



## HOW CAN I TELL IF MY REPTILE IS SICK?

Most reptile species that are kept as pets are subject to predation in the wild. As potential prey themselves, they have adopted the survival strategy of trying to appear fit and healthy to avoid being eaten. This is sensible in nature, as a sick or weak animal, or one that is obviously abnormal in its behavior or appearance is easier to catch. So, the most important thing to remember when evaluating the health of your pet reptile, is that he doesn't want you to know that he is unwell. By the time an owner is sufficiently concerned to seek veterinary advice, the reptile may have been ill for a relatively long time, and disease may have progressed further than is immediately clear.

To complicate matters more, reptiles have a very limited number of ways in which to show that they are ill. Again, this is an evolutionary strategy. Unlike domestic animals, or indeed humans, there is no advantage to the reptile if he can communicate that he is ill. On the contrary, advertising weakness is a distinct disadvantage. So, by the time your pet displays signs of a problem, he may be extremely ill and no longer able to appear well.

Good preventive health care should clearly be the goal of every reptile owner. This involves researching the natural environment of the species, its habitat, diet and particular requirements in captivity. Regular veterinary visits are strongly recommended and screening blood work, examination for parasites and husbandry reviews can be performed as appropriate. In spite of the best care, however, some pets will become ill and early recognition of a problem is often crucial to the outcome of the case.

There are three key points to evaluating the health of your reptile:

- Know what is normal for your species
- Keep records
- The Ice Berg Principle

### WHAT IS NORMAL?

The first, and perhaps the most important point is to know what is normal for the species in question. Only when the reptile owner is familiar with the normal appearance and the normal behavior of his species of pet reptile will he be able to recognize the animal. The reptile owner must have knowledge of the animal's natural environment as well as captive husbandry requirements to understand the reptile in sickness and in health.



To educate yourself about the normal appearance and habits of your reptile species: subscribe to hobby magazines, visit zoos and reptile shows, join a local reptile club, buy books published in the last 5-10 years which have good color illustrations. Nature programs on television can have excellent footage of animals in the wild, and the very lucky may be able to take an eco-tourist holiday. Pet shop, zoo and privately owned specimens may not always be healthy, but seeing as many animals as possible will widen your knowledge base. Observing your species of reptile, reading and speaking to experienced reptile keepers will greatly improve your ability to recognize a problem quickly. A good reptile veterinarian is also an invaluable source of current and practical advice. Do not rely on a pet store for assurances as to what is normal. While many pet shops are ethical, many have employees with no more knowledge than the average customer. Remember that you don't need to know anything about animals to be allowed to sell them. Many reptiles have highly specific needs, particular to the species and even experienced hobbyists must engage in research.

Once you have a solid knowledge of your pet's environmental, nutritional and medical needs, you can begin to assess his health. Assess the following on a regular basis:

**Activity level:** increased or decreased? An unusually docile or aggressive lizard or snake may be ill or in pain.

**Hiding:** A stressed or sick reptile or one in pain may spend more time in hiding. Instinct tells him not to show himself to potential predators.

**Posture and responsiveness:** When you enter the room, does your lizard notice and stand? Does your tortoise wander to the cage side for a scratch? Does your snake or turtle seem aware of you? Since most of these animals are vulnerable to predation in the wild, they should be aware of movement and activity in the environment. Eyes should be bright and alert, and those species with eyelids should seldom be seen with them closed. Reptiles that lie in one spot all day, which seem reluctant or unable to move or which cannot hold their legs, tail, head or body in a manner normal for the species, may be ill. Some species, especially snakes may normally be relatively sedentary, but again, you must know what is normal.

**Gait:** Is your lizard, turtle or tortoise using all its limbs normally? Watch nature programs on television and gain an appreciation for the normal movement patterns of reptiles in the wild.

**Color:** Some species display a wide variety of normal color variations, but generalized (body wide) or patchy changes may indicate a problem. Be familiar with the normal.

**Shape:** Is your snake or lizard swollen in its body or limbs?

**Appetite:** increased, decreased or selective (ie. picky eater).

**Drinking:** Drinking habits vary with species, particularly with tortoises and some lizards, increased thirst may point to a variety of possible problems.



**Urine and stool production:** Generally speaking, reptile waste has three components: the clear, liquid urine, the chalky white urate (both products of the kidney) and the blackish-brown fecal component. In most cases, these three, in varying proportions (depending on species and on diet) are evacuated together. When reptiles are housed in relatively unchanging captive conditions, are fed at regular intervals and are kept in an optimal environment, their bowel movements can become highly predictable. Reptiles should be housed in such a way that their wastes are not simply trodden into deep or absorbent bedding. When clearing away feces and urine, the owner should take some note of their appearance. Is there more or less stool than normal? Relate this to how much and when the animal last ate. Is the stool of the usual consistency, or is it watery (diarrhea) or firmer than usual? Is there a greater or smaller volume of urine than usual, and is this a trend? Is the urine clear and the urate chalky white? Or does either have a yellow, green, orange or brown tinge to it? Is there blood in the waste, and if so, is it in the urine, the urate or on the stool itself? Does the animal appear to have difficulty in passing feces or urine? Signs of difficulty may include straining, passing only small quantities of feces at one time, passing waste with increased or decreased frequency.

