

Testing for Hypothyroidism in EMDs

What is hypothyroidism?

The thyroid is a gland in the neck. It secretes hormones that allow your cells to use energy. Too much of these hormones (hyperthyroid) causes the dogs metabolism to speed up whilst too few of the hormones (hypothyroid) will make it slow down.

Hyperthyroid is generally caused by an over active thyroid gland but hypothyroid can have two causes; an underactive thyroid or autoimmune. This article is about the autoimmune hypothyroidism.

Who gets hypothyroidism?

Both humans and dogs can suffer from hypothyroidism. Large breeds, including the Estrela Mountain Dog, seem to be particularly affected. It is not caused by the dog's upbringing although there are some theories that it can be triggered by infection, extreme stress or physical trauma to the thyroid. It can be a secondary response to other disease such as adrenal dysfunction (Addison's or Cushing's disease). In breeds such as the Finnish Lapphund, the disease has been clearly shown to be genetic and hereditary.

Dogs are usually diagnosed between the ages of four and nine years old. This is a progressive disease however and dogs are often suffering the disease for some time – years even – before being diagnosed. This is because the symptoms get worse so gradually, owners don't always realise there has been a change. Sadly, symptoms are often labelled as 'bad temperament', 'the dog' or 'the breed' which further delays or prevents diagnosis.

What are the symptoms of hypothyroidism?

Hypothyroidism reduces the energy available in the cells, this means that for each type of cell in the body, there are multiple possible symptoms! The most obvious or common symptoms include:

- Psychological issues e.g.; anxiety, aggression, resource guarding, fearfulness, head tilting, compulsiveness, intolerance and depression.
- Lack of energy e.g.; frequent napping, slowing down or stopping on walks, less playful.
- Weight gain, difficulty in losing weight or gaining muscle.
- Whale eye (whites of the eyes visible), hang dog expression.
- Thin coat, hair loss.
- Dry skin, black marks appearing on skin.
- Goitre – swelling and discomfort in the throat.

Can hypothyroidism be treated?

There is no cure but it can be successfully treated with daily tablets to replace the missing hormones.

How is hypothyroidism tested for?

A blood sample is tested for thyroid hormones (and antibodies). Your own vet can normally test for the 'main' thyroid hormone, T4. It requires a small sample of blood and as vets can usually do this test in house, the results are usually back in one or two working days and shouldn't cost an arm and a leg – if you are quoted more than £50 it would be worth shopping around.

The T4 test can show if there is a thyroid problem or not. If T4 levels in the blood are normal then no further tests are required.

If T4 levels are not normal then further blood tests will be necessary to determine the cause. The presence of antibodies indicates immune mediated hypothyroidism. Most vets will need to send this away to a laboratory.

Is there a DNA test?

No. More breed specific research would be required.

When should EMDs be tested?

When there are any behaviour problems or symptoms.

Breeding dogs should be tested at two years or prior to breeding if earlier and then retested either annually or before each breeding. This is because of the strong possibility of genetic predisposition being hereditary. Also because dogs can be 'sub-clinical' and not show obvious symptoms, particularly when they are younger. This test should really be part of routine, pre-breeding checks.

Senior dogs should be tested from 7+ and then follow your vets advice as to frequency after that. Many vets now run senior panels or senior clinics which include other tests and checks as well to make it better value for money.

I'm NOT interested in testing, what should I do now?

Please be aware of the symptoms and don't write off any behaviour problems as purely psychological without first getting the dog checked by a vet.

If your dog does get diagnosed with hypothyroidism, please let the breeder and breed club know. You can also contribute to an unaffiliated breed health data base here:

<http://www.facebook.com/groups/149520918506493/?fref=ts>

I AM interested in testing my dog(s) for hypothyroidism, what should I do now?

Contact your vet. It may be cheaper to get the T4 test done when you are taking the dog to the vet anyway, or doing multiple dogs at the same time.

You can also contribute your results to an unaffiliated breed health data base here:

<http://www.facebook.com/groups/149520918506493/?fref=ts>

References

Landsberg et. al, Vet Clin North Am 2011; 41; 566

Medical Causes of Behavior Problems in Dogs and Cats, Debra Horwitz, DVM, DACVB
Veterinary Behavior Consultations St. Louis, MO

<http://www.hemopet.org/>

Comparison of thyroid analytes in dogs aggressive to familiar people and in non-aggressive dogs Lisa A. Radosta a,†, Frances S. Shofer b, Ilana R. Reisner c The Veterinary Journal 192 (2012) 472–475

The effect of thyroid replacement in dogs with suboptimal thyroid function on owner-directed aggression: A randomized, double-blind, placebo-controlled clinical trial Nicholas H. Dodman a,* , Linda Aronson a, Nicole Cottam a, Jean W. Dodds Journal of Veterinary Behavior 8 (2013) 225–230