

IWS Thyroid Study Annual Report

Cumulative Number of IWS Tested for Thyroid Function by Years 2007-2015

YEAR	TOTAL # TESTED
2007	111
2008	193
2009	250
2010	437
2011	491
2012	504
2013	519
2014	534
2015	547

SUMMARY OF CUMULATIVE 2015 RESULTS FOR HEMOPET IWS THYROID STUDY

# IWS	Testing Lab	THYROID STATUS * †			
		Normal	Hypothyroid	Equivocal	Autoimmune Thyroiditis†
236	Hemopet/Antech				
290	Hemopet				
17	MSU				
2	Antech Other				
1	Vita -Tech				
1	Texas A & M				
Total 547	6	450	92	10	14

* results status not categorized by testing laboratory to maintain anonymity. † 12 dogs had elevated thyroid autoantibodies and 9 of these were hypothyroid; 2 dogs also had Addison's disease; 28 hypothyroid dogs received thyroxine therapy.

Summary of Findings for Thyroid Function Testing

These results indicate that 17.0 % (92 of 547) of the IWS tested were hypothyroid. Some of these hypothyroid dogs were subsequently retested after being placed on thyroxine therapy, but they were only counted once in the data base. Ten dogs tested in the equivocal category and needed to be retested in another 4-6 months. [Note: in 2007, 8% of the IWS tested were hypothyroid. In 2008 that number was 13.5%. In 2009 that number increased to 16.8%; although it decreased slightly in 2010 to 15.4%, and increased slightly in 2011 to 15.8%, returned to 15.1% in 2012; and increased to 16.4% in 2013, and increased again to 17% in 2014. **For this 2015 report, 16.8% of the total number of IWS tested were hypothyroid.**]

Fourteen dogs were diagnosed with autoimmune thyroiditis based upon finding elevated levels of either T3AA, T4AA or TgAA [i.e. T3 or T4 autoantibody, or thyroglobulin autoantibody]. [Note: in 2007, 3 dogs were diagnosed with autoimmune thyroiditis. In 2008 and 2009, that number increased to 5 and 7 dogs, respectively. For 2010, the total increased by one dog to 8, and increased again to 9 in 2011 and to 12 in 2012; the number increased again in 2013 to 14 cases. In this report from 2015, the number has remained at 14. The most recent thyroiditis cases had extremely high thyroglobulin autoantibodies, which reflected the early acute inflammatory phase of this thyroid destructive process.

Two dogs had Addison's disease (autoimmune hypoadrenocorticism).

As autoimmune endocrine disorders have a heritable basis, the above thyroid testing data support the need to actively screen all IWS breeding stock, in contrast to earlier assumptions that IWS are at relatively low risk for developing hypothyroidism.

Review of the data collected so far indicates that the normal reference ranges for IWS typically fall within those limits established by us for other medium-sized breeds.