

RIVERSIDE CAT HOSPITAL

Radioiodine treatment information for pet owners



If your cat has been diagnosed with hyperthyroidism, you may be overwhelmed with trying to understand the disease, treatment options, knowing what to expect, and figuring out what is best for you and your cat. We are here to help!

What is hyperthyroidism?

Hyperthyroidism is an elevation in a cat's thyroid level (T4) that is caused by a tumor on the thyroid gland. These tumors are usually benign, but they are functional, and produce an excess of thyroid hormone (T4). This elevated T4 initially may not cause any obvious clinical signs. As the disease progresses and the T4 elevates further, affected cats will become sick. Common clinical signs include weight loss (usually despite a normal or even increased appetite), vomiting or diarrhea, haircoat changes, and behavior changes. If the disease is left untreated, the chronically high T4 will have serious adverse effects on other organ systems, including the heart and kidneys. Affected cats will become emaciated, and may develop serious hypertension that can lead to blindness. Eventually the disease is fatal, though it may take several years to get to this late stage. Thankfully, though hyperthyroidism is a common disease, there are treatment options.

Hyperthyroid treatment options

There are four treatment options for hyperthyroid cats. These are medication, surgery, diet and radioiodine.



Medication

A common treatment option is medication called methimazole. This is a drug that blocks production of T4 in the thyroid gland, allowing levels of T4 hormone to reduce to normal.

Advantages:

- *Methimazole is relatively inexpensive and well tolerated by most patients. It is an effective way to reduce T4 and maintain normal T4 levels.*

Disadvantages:

- *Methimazole only controls hyperthyroidism, it does not cure it. The thyroid tumor remains, and if the cat remains hyperthyroid for several years, the tumor can become cancerous.*
- *Thyroid tumors can become very large, and sometimes even higher doses of methimazole are not effective in controlling the disease.*
- *Small numbers of cats can have potentially serious adverse reactions to methimazole that prevent them from being able to take it.*
- *Regular monitoring bloodwork is needed to manage treatment with methimazole.*
- *Finally, treated cats must receive medication 1-2 times daily, for the rest of their lives. For cats who are difficult to medicate this can be very challenging.*

Surgery

Surgery to remove the affected thyroid gland is an effective treatment option, though it's performed less often today compared to the past



Advantages:

- *The affected thyroid gland and tumor are removed surgically, usually leading to a complete cure of the hyperthyroidism.*

Disadvantages:

- *Thyroidectomy is a delicate surgery best performed by a skilled surgeon experienced in this type of procedure. There are sensitive structures nearby, like the parathyroid gland, that can be damaged during surgery.*
- *Cats must be hospitalized after surgery, often for 1-3 days, to ensure that they are stable to be discharged safely.*
- *Thyroidectomy surgery is expensive, typically on par with or more than the cost of radioiodine therapy.*



Prescription diet

A prescription diet like Hill's y/d can be fed to control hyperthyroidism. This diet works by restricting iodine. Iodine is needed by the thyroid gland to make thyroid hormone (T4). If iodine is not included in the diet, the thyroid tumor can not make excessive levels of T4.

Advantages:

- *y/d diet can be an effective way to control hyperthyroidism without surgery or medication.*
- *The prescription diet, while more expensive than regular cat food, is an affordable treatment option for many pet owners.*

Disadvantages:

- *In order to be effective, the hyperthyroid cat can ONLY eat the y/d diet and no other foods or treats at all. This is difficult for cats who are picky, or for pet owners who like to indulge their cats with treats. It's also problematic for other pets in the household, who ideally should not be fed an iodine deficient diet if they are not hyperthyroid.*
- *Monitoring bloodwork is still needed regularly to ensure the effectiveness of the diet.*
- *As with medication, the prescription diet only controls the disease, it does not cure it. With time, the thyroid tumor may grow or become cancerous.*

What is Radioiodine treatment?

