

Feather Loss In Pet Birds

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Poor feathering is a great cause for consternation for anyone who owns a companion bird. Feather loss can be quite devastating, particularly in the brightly colored parrots whose plumage commands top dollar in the market place. Many bonded owners will go to great lengths to investigate and determine the cause of feather disorders in their beloved pets. It is imperative that the avian clinician be familiar with the common causes of feather disorders and formulate a plan of action to diagnose and try to remedy the condition.

Feather loss can be roughly divided into 4 categories: spontaneous (without plucking) vs. self-induced (plucking), and pathologic (medical) vs. behavioral. It is usually simple to differentiate between spontaneous feather loss and plucking through evaluation of a detailed history and physical examination. Molting should be considered normal if there are new feathers seen and no visible bare patches or exposed down feathers. Feather loss can be caused by a cagemate, often noted on the back of the head as a result of over-preening. Once molting and cagemate trauma have been ruled-out, the bird is evaluated for plucking or poor feather growth.

Inability to grow new feathers in mature birds is often the result of damage to the feather follicle. Severe plucking can result in an inactive follicle long after the plucking has subsided. These birds are often plucked clean over the keel and have no evidence of new feather activity. Hypothyroidism can result in feather follicle degeneration or "atrophy" with subsequent poor feathering. Viral disorders include psittacine beak and feather disease (Pbfd or circovirus) which results in abnormal growth of new feathers as evidenced by clubbing, stunting, and malformed feathers with reduced growth. Polyoma virus affects feathers in juvenile budgerigars but feather abnormalities are rare in the larger psittacines.

The reasons for the plucking can be multifactorial and often are unidentified. The veterinarian's goal with the plucked bird is to try to identify medical conditions and to encourage optimal health in that patient. Once all possible medical conditions have been ruled-out, the bird can be considered a behavioral plucker and behavior modification techniques can then be used. Keep in mind that not all pluckers are "psychotic"; this is just a way of categorizing these patients when medical conditions have not been identified (right or wrong, unfortunately).

The list of medical conditions can be a long one. Here are some causes to consider:

Parasites. This is an uncommon cause of picking in most psittacines. *Giardia* (an intestinal parasite) has been linked to plucking in cockatiels and all plucking species should be checked for this.

Dermatitis (inflammation of the skin) can be the cause or effect of plucking and it may be difficult to tell what came first: the dermatitis or the plucking/biting at the skin. Raw areas and scabs may be present, especially on the feet and legs and under the wings. Causes include bacteria (like *Staphylococcus*) and fungi (yeast). Skin biopsy and cultures are needed in extensive cases and treatment involves topical as well as oral medications.

Folliculitis (inflammation of the feather follicle). Usually cannot be determined on a visual examination. Feather follicle (skin) biopsy is recommended. Bacteria and fungi (yeast) most common. Beak and feather virus can be seen in affected follicles.

Hypothyroidism. Difficult to document in birds; requires TSH stimulation test rather than just a baseline thyroid level. Can get presumptive diagnosis based on poor feather growth, obesity, high blood cholesterol levels, lack of molting, and response to thyroxine. May be overdiagnosed clinically. Thyroid medication is toxic in high doses.

Metabolic disease. Kidney disease and liver conditions have been associated with plucking. Recommend full blood testing on acute feather pickers.

Allergies. Allergic response in birds is very poorly documented. Allergic dermatitis unlikely cause of plucking but the environment and diet should be screened for potential allergens.

Zinc toxicity. Has been described by some clinicians as a cause of feather picking but a definitive cause and effect relationship has not been established. Zinc may be in the cage itself or the hardware used to secure toys and cups.

Malnutrition. Chronic poor diets can indirectly lead to feather plucking due to dry skin and old feathers that haven't molted in a long time. Seed-only diets can induce hypovitaminosis A which can cause thickening and flaking of the skin. Low humidity may exacerbate dry skin.

Internal tumor or granuloma. Birds that persistently pluck and/or bite at one site may have an internal condition at that site, similar to a horse with colic that bites at its' sides or a sore muscle that gets rubbed often.

Poor wing clips. Some short wing clips can leave sharp edges that may rub against the body wall when the wings are closed. This would result in irritation and picking that could progress to a more widespread case of plucking.

We cannot assume every plucking bird is emotional or psychotic. It would be wrong to "just give drugs" before having a full medical and behavior work-up. Physical exams, bloodwork, and fecals are the minimum data base. In some cases, skin biopsies may be indicated, and sometimes XRAY's. Once any possibility of a medical problem can be reasonably eliminated, implementation of behavioral modification techniques is indicated.

The psychological problems that can lead to plucking can be difficult to determine. It helps to "think like a bird", i.e., to understand a little about the driving forces behind avian behavior. The first part of this is to realize that most pet bird species are highly intelligent and social beings that in the wild, have very busy days. The whole "flock mentality" is a very foreign concept to persons accustomed to dog/cat (predator) behavior. All parrots, even those domestically bred, should be considered wild animals that do not grasp the concept of the pet/master relationship. It is essential, then, that the owner implements guidelines to ensure the desired behavior. Lack of clear-cut and consistent guidelines can result in undesirable behavior like feather plucking and biting. Additional stressors like separation anxiety, frustration, and boredom, are common in the typical pet parrot. Plucking is not seen in free-ranging wild birds; it is a captivity problem that may have it's roots in stress and insecurity.

A thorough history is an important part of the work-up of the plucking bird. Any changes in the environment, however simple, may be significant. Emotional changes as well as physical changes must be taken into account. The age of the bird is important as well as the season, and even the time of day of the active plucking.

It is beyond the scope of this paper to thoroughly investigate the issue of behavior modification. The most important aspect is to identify when behavior needs work and refer to an avian behavioralist if possible. It is worth the investment for a young parrot to learn appropriate behavior before the frustrated owner gives the misunderstood bird away.

Veterinarians have access to a wide range of behavior-modifying drugs, all of which should be considered off-label and experimental in nature. These medications should be used in conjunction with behavior-modifying techniques.