

**Lilydale Clinic**

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## HYPERTHYROIDISM

### **What is hyperthyroidism?**

Hyperthyroidism is the most common endocrine (hormonal) disorder of cats. It is rarely seen in cats under eight years of age. It is due to an increase in production and secretion of thyroid hormone by the thyroid gland in the neck.

### **What are the clinical signs of hyperthyroidism?**

Cats may present with a combination of the following clinical signs:

1. Weight loss
2. Increased appetite
3. Hyperactivity and restlessness
4. Increased heart rate, with a variety of cardiac rhythm irregularities and murmurs
5. Increased frequency of defecation, with abundant, bulky stools
6. Increased thirst and urination
7. Occasional vomiting
8. Panting
9. Matted, greasy and unkempt coat

### **How is hyperthyroidism diagnosed?**

In hyperthyroidism a nodule is usually palpable in one or both of the thyroid lobes. As the enlarged lobe may be freely movable and can slide along and behind the trachea, it may be difficult to detect, and require careful palpation. In the normal cat, the thyroid lobes are either not palpable or small and symmetrical.

Once hyperthyroidism is suspected on the basis of clinical signs, the diagnosis is confirmed by detecting elevated serum thyroid hormone levels. Other laboratory tests may also be abnormal, such as elevation of the liver enzymes.

### **How can hyperthyroidism be treated?**

There are three therapeutic options for the treatment of hyperthyroidism. Which treatment option is most suitable for your cat depends on a number of factors and your vet will discuss this with you.

#### **Anti-thyroid drug therapy**

Anti-thyroid drugs are readily available and economical. They do not destroy thyroid gland, but act by interfering with production and secretion of thyroid hormone. Their use does not result in a cure, but rather controls the condition. Carbimazole (Neo Mercazole) is commonly used. When used as a long term treatment, twice daily dosage is usually required, so keeping the cat medicated can be difficult with this treatment.

Mild (and often transient) side effects are seen quite commonly in cats on this medication (~15% of patients), and can include poor appetite, vomiting and lethargy. More serious side effects are seen less frequently (~5% of patients) and can include a fall in the number of white blood cells, clotting problems, or liver disorder. Blood should therefore be tested routinely to monitor for potential side effects, and in some patients the occurrence of severe adverse reactions may necessitate withdrawal of the drug.

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**Surgical thyroidectomy**

Surgical thyroidectomy (removal of the thyroid glands) has the immediate advantage over drug therapy in that it provides a cure. This treatment is readily available, although surgical skill and experience are necessary to minimise potential side effects. Anaesthesia can be problematic in hyperthyroid patients both as a direct result of the condition being treated, and also because a number of patients have other concurrent diseases e.g. chronic renal failure. To reduce hyperthyroid-related surgical risks, patients should be pre-treated with anti-thyroid drugs for 3 to 4 weeks prior to surgery to reduce their thyroid hormone levels back to normal. Any associated cardiac disease should be carefully controlled.

**131 I (radioactive iodine) therapy**

This uses radioactive iodine which is administered by mouth or intra-venously, and is selectively concentrated within the follicles of the thyroid gland. It selectively destroys the affected thyroid tissue, including any areas of thyroid tissue which may be inaccessible to surgery, and spares adjacent normal tissue, including the parathyroid glands.

The primary advantages of <sup>131</sup>I treatment are that it is curative, has no serious side-effects (no toxicity, no hypoparathyroidism), does not require an anaesthetic or sedation, is associated with a low recurrence of hyperthyroidism and the location of the tumour is unimportant. The cost of treatment is comparable to surgical treatment, but depends in part on the length of hospitalisation.

The problems of <sup>131</sup>I treatment include

- a) Poor availability, due to safety regulations that cover the use of radioactive products.
  - b) Hospitalisation for between 1 and 2 weeks following treatment.
- It is not suitable for use with patients requiring intensive care
  - The radiation risk to personnel treating the cats.