# Hypothyroidism

# What is it?

An endocrine disorder of the thyroid gland. Primary Hypothyroidism occurs when the thyroid does not secrete enough thyroxine (T4). The thyroid is an important and often overlooked gland located at the front of your dog's throat. This gland affects almost every cell and biological process in the body, and impaired function can present with a myriad of clinical manifestations. Although hypothyroidism is not life threatening, it can have a significant impact on quality of life and overall health.

# What causes it?

The majority of Hypothyroidism found in dogs is autoimmune in nature. Hypothyroidism stemming

from autoimmunity is known as Autoimmune Thyroiditis. Autoimmunity means that the body is creating antibodies that are attacking the thyroid gland, damaging it. Unfortunately, scientists do not yet know what causes the body to attack the thyroid, but do know that having a close relative with the disease puts a dog at higher risk. Risk is also higher for those dogs who are female, have been exposed to environmental radiation, and dogs who have another autoimmune disorder.

## Signs & Symptoms

The most common physical symptoms are:

- Unexplained weight gain
- Feeling cold
- Fatigue, which can be moderate or disabling
- Fur loss and/or patchy fur
- Dull coat
- Constipation

The bulleted physical symptoms are the "classic" symptoms of the disease. Still, there are some cases where the dog exhibits an unexplained change in behavour that does resolve once on a stable dosage of levothyroxine. It bears noting that the overwhelming majority of behavioural issues in dogs stems from poor training and temperament issues, not thyroid disease.

## **Testing & Treatment**

#### How is it diagnosed?

Testing for hypothyroidism in dogs can start with a blood draw to test T4 levels. It is preferable to get a thyroid panel, which includes total T4, total T3, free T4, free T3, T3AA and T4AA. Additional tests which may be considered are cTSH and/or TgAA.

It is important to note for diagnostic purposes that giant breeds such as Newfoundlands have a lower basal rate than other breeds. A healthy Newfoundland will have numbers way lower than for what's considered normal for other breeds. Your veterinarian should be aware of this difference.

### How is it treated?

Treatment consists of orally administered levothyroxine. Follow-up testing will be needed to determine if the dosage needs to be adjusted. Once on an effective dose, your dog will need regular testing annually.

# **Prevention:**

The best thing you can do towards prevention is to purchase a puppy from a reputable breeder who tests the sire and dam for thyroid function. Testing farther back in the pedigree is even more desirable. If thyroid testing has been done on breeding animals, and was submitted to the OFA, you can view public records at www.offa.org. Inquire with the breeder about any health issues that may have presented in their lines.

# More Information:

https://www.homevet.com/thyroid-disease-and-autoimmune-thyroiditis-with-dr-dodds/ https://www.ofa.org/diseases/other-diseases/hypothyroidism http://veterinarymedicine.dvm360.com/canine-hypothyroidism-supplementation-and-monitoring-updates http://veterinarymedicine.dvm360.com/hypothyroid-associated-neurologic-signs-dogs

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