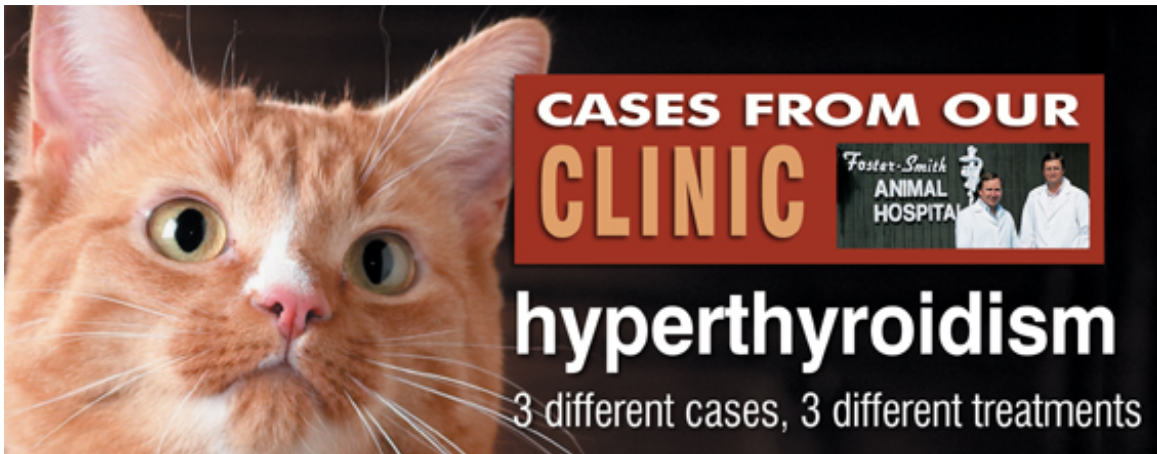


Cases from Our Clinic: Hyperthyroidism

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We've seen a number of hyperthyroidism cases over the years. In fact, though the reasons are unclear, studies show that the incidence of overactive thyroid glands in cats have markedly increased over the last 25 years. Feline hyperthyroidism is treatable if caught early; however, serious medical conditions can result if this disease is left untreated.

All of the symptoms associated with feline hyperthyroidism involve an increase in thyroid hormone. Common symptoms include:

- Increased appetite with weight loss
- Hyperactivity
- Vomiting
- Diarrhea
- Increased water consumption
- Frequent urination

However, as the cases below illustrate, you can help your hyperthyroid cat lead a normal, healthy, and happy life:

Case One: Fuzzy Goes

Fuzzy, an eight-year-old white Persian mix, was known for being active, healthy, and fastidiously clean. So we were

Treatment	Pros	Cons
Methimazole	<ul style="list-style-type: none">• Medication readily available• Inexpensive in short-term• No anesthesia or surgery• No hospitalization	<ul style="list-style-type: none">• Not a cure; the adenoma will continue to grow• Lifelong therapy necessary• Medication may need to be

naturally concerned when Fuzzy's owner, Alice, brought him in to see us because lately he'd been drinking more water and had begun urinating outside the litterbox in the house. Alice was worried that Fuzzy had a urinary tract problem - which is common in neutered male cats.

But during our physical exam of Fuzzy, we noticed something amiss with the thyroid gland in his neck. In fact, the gland was so enlarged we could feel the left lobe of the gland, but could not find the right lobe. A blood test showed an excessive amount of thyroid hormone (known as thyroxine or T4 in blood tests), which confirmed that Fuzzy had an overactive thyroid gland.

We discussed Fuzzy's treatment options with Alice. Initially, we

	<p>hospitalization or special facilities required</p> <ul style="list-style-type: none"> • Treatment is reversible, if needed • Development of hypothyroidism very rare • Preferred in cats with kidney failure or other serious disease • Use prior to radiation or surgery to stabilize cat 	<p>may need to be given more than once daily</p> <ul style="list-style-type: none"> • May be difficult to give medication • Medication has side effects some cats cannot tolerate • Periodic blood work required
Surgery	<ul style="list-style-type: none"> • Cures the condition unless all of the abnormal tissue is not removed • Approximately the same cost as several years of methimazole • Short hospitalization • No need for daily medication 	<ul style="list-style-type: none"> • Requires anesthesia • Cat must be a good surgical candidate • Post-operative complications can occur to parathyroid gland or nerves in the area • Could rarely cause hypothyroidism • Not possible if thyroid tissue is located within the chest • Recurrence possible
Radiation	<ul style="list-style-type: none"> • No anesthesia, sedation or surgery 	<ul style="list-style-type: none"> • Availability limited • Most

recommended drug therapy to control Fuzzy's enlarged thyroid gland. But Alice didn't like the idea of giving Fuzzy medicine every day for the rest of his life - after all, Fuzzy was relatively young. Nor did she like the costs that would add up over years of thyroid medicine use, especially since medicine can control hyperactive thyroids but it does not cure hyperthyroidism.

