

Client Information Sheet

Feline Hyperthyroidism

What is hyperthyroidism?

Hyperthyroidism is caused by an 'over-active' thyroid gland. It is the most common hormonal disorder of older cats. The paired thyroid glands are located in the neck, and produce a hormone called thyroxine ('thyroid hormone') which controls many of their metabolic or 'energy using' functions. With hyperthyroidism, the thyroid gland becomes enlarged and produces excessive thyroxine, usually due to the presence of one or more benign tumours in the glandular tissue. Very rarely (<2% of affected cats), thyroid tumours can become malignant and spread to other parts of the body.

What are the effects of hyperthyroidism?

Excessive thyroid hormone has many adverse effects on the body, particularly on blood pressure, the kidneys and the heart. Signs that you may notice in your cat include changes in behaviour, a ravenous appetite yet losing weight, vomiting, diarrhoea, increase in thirst, increase in urination, unkempt coat and sometimes breathing difficulties. Hyperthyroidism when left unmanaged can become life threatening, but fortunately it can be effectively treated if detected early enough.

How is hyperthyroidism diagnosed?

Many of the clinical signs listed above can also be caused by other conditions which is why it is important for your veterinarian to examine your cat thoroughly if you notice any of these changes. At this point, they will usually recommend a blood test to screen your cat for a number of common problems, and sometimes additional tests involving xrays and ultrasound, before making a final diagnosis. Elevated levels of thyroid hormone in your cats blood are usually indicative of underlying hyperthyroidism. Sometimes there are other concurrent issues, such as kidney disease, which can be partially 'masked' by hyperthyroidism and only become apparent once treatment is started. Ongoing testing is therefore an important part of managing your hyperthyroid cats overall health.

How can it be treated?

There are two different approaches to treating hyperthyroidism – 'control' versus 'curative':

1. Daily control of thyroid hormone production

These treatments 'control' the production of thyroid hormones and therefore relieve the clinical signs and consequences of having an overactive thyroid gland. However, they do not 'cure' the underlying condition, so need to be used daily for life. There are two ways of controlling daily thyroid hormone production:

a) Daily medication

There are two main drugs available to manage hyperthyroidism, carbimazole and methimazole. They both work in the same way by blocking the production of thyroid hormone. Both drugs are available as tablets, and methimazole is also available as a gel that is applied to the inner ear. These treatments are required daily, sometimes twice daily, for the rest of the cat's life. They can be associated with side effects – most commonly these are mild and resolve without needing to stop treatment (such as vomiting, diarrhoea, loss of appetite), but occasionally more severe side effects can be seen that necessitate stopping treatment. This includes liver toxicity, skin conditions and

other blood abnormalities. For this reason, and for monitoring the correct dosage, regular check-ups and blood tests are required when cats are receiving these treatments.

b) Dietary therapy

There is a prescription diet available for managing feline hyperthyroidism. Dietary therapy reduces levels of thyroid hormone in the body by restricting iodine in the diet. Iodine is required for the production of thyroid hormone, so by limiting the level of dietary iodine the production of thyroid hormone is also limited. Diet alone is not always effective in adequately controlling hyperthyroidism, but can be useful in the early stages of disease, cats that have other concurrent illnesses or that are difficult to medicate, or to help in stabilisation prior to pursuing a curative treatment.

2. Curative treatments

a) Surgery

Surgical removal of the thyroid gland can be performed and is frequently an effective way to treat the disease. However there are risks and complications involved in anaesthetising an elderly cat with heart disease (which is frequently the case with hyperthyroid cats) and additional risks with damaging another gland next to the thyroid (the parathyroid gland), which controls blood calcium levels. There is also the chance that the overactive thyroid can be incompletely removed, or can recur following surgery.

b) Radioactive iodine treatment

This is recognised world wide as being the gold standard treatment for hyperthyroid cats. Radioactive iodine (I-131) is administered orally or as an injection under the skin and becomes concentrated in the thyroid gland, destroying the overactive tissue whilst having no adverse effects on the rest of the body. In about 98% of cats a single treatment is curative. Furthermore studies have shown that the life expectancy of hyperthyroid cats treated with radioactive iodine is longer than those controlled with daily medication. Due to radiation safety regulations, treated cats need to be hospitalised for 1-2 weeks following treatment in a licensed facility. Only a small number of facilities offer radioactive iodine treatment due to the specialised training & equipment required to house and nurse treated animals during the hospitalisation period.

What is the most cost effective treatment?

All of the treatment methods mentioned above will have some beneficial impact on managing your cats hyperthyroidism if they can be instigated effectively.

Many people opt for a treatment that involves daily control of thyroid hormone production, because at first glance this seems a much cheaper option. However, because these medications are only controlling the disease not curing it, costs are also ongoing and can quickly add up. There is also the difficulty of treating your cat every day which can impact on your relationship with your pet. When you take into consideration all the costs required for the daily control of a hyperthyroid cat over a one year period, the cost is about equivalent to treatment with surgery or radioactive iodine. These latter two treatments, while generally curative and without ongoing cost, require specialist skills and/or facilities that make them more expensive to start with and harder to source.

Your veterinarian can talk you through each of these options further and help you decide which one is most appropriate for your pet and situation. Most cats with hyperthyroidism will live several years following treatment of their condition, unless they have another pre-existing disease or develop other conditions in the meantime. This means if they are detected early & managed effectively, your hyperthyroid cat can still maintain good quality of life for a long time to come.