

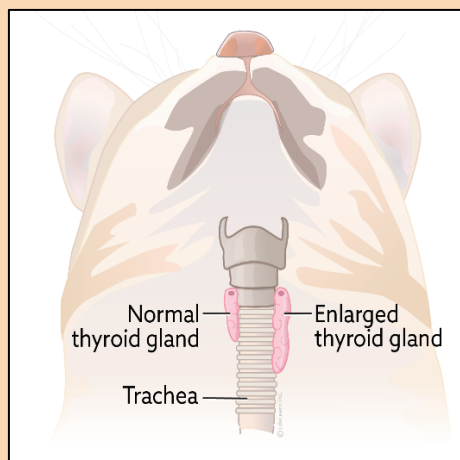


# Hyperthyroidism in Cats

## What is hyperthyroidism?

The thyroid is a paired gland located in the front of the upper neck of mammals. It varies in size and is usually not able to be felt in normal cats. The thyroid produces several hormones that control the body's metabolic rate and regulate calcium levels in the body. In cats with hyperthyroidism, the thyroid gland produces higher than normal levels of the hormones thyroxine and triiodothyronine, resulting in an increase in metabolic rate.

In around 1-2% of cases, this overactive thyroid is due to a cancer of the gland, but in most cases, though the gland does tend to enlarge, the changes are not cancerous. Most cats that develop this condition are middle aged to older; around 10-15 years of age.



## How does it affect my pet?

Overproduction of thyroid hormones leads to many changes throughout the body. Though other systems are also affected, its major affect is on the heart, leading to a greatly increased heart rate, heart rhythm changes, heart murmurs, and increased blood pressure. Over time, these effects can lead to permanent changes in the heart muscle, resulting in a condition called 'thyrotoxic cardiomyopathy'. If blood pressure increases to a dangerous level, this can result in multiple organ damage including blindness, kidney failure and bleeding in the brain.

At home, you will tend to see your older cat becoming increasingly skinnier, with an unkempt coat, long thickened nails, and a grumpy attitude. They appear restless and irritable, and tend to become very vocal, often appearing to wander aimlessly around the house yowling for no apparent reason. Affected cats will eat ravenously, but will not be able to hold their weight, and will actually suffer from weight loss. You may be able to notice that their heart beat and breathing rate are faster than usual. They may drink more and urinate more than they used to.

Many cats diagnosed with hyperthyroidism also have chronic kidney disease (CKD). In many cases this has been developing as an unrelated condition, however, hyperthyroidism can *cause* kidney disease, and clinical signs of both these conditions are very similar. It is possible that CKD will not be apparent on blood tests until after hyperthyroidism has been stabilised with treatment.



## What can we do about it?

Fortunately, hyperthyroidism can be treated and managed. Depending on your cat's individual circumstances, there are several forms of therapy that may be effective.

**Medication:** The most commonly elected treatment is oral medication. This is required as a lifelong treatment, with a tablet given by mouth once or twice every day. A trans-dermal formulation which is absorbed through the skin is also available for those cats who are impossible to tablet. With either medication, it will take several weeks before an improvement in signs is seen. It is essential that cats have regular blood tests every 3 to 6 months while using these medications, as some side effects can occur which are only apparent on blood tests; it is important that we know about these effects as soon as possible so that we can stop the medication or change the dose to avoid worsening of these side effects. In addition, the dosage required is expected to change over time, so thyroid level blood tests are also needed every 3 to 6 months to ensure the dose is still effective.

**Surgery:** Surgical excision of the tumour, or even of the entire thyroid gland can be successful. However, this is a complicated and risky procedure, and as less than 2%

of cats with hyperthyroidism have a thyroid tumour, it is generally not recommended in most cases. Diagnosis of a tumour versus simple thyroid enlargement requires referral to a Specialist for advanced imaging and further tests.

**Radioactive iodine:** This is a very effective treatment for many cats. A single injection of radioactive iodine is given which targets and destroys abnormal thyroid cells whilst sparing other organs. Once therapy is completed, the aim is that no further medications or treatment are needed. Cats are required to remain in hospital for 1-2 weeks following treatment. Few clinics offer this therapy as it requires specialised facilities and training.

## Can I choose not to treat my cat's hyperthyroidism?

Due to the potentially serious complications of this condition, we do highly recommend treatment. In most cases, treatment leads to reversal of most if not all of the organ changes that have occurred as a result of the disease, and a resolution of the clinical signs seen at home. We expect that cats who are receiving treatment will show a normalised appetite, weight gain, improved coat quality, improved mood, reduced vocalisation, and a normalised heart rate and blood pressure.

Sometimes, we do find that once their hyperthyroidism is under control, further tests show that treated cats also have chronic kidney disease that may have been masked in previous tests. In these cases, we can now also treat the CKD. If we had not successfully treated the cat's hyperthyroidism, we may be unaware of the presence of CKD and therefore miss the opportunity of treating this, which extends and greatly improves your cat's wellbeing and quality of life .

## Can it be prevented?

Unfortunately, hyperthyroidism cannot be prevented. The earlier we can detect the condition and begin treatment, the more likely it is that we will be able to prevent permanent organ changes, and the more likely it will be that the cat will respond well to treatment. Annual blood testing for all senior cats is recommended to aid early detection of hyperthyroidism, CKD, and other conditions that are commonly found in older cats.

## What are the costs involved in treatment?

Initial detection of hyperthyroidism is usually achieved through a veterinary consult, physical exam and blood tests, the cost of which is around \$400 at The Vet Clinic.

Regular blood tests to monitor thyroid and kidney levels are around \$300, including consultation with our vets to discuss your cat's progress and blood

results. Depending on your cat's individual response to treatment and general health, these tests may be required every 3 to 6 months, or perhaps annually. Medication costs vary depending on the formulation chosen, but are usually around \$100 per month for tablets and \$200 per month for trans-dermal products that can be applied to the ear and absorbed through the skin.

Costs for Specialist surgery vary considerably. Keeping in mind referral fees, and the costs of diagnosing the presence or absence of a thyroid tumour through specialised testing, total costs are likely to be in the many thousands of dollars.

The costs of undertaking Radioactive Iodine therapy will also vary depending on the practice offering this treatment. We have referred a few patients over the last couple of years, and their treatment has cost around \$2000 - \$3000.

### How can I get more information?

If you would like to find out more about hyperthyroidism, please feel free to contact the clinic anytime to have a chat with our friendly team. If you think your cat may have hyperthyroidism, the best thing to do is to make an appointment with one of our vets for a full consultation and physical exam of your cat. We can work with you to develop the best diagnostic and treatment plan for you and your friend going forward.

To make an appointment, simply contact The Vet Clinic on 8564 3488 to speak with one of our knowledgeable and friendly nurses.