

## Hyperthyroidism

The thyroid glands are a pair of glands usually located on the underside of the neck/throat. An overactive thyroid gland is more commonly seen in cats, whereas an underactive thyroid is more common in dogs.

Hyperthyroidism is perhaps the most common hormonal disorder of cats, and affected cats are usually over 10 years old. The thyroid usually becomes overactive either due to hyperplasia or a tumour – it is rare for tumours to be malignant, they are usually benign.

### Clinical signs

If your cat is hyperthyroid, they may show any of the symptoms listed below:

- Weight loss, usually despite a good appetite
- Unkempt hair coat
- Personality change
- Vomiting
- Diarrhoea
- Anorexia
- Panting and breathlessness
- Fast heart rate +/- other cardiac abnormalities

### Diagnosis

If you suspect your cat is showing any of the signs listed above, you should make an appointment with your vet. Your vet will perform a full clinical examination on your cat, including palpating the throat for an enlarged thyroid gland, and paying close attention to the heart rate and rhythm.

A blood sample will be taken to run a full health profile, to ensure there are no other underlying abnormalities, in addition to a thyroid hormone (T4) level.

If your cat has any concurrent underlying illnesses, this can artificially suppress the T4 concentration, and so the cat may have all the symptoms of hyperthyroidism, but the blood test may be normal.

### Treatment

There are 3 main treatment options for hyperthyroid cats.

#### *1. Medical management*

This involves giving your cat daily medication, either in the form of a tablet or a liquid. There is not a 'one size fits all' in regards to medication, and when first started on medication your

cat will require a full blood profile and a T4 measurement every few weeks and the dose of the medication may need adjusting periodically in response to your cat. The medication does carry risks, hence the regular blood monitoring.

2. *Surgery*

Surgery involves a full general anaesthetic and the affected thyroid gland(s) are removed. It is recommended to stabilise the cat with medication first. Once the thyroid gland(s) are removed, the hyperthyroidism is cured. If only 1 affected gland is removed, it is fairly common for the other gland to develop hyperthyroidism later on and so a second surgery may be required. There is a risk with any anaesthetic, especially as hyperthyroid cats are usually older. The main risk in regards to the surgery itself is damaging the parathyroid glands. These glands are closely associated with the thyroid glands and are involved in calcium regulation in the body. If these are damaged, the cats blood calcium levels can fall and they may show signs such as seizures, and if untreated death. This can sometimes be transient and control may return; if permanent, the cat will require calcium supplementation for the rest of its life.

3. *Radioactive iodine treatment*

This is considered the 'gold standard' treatment. The cat would be referred to a specialist hospital that can perform this treatment. While undergoing treatment the cat will need to be kept in isolation and once discharged there may be specific instructions regarding disposal of litter tray contents etc. This treatment modality cures the hyperthyroidism and avoids a general anaesthetic and surgery.

If not treated

An increase in thyroid hormone levels in the body leads to an increased metabolic rate. This increased metabolic rate, as well as direct effects from the thyroid hormones, can affect the heart. These increase the heart rate and contractility. The cat can normally compensate for this initially, but the longer left untreated, the increased chance that the cat will develop heart failure due to decompensation.

The increased metabolic rate leads to weight loss despite a good appetite. If untreated your cat will continue to lose weight.

Concurrent conditions

As mentioned above, some cats can develop heart disease secondary to the hyperthyroidism. A lot of the time, once the hyperthyroidism is controlled the heart disease is managed. Sometimes, cats need medication for the heart disease itself.

It is common for cats to suffer from renal disease in addition to hyperthyroidism. This is often undetectable when the cat first presents; the hyperthyroidism masks the signs. Once the hyperthyroidism is stabilised though, the renal disease can be unmasked. It can sometimes be



difficult to control both the hyperthyroidism and renal disease to a satisfactory degree with medication.

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