



Hypothyroidism

Introduction: Hypothyroidism is one of the most common endocrine disorders in dogs. It is typically caused by either lymphocytic thyroiditis or idiopathic thyroid atrophy. The result is a decreased level of circulating thyroid hormones (T4 and T3). These thyroid hormones have effects all over the body, especially the metabolic rate, and as such the clinical signs of hypothyroidism are very diverse and variable.

Signalment: Hypothyroidism is most common in dogs 4 to 10 years old, but the age of onset may vary. It usually affects medium and larger breed dogs. Breeds reported to be predisposed include Golden Retrievers, Dobermans, Irish Setters, Miniature Schnauzers, Dachshunds, Cocker Spaniels, and Airedale Terriers.

Clinical Signs: The most common clinical signs of hypothyroidism are usually weight gain without an increase in appetite, lethargy, dullness and dermatologic changes. Skin abnormalities that develop are usually bilaterally symmetrical hair loss, a "rat tail" appearance, and excessive shedding. Less common clinical signs include myxedema ("tragic" facial expression), hypothermia, and reproductive abnormalities. A severe presentation known as myxedema coma may occur, typically rapidly, and leads to a stupor, coma and can be fatal.

Diagnosis: Hypothyroidism is a frustrating disease to definitively diagnose. A T4 measurement is usually included in the junior and senior panel bloodwork we recommend done yearly. If the T4 is lower than normal and your dog is having clinical signs, treatment can usually be initiated. What is challenging is when a dog has low T4 without clinical signs. Serum T4 can also be decreased in dogs with other illnesses ("euthyroid sick") or after giving certain medications. When this occurs, we recommend running a freeT4 by equilibrium dialysis. This test is more precise and sensitive at diagnosing hypothyroidism. If the freeT4 is decreased, that typically confirms a diagnosis of hypothyroidism. There are additional, more involved tests, such as TSH stimulation and anti-T4 antibody measurements, but these are usually only performed in extremely hard to diagnose cases.

Treatment: Treatment is very simple and economic for hypothyroidism. The aim is to replace the deficient T4 with a supplement. Thyrosin is an oral supplement usually given twice a day. The goal is to reverse any clinical signs your pet is having and get the serum T4 to an acceptable measurement. Dermatologic changes typically do not reverse until 1 to 2 months after supplementation is initiated. Our protocol is to start supplementation at a lower dose and recheck the serum T4 in one month. If the T4 is acceptable, we will stay with the current dose. If not, adjustments and continued rechecking will be needed until an appropriate supplement dose is achieved.

Prognosis: The prognosis for hypothyroidism is excellent. Dogs typically live a normal life once appropriate supplementation is initiated.

Hopefully this client education sheet helps shed some light on your pet's hypothyroidism. We strive to ensure you both understand your pet's disease and the treatment plan that is best for your pet. If you ever have any questions or concerns about this disease or any other problems, please feel free to contact us.