

TIPS FOR MAXIMIZING OFA THYROID TESTING RESULTS

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The OFA thyroid testing program is a tool for breeders to screen for the most common genetic reason for hypothyroidism, Autoimmune Thyroiditis. This disease occurs when the dog's immune system destroys the thyroid gland, and often begins to manifest itself in young dogs between 2 and 5 years of age. Since dogs may not become truly hypothyroid for several years, OFA recommends periodic screening until the age of 8 to confirm the presence of the disease.

Three tests are used to screen for the disorder--TSH (Thyroid Stimulating Hormone), FT4 (Free T4, the most reliable thyroid level in the dog), and, most importantly, TGAA (Thyroglobulin Autoantibody). The pattern of these three tests produces a diagnosis of thyroid health for the OFA certification, and are summarized in the table below ("Thyroid Classifications" from ofa.org/diseases/thyroid/):

| Certification | Free T4 (FT4) | Canine Thyroid Stimulating Hormone (cTSH) | Thyroglobulin Autoantibodies (TgAA) |
|--|----------------------------|--|-------------------------------------|
| Normal | FT4 within normal range | cTSH within normal range | TgAA negative |
| Positive Autoimmune Thyroiditis | FT4 less than normal range | cTSH greater than normal range | TgAA positive |
| Positive Compensative Autoimmune Thyroiditis | FT4 within normal range | cTSH greater than or equal to normal range | TgAA positive |
| Idiopathically Reduced Thyroid Function | FT4 less than normal range | cTSH greater than normal range | TgAA negative |

All other results are considered equivocal.

An "equivocal" test is any set of results which does not fall into one of these four patterns. It may involve an abnormality of any one of the three tests, however slight, and is often unrelated to autoimmune thyroiditis.

Thyroid hormone production is not constant and is affected by many other factors. To get the best possible result, there are many precautions which should be taken:

Vaccination: Recent vaccination can falsely elevate the TGAA, so coordinating the blood testing with the vaccination schedule is vitally important. OFA only requires a 30-to-60-day wait after vaccination, but a 3-6 month wait after the most recent

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vaccine is a better choice. Puppies usually get primary DHPP vaccinations at 6, 10, and 16 weeks, then rabies at 5 months, and other non-core vaccines based on veterinarian recommendations. So, an annual booster one year later will allow for the first thyroid testing to be done after another 6 months, right around the 2-year mark when the CHIC tests for thyroid, hips, elbows, and eyes are first performed. Vaccination and testing later in life should be planned, around each other, well ahead of time, as well.

Estrus: Bitches should not be tested in, or near, their estrous cycle.

Time of day: Thyroid hormones are more active in the morning, so testing before noon is recommended.

Nutrition: Dogs should be fasted for 8-12 hours before the test. Excessive amounts of kelp or kale in the diet should be lowered the week before, and any vitamins containing biotin or Vitamin D should be taken away one week before, as well.

Concurrent illness: Any other illness lowers thyroid levels. Dogs should be completely healthy when performing the test.

Even with all these precautions, equivocal results can happen. Thyroid hormone is produced in pulses and is not exactly the same from day to day, or even from hour to hour. If an equivocal result comes back, wait a month, make sure all precautions are taken, and test at a slightly different time of day. When evaluating a dog or bitch for breeding, look at the equivocal test. Any increase in T4, or very small increases in TSH, may not be significant. Any low free T4, increased TSH more than 10% above the normal range, or any elevation of TGAA should be approached with caution.

There is a more complete discussion of the OFA thyroid testing program on the OFA site by hovering over the “diseases” tab and choosing “Thyroid”.