

# WELL LIFE COMPOUNDING PHARMACY

## FELINE HYPERTHYROIDISM

The results of this prospective clinical study suggest that transdermal methimazole is an effective and safe alternative to conventional oral formulations – “Clinical efficacy and safety of transdermal methimazole in the treatment of feline hyperthyroidism” ([Can Vet J. 2006 Feb;47\(2\):131-5](#)).

**ABSTRACT:** “Thirteen cats, newly diagnoses with hyperthyroidism, were treated with a transdermal formulation of methimazole at a dose of 5mg (0.1ml) (concentration of 50mg/ml) applied to the internal ear pinna every 12 hours for 28 days. Baseline hematologic and biochemical values, along with serum thyroxine (T4) levels, were obtained on presentation day (day 0). Cats were evaluated at 14 d (D14) and 28 d (D28) following transdermal therapy. At each visit, a physical examination, a complete blood cell count, a serum biochemical analysis, and a serum T4 evaluation were performed. Ten cats completed the study. Clinical improvement, as well as a significant decrease in T4, was noted in all cats. Serum T4 measured at D14 and D28 were significantly lower at 27.44 mnol/L, s = 37.51 and 14.63 mnol/Lm s = 10.65, respectively (P < 0.0001), as compared with values at D0 97.31 mnol/Lm s = 37.55). Only 1 cat showed a cutaneous adverse reaction along with marked thrombocytopenia. The results of this prospective clinical study suggest that transdermal methimazole is a safe and effective alternative to conventional oral formulations.” PMID: 16579038

# WELL LIFE COMPOUNDING PHARMACY

## FELINE HYPERTHYROIDISM

This study found that transdermal methimazole is associated with fewer GI adverse effects compared to the oral route – “Efficacy and safety of transdermal methimazole in the treatment of cats with hyperthyroidism” (J Vet Intern Med. 2004 Sep –Oct;18(5):651-5).

**ABSTRACT:** “The objective of this study was to determine whether transdermal methimazole was as safe and effective as oral methimazole for the control of hyperthyroidism in cats. Forty-seven cats with newly diagnosed hyperthyroidism were randomized to receive either transdermal methimazole in pluronic lecithin organogel (PLO; applied to the inner pinna), or oral methimazole (2.5mg q12h for either route). Cats were evaluated at weeks 0, 2, and 4 with a physical exam, body weight determination, CBC, biochemical panel, urinalysis, measurement of total levothyroxine (T4) concentration, indirect Doppler blood pressure determination, and completion of an owner questionnaire. Data between the 2 groups and over time were compared by nonparametric methods. Forty-four cats followed the protocol (17 oral and 27 transdermal). Significantly more cats treated with oral methimazole had serum T4 concentrations within the reference range after 2 weeks (14 of 16 cats) compared to those treated by the transdermal route (14 of 25; P = 0.027). This difference was no longer significant by 4 weeks of treatment (9 of 11 for oral versus 14 of 21 for transdermal), possibly because of inadequate numbers evaluated by 4 weeks. Cats treated with oral methimazole had a higher incidence of gastrointestinal (GI) adverse effects (4 of 17 cats) compared to the cats treated with transdermal methimazole (1 of 27; P = 0.04), but no differences were found between groups in the incidence of neutropenia, hepatotoxicity, or facial excoriations. Although the overall efficacy of transdermal methimazole is not as high as that of oral methimazole at 2 weeks of treatment, it is associated with fewer GI adverse effects compared to the oral route.” PMID: 15515580

We have the ability to compound methimazole as a transdermal gel.

Example of how you might prescribe:

**Methimazole 5mg/0.1ml  
Transdermal gel  
10ml**

Apply to 0.1ml to inner ear QD-BID