

Vitamin A Deficiency

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Species

Vitamin A is an essential vitamin for all species of birds. Disease occurs most commonly in hobby birds raised in cages (ie. no access to natural foraging) and those fed home-made rations. Vitamin A deficiency would rarely occur in commercial birds or those fed formulated rations as Vitamin A is always a component of the vitamin/mineral premix.

Status in Canada

Not very common but seen usually in late winter and early spring after birds have been fed stored feed.

Etiology

The cause of this condition is a dietary deficiency in vitamin A. Vitamin A has many biological functions. One of the most important is maintaining the health and integrity of cells lining the oral cavity and respiratory tract. If vitamin A is deficient in the ration, cells lining the oral cavity and respiratory system fail to develop properly leading to plugging of glands and loss of cilia in the respiratory tract.

Vitamin A is essential in allowing cells to mature properly and glandular cells to function properly. Birds with a vitamin A deficiency develop raised white nodules throughout the oral cavity as esophageal glands become plugged with keratin. These birds have a high incidence of pneumonia and respiratory infections due to a loss of the normal protective mechanisms in the respiratory tract.

Cause:

Diet lacking vitamin A.

Transmission:

- *none*

Symptoms:

- *Nose discharge*
- *Respiratory problems*
- *Prone to infections*

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Diagnosis

Diagnosis is made based on the gross changes in the oral cavity and confirmed by microscopic examination of scrapings from oral lesions or biopsy of lesions.



African grey parrot with swelling under the lower bill. This is actually a swollen sublingual gland plugged with keratin. Typical of vitamin A deficiency.

Treatment and Prevention

Treatment is through supplementation with vitamin A usually through adding multi-vitamins to the drinking water. In advanced cases the bird may have to be injected with vitamin A to get an appropriate response. The diet should be carefully reevaluated.

Vitamin A is not very stable and will break down under storage. The normal half-life of the vitamin is approximately 6 months so feed stored for prolonged periods (i.e. > 6 months) or kept in poor storage conditions (subjected to heat and moisture etc.) is often the reason the deficiency occurs. Always feed fresh feed.



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