# Veterinary Viewpoints

Edited by Amy B. Worell, DVM Dipl. ABVP West Hills, California

**Question #1:** I have several pet birds and my veterinarian has talked to me about the new polyomavirus vaccine for them. I am concerned about giving them something that they don't need. Is it safe? Why or why not should I give my birds this vaccine? I have a Senegal Parrot and a Blue and Gold Macaw.

S. Vaughn, Connecticut

Answer #l: Polyomavirus is a serious problem for hatchlings and nestlings who succumb and die from this virus. Once birds have an adequately developed immune system, and then are exposed, they can become carriers and shed the virus from time to time or eliminate the virus from their system. By 60 days of age, most birds are immune competent and do not develop symptoms if exposed. The vaccine has its place in breeding situations where polyomavirus has caused losses of chicks, but it is not a substitute for good sanitation and "the closed aviary principle." There does not seem to be any reason to vaccinate your two pet birds

James M. Harris, DVM Oakland, CA

**Answer #2:** The use of the polyomavirus vaccine is controversial. although it is considered safe and efficacious. There is only a small chance of getting a reaction to the vaccine, such as a scab at the injection site, and that is only when the vaccine is administered incorrectly (in the skin as opposed to under the skin). For this reason, it is recommended that only veterinarians administer the vaccine as an inexperienced person could accidentally give the vaccine in the skin (intradermally). In studied research trials, the vaccine protects birds adequately for at least one year. Until more is known, it is advised to revaccinate the birds at yearly intervals.

The controversial aspect comes from *when* birds should receive this vaccine. Most veterinarians would agree that the vaccine should be used in growing chicks and those under a year of age. It is during this period that birds are most likely to die from the disease, especially if they are exposed to groups of birds from other breeding facilities. Adult birds that have low exposure to other birds (no new birds come to live in the house and birds do not leave the house to mingle with

M. Scott Echols, DVM

birds from other households) are generally not vaccinated, especially if there are only a few pet birds in a single house. Without a doubt, the need to vaccinate is considered on a bird by bird basis and the past, present, and future flock history of the birds.

Kim L. Joyner, DVM, MPVM Raleigh, NC

Answer #3: Use and recommendations for the polyomavirus vaccine vary greatly from veterinarian to veterinarian. The pet birds that are presented for veterinary care in my practice are handled on an individual basis. Many of these birds reside in their owner's homes only, and may make occasional trips to their veterinarian for routine veterinary care or grooming. Others may be taken to pet stores for procedures, taken to bird club meetings, or have a variety of exposures to other psittacines. In the first situation, where the birds are home bodies, I do not actively encourage use of the polyomavirus vaccine. In the second situation, where other exposures are probable, I think use of the polyomavirus vaccine is warranted. My breeder clients, including my own birds, have not been vaccinated.

Amy B. Worell, DVM, ABVP, Avian West Hills, CA

Question #2: My pet Cockatiel has been laying eggs in the seed dish. She does not have a mate and I don't want to breed her. Is it best to leave the eggs with her or should I throw them away? If I throw them away, do I let her have the whole clutch or do I remove each one after it is laid? Why did she all of a sudden decide to lay eggs? She is five years old and I have had her since she was six weeks old

P. Haggard, Kentucky

Answer #1: Egg laying is often a spontaneous occurrence not needing the presence of a male bird. Breeders select birds that are heavy producers and therefore lay large clutches of eggs frequently throughout the year. There are many stimulants that can trigger the onset of ovarian activity resulting in

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egg production. Some of these are light, air temperature, the presence of a nest box or nest-like object, toys, or the hen's attachment to a person. Some birds (doves and pigeons) lay only two eggs in a clutch. Others may lay large numbers. Pressure on the brood patch by eggs is the biofeedback that eventually shuts off the ovary. If you keep removing eggs, the hen will replace them with more. Let her sit on them all for a few weeks. If that doesn't shut her down, consult with your avian veterinarian. A fiveyear-old Cockatiel is certainly sexually mature. Hormones are powerful forces in nature and for some reason turned on your hen's reproductive tract.

James M. Harris, DVM Oakland CA

Answer #2: Cockatiels are thought to be indeterminate layers, which means that if you keep on removing eggs as they are laid the hen will continue to lay eggs until she "sees" the normal number of eggs that should be laid in a single clutch. Other parrots may also continue to lay more eggs, or perhaps even just 1-2 more eggs if the first few eggs laid are removed. Given that your bird may become exhausted from laying too many eggs, it would not be advisable to remove the eggs one by one. Instead, let her lay an entire clutch so that she will stop laying additional eggs. If she will incubate the eggs it is best to leave the eggs with her for this will delay the next onset of egg laying, which you want to avoid due to the possible reproductive problems and physiological exhaustion that comes from laying too many eggs.

It is hard to say why she just started laying eggs. Hens do this when they mature, although your bird has been mature for some time. I would look to the environment and her surroundings to see what may have stimulated her into laying. Perhaps she has bonded to a new object or a new person. Hormonal surges seem to increase in intensity as a bird ages so, although her ability to reproduce has been present for several years, it is only now that in a single bird she is expressing her continuing maturity by laying eggs.



