

Vitamin A Imbalances

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Vitamin A Deficiency (Hypovitaminosis A)

Birds on all-seed diets will likely suffer from a vitamin A deficiency, since peanuts and most seeds and grains (except yellow corn) are devoid of this vitamin. Because vitamin A maintains mucous membranes and other epithelial surfaces, low levels of vitamin A will result in decreased resistance of these tissues to disease-producing organisms. As a result, respiratory and sinus infections are more severe in birds with deficient levels of vitamin A. Vitamin A deficiency can also lead to hyperkeratosis, or thickening of the skin with excessive scaliness and flakiness of the feet.

Signs of hypovitaminosis A often seen by avian practitioners include white plaques on the roof of the mouth, excessive oral mucus (caused by changes in the salivary and tear glands), and blunting of the choanal papillae. Quite often, birds brought to the hospital for some type of respiratory difficulty described by the owner as “sneezing” or “coughing.” However, frequently they have developed the condition as a result of the excessive mucus and mouth lesions caused by vitamin A deficiency. If secondary infections have developed, pustules or abscesses may be seen in the oral cavity, crop, or respiratory tract. In severe cases of vitamin A deficiency, changes may develop in the kidneys that can lead to gout (indicative of kidney failure). Other signs of vitamin A deficiency are fading of the pigmentation of the skin and feathers, failure of young birds to gain weight, low hatchability rates, and high hatching mortality.

The best and safest way to ensure that a bird will not suffer from a vitamin A deficiency is to provide it with adequate nutrition. Birds that prefer seeds should be given a commercial vitamin supplement, administered on the food or in the water. All birds should also be provided with foods that are rich in vitamin A, such as red or orange vegetables (carrots, sweet potatoes, red peppers, squash, mango, papaya) and dark green leafy vegetables (spinach, broccoli, collards). In addition, beta-carotene supplementation is effective. Readily converted by birds to the active form of vitamin A, beta-carotene cannot be oversupplemented to produce toxicity. Injectable vitamin A is usually used for clinical cases.

Another means of supplementation is to periodically add a few drops of vitamin A from a punctured vitamin A gel capsule to the bird's diet. Some breeders add a teaspoonful of cod liver oil to each pound of seed, since vitamin A has been shown to improve reproductive results. The use of cod liver oil is not recommended, however, as it can become rancid and promote the destruction of vitamin E. In all of the other forms noted, vitamin A supplementation is an effective means of increasing birds' resistance to disease and yielding better reproductive results.

Hypervitaminosis A (Oversupplementation of Vitamin A)

Oversupplementation of vitamin A has the potential to be toxic in birds (as in other animals), but this condition is not well documented in birds. In other animals, overdoses of vitamin A have been shown to cause a wide variety of signs, including weakness and bone abnormalities.

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