

# Hyperactive Ovary in Pet Birds

Carlingford Animal Hospital

Hyperactive ovary occurs as a result of the continuous hormonal stimulation of breeding behaviour in female pet birds that are sexually bonded to humans. This condition is brought about by perpetual mutual grooming activity in the absence of a nesting place. These mutual grooming activities mimic the natural courtship activities of birds when they are ready to breed. Mutual grooming (allopreening) refers to the male bird preening the face of the female bird and then the female responding in the reciprocal manner. This behaviour stimulates the female to release breeding hormones preparing her for the production of eggs. These sex hormones mobilise calcium from the body organs to the bones in readiness of egg shell formation. Body protein and energy is also called upon for egg yolk production. During this time the female seeks additional minerals, energy and protein. After laying the eggs, the female sex hormone progesterone rises, allowing body calcium, energy and protein levels to return to normal. At this time, interest in courtship behaviour or mating activity ceases.

## Introduction

The human to pet bird bond is created at a young age by touch and nurturing affection. The juvenile bird is not interested in reciprocating affection in the form of mutual grooming. This behaviour does not occur until sexual maturity. At this age, physical affection from the owner may be construed as a sexual advance and in doing so, creates a sexual bond between the bird and its favourite human. The bird will then engage in courtship grooming behaviour which drives the production of female sex hormones in anticipation of breeding. Once established, she continuously reaffirms the sexual bond by close physical contact. Hyperactive ovary is the consequence of this ongoing physical contact. The condition occurs in response to the perpetual release of female sex hormones, causing multiple health problems by depleting the body of calcium, protein and energy.

In the home setting, sexually driven mutual grooming between you and your bird may occur on a continuous basis. This does not allow the breeding cycle to proceed in a normal fashion where there is a natural rise and fall in female sex hormones. Instead, the female hormone, estradiol remains high and there is a continual depletion of calcium, energy and protein from the body. The female develops a continuous craving for minerals in an effort to sustain normal body calcium levels. This predisposes her to seek minerals in any form. Often, females will over-engage on mineral grits and ingest foreign matter such as metals, stones or sand which can lead to an impacted gizzard. When there is a limited source of minerals, the body becomes extremely depleted of calcium which predisposes the hen to weak bones, muscle cramping, heart problems and digestive disturbances. Similarly, the body is strained by energy and protein loss.

## Diagnosis of Hyperactive Ovary

Hyperactive ovary is involved with many health problems, including digestion problems, feather picking, night fright injuries or bleeding episodes as a result of the sustained depletion of calcium, energy and protein from the body. During your consultation Dr Marshall has recognised that there is a sexual bond between you and your bird and that hyperactive ovary may be an underlying cause of these problems. Diagnosis is made from x-ray and blood chemistry findings and is often detected during the investigation of other health problems. Blood chemistry is extremely important in diagnosing and managing birds with hyperactive ovary as it differentiates between its 2 forms - hypocalcaemia and hypercalcaemia.

## Hyperactive Ovary with HYPO-Calcaemia

Hypocalcaemia refers to abnormally low calcium blood levels. The focus of immediate treatment for birds with hypocalcaemia is to supplement the diet in order to restore normal body levels of calcium, protein and energy. For these birds, our Egg Laying Support Programme is followed for 4 weeks. This programme is often combined with other programmes for digestive disturbances, immune suppression and vitamin D deficiency, which have also been diagnosed. Repeat blood tests are taken after 4-8 weeks to assess ovary function and determine how long to remain on this programme and if additional programmes are required.

## Hyperactive Ovary with HYPER-Calcaemia

Hypercalcaemia is excessively high blood calcium. This is a far more serious problem than hypocalcaemia as it predisposes to heart attack and stroke. Although the blood calcium levels are high, calcium levels in the body are depleted. Treatment may include hormone injections to de-activate ovary function and to immediately cease the production of harmful sex hormones. This treatment plan is often combined with a dietary programme (e.g. egg laying, digestive, immune or vitamin D support programmes) to re-establish normal calcium, protein and energy levels. Repeat blood tests are taken after 4-8 weeks to ensure calcium levels have returned to normal.

