

A First for Feline Hyperthyroidism

KEY POINTS:

- Limiting dietary iodine (≤ 0.32 ppm) effectively lowered serum total thyroxine (T_4) concentrations and returned hyperthyroid cats to a euthyroid state.
- Serum total T_4 concentrations decreased significantly 3 weeks after feeding a low-iodine food to hyperthyroid cats.
- Adverse effects were not observed in any of the hyperthyroid cats managed with low-iodine foods.

CONTROLLED LEVEL OF DIETARY IODINE NORMALIZES SERUM TOTAL THYROXINE IN CATS WITH NATURALLY OCCURRING HYPERTHYROIDISM

Yu S, Wedekind KJ, Burris PA, et al. *J Vet Intern Med* 2011;25:683-684 [abstract].

PURPOSE

To determine if a food with 0.32 ppm iodine would induce euthyroidism in hyperthyroid cats.

DESIGN

Prior to beginning the study, 14 hyperthyroid cats were equally divided into 2 groups and fed either a commercial food with 1.9 ppm iodine or a positive control food with 0.17 ppm iodine for 6 weeks.

Cats in the commercial food group were then fed a test food with 0.32 ppm iodine for 12 weeks while the positive control group continued eating the same food for 12 weeks.

RESULTS/CONCLUSION

Mean serum total T_4 concentrations decreased significantly in the test food group by week 3 and remained within the reference range through the end of the study (Figure 1).

Cats in the positive control group remained euthyroid during the study (Figure 2).

Feeding a low-iodine food (≤ 0.32 ppm iodine) maintained normal T_4 concentrations in hyperthyroid cats.

TITRATION OF DIETARY IODINE FOR REDUCING SERUM THYROXINE CONCENTRATIONS IN NEWLY DIAGNOSED HYPERTHYROID CATS

Melendez LD, Yamka RM, Forrester SD, et al. *J Vet Intern Med* 2011;25:683 [abstract].

PURPOSE

To evaluate the effects of feeding low-iodine foods to cats with naturally occurring hyperthyroidism.

DESIGN

Ten hyperthyroid cats with serum total T_4 concentrations ranging from 55 to 146 nmol/l were included.

Initially, 5 cats were fed 0.47 ppm iodine for 9 weeks. These cats along with 4 additional cats were then fed 0.28 ppm iodine for 18 weeks. Finally, 8 of these cats and one newly diagnosed cat were fed 0.17 ppm iodine for 4 weeks.

Serum total T_4 concentrations, complete blood counts, and serum chemistries were measured approximately every 3-4 weeks throughout the 31-week study.

RESULTS/CONCLUSION

Eight of 9 cats (89%) became euthyroid while eating foods with 0.47 or 0.28 ppm iodine and all cats were euthyroid while eating the food with 0.17 ppm iodine.

No adverse effects were observed with feeding any of the low-iodine foods.

Limiting dietary iodine was a safe and effective method for lowering serum total T_4 concentrations and returning hyperthyroid cats to a euthyroid state.

TITRATION OF DIETARY IODINE FOR MAINTAINING NORMAL SERUM THYROXINE CONCENTRATIONS IN HYPERTHYROID CATS

Melendez LD, Yamka RM, Burris PA. *J Vet Intern Med* 2011;25:683 [abstract].

PURPOSE

To determine the maximum amount of dietary iodine that maintains normal serum total T_4 concentrations in hyperthyroid cats previously managed with a low-iodine food.

DESIGN

Eighteen hyperthyroid cats were maintained euthyroid by feeding 0.15 ppm iodine for 10 months to 3 years before the study.

Cats were then equally divided into 2 groups and were fed either 0.39 ppm iodine or 0.47 ppm iodine for 9 weeks.

All cats were subsequently fed 0.28 ppm iodine for 15 weeks and then 0.17 ppm iodine for 4 weeks.

Serum total T_4 concentrations, complete blood counts, and serum chemistries were measured throughout the study.

RESULTS/CONCLUSION

Serum total T_4 concentrations increased in all previously controlled hyperthyroid cats when fed ≥ 0.39 ppm iodine.

After eating the food with 0.28 ppm iodine, serum total T_4 concentrations decreased in all cats and were within the reference range for most cats, and all cats were euthyroid after eating the food with 0.17 ppm iodine.

Serum total T_4 concentrations were not well controlled in hyperthyroid cats eating foods with ≥ 0.39 ppm iodine.

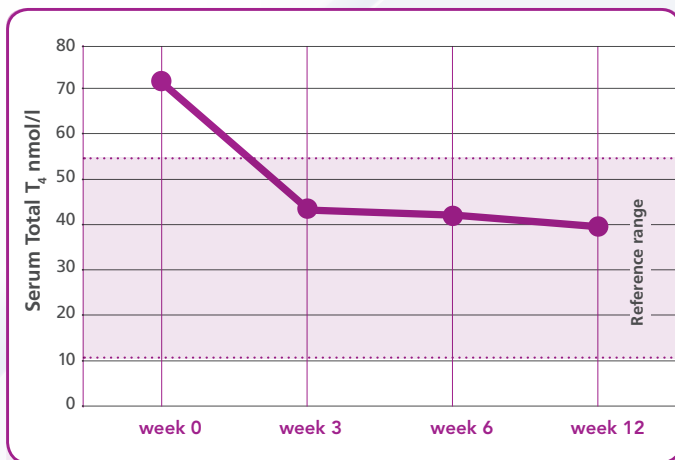


Figure 1. Mean T_4 concentrations decreased significantly ($P < 0.01$) after feeding low-iodine food (0.32 ppm) to 7 hyperthyroid cats.

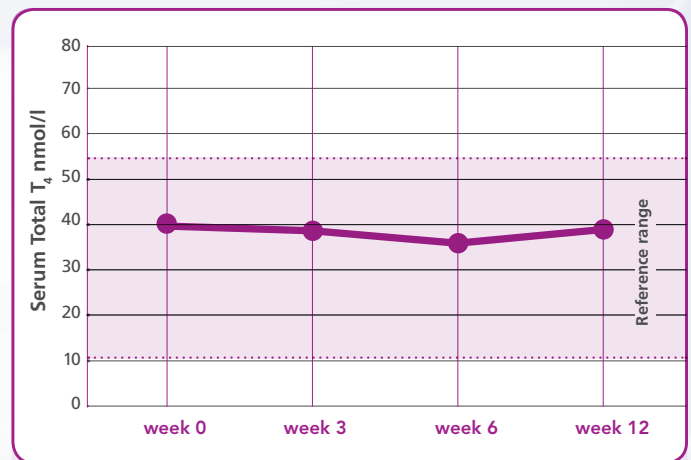


Figure 2. Mean T_4 concentrations remained normal during feeding of low-iodine food (0.17 ppm) to 7 hyperthyroid cats.

SUMMARY

In the studies described above, researchers determined that feeding a low-iodine food effectively reduced serum total T_4 concentrations in hyperthyroid cats without negatively affecting other measures of health.

NUTRITIONAL RECOMMENDATION

Now you can manage your cat's hyperthyroidism with Hill's® Prescription Diet® nutrition. It's the first and only pet food formulated with limited iodine to make managing feline thyroid health as easy as feeding.