

DePorre Veterinary Hospital

4066 W. Maple Road
Bloomfield Hills, Michigan 48301
www.deporrevet.com

248-646-1669 phone 248-646-6348 fax

Caring People Caring for Animals

Canine Hypothyroidism

What is Hypothyroidism?

Hypothyroidism is a condition characterized by decreased production of thyroid hormone from the thyroid gland. The thyroid gland is a bilobed structure located near the trachea in the neck. Thyroid hormone performs many functions in the body related to metabolism. Too much thyroid hormone increases metabolism, while too little decreases metabolism. The pituitary gland, near the base of the brain, is responsible for producing thyroid stimulating hormone (TSH), which stimulates the thyroid gland to produce thyroid hormone.

What Causes Hypothyroidism?

Hypothyroidism most commonly results from immune mediated destruction or atrophy of the thyroid gland. This results in decreased levels of circulating thyroid hormone in the blood. Hypothyroidism is most commonly seen in middle aged to older dogs of many different breeds.

What are the Clinical Signs of Hypothyroidism?

Clinical signs of hypothyroidism are often gradual in onset. They typically involve both metabolic and dermatologic changes. Clinical signs may include:

- Weight gain without an increase in appetite
- Lethargy/exercise intolerance
- Mental dullness
- Heat seeking behavior
- Symmetrical truncal alopecia (hair loss/thinning hair)
- Dry, dull coat with excessive shedding
- Increased pigmentation of skin
- Seborrhea
- Increased susceptibility to skin and ear infections

How is Hypothyroidism Diagnosed?

Hypothyroidism is initially suspected based on characteristic clinical signs and physical exam findings. A general blood panel may reveal abnormalities associated with hypothyroidism including elevated cholesterol and elevated triglycerides. Several blood tests may then be used to measure the level of thyroid hormone. These include total T4, free T4, and TSH levels.

Thyroid hormone exists in the blood in a free state or bound to proteins. Total T4 (thyroxine) includes both free T4 and protein bound T4 and may be assessed as a screening test. If the total T4 level is low and clinical signs are supportive of hypothyroidism, a thyroid panel which includes a free T4 test by equilibrium dialysis and TSH levels may be performed. If free T4 is low and TSH is elevated, hypothyroidism is strongly suspected.

How is Hypothyroidism Treated?

Hypothyroidism is treated with oral supplementation of a synthetic thyroid hormone called levothyroxine. This medication may be prescribed on a twice daily or once daily basis depending on the patient. The goal of treatment is to bring T4 levels to the normal range and eliminate clinical signs of hypothyroidism. Improvement in energy level and alertness is generally noted quickly, however changes in skin and coat may take several months.

T4 levels in the blood should be checked 1 month after starting treatment or changing medication dosage, and then every 6-12 months. The blood sample should ideally be drawn 4-6 hours after administration of the thyroid medication. Thyroid medications dosages may require adjustment with time.

What is the Prognosis with Hypothyroidism?

Treatment is life-long and there is no cure for hypothyroidism. With treatment however, long-term prognosis is excellent and most dogs can live normal lives.