

Implant Radioactive Substance, Abandon for Seven Days – Could You Do This to Your Pet?

Surprisingly, this is the traditional veterinarian's treatment of choice for this now-epidemic condition. If caught in its early stages, there's a kinder, gentler approach with a secondary backup solution that can reverse the problem for good.

Reviewed by [Dr. Becker](#)

STORY AT-A-GLANCE

- Feline hyperthyroidism is a common problem in U.S. cats over the age of 10. The disease is usually caused by a benign tumor on the thyroid gland
- Radioactive iodine therapy is the treatment of choice among conventional veterinarians for cats with hyperthyroidism
- Studies are underway to discover how best to tailor radioiodine doses to the individual cat versus the current one-size-fits-all dosing protocol, which leaves a significant number of cats with an underactive thyroid
- If your cat's hyperthyroidism is discovered early, natural therapies can be helpful. Other more traditional treatment options include surgery to remove the tumor, or medication which must be given for the remainder of the cat's life
- The best approach is to help your cat avoid this disease in the first place. To help prevent an overactive thyroid in your kitty, avoid feeding fish-based diets and foods containing soy, and eliminate flame retardant chemicals from your home environment

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The thyroid is a butterfly-shaped gland at the base of the throat. When the gland overproduces thyroid hormone, the result is the condition known as hyperthyroidism.

Sadly, feline hyperthyroidism has reached epidemic proportions in the U.S. It's the most common endocrine disorder of domestic cats, with over 10% of kitties over the age of 10 diagnosed with the disease.

Hyperthyroidism is usually caused by a benign tumor on the thyroid gland called an adenoma. In rare cases, the tumor is a carcinoma, which is cancer.

Radioactive Iodine Treatment of Feline Hyperthyroidism

One of the traditional therapies for hyperthyroidism in cats is radioactive iodine treatment, and in fact, many experts in the traditional veterinary community consider it the treatment of choice for most cats with the disease.

The therapy takes place at a specialized radioactive-approved facility. The patient is given a single dose of I-131, a radioactive form of iodine that attacks the diseased portion of the thyroid gland.

The iodine may be given orally or by injection on the first day of hospitalization. Afterwards, the kitty is placed in isolation for about five to seven days until her radioactivity level drops low enough that it's safe for her to come home.

While hospitalized, cat patients are cared for by a hospital veterinary team. By law, their owners aren't allowed to visit due to the potential for exposure.

As unsettling as it might seem to contemplate putting a radioactive substance into your pet and then abandoning her for a week, this therapy is used very commonly on cats (and people as well).

However, one of the drawbacks to radioiodine therapy in kitties is that every patient is given the same fixed, one-size-fits-all dose. The fixed dose eliminates the hyperthyroidism in most cases; however, there is concern in the veterinary community that many cats are being over-treated.

In fact, estimates are that around 30% of treated kitties become hypothyroid, which means their thyroid gland goes from being overactive (hyper) to underactive (hypo).

So a large proportion of cats are getting more radioiodine than they need, while a small number are getting less than they require to resolve their condition.

Clinical Trial Underway to Individually Tailor Radioiodine Doses

Veterinarians David Panciera and Wendy Morr  at the Virginia-Maryland College of Veterinary Medicine at Virginia Tech are working to solve the problem of fixed radioiodine dosing in hyperthyroid cats.

In a clinical trial, the researchers are using a technique called scintigraphy to measure the degree of thyroid disease in feline patients enrolled in the study. Then they tailor the dose of I-131 based on what they learn from the scintigraphy, including information about the size of the thyroid gland.

In prior studies, researchers were able to improve treatment responses by modifying the dose of radioiodine based on a kitty's thyroid hormone levels and symptoms. In the current clinical trial, the researchers hope to develop objective criteria to determine the dose that delivers the best treatment responses.

The VA Tech DVMs also teamed up with a vet at VCA Veterinary Referral Associates in Gaithersburg, Maryland who routinely treats hyperthyroid cats with radioiodine. The VCA vet, Dr. Tina Conway, has treated over 200 cats and was already using scintigraphy to visualize thyroid glands of patients in her practice.

Conway adapted her methods to match the college's approach so that her data can be used in the overall study. According to Dr. Greg Daniel, professor of radiology and head of the Department of Small Animal Clinical Sciences at VA Tech's veterinary college:

"We are doing two studies in parallel. The veterinary college is looking at a series of radioiodine doses and will compare results with Dr. Conway, who used a different dose range. Eventually, we can combine the data so we can look at effectiveness across a broader range."¹

According to both the VA Tech vets and Conway, the clinical research has already benefitted cats enrolled in both studies.

