

## How to Analyze Your Dogs Thyroid Panel Results

When a dog starts showing aggressive, anxious, fearful or reactive behavior it is important to rule out any medical causes of this behavior. There are many medical issues that can cause and/or exacerbate aggressive, anxious and reactive behavior in dogs. One of the common medical conditions is Hypothyroidism. Many people have heard that hypothyroidism causes weight gain and sluggish or lethargic behavior in dogs. They have also heard that a Hypothyroid dog will have a dull coat and might have hair loss. These symptoms can be present, however, many dogs who are Hypothyroid (especially in the early stages, young dogs, or those who are Borderline (Low-Normal) Hypothyroid will not show these symptoms). The fact is that different dogs will exhibit very different symptoms. Some dogs are actually more "hyper" than lethargic, and some stay thin. The ONLY way to really know if your dog has Hypothyroidism is to have a Six-Panel Thyroid Test run on him/her.

A Six Panel Thyroid Test examines your dogs Thyroid feedback system. It measures T4, T3, Free T4, Free T3, T4 anti-bodies and T3 anti-bodies. Neighborhood Veterinary offices do not run these tests themselves. They draw the blood and then send the sample out to a much larger laboratory who then runs the tests and send the results back to them. Your Vet may already have a lab that they prefer to use for these tests. You can choose to go with their recommendations, or you can specify a lab you would prefer.

Laboratories vary in quality and experience, and my recommendation is to have Dr. Jean Dodds at "Hemopet" run the tests. Dr. Dodds is the foremost authority on Canine Hypothyroidism, and she has established certain controls for testing for Hypothyroidism that will help give you more accurate test results. Hemopet is located in Orange County California, but also receives blood sample from dogs around the world (Australia, Italy, UK and Israel just to name a few). The results will be analyzed in just a few days. Dr. Dodds also analyzes every dogs test results personally, and includes her comments on your dog's results. When you have Hemopet (Dr. Dodds) do your dog's testing, she will speak with you for free, on the phone if you have any questions, and she will do phone consultations with your vet on dosing recommendations etc.

In order to have Dr. Dodds at Hemopet run your dog's Six Panel Thyroid Test, you need to follow the link below and then print out both testing forms to bring with to your regular Veterinarians office. It is helpful to call your Vet first and explain that you would like Dr. Dodds to run these tests, but that you would like them to do the blood draw and send the sample to her at Hemopet (the instructions are in the link). Most Veterinary offices are more than happy to do this for you (don't worry, they will not be insulted!). You will probably be charged a blood draw fee, as well as the price of the Six Panel Thyroid Test. In Southern California it costs me \$90 for everything (blood draw

plus tests).

<http://www.itsfortheanimals.com/HEMOPET.HTM>

It takes only a few days for the test results to come back. Explain to your Veterinarian that you would like a copy of the results for your own home files. They can either mail or fax you a copy (or you can go pick it up from the office). Once you have a copy, you can analyze the results. It is very important to do this, as most neighborhood Veterinarians are not very familiar with a condition called "Borderline Hypothyroidism" also called "Sub-Clinical" or "Low-Normal" Hypothyroidism. Borderline Hypothyroidism is a condition where the dog is definitely suffering from a weakened Thyroid system, but it is not yet severe enough to register out of the "Normal Range". Just because it has not reached an extreme state yet, does not mean that it is not affecting your dog's health and behavior negatively. Here are some excellent articles explaining the links between aggression in dogs, and borderline Hypothyroidism.

<http://akitarescue.com/aggressi.htm>

<http://www.petplace.com/articles/artShow.asp?artID=1807>

Most Vets will read the test, and as long as the dogs results fall anywhere in between the laboratory's "Normal Range" they will tell you (and believe) that the dog is not Hypothyroid. This is why it is VERY important that you understand how to analyze the test results for yourself to determine if your dog has "Borderline" (Sub-Clinical/Low-Normal) Hypothyroidism.

Here is how you analyze your dogs test results...

The first thing you want to do is calculate the 50% mark of the "Normal Range" for each panel (T4, T3, Free T4, Free T3, T4 Antibodies and T3 Antibodies). Each panel will have a "Normal Range" associated with it. If you have had Dr. Dodds do the testing, there should be a second page that also lists her personal ranges. She adds these based on your dog's age and breed (and they tend to be more conservative than even the laboratory's ranges). Try this method with both the Lab's ranges as well as Dr. Dodds'. To calculate the 50% point you add the end values of the range and divide by 2. Here are some examples...

T3 Lab "Normal Range" = 45 - 150  
 $45 + 150 = 195$   
 $195 / 2 = 97.5$   
 $97.5 = 50\%$  of the "Normal Range"

Therefore, if your dog's T3 level was less than 97.5 in this instance, he/she would be below 50% of the range. You need to do this calculation and comparison of these percentages with each of your dog's test results ( T3, T4, Free T3, Free T4). If your dog falls below the 50% mark of these ranges, you should speak to your Vet (and you can also call Dr. Dodds to get more information) about supplementing your dog on Soloxine (the thyroid supplement). The supplement size will usually be much smaller than the amount than a dog with full blown Hypothyroidism would receive, but even so, the behavioral changes can be dramatic (for the positive). Once your dog is on the right amount of medication (and you will need to do regular follow-up testing throughout his/her life to make sure that the levels stay in a healthy range once they get back up there) you may see big changes in his/her behavior, or else you may just see "the edge" taken off (which can be a big change in and of itself!).

Here is an example of my dog Manny's results before he received Soloxine (Thyroid supplementation).

Lab Range T3 = 45-150

50% of Range = 97.5

Manny's T3 = 76

Lab Range T4 = 1.0 - 4.0

50% of Range = 2.5

Manny's T4 = 2.44

Lab Range Free T4 = .65 - 3.0

50% of Range = 1.825

Manny's Free T4 = 1.14

Lab Range Free T3 = 3.0 - 8.0

50% of Range = 5.5

Manny's Free T3 = 3.1

Lab Range T4 Antibodies = <2.0

Manny's Antibodies = 1.0

Lab Range T3 Antibodies = <2.0

Manny's Antibodies = 1.2

As you can see some of his results were just right underneath the 50% point, however even though it doesn't seem like much, his behavior was definitely being negatively affected by his Thyroid status. According to Dr. Dodds, a young healthy large breed dog should be in the **upper 50%** of the range, whereas a young healthy small breed dog should be even higher (in the **upper 75%**) as their metabolisms run faster than their large breed cousins. All in all, it is very important to both run

the Six Panel Thyroid Test for your dog, and also to analyze it yourself when you receive the test results back.

If you determine that your dog is Borderline or Sub-Clinical Hypothyroid, you should print out the articles linked to above and take them to show your vet. You may also call Dr. Dodds (if you tested with Hemopet) and consult with her to get recommendations for supplementation to discuss with your vet. Your vet should be open to trying a course of Soloxine supplementation in order to get your dog's Thyroid levels up. As I mentioned above, regular testing should be done throughout the dogs life to make sure that once they are arrived at, he/she stays in a healthy range.

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Alise Shatoff  
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