

Hyperthyroidism in Cats

What is hyperthyroidism?

The thyroid gland is one of the most important glands in the body. It produces thyroid hormone which is involved in regulating the rate of metabolism (chemical processes) that occur in the body. Cats have two thyroid glands that are located either side of the windpipe. Hyperthyroidism, as the name would suggest, is an excessive production of thyroid hormone from one or both of the thyroid glands. This is usually due to a physical enlargement.

What are the clinical signs of hyperthyroidism?

Hyperthyroidism is a disease most commonly affecting middle-aged to older cats. The clinical signs seen are the result of the body's metabolism speeding up as a result of the high levels of thyroid hormone in the blood. These can include one or a combination of the following:

- Drinking and urinating excessively
- Weight loss despite an increased appetite
- Vomiting
- Diarrhoea
- Hyperactivity
- Swelling around the neck region
- Increased effort breathing

Which tests are performed to diagnose hyperthyroidism?

If the clinical signs are suggestive of the disease, hyperthyroidism is diagnosed with a simple blood test (called a 'T4'). This checks the levels of thyroid hormone in the body. The process involves taking a small amount of blood from your cat, which takes approximately 5 to 10 minutes, and running the test using our in-house blood machine. Results will usually be relayed to you within 24 hours.

We also advise running a general blood profile. This not only supports our diagnosis of the disease but also allows us to check for underlying problems such as kidney disease which may not be obvious on a clinical examination and can sometimes be masked by hyperthyroidism.

The heart can often struggle to cope with the high metabolic rate caused by hyperthyroidism. This can cause it to change shape and beat harder and faster. A high heart rate and/or murmur is generally the first thing picked up by a vet listening to the heart and a blood pressure check may also be advised. A rapid heart rate eventually leads to heart failure if left untreated.

How is hyperthyroidism treated?

There are four main treatment options for managing hyperthyroidism currently. Each option has

it's own benefits and disadvantages depending on the situation and these are discussed at the time of diagnosis.

It is important to realise that treating hyperthyroidism can occasionally unmask underlying kidney disease once thyroid levels return to normal and blood pressure is reduced. It also has the potential to cause the opposite disease (hypothyroidism, a reduction of thyroid hormone) in some cases.

Below is a summary of the different treatment options:

1) Radioactive iodine treatment

This is the gold standard treatment available and has a 95% cure rate. It is performed at a specialist clinic and involves either a single injection or administration of an oral capsule of radioactive iodine, which travels directly to the thyroid glands and destroys the functioning thyroid cells. It is very safe, requires a two week stay in hospital isolation and does not damage any of the surrounding tissue. It is initially more costly than the other options (around £1500)* and very rarely cats require a repeat treatment but is the most effective treatment currently available for hyperthyroidism currently. Not all cats are suitable candidates for this treatment option so a discussion with the vet is advised first.

2) Anti-thyroid medication

This is a medication available in tablet form which acts to block thyroid hormone production in the thyroid glands. It is used to manage the disease rather than cure it. In most cases it needs to be given twice daily so your cat will need to be willing to take tablets orally. When the course is first started we advise a repeat blood test after three weeks to check the level of thyroid hormone is coming down, if it is not then the dose is increased and another test performed monthly as needed until stability is achieved. Once on a stable dose we advise a check-up every three months to perform a thorough clinical exam, address any concerns you may have and dispense more medication. Repeat blood tests are generally advised once every six months. Side effects such as reduced appetite, nausea and vomiting are rare but can happen in some cases. With check ups, repeat blood tests and tablets the cost works out to approximately £55 per month*.

3) Iodine-restricted food

Iodine in a cat's diet is used to produce thyroid hormone, so limiting the amount fed can help to reduce thyroid hormone levels in cases of hyperthyroidism. There is now a diet available that has restricted iodine content, allowing control of the disease without having to administer medication to your cat. This is the simplest option in terms of hyperthyroid treatment, however there are some things to consider. In order for it to work it has to be the only food the cat eats (ie. no treats or other tidbits). Any external iodine source will cancel out the effect of the food. Other cats in the household can eat it but they should be supplemented a regular cat food on top. Other medication your cat is on may contain iodine so this will also need to be taken into account. Once started on the food we advise a check-up at 4, 8 and 12 weeks to assess clinical signs, thyroid and kidney function and blood tests may be required. We also advise regular check ups

once stable to ensure the food is working. Clinical trials performed recently have shown that cats have had a good response to this form of treatment.

4) Thyroidectomy

This potentially curative treatment involves removal of the left or right thyroid gland under a general anaesthetic. The side removed depends on which is enlarged. We advise stabilising the disease first using medication (Felimazole) to ensure the anaesthetic is as safe as possible. Any surgery carries higher risks in older cats, especially those with heart disease, so it will depend on how well suited your cat is to the procedure and we take every precaution to ensure that risks are minimised. Postoperative complications are rare but are more common in cats that have had both sides of the gland removed. These can include nerve damage, hypothyroidism or hypocalcaemia (low calcium levels). A gland that regulates calcium in the body is partly imbedded within the thyroid gland and it's removal can increase the risk of hypocalcaemia. We usually only remove one gland initially, but in 20% of cases surgery on the second gland is required at a later stage.

Need more information?

Please feel free to contact the clinic if you wish to discuss the options in more detail. We are always happy to discuss the best method of treatment for your individual circumstances.

Although success can never be guaranteed, hyperthyroidism is a gratifying condition to treat in cats, because in most cases we are able to give patients a very useful extension to their life expectancy with minimal side effects.