

THYROID HORMONE AND TESTOSTERONE CONCENTRATIONS  
IN RACING GREYHOUNDS WITH AND WITHOUT BALD THIGH  
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Bald Thigh Syndrome (BTS) is a bilaterally symmetrical, nonpruritic alopecia on the caudal and lateral aspects of the thighs that occurs commonly in adult greyhounds. The purpose of this study was to determine if alterations in serum thyroid hormone or testosterone concentrations (Testo) were associated with BTS.

From a racetrack, 57 actively racing greyhounds were chosen to obtain a relatively even distribution of intact male and female dogs, and affected and nonaffected controls. Monthly Testo injections had been given to suppress estrus in the female dogs. Blood was collected for determination of total thyroxine (TT4), free-thyroxine (fT4) by equilibrium dialysis, triiodothyronine (T3), thyroid stimulating hormone (TSH), and Testo concentrations. A 2-way ANOVA (SAS) was used to compare affected vs nonaffected Greyhounds, and male vs female dogs. A T test was used to test for differences between gender-BTS categories.

There were no significant differences in the fT4, TT4, TSH, or T3 between the BTS and control dogs, or between genders. The means for each gender-BTS group ranged from: fT4: 9-16nmol/L, TT4: 6-12nmol/L, TSH: 16-21mU/L, T3: 1.1-1.3nmol/L. In 11 of 29 BTS dogs and in 5 of 28 control dogs, the fT4 was below the lower limit of the laboratory canine reference range; 52 of 57 dogs had TT4 below the reference range. 8 BTS and 5 controls dogs had a T3 below the lower limit of the canine reference range. In all dogs, the TSH were within the laboratory canine reference range.

There were no significant differences in the Testo concentrations between the BTS and control dogs. However there was a significant ( $p=0.02$ ) gender effect with females having a higher mean Testo than males ( $16.6\pm 0.03$  vs  $9.2\pm 0.03$ , respectively). There was no significant difference in Testo between affected and control female greyhounds.

In conclusion, our data suggest that BTS in racing Greyhounds is not caused by differences in serum concentrations of thyroid hormones or testosterone. The data provide further evidence that standard canine reference values of iodothyronines may not be appropriate for racing Greyhounds.