Symptoms of Feline Hyperthyroidism

About half of cats that develop hyperthyroidism have an increased appetite; however, about 90% of those kitties ultimately lose weight because a side effect of too much circulating thyroid hormone is an increase in metabolism. Other symptoms of hyperthyroidism include:

- High blood pressure
- Frequent vomiting
- Increased body temperature, heart and respiration rates (due to the up regulation of metabolic processes)
- Hyperactivity

A combination of increased appetite, weight loss and sudden, unexpected bursts of energy in an older cat is a definite sign your kitty may have an overactive thyroid. Make an appointment with your veterinarian as soon as possible.

Tests for Thyroid Dysfunction in Cats

Dr. Jean Dodds, the world's foremost authority on thyroid disease in pets, sees lots of older cats who've been treated with radioactive iodine go hypothyroid within a few months of treatment.

According to Dodds, these patients go from reactive, pacing and howling due to hyperthyroidism, to "blobs of inactivity who don't even look at their humans, much less interact with them."

Often, the owners think their kitties have reached the end of their lives, when what they actually need is supplemental thyroid hormone to correct the hypothyroid situation and return them to the cats they were before they became hyperthyroid.

The way to monitor hypothyroidism in these cats is with a TSH test because it's very helpful in regulating doses of added T4 and T3 hormones to return the kitties to a state of metabolic balance.

To check a cat's thyroid function, Dodds recommends a total T4 test, free T4, total T3, free T3 and TSH. The TSH is important for cats who also have chronic kidney disease, which is common. Feline hyperthyroidism can be missed if kidney failure pushes the total T4 down into the upper limit of the normal range.

Dodds considers the TSH test to be the most predictive of hyperthyroidism in cats with chronic renal failure. Suppressing the thyroid in cats with kidney disease can worsen the situation with the kidneys, so they must be treated carefully. In Dodds' experience, some cats actually do better being slightly hyperthyroid when they have renal disease.

The Recommended Approach to Treating Hyperthyroidism in Cats

If it's early enough in the development of your cat's hyperthyroidism, start with natural therapies that avoid many of the risks and side effects associated with more traditional approaches.

It's important to catch the disease early. In fact, astute proactive veterinarians begin checking a cat's thyroid level at age 7 and then compare test results annually for subtle changes. If there's a slow but consistent increase in thyroid levels, we begin natural thyroid balancing protocols immediately.

There are many natural remedies that can be beneficial in managing your cat's condition if it's caught early. These include homeopathic remedies, acupuncture, herbal remedies (Eastern, Western and Ayurvedic) and nutraceuticals. Check your cat's thyroid levels annually after the age of 7.

The next choice when a natural approach is ineffective is thyroidectomy, which is the surgical removal of the benign tumor from your cat's thyroid gland. This operation should only be performed by a skilled soft tissue surgeon who has done many of these procedures.

Surgery cures the problem, which is why it's preferable, but there can be complications, including accidental removal of the parathyroid glands that sit on the thyroid, which can cause a whole host of other problems. However, successfully done, thyroidectomy cures the patient, which is the ultimate positive outcome.

Another option is medical management of the disease, which means putting the cat on a medication called methimazole, which inhibits thyroid hormone production so the amount of the circulating hormone is reduced. There can be lots of side effects of methimazole, including GI upsets that cause vomiting. Using a compounded transdermal methimazole ointment applied inside the cat's ear can help avoid GI problems.

Occasionally, a patient will develop an almost immediate allergic response to the drug in the form of an intense facial itch that comes on after the first pill is administered. This reaction means the drug cannot be continued and another treatment option is needed.

Other side effects, which are fortunately rare, include decreased platelets and increased liver enzymes. The downside to medical management is that cats must take methimazole for the rest of their lives, and blood levels must be routinely monitored. And since hyperthyroidism is known to mask kidney problems in cats, it's important for veterinarians to monitor not only thyroid hormone levels but also kidney function in kitties taking methimazole.

Start holistic kidney support via herbal and nutritional supplementation when the diagnosis of feline hyperthyroidism is made. This is also an excellent time to work with a homeopathic vet.

Tips for Helping Your Cat Avoid Hyperthyroidism

- Feed a balanced, fresh food and species-appropriate diet that is respectful of a cat's natural iodine intake (much lower requirement than dogs!)
- Do not buy canned food that is not labeled BPA-free
- Avoid feeding your cat a fish-based diet, or any food containing soy products
- Rid your environment of flame retardant chemicals
- Provide your cat with an organic pet bed
- Purchase a high-quality air purifier for your cat's environment

