

Calcium Deficiency in Dart Frogs

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Scientists are only now beginning to figure out exactly what dart frogs eat in the wild, but one thing is clear, the diets we provide them in captivity are very different from their diet in the wild. Fortunately dart frogs seem to thrive on a diet which is made up primarily or entirely of a single food item such as fruit flies or domestic crickets, or a small menu of feeder insects.

However in order to make this work, a good program of vitamin and especially calcium supplementation is required, for these food items are lacking in the proper levels of calcium for the dart frogs good health. In fact, the single most common problem that I encounter with my customers and their dart frogs' health is calcium deficiency. Symptoms of calcium deficiency include hind limb paralysis, complete paralysis, hind limb spasms, seizures, and skeletal deformities.



Causes of this problem are several, and this is where it gets tricky. The most common problem, not surprisingly, is failure to use any supplementation on the food. The next most common problem is the use of any of a number of inappropriate supplements to dust the frogs' food. Especially common is the use of a single product such as Reptivite to dust the food. While Reptivite and various other multi-vitamin supplements may or may not be good products, in general they do not provide an adequate calcium supplement for dart frogs.

Allow me to digress with a very basic bio chemistry lesson, which applies to most animals. Calcium is found dissolved in the blood of many animals, and is critical for a variety of bodily functions on a cellular level, not just building strong bones. In fact, when the blood calcium levels drop too low, and the diet does not supply the needed calcium, the body begins to take calcium from the bones, leading to the softening of the bones, and their eventual deformities. So animals need calcium in their diet for both the chemical functions and to build and maintain healthy skeletons.

However simply having calcium in the diet does not assure its' availability in a usable form to the animal. This is because certain other ingredients in the diet may bind with calcium, and render it useless before it can be taken into the bloodstream. One such ingredient is phosphorus, which is common in vitamin supplements, and in live insects. In the case of some vitamin supplements which also contain calcium, (what many pet stores will recommend as a single supplement) there is enough phosphorus in the supplement to render the calcium useless. So in this case you would use the supplement on a regular basis, and think you were doing the right thing, until one day your animal is dead, or convulsing with its hind limbs stretched out. You have calcium deficiency!!

There are many supplements out there, most of them with many ingredients. Some are flat out bad, and will kill your reptiles and amphibians in fairly short order. I have seen Reptocal, from Tetra, kill young bearded dragons, veiled chameleons and dart frogs within a few months of beginning to use it. Other products are very good and offer a needed array of vitamins and trace minerals. However I am not aware of any product which offers the calcium level you need with all the other vitamins. The solution is to offer your animals a calcium supplement which contains only calcium (and the vitamin D3 required by the body to use it). In addition you should be offering a good vitamin supplement. I use both at once, at every feeding. My products of choice are both from Rep-Cal laboratories, Rep-Cal and Herptivite. The Herptivite has a good array of vitamins and minerals, and does not contain any vitamin A, which is an easily overdosed vitamin. Instead it contains beta carotene, which is a precursor to vitamin A, meaning the body can make its own vitamin A from the beta carotene. The most important of the two is the Rep-Cal though, you can mix it with other vitamin supplements and probably be fine, especially in the short run. Please heed this advice, as I regularly get calls or emails from people who have found their animal paralyzed or having spasms, and need help.

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"Curing" Calcium Deficiency Symptoms

Unfortunately calcium deficiency can be a very serious problem, and often results in sudden death, or a series of spasms which lead to death. If caught early enough, you can reverse it with prompt action.

There are several approaches to this but the most direct and immediate is to get some Rep-Cal and make a thick paste with some of it mixed with water. Then you will need to get a bit of this in the frogs' mouth. To do this without hurting the frog is a delicate process. I suggest picking up the frog in your left hand, if you are right handed, and holding it in such a way that your left thumb is in position to hold the mouth open. Now, using a thin piece of rigid cardboard, such as a match book cover, with your right hand pry open the mouth. Using the left thumbnail, hold the mouth open. Now using a piece of the same cardboard, wipe a bb size blob of your paste into the frogs mouth, as far back as possible. This technique is dangerous, and has the potential to harm your frog, so only do this if you feel that it is absolutely necessary.

Another approach is to soak the frog in a mix of Rep-Cal and water. Do this for an hour or so daily for a few days. Both these steps are extreme, and may not be necessary, if for instance you see your frog having the spasms, but it seems to recover fully. In this case, I suggest getting the Rep-Cal, and heavily dusting a few food items, and feeding them to your frog one at a time. Do this daily for a few days, and you should be in the clear.



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