**Skin:** Know what is normal for your pet, but generally, snakes should be smooth, without wrinkled scales or retained skin. Check your snake after each shed. Retained eye caps or skin may indicate medical or environmental problems, but is never normal. Scales should not be raised or blistered. There should not be peeling of individual scales or red, sore appearing areas. The underside of the snake should appear healthy, not red and inflamed or moist. Burns to this area are common when hot rocks are used, and for this, among other reasons, they are not recommended. Tortoises and turtles should have hard shells, without swellings or soft spots. Areas of white or pink discoloration can indicate a variety of problems, such as infection. Lizards, snakes and the soft parts of tortoises and turtles should be free of swellings under the skin, sores and areas of discoloration. The head is a common place to find mites, which will appear as very small spots between scales. Species with toenails should have these checked to be sure that they are wearing properly. In the case of lizards such as the leopard gecko, constricting bands of skin, which has failed to shed, can accumulate around the toe, which can lead to strangulation of the digit.

**Eyes, ears, nostrils, mouth and vent:** There should be no discharge or bubbles from the eyes or nose. A white (salt-like) crystalline discharge is normally sneezed from the nose of some reptiles, such as the green iguana. There should be no sores or scabs on the nose. This is a particularly common problem of captive lizards and snakes. There should not be foam, red or other discolored patches in the mouth. There should be no noise when your reptile breathes. Wheezing or a squeak or whistle may be associated with respiratory disease, and should be investigated. It is important to be able to distinguish between abnormal respiratory sounds and those related to an aggressive display by the reptile. This is not always easy, but your veterinarian will be able to help you. Swellings in the area of the ear are often seen in turtles and tortoises, and can be caused by abscesses. Nutritional problems often cause the animal's conformation to be abnormal. This is especially common in the case of herbivorous reptiles, such as the green iguana, which as a result of malnutrition and other factors can develop a swollen jaw. Again, it is necessary to know what the head of a healthy iguana looks like, before you can recognize this. The jaw should



be firm, not rubbery. In the case of tortoises and turtles, beaks can overgrow, and become deformed. Comparing your pet to healthy specimens in a zoo, in a book or on a nature television program may reveal cause for concern. The vent should be clean on the outside. Soiling may indicate diarrhea or another condition.

**Body condition:** Obesity is dangerous to any pet. Be familiar with the appearance of a well-fleshed member of your pet's species and have your veterinarian explain assessment of body condition for your particular species. Weigh your pet regularly and write down the number.

## RECORDS

A change in your pet's behavior is often the first sign of the presence of disease. The change may be gradual and subtle, and obvious only in retrospect. Some changes may be seasonal or hormonal and perfectly natural, but since reptiles are limited in their ability to manifest or show outwardly their response to change within their bodies, or in their environments, objective assessment through record keeping is invaluable. The form and the extent of records will vary with the size of the reptile collection, but at a minimum, keep track of a few details:

- When did the animal last eat? This is most relevant to snakes, which may have prolonged intervals between meals.
- How much was eaten? Was it eaten enthusiastically, or only after a wait, or did the animal consume only part of the meal? Did the reptile regurgitate? Willingness to eat will help you to assess health, as well as whether the animal is being fed too much or too little.
- What was the source of the food, and how was it stored? (Applicable primarily to carnivores)
- How often are supplements used? What is the name of the supplement(s) and how much is used?
- How often does the animal shed? In the case of snakes, was the shed complete, and did it include the eye caps or spectacles?
- How frequent are the bowel movements? This is particularly relevant to snakes, which may defecate infrequently, but even the smallest lizard can go some time without passing stool, and this may be overlooked unless the owner pays deliberate attention. Your veterinarian will want to know how regularly your pet defecates. This will be difficult to observe in the case of very small animals in a terrarium, and so stricter attention needs to be paid to the animal's other habits, such as willingness to eat. Wood shavings, corncob, soil, gravel and bark make observation and clearing of feces difficult and for this and other reasons, these are not recommended substrates.

**Weight:** Young, growing animals should have their weight closely monitored. Hatchlings should be weighed daily, weekly for juveniles and once or twice monthly for mature animals. If your pet is ill, or you suspect it may be, weigh it more often. Increasing weights, in conjunction with a decreased appetite may indicate egg production, for example. This does not necessarily constitute a problem but it is important to be aware of change, so that it can be monitored and investigated if need be.

Weight should be noted in grams, rather than ounces, when possible. Digital scales are easiest to use and balance scales can work just as well. The cost of a scale can vary considerably, from \$30-\$200.



