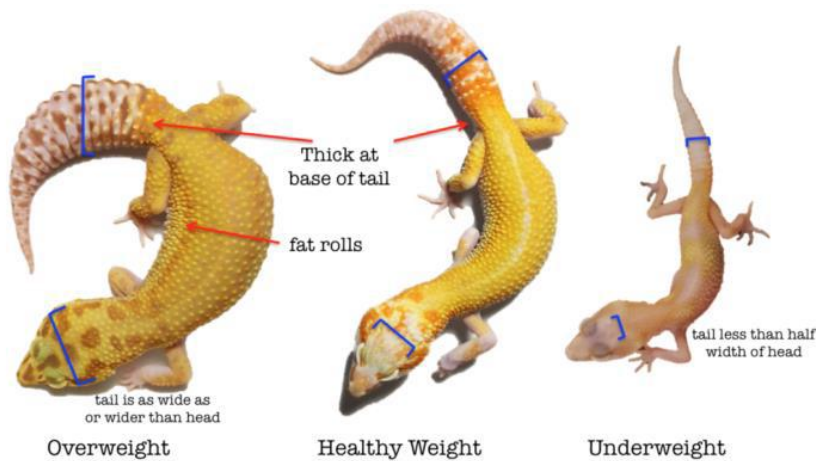


Photo provided by Google images

**“Bubbles“ in the Axillary Pockets:** We jokingly call these “goobies” and normally can be a present or seen in an overweight leo. However, if the leo has them all the time a vet visit would be recommended. Most common cause is too much feeding, excess Calcium and you find it mostly in overweight leos.



Photo provided by Google images

**Tail Drop:** The overall purpose of the tail is to store fat and for times when food is scarce. Leos like some other geckos have the ability to drop their tails (Autotomy) for various reasons. They do this as a defense mechanism to escape danger, frightened or startled. The tail will regenerate over a period of around 3 months. Often, the regrown tail will look different from the original. The downside to a dropped tail is that the leo has lost its storage of fat deposits. In captivity, this is not a huge issue as we provide food as needed.

If your leo drops the tail, place in quarantine on clean paper towels, use only paper towels in the humid hide, and increase feeding with the addition of high fat feeders in moderation. If the wound is dirty from substrate it can be rinsed with sterile saline or

water/Iodine mixture diluted to the color of tea. Monitor the tail for infections and no medications or ointments are needed, just keep it clean.

Seek a vet visit as needed and follow all treatments and guidelines provided.



For more information on the above images or collected information for a Tail Drop follow the link below.

<https://www.reptifiles.com/leopard-gecko-care/leopard-gecko-diseases-health/leopard-gecko-tail-loss/>