## Management of Hyperactive Ovary

Hyperactive ovary is managed by both behavioural and dietary modifications. Behaviour modifications are necessary to break the sexual bond between the bird and its owner. Dietary changes are required to support the nutritional needs of the bird during recovery and in the long term.

### Behaviour Modification

Mutual grooming as part of a sexual bond is the cause of hyperactive ovary. This behaviour must be stopped in order to re-establish the normal breeding cycle. With the normal breeding cycle there is a natural rise and fall of the female sex hormones. This treatment plan does not mean that you cannot continue to be affectionate towards your bird, but your bird must not be allowed to reciprocate a sexual response by touching or close physical contact. Importantly, your bird should not be allowed to touch or groom your face or hair with their beak or sit on your shoulder where she can snuggle into your neck as these actions represent courtship behaviour that stimulate ovary function.

Changes in the way you interact with your bird are not intended to impact on your close relationship. Instead, the relationship must change from a sexual bond that stimulates breeding hormones to one of endearing friendship. This means that you can still nurture and love your bird as a parent would but the sexual bond must be broken. This is achieved by ceasing all activities perceived by the bird as courtship related mutual grooming and replacing sedentary activity (e.g. sitting on the shoulder) with playful learning opportunities to divert attention away from the sexual bond. Tailai, our bird behaviouralist, will explain new ways of keeping your bird happy and well occupied during this transitional period.

### Dietary Modification

Hyperactive ovary promotes mineral and protein deficiencies, especially in birds with limited access to direct sunlight (vitamin D deficiency). Calcium and protein supplements are an important part of the recovery plan and all birds with hyperactive ovary are prescribed the Egg Laying Support Programme for 4-8 weeks. The duration of this and other incorporated programmes depends on the results of blood chemistry which shows the degree of deficiency and presence of other complicating conditions such as vitamin D deficiency, protein deficiency, digestive problems, fatty liver and immune suppression. This same programme is should be reintroduced when your bird is showing signs of normal seasonal breeding behaviour.

## Egg Laying Support Programme (4 weeks)

Optional Medication	In Drinking Water	On Sterile Seed	Dietary Recommendations
	Quik Gel & Hi-Cal <sup>1</sup>	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Cooked rice
	Quik Gel & Hi-Cal <sup>1</sup>	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Cooked beans
	Dufoplus, Ioford & Hi-Cal <sup>2</sup>	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Cooked vegetables
	KD Powder <sup>3</sup>	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Apple/Orange
	Inca Honey & Hi-Cal <sup>4</sup>	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Apple puree
	Fresh water	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Other _____
	Fresh water	Turbobooster, E-Powder & F-Vite <sup>5</sup>	<input type="checkbox"/> Disinfect the feeding utensils with KD Powder <sup>3</sup>

<sup>1</sup> Mix 1 drop Quik Gel and 1ml Hi-Cal thoroughly into 100ml drinking water. May also be given with fruit, vegetables or nectar.

<sup>2</sup> Mix 1ml Hi-Cal, 10 drops Ioford and 5 drops Dufoplus thoroughly into 100ml of drinking water.

<sup>3</sup> Mix 1gm KD Powder (white spoon) into 1 litre of drinking water. Fill the water vessel and use the remainder to clean the cage.

<sup>4</sup> Mix 6 drops Inca Honey and 1ml Hi-Cal thoroughly into 100ml drinking water.

<sup>5</sup> To 100gm of sterile seed add 6 drops of Turbobooster and mix thoroughly. Then add 1gm (white spoon) each of E-Powder and F-Vite and mix again so that these powders stick to the Turbobooster oil impregnated seed.

### Hormone Implant

Birds with hypercalcaemic hyperactive ovary are in danger of heart attack or stroke. The elevated hormone levels in these birds must be immediately addressed with the use of a hormone implant (Supre-lorin). This implant may take 1-3 weeks to take effect and suppresses all ovary activity for up to 6 months. Blood tests are usually taken 4 weeks after the implant to re-assess calcium blood levels. Hormone implants are sometimes used for birds with hypocalcaemic hyperactive ovary when behavioural modifications have failed to break the sexual bond. We prefer to manage these birds with behavioural and dietary modifications due to the potential side-effects of the implant.