Department and hardware stores, drugstores, medical supply outlets and kitchen specialty shops are possible sources of scales. Check that the scale weighs in metric (i.e. grams), that it can accommodate a weight as heavy as that which your reptile is likely to reach, and that it is sensitive enough to supply a meaningful reading for your pet. For instance, if you own a 200g bearded dragon, a scale that reads in increments of 500g, will be of no use. For a giant snake, a good bathroom scale will do well. Simply subtract your weight from the weight of you holding the snake. A useful scale does not need to be expensive, it does not even need to supply the precise reading that your vet's scale does, but it must be consistent. If you are concerned, occasionally weigh a test object to be certain of consistency in readings. Remember that the absolute weight of your pet may be less important than a change in weight.

Snakes are easily weighed when knotted into a pillow case. Lizards may settle best on a tray lined with a towel, or when wrapped in a towel. Tortoises may need to be "high centered" on a low block or tin can, to prevent their scrambling off the scale. Some animals may need to be restrained in a box. Be sure to subtract the weight of the towel, box or tray from the total weight. In the case of smaller animals it is particularly important to weigh them at consistent times, for example before feeding and after a bowel movement, as these can significantly affect weight. It may be helpful to note whether or not the reptile has recently eaten or defecated.

**Reproductive activity:** If your pet lays eggs, it is always appropriate to seek veterinary advice. The best way to deal with the situation will depend on the species of reptile, your goals as an owner, and the condition of the individual animal. Making notes of the number of eggs, whether they are smooth or rough-shelled, hard-shelled or soft and whether or not the animal appeared to have difficulty in producing them, will help you and your veterinarian to assess the reptile's health. Keep a record of any behavioral changes that may be related to reproduction. These include digging, restlessness, pacing and a decreased appetite, in spite of increased activity. Please note that these may also be signs of illness they may be associated with many conditions, not just a reproductive cycle. Again, reptiles are limited in the range of behaviors which they can exhibit and which we can understand. Male reptiles may also show regular behavioral changes in association with hormonal or other seasonal influences. A diary of your pet's behavior may make it easier to understand him.

Record maximum and minimum temperatures and humidity.

Be sure to include in your records events that may only in retrospect be seen to have affected your pet. These would include power cuts, unusual temperature fluctuations (although, ideally your reptile's micro-climate will protect him from such things) and earthquakes. New people or animals in the house, cage modifications, new foods or supplements, changes in routine such as holidays which require pet sitters, can all have subtle or not so subtle effects on your pet's health. If you have more than one reptile, it is particularly important to record the animals' origins, their medical history, their quarantine records and with which other individuals or species (if any) they have been housed. Keep your own notes of veterinary visits, treatments and the course and outcome of any illness. Record worming or mite treatments.



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Records make it easy to relate your pet's medical history to a veterinarian, and will alert you to a possible problem earlier than if you rely strictly on memory. Obviously, hobbyists with large collections and breeders will require especially detailed records. This is particularly important in the case of large collections, but even keepers of just two or three animals, whether of the same or different species will benefit and increase their knowledge and understanding of reptiles through record keeping.

**The Ice Berg Principle:** Always remember that by the time even the most experienced keeper suspects illness in a reptile, there is a very good chance that the animal is more ill and has been sick for longer than either owner or veterinarian can know. This is not the fault of either, it is simply a reflection of the evolution of reptiles, which has made them masters at hiding disease. Get to know your species as thoroughly as you can, through publications and clubs and your veterinarian. Records will help you to assess your pet's health objectively, but there is no substitute for careful and regular observation of your pet. If your instincts tell you that his behavior has changed, or if your records show a trend which you cannot explain, you do not need to wait for overt signs of illness before consulting a veterinarian. Regular well-pet examinations will build a good relationship with your reptile veterinarian and expand your knowledge of reptile health and husbandry. Building your knowledge of your pet in health is the surest way to prevention and early detection of disease.



### SIGNS WHICH WARRANT A VETERINARY VISIT:

**Parasites:** internal and external, these are a common and unnecessary burden on your pet  
**Trauma** such as broken tails, bite or scratch wounds, burns. Open wounds can rapidly become infected, leading to septicemia (blood poisoning). Cat bites, and those from other reptiles can be particularly dangerous. Do not underestimate the level of aggression that can exist between reptiles; few species should be housed together and in many cases it is inappropriate to house together individuals of the same species.

**Skin lesions:** sores, swellings, moist areas (which should be dry) and soft areas (which should be hard)

**Changes in respiration:** open mouth breathing; labored breathing, which may be characterized by an extended head and neck, and in the case of snakes, resting the head against the tank wall; whistles or wheezes as the animal breathes; foam in the mouth

Swollen or shortened lower jaw (lizards)

Swollen or lumpy limbs (for those who have them)

Muscle tremors

Reluctance to move

Paralysis

Abnormal gait or lameness; uncharacteristic slithering in snakes; abnormal posture, (e.g. "star gazing" in snakes)

Seizures

Changes in stool or urine production

Inappetance or anorexia

Vomiting or regurgitation

Weight loss

Changes in behavior such as unusual docility or aggression

Eye or nose discharge