

The Birdcare Company's modern take on Egg-Binding

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We used to think of egg-binding as simply an extreme symptom of calcium deficiency. After all it tended to occur in birds that had already laid a number of eggs (in canaries for example it probably happened in the third round). It was normally accompanied by eggs that had thin shells or no shells at all. We would fix it by simply feeding our liquid calcium supplement Calcivet. In acute cases we might put undiluted Calcivet into the beak and generally 20 minutes later the bird would pass the egg. Otherwise we would add it to water or food for a slower but less stressful effect.

The veterinary approach tended to be injection of calcium borogluconate (just sterile Calcivet really) and the response may be a few minutes quicker. So if all you want to know is how to treat birds with acute egg-binding you need read no further. But if you are interested in preventing the problem read on.

The theory we used to work on was that calcium is required for efficient nerve and muscle function and so calcium deficient birds simply could not push the egg out. There are actually a number of clues that this simple theory is wrong. But typically none on their own were enough to get us to think about this differently. Funnily it was our experience selling similar products for horses that have shed most light on what seems to be happening.

So here are some clues that simple calcium deficiency isn't the story:

1. Most birdkeepers have been feeding calcium supplements (oyster shell grit and cuttlebone mostly) for well over a hundred years. Research on zebra finches suggest that, prior to breeding, they actually increase their intake of calcium by eating more cuttlebone. So they seem to have a natural wisdom about needing calcium.
2. Despite that egg-binding is a common problem as are other symptoms (which tend to vary by species). Consider splayed legs in budgies, stargazing, poor flying ability and fits and seizures in pet parrots. Not to mention smaller than ideal clutch sizes
3. People who grate their cuttlebone into soft foods (so the birds have no choice but to eat it) often seem to have more problems than those who leave the cuttlebone for the birds to take if they want it.
4. Some birds don't produce soft shelled eggs but instead produce thick shells. These tend to be very uneven in thickness and chalky in appearance instead of shiny. You will see some of these in your supermarket every now and then too.

Instead of thinking of these problems as calcium deficiency we now believe they are a failure in regulating calcium. And interesting they often show up as opposites that both have the same solution. So we fix those thin shelled eggs and thick shelled eggs with Calcivet. In horses we see

many nervous horses sweating profusely. But a small minority stop sweating at all. This occurs mostly if they are grazing very high calcium soils but we fix both extremes with our horse equivalent of Calcivet. You can see a similarity here to point 3 above. Too much calcium may cause similar problems to too little.

So what is Calcivet? Technically it is a chelated calcium supplement. The calcium is bound to a couple of glucose molecules. We used to think that just improved the way it is absorbed but actually it turns out that molecules like this are perfectly normal components of the blood and body fluids and they seem to have a role in almost every cell in the body to get them to work as nature intended. These molecules don't give up their calcium at all so they are not a calcium supplement.

So we now think of the problem that bird keepers and horse owners see regularly as a deficiency of "chelated calcium".

In the 25 years we have been selling Calcivet we have developed application rates and frequencies that work very well. When adjusted for body weight our horse and canary rates are very similar. We do prefer that animals and birds get breaks from it every now and then so we never feed Calcivet seven days a week. Normally it is once or twice a week for non-breeding birds and five days a week for breeders. This seems to help the birds to manage their chelated calcium really well. Combine this with cuttlebone and/or oyster shell grit that the birds can consume or not at their discretion and the problems mentioned in this article are incredibly unlikely.