

Medication For Hyperthyroidism

The most common medication prescribed to treat feline hyperthyroidism is called methimazole (trade name Tapazole or Felimazole). This medication has virtually replaced the older medication propylthiouracil or PTU because methimazole is effective without as much tendency for side effects. In the United Kingdom and Australia, carbimazole is sometimes used. Because carbimazole is converted to methimazole in the body, the information here for methimazole also holds for carbimazole.

All these medications block the production of T4 and T3. Thyroid hormones that are already in the body when medication is started are still in play, so a good 2 to 4 weeks are needed before thyroid blood tests will show the effect of treatment.

It is important to understand what the potential side effects of methimazole and its relatives are, and the monitoring that is generally recommended. The thyroid nodule, which can be detected in a cat's throat, will not reduce in size with treatment and may in fact get larger.

Advantages of Using Methimazole

- Medication is inexpensive relative to radiotherapy or surgery.
- Control of thyroid disease is achieved only while the pet is on medication so that if there is any problem with exacerbated poor kidney function, treatment can be discontinued.
- No hospitalization is required.
- Side effects are relatively uncommon.
- If an occasional dose is skipped, no harm is done.
- If no side effects are encountered after the first 3 months of therapy, the chance of side effects occurring thereafter is substantially reduced.

Disadvantages of Using Methimazole

- Medication must be given at least daily (usually twice daily). Some cats simply will not take oral tablets at this frequency. Methimazole is readily made into a flavored liquid or chewable for easier administration by a [compounding pharmacy](#) or it may even be possible to convert methimazole into a gel administered on the hairless inner surface of the cat's ear (see below).
- Approximately 15% of cats will experience some kind of side effect. The usual side effects are: lethargy, loss of appetite, and vomiting. If one of these side effects occurs, medication is discontinued until the symptoms resolve. Medication is then restarted at a lower dose and gradually

increased to the former dose. These side effects do not generally recur if medication is increased gradually in this way.

- Facial itching is a more serious side effect. This side effect also resolves with anti-itch medication and discontinuation of methimazole. Cats who have this side effect can be expected to have it again if medication is restarted, so another form of treatment should be used. Facial itching occurs in less than 4% of cats on methimazole.
- Serious liver failure results in an extremely small number (less than 2%) of cats taking methimazole. This toxicity can be expected to resolve after discontinuation of the medication but, again, alternative therapy should be considered.
- Bone marrow changes can also result from methimazole administration. Blood tests evaluating white blood cell patterns should be periodically performed to monitor for these changes. This side effect occurs in less than 4% of cats on methimazole and necessitates a change in therapy.
- Pre-existing kidney insufficiency can be masked in hyperthyroidism. This is because the heart disease and high blood pressure that goes with hyperthyroidism actually increases blood flow through the kidneys making the kidneys more efficient (virtually the only positive aspect of having hyperthyroidism). Once treatment is instituted for hyperthyroidism, the kidney disease is unmasked or made worse when kidney blood flow returns to normal. Sometimes it is necessary to choose between treating the kidneys and treating the thyroid, so monitoring kidney function along with thyroid levels is particularly important during methimazole therapy. Kidney problems can be minimized by starting with a lower dose of methimazole and working up over weeks or months so as not to cause as abrupt a change in kidney blood flow. If kidney problems become significantly worse on methimazole, medication can be discontinued. Approximately 15 to 22% of cats treated for hyperthyroidism will show kidney disease that was not evident prior to treatment.
- A study published in the February 15, 2006, Journal of the AVMA by Milner et al found that when cats with pre-existing renal disease are excused from the group and compared to cats treated with radiotherapy vs. those treated with methimazole, those treated with radiotherapy had a much longer median survival time (4 years vs. 2 years). This may be due to difficulties in regularly medicating cats with oral medication and ultimately leading to periods of incomplete treatment.

MOST SIDE EFFECTS OCCUR DURING THE FIRST 3 MONTHS OF METHIMAZOLE THERAPY.

Periodic blood testing to examine T4 level, white blood cell patterns, kidney function, and liver enzymes should be periodically performed. Be sure to ask your veterinarian to review an appropriate schedule for your cat. Side effect potential can be reduced by beginning at a smaller dose and working up to the full therapeutic dose over the first couple of months of therapy.

Specific Hazard Associated with Methimazole (Tapazole)

Drug-Safety experts state that Methimazole in any form must be handled with caution. This drug interferes with the use of iodine to make thyroid hormone in the body. It may cause birth defects and has been found to be carcinogenic in rats.

Clients should wear gloves when handling this drug and wash hands with soap and water after administration to avoid exposure. Clients should also use caution when breaking or crushing the tablets and wear gloves to prevent direct contact with the litter, feces, urine or vomit of treated cats.

Methimazole for cats is the same as the drug used to treat humans with hyperthyroid disease. This is the same reason that veterinarians prescribe methimazole for their feline patients. Hyperthyroid disease is a common ailment of older cats. You can administer cat medication for hyperthyroid disease orally or topically