Alice finally opted for surgery to remove the abnormal thyroid tissue. Unlike medications, successful thyroid surgery can cure feline hyperthyroidism. However, the surgery could possibly have to be repeated if additional abnormal tissue growth should occur.

Thankfully, Fuzzy's

abnormal tissue was contained in the immediate area and surgical removal was fairly easy. After a short recovery time, Fuzzy was soon back to his normal antics and Alice was consulting us on a different matter - how to best let Fuzzy release all his playful energy.

	<ul style="list-style-type: none"> • All abnormal tissue is treated • No need for daily medication • Does not destroy healthy tissue or other organs • Normal thyroid function returns within a month • Preferred if malignancy present, or thyroid tissue located within the chest 	<p>expensive alternative: over \$1,000</p> <ul style="list-style-type: none"> • Specialized facility required • Hospitalization and quarantine required • Treating other diseases during initial days following treatment is not possible • In rare cases may need to be repeated • Could rarely cause hypothyroidism
<p>Chemical Ablation</p>	<ul style="list-style-type: none"> • Short anesthesia time • Short hospitalization • No need for daily medication • Specialized facility not required 	<ul style="list-style-type: none"> • Requires anesthesia • Post-operative complications can occur to nerves in the area • Not possible if thyroid tissue is located within the chest • Effects may be short-term, and procedure may need to be repeated multiple times

Case Two: Grigio the Hungry

Michael had never seen his sleek gray, 13-year-old cat, Grigio, so hungry. But Grigio seemed ravenous all the time. In fact, Grigio would whine at the closed pantry door where his food was kept, jump onto the counter while his meals were prepared, and gobble down his food as soon as it was ready. More mysterious, however, was that Grigio was losing weight in spite of his increased appetite.

Needless to say, we were just as worried about Grigio's health as Michael. We ordered a complete blood workup, including a T4 test. The test results showed that Grigio's T4 levels were elevated, as were his kidney values: blood urea nitrogen (BUN) and creatine. The high T4 levels told us that Grigio's thyroid was hyperactive, while the elevated BUN and creatine levels indicated potential kidney disease.

There was a chance that Grigio's overactive thyroid could also be causing his kidney troubles. While we monitored his kidney function, however, we wanted to start treating his hyperthyroidism. We suggested Michael use the drug methimazole to control Grigio's thyroid activity. This would also let us monitor and treat his kidney problem. Plus, considering Grigio's age, drug therapy was less obtrusive and less costly than other treatments for hyperthyroidism.

Case Three: Gladys the Cat Clown

Gladys is an active, young spayed female calico owned by Rodney, who had recently retired. At first, Rodney was worried about what he was going to do with all his time. But since he adopted Gladys, his days had been filled with companionship and laughter - especially since Gladys is known as a bit of an antic-filled cat clown.

But Rodney became worried when Gladys began keeping him up at night with her constant activity. So he brought her into us to have her checked out. Though Gladys appeared physically healthy, we still ran some precautionary blood tests and found an elevated T4 level in Gladys' blood and recommended treatment for an overactive thyroid.

Since Gladys was so young, Rodney was interested in radioactive iodine therapy. With this treatment, radioactive iodine is given to the cat intravenously. The radioiodine then becomes concentrated in the thyroid gland and destroys the malfunctioning tissue but does not affect any healthy thyroid tissue. This treatment can be expensive and Gladys would have to remain at the clinic for a week or two until the radioactive material was cleared from her body. We did not have the equipment to perform this therapy so we gave Rodney and Gladys a referral to a larger clinic in Madison. The prognosis for cats that receive this treatment is excellent. Gladys responded favorably and went on to live a normal, active life.

All three cats are doing extremely well now and their owners have reported no further signs or complications.

A new treatment, called "ablation" is being investigated. With this treatment, ultrasound is used to identify the thyroid gland, which is then injected with a chemical or exposed to heat via high radiofrequency to kill the abnormal cells. Although the procedure requires anesthesia, the treatment takes less than 15 minutes.

Q. What is the thyroid gland?

A. The thyroid gland is a small, butterfly-shaped gland in the neck. The thyroid gland produces the major thyroid hormone called thyroxine (T4) and a small amount of another hormone, triiodothyronine (T3). These hormones regulate the body's metabolic rate and affect every system in the body. The production of the thyroid hormones is controlled by the hormone called thyroid-stimulating hormone (TSH). TSH is produced by the pituitary gland, which is found at the base of the brain.