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Frequent egg laying is a severe problem in Cockatiels. Many birds lose their lives or suffer through major surgery and treatment regimens. I would suggest that you take your bird to an avian veterinarian now so that you have a chance to prevent further egg laying and possible harm to your pet.

Kim L. Joyner, DVM, MPVM Raleigh, NC

Answer 3#: Egg laying in captivity by small female psittacines such as lovebirds, Cockatiels, and Budgies, is quite common. Many of these individuals apparently have very strong nesting and hormonal stimulation, such that eggs may be laid in a variety of situations, including without the stimuli of a male or another bird. Diet becomes extremely important in these egg laying birds. I strongly recommend that all psittacines be on pelleted diets, as the basis of their diet, and this becomes especially important in birds laying eggs. As more than normal amounts of calcium will be required, supplementation of calcium is recommended.

As to why a female would all of a sudden start to lay eggs, one can theorize that stimuli were present in the birds body (hormonal) and possibly the environment, thus initiating the egg laying. Many of these small birds that start laying eggs will lay a clutch almost every month, or at frequent intervals.

I recommend that once the bird starts to lay eggs, leave the eggs with her until that clutch is completed. The average for many Cockatiels would be 4-6 eggs but some females may produce up to 10 eggs in a clutch. Eggs may be laid at a variety of intervals, commonly every other day, but periods of five days or longer may be present between eggs. Removal of the eggs before the clutch is complete often results in additional eggs being laid. Egg laying can be stopped forever with a hysterectomy.

Amy B. Worell, DVM, ABVP, Avian West Hills, CA

**Question #3:** I have four pairs of Umbrella Cockatoos. One of the pairs

lays two eggs every six weeks or so. I, tried to let them raise their own babies, but they never did. So, I started to incubate the eggs, and I have lots of babies from them. They are on pellets, and fresh food, but they won't eat cuttle bone. I am concerned that they may not have enough calcium to produce all those eggs. Should I take the nest box away, let them sit on the eggs that they will never hatch, or what? I want to do what is best for them.

I am concerned that if I close off this pair's nest box they will become stressed, as all the other pairs stay in their boxes almost all the time.

#### B. Pryce, Massachusetts

Answer #1: Some birds, like some people, are terrible parents. You seem to be doing a good job hand raising the chicks. You can consider other sources of calcium in their diet: mineral blocks, cheese, oyster shell or crushed calcium tablets or liquid in the diet. From time to time, you should consider giving the parents a rest and close off the nest box.

*James M. Harris*, DVM Oakland, CA

**Answer #2:** Overproduction of eggs may seem like a wonderful opportunity for the aviculturist, but it can also cause problems due to the risk of future reproductive disease problems in the hen. No one knows exactly how many eggs a cockatoo can lay in a given year without causing injury to the hen or decreased hatchability in the eggs. Perhaps we can approximate maximum numbers of eggs that should be laid from the reproductive physiology evolved for hens in the wild: which is to lay at most two clutches a year (6-10 eggs maximum). Hens may be able to produce more in the wild but lack available foods, and the environmental clues curve their natural instincts and control reproduction.

Your diet sounds adequate, if the hen is eating plenty of pellets and not just the fresh food. Remember, too, that pelleted feeds have yet to be scientifically analyzed as to their ability to support egg laying cockatoos (or any parrots for that matter). The calcium content in pellets is greater than the percentage required for Cockatiels to lay eggs according to a study done at UC Davis several years ago. The risk you take in allowing your hen to continually lay is that she may be unable to replace quickly enough the vitamins and minerals that she is putting into her eggs. This can cause increased risk of general disease and specific reproductive diseases, such as egg binding.

A solution may be to allow the hen to lay only two clutches a year (some would argue up to four clutches). If you must pull the eggs, replace her eggs with "dummy eggs." She will incubate these eggs and stop her laying cycle. Closing the nest box can cause stress and may precipitate mate aggression, but it is an option considering the alternative or dealing with health risks in hens that continually lay eggs. You could also allow her to raise her own chicks. You mentioned that she doesn't incubate eggs, but if chicks hatch, will the parents feed them? Her egg laying cycle will stop if she is feeding chicks and if you allow the chicks to fledge with her, you will not only gain well socialized birds but also a further delay in her egg laying.

Kim L. Joyner, DVM, MPVM Raleigh, NC

**Answer #3:** My recommendation for a pair of heavy egg producing birds is multi-fold. First, I suggest leaving the nest box up year around. Umbrellas in breeding situations appear to be much less stressed if they have the safety and security of a nest box to reside in. Second, let the parents sit on the eggs rather than pull them for incubation. This will greatly lengthen the time periods between egg laying, as hormones necessary for egg production will not be produced due to the brooding of the eggs. This will decrease your baby bird production, but it will be better for the birds. Third, sometimes, moving the pair to a new aviary will stop the egg laying for a period of time, and they will get a "nutritional rest" this way.

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