Egg Binding and Dystocia in Birds: Risks, Signs, Treatment, and Prevention

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Egg binding occurs when the egg does not pass through the reproductive system at a normal rate. Dystocia occurs when there is difficulty in laying an egg because of an obstruction. Both are common, and often preventable, problems in pet birds. Both can occur in female birds not exposed to a mate, since eggs may be formed and laid without the presence of a male. If diagnosed and treated early, the outcome is generally very good. If either condition goes on for too long, complications and death, especially in smaller birds, may result.

Egg binding can occur in female birds not exposed to a mate.

Which birds most commonly have a problem with egg binding/dystocia?

There are a number of factors that can increase the risk of egg binding.

Species: Egg binding is more common in smaller birds such as budgerigars (parakeets, budgies), cockatiels, lovebirds, canaries, and finches.

Bonding: The risk is higher in single female birds that are strongly bonded to their owner. Birds that show a strong attachment to mirrors or certain toys may also have an increased frequency of egg binding.

Number of clutches: Birds that produce repeated clutches as a result of poor breeding practices (e.g., eggs or young birds taken away too soon, breeding birds out of season) or excessive egg laying often develop health problems that result in egg binding.

Age: Young birds laying for the first time, as well as "senior" birds more commonly become egg bound.

Reproductive health: Hens with previous reproductive problems or those that have a history of laying malformed or soft-shelled eggs are more prone to egg binding.

Malnutrition: Birds on seed-only diets or those with deficiencies in calcium, vitamin A, protein, vitamin E, or selenium are at higher risk.

Overall health: Egg binding is more common in birds with other health problems such as obesity or lack of exercise, as well as those under stress from environmental conditions such as improper temperature.

Egg abnormalities: An overly large or malformed egg, or one that is not positioned correctly, is broken, or joined to other eggs.

Genetics: Certain lines of birds may be genetically predisposed to egg binding.

What are the signs of egg binding and dystocia in birds?

Signs will vary depending upon the severity of condition and can include:

- Abdominal straining
- Bobbing or wagging of the tail
- Drooping of the wings (canaries)
- Wide stance
- Depression
- Loss of appetite
- Lameness or leg paralysis (the egg puts pressure on the nerves going to the legs)
- Distended abdomen
- Droppings stuck to the vent area (the bird cannot raise her tail when passing waste)
- Fluffed feathers
- Weakness
- Difficult breathing (the retained egg puts pressure on the air sacs)
- Sitting on the floor of the cage
- Possible prolapse of part of the reproductive tract (the inner part of the reproductive tract is pushed out so that it is visible as a pink mass protruding from the cloacal opening)
- Occasionally sudden death

How is egg binding diagnosed?

The veterinarian will make the diagnosis based on the clinical signs, history, physical examination, and radiography (x-rays) and/or ultrasound. If the bird is very stressed or in shock, it will be necessary to stabilize her before proceeding with extensive examinations.

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How is egg binding treated?

The treatment will depend on the condition of the bird, severity of the signs, where the egg is located, and the length of time the bird has been eggbound. This condition is more serious in smaller birds (canaries and finches) who may die within a few hours if not treated.

For a bird that shows a minimum of depression, treatment may include:

- Elevation of the humidity and increasing the environmental temperature to 85-95°F
- Lubrication of the vent
- Injection of calcium, and possibly vitamins A, D, and E, and selenium
- Administration of fluids and dextrose
- Injection of oxytocin or arginine vasotocin, or application of a prostaglandin gel. These medications cause contraction of the reproductive tract and may result in the passing of the egg. They should not be used if an obstruction is present.
- Continued access to food and water

A more severely affected bird must be treated for shock first, and then stabilized. After stabilization, additional treatment may include:

- Administration of antibiotics and possibly short-acting corticosteroids
- Manual removal of the egg by the veterinarian through applying gentle pressure with the fingers. This may require anesthesia.
- Cleaning and repair of any prolapsed tissues
- Ovocentesis, in which the contents of the retained egg can be removed by passing a needle into the egg visible at the cloaca or through the skin of the abdomen and into the egg (percutaneous ovocentesis) if the egg is not visible. This will make the egg smaller, and easier to pass.
- Abdominal surgery if the egg reproductive tract is ruptured, the egg has developed outside of the reproductive tract (ectopic egg), or there is an obstruction
- Follow-up care with antibiotics, fluids, appropriate environmental temperature and humidity, and nutritional supplementation

What are the potential complications of egg binding?

If left untreated, egg binding or dystocia can result in shock and death, often within hours for smaller birds such as canaries and finches. In addition, other complications are more likely to occur including:

- The retained egg may place pressure on the kidneys, affecting their function and health.
- If the egg ruptures while still inside of the bird, life-threatening peritonitis (a serious inflammation of the abdominal cavity) can occur.
- Oxytocin, arginine vasotocin, or prostaglandins may cause forceful contractions that could lead to rupture of the reproductive tract and death.
- Constant straining may cause prolapse of the reproductive tract or cloaca. This can result in egg peritonitis, infection, or scarring that could result in further problems with egg binding in the future.

Can egg binding be prevented?

The risk of egg binding may be decreased by:

- Providing the correct diet
- Using proper breeding techniques including timing of breeding, breeding at an appropriate age, removing genetically predisposed birds from the breeding program, and providing the correct environmental conditions
- Treating excessive egg laying
- Providing adequate exercise opportunities and preventing obesity
- Administering hormones to stop egg laying. These may include leuprolide or human chorionic gonadotropin
- Performing surgery to remove the reproductive tract (spaying) to permanently stop the egg laying. This is a high-risk procedure in birds because of their very small size, and the delicateness of the reproductive tract.

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