



勝利動物醫院  
Victory Animal Hospital

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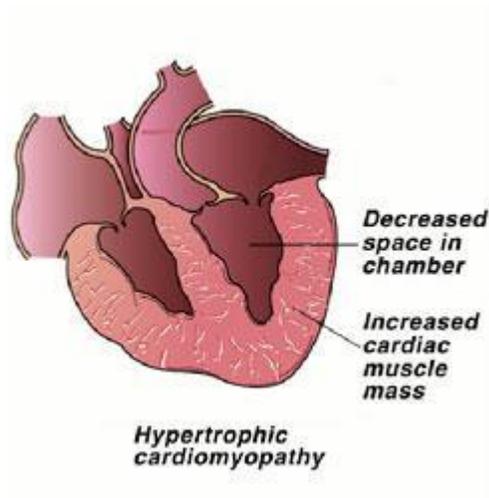
## Hyperthyroidism in Cats

Cats have two thyroid glands, which are located in the neck and play a vital role in regulating the body's metabolic rate. *Hyperthyroidism* is characterized by the overproduction of thyroid hormone and a subsequent increase in metabolic rate. This disease is common in older cats. Although the thyroid gland enlarges in hyperthyroidism, it is usually a benign or non-malignant change. Fewer than 2% of hyperthyroid cases in cats involve malignant thyroid gland tumors.

Many organs are affected by hyperthyroidism, especially the heart.

### What are the clinical signs of hyperthyroidism?

The typical cat with hyperthyroidism is middle aged or older – the average age of affected cats is approximately 12 years.



The most common clinical sign of hyperthyroidism is weight loss due to the increased rate of metabolism and despite an increased appetite. Affected cats are often restless, and may become cranky or aggressive. They may have increased water consumption and urination. It is also common for hyperthyroid cats to exhibit increased vocalizing, particularly at night. They may develop periodic vomiting or diarrhea, and fur may appear unkempt. In some cats, anorexia develops as the disease progresses.

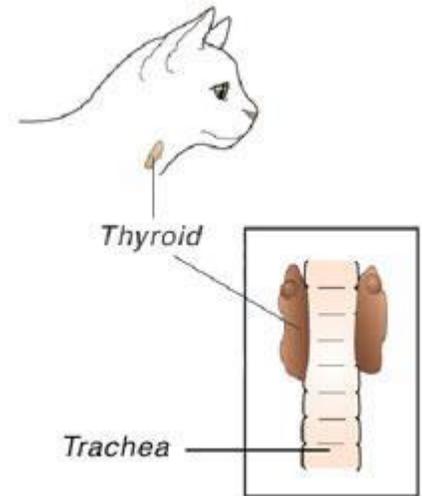
Two secondary complications of hyperthyroidism can be significant; Hypertension (high blood pressure) and a particular form of heart disease called thyrotoxic cardiomyopathy. Hypertension develops due to the increased pumping pressure and elevated heart rate that occurs with thyrotoxic cardiomyopathy. About 25% of cats with hyperthyroidism become hypertensive. In some cats, blood pressure can become so high that retinal bleeding or

retinal detachment will occur, resulting in sudden blindness.

Thyrotoxic cardiomyopathy may develop because the heart enlarges and thickens to meet the increased metabolic demands. In some cases, the cat will develop a heart murmur associated with the cardiomyopathy.

### How is hyperthyroidism diagnosed?

Diagnosis of feline hyperthyroidism is generally straightforward. The first step is to determine the blood level of one of the thyroid hormones, called total thyroxine (or TT4). Usually, the TT4 level is so high that there is no question as to the diagnosis.



## How is hyperthyroidism treated?

Before choosing any form of treatment, several tests are performed which may include blood tests, a urinalysis, chest x-rays, an ECG, and blood pressure measurement. These tests are needed to evaluate the overall health of the cat and to predict the likelihood of complications with the chosen treatment protocol. Cardiac ultrasound or echocardiography may be recommended based on your cat's condition, especially if there is any concern about cardiomyopathy.



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There are four treatment options; any one of which may be the best choice for a particular patient. Many factors must be considered when choosing the best therapy for an individual cat. The four treatment options for hyperthyroidism are:

1. **Surgery.** Surgical removal of the affected thyroid gland(s) may be very effective. Since hyperthyroid cats are usually over eight years of age, there is a degree of risk involved. However, if the cat is otherwise healthy and the initial diagnostic tests and treatment did not reveal any underlying conditions, the risk is minimal. If the disease involves both lobes of the thyroid gland, two surgeries may be required, depending on the surgeon's choice of procedures. In many cats, only one thyroid lobe is abnormal, so only one surgery is needed.

Some hyperthyroid cats have thyroid cells in abnormal locations – called *ectopic* thyroid tissue – and they may remain hyperthyroid after surgery.

Your cat may be hospitalized for one to two nights following surgery, and should begin to eat and behave normally after returning home. One to two weeks after surgery, another TT4 level is measured.

2. **Oral medication.** Life-long administration of methimazole can control the effects of an overactive thyroid gland. It takes several weeks for methimazole to restore thyroid hormone levels to normal. Some cats develop side effects to methimazole, which may include vomiting, lethargy, anorexia, fever, liver damage, anemia and a decrease of white blood cells in the blood.

3. **Radioactive iodine.** A very effective way to treat hyperthyroidism is with radioactive iodine therapy (I-131). When an injection of radioactive iodine is given, it destroys the abnormal thyroid tissue without endangering other organs. I-131 therapy does not require anesthesia, and it eliminates the need for daily medication. This is unfortunately not available in Hong Kong.

4. **Prescription nutrition.** The most recent development for treating hyperthyroidism in cats is Hills Prescription Diet y/d<sup>®</sup> Feline. The food is *not* medicated. Over 10 years of clinical nutrition research revealed that by controlling dietary levels of iodine, the hyperthyroid cat's body would resume normal thyroid hormone production. This is *not* an iodine-deficient diet. Rather, the iodine content is precisely controlled.

## Will my cat be cured with treatment?

Recurrence of the disease is a possibility in some cats.