

Egg Binding

David N. Phalen, DVM, PhD, Dipl. ABVP
Director, Avian Reptile and Exotic Pet
Hospital
University of Sydney
415 Werombi Road, Camden, NSW 2570



It is the breeding season again and my clinic is seeing an increase in the number of birds that are presenting with egg binding. I don't know for certain, but I would seem likely to me that most budgerigar breeders have had hens with egg binding. So what exactly is egg binding, when is it most likely to occur and what is the cause of it?

Egg binding is when an egg is formed, but the bird cannot lay it. The main reasons for egg binding are, in my experience, a hen that has either exhausted her calcium reserves, or is unable to mobilize them, or a hen that is getting older, has laid many eggs in the past and now has some damage or disease of her reproductive tract that interferes with egg laying.

Budgerigars, like all birds prepare for egg laying by depositing calcium in a layer of easily reabsorbed bone prior to the onset of laying. When the egg begins to form, there is a massive need for calcium and some of this bone is broken down releasing calcium to the blood which is then incorporated into the egg. The calcium lost to the egg shell needs to be rapidly replaced in a laying bird. Birds that have multiple clutches or those that are not provided with adequate calcium are most at risk for developing low blood calcium levels. When calcium levels fall, the shell does not form properly or does not form at all and the muscles of the oviduct cannot contract forcefully enough to expel the egg, because their function is also impacted by the low blood calcium.

When a hen cannot expel an egg many secondary problems develop. Most are the result of the continuous presence of the egg in the abdomen. Eggs are big, relative to the budgerigar and are not meant to remain in the abdomen for more than a few hours. When they are retained, they put pressure on the kidneys and the intestines and collapse the air sacs interfering with the normal functions of these organs and, in particular, compromising breathing.

The signs of an egg bound bird, are a fluffed up bird with that may be down at the bottom of the cage. The bird may have a distended abdomen and hold its legs further apart. Because of the air sac compression, often the birds have an increase respiratory rate and a tail bob. In some situations, the cloaca and part of the oviduct have prolapsed and these structures containing the egg are hanging out through the vent.

What can be done to help an egg bound bird? Over the years, I have heard some remarkable recommendations about treating egg bound birds. One was to steam the bird by holding it over a tea kettle. This will only burn the bird and also your hand. Another common recommendation that I hear regularly is to give the bird paraffin oil orally or putting it into

the cloaca. Given that the egg is in the oviduct and not in the digestive tract, this will not work either.

Egg bound birds have low blood calcium, are dehydrated, and often are not eating, so their body is lacking in energy. For the best chance of survival, all these problems need to be addressed in the egg bound bird. At our hospital, we generally give the birds injectable calcium, subcutaneous fluids, and support the bird with heat and sometimes oxygen. When it is more stable, we will attempt to express the egg. This is done by gently pushing on the egg and partially prolapsing the oviduct out through the cloaca. The cloaca lining is very thin and the egg can be seen through it. The opening from the oviduct into the cloaca is next identified and the opening enlarged by gently pushing back on the cloaca lining with a lubricated cotton bud. In most cases this results in the egg being delivered with minimum damage to the bird. After the egg is delivered, birds are treated with tube feeding, if they do not immediately begin eating, antibiotics and calcium supplementation.

It is best for hens that have become egg bound not to continue breeding, as their oviduct has been damaged and to rest from breeding until the next breeding season. To get these hens to stop laying, we give them a series of hormone injections and take out their nest box and separate them from the male.

What can you do if you have a bird that is egg bound? The best choice is to take it to an experienced avian veterinarian. If this is not an option, putting the bird in a hospital cage with an air temperature above 30 C, giving the bird oral calcium, and possibly attempting to rehydrate it with an oral electrolyte solution, may in some cases allow the bird to lay. Actually expressing the egg, may be possible for some experienced breeders, but is not recommended for someone who has not seen this done before.

Many things can go wrong with the egg bound bird. The longer the bird has been egg bound the more critical its condition is. In some cases, there is an infection in the oviduct, in others the egg may collapse on its own, and in others it is possible for the egg to go back up the oviduct and end up in the abdomen. Obviously these eggs cannot be passed and must be removed surgically. The most common complication that I see is when the oviduct prolapses with the egg in it and it is not recognized by the owner straight away. The lining of the cloaca and the oviduct then dry out and die. At this point we cannot save these birds and they must be euthanized.

Not all birds with a swollen abdomen are egg bound. I see many budgerigars that the owners think are egg bound, but are not. These birds may have hernias, cancer, a fluid build up in their abdomen, or may simply be obese.

In the end, the best treatment of egg binding is to prevent it from happening in the first place. This means feeding a diet with adequate calcium to your breeding birds, keeping them fit, and limiting the number of clutches that each hen produces. If you are having many birds that become egg bound, then a careful review of your husbandry practices is indicated.

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