Radioiodine treatment (I^{131}) is the gold standard for treating hyperthyroidism in people as well as pets. With this type of treatment, a patient is administered a single oral dose of a radioactive form of iodine (I^{131}). This radioiodine is taken up by the thyroid gland and the radioactivity in the atoms destroys the cells in the thyroid tumor. Because most of the radioactivity only travels 1-2mm within the tissue, only the thyroid tumor is destroyed, and

normal thyroid tissue is spared. The radioactive iodine is then excreted from the cat's body, mostly in the urine or feces. Once the level of radioactivity has decreased to a safe level, the pet can be sent home.

Advantages:

- *Hyperthyroid cats treated with I131 are cured of their hyperthyroidism. The small dose of I131 concentrates in and destroys the thyroid tumor, thereby providing a permanent cure in 99% of treated cats.*
- *Treatment with I131 is well tolerated by patients. Treatment does not require anesthesia, and is not invasive, unlike surgery. The I131 is administered in the form of a single oral capsule that is given at our facility.*
- *Radioiodine allows for treatment of hyperthyroidism without having to administer medication, helping to preserve your bond with your cat.*
- *After initial follow-up bloodwork, ongoing regular blood tests are not needed as the disease is cured.*
- *The chance of a benign thyroid tumor becoming cancerous later on is eliminated.*



Disadvantages:

- *I131 treatment requires your cat to stay in our clinic for a few days. The length of hospital stay required varies depending on individual factors, but can range from 2 days to 4-5 days. In rare cases, a treated patient may need to be hospitalized for longer.*
- *The vast majority of cats treated with I131 are cured of their disease. However, there are very small numbers of patients who remain hyperthyroid following treatment, and a second treatment may be needed in those cases.*
- *Most treated cats retain enough functioning thyroid tissue after treatment to maintain normal T4 levels. However, some cats can become HYPOthyroid after treatment. Those cats will need lifelong thyroid supplementation.*

Preparing for your cat's treatment

Once your veterinarian has determined that your cat may be a good candidate for I131 treatment, he or she will discuss the treatment with you and together you will decide if it's right for your cat. Then, your veterinarian will consult with us about your cat's case and your cat will receive an appointment for their treatment. Prior to coming in for treatment, your cat will need some blood tests and x-rays. If your cat is taking methimazole or eating y/d, you will need to stop the medication or prescription food at least 7 days prior to your cat's appointment date.

Treatment day

On the day of your cat's appointment, our veterinarian will perform a full physical examination to ensure that your cat is healthy enough to undergo treatment.



She will discuss your cat's medical history with you and review the treatment your cat will receive, as well as your responsibilities following treatment. Time will be provided for you to ask questions. We want to make sure you understand and are comfortable with your cat's care.

You will need to bring your cat in a carrier. You will also need to bring the food that your cat is accustomed to eating (enough for at least 1 week). You are welcome to bring a bed, toys, small scratching post, etc, but we will not be able to return these items to you following treatment. Make sure to bring any medication your cat is taking, as we'll need to continue giving it during your cat's stay.

Once your cat is admitted for treatment, the veterinarian will administer the I131. This is in the form of a single oral capsule that is administered using a

special pill holder. This is to ensure that your cat swallows the capsule easily and prevents the veterinarian from having to hold the radioactive capsule in her hands. After administration of the capsule, your cat is monitored for a few hours to ensure that he or she doesn't vomit up the medication.

What happens to my cat during their hospitalization?

After receiving the capsule treatment, your cat is checked into his or her kitty suite for the rest of their stay. Your cat will likely not require any other treatment or special handling during their stay. They need to stay in the hospital due to the radioactivity being released by the I131 they have been given. Once your cat has released some of this radioactivity in the form of urine or feces, and his or her radiation level has declined to a safe level, they can be released from the hospital.



While your cat is in our hospital, they must stay in our special radioiodine ward. This is a separate part of our facility that is specially shielded. Only those on our staff who have received radiation training are allowed to enter the ward and care for your cat. Because of this, it is not possible for you to visit with your cat after they have been

admitted. However, you will have access to log in to our radiokitty webcam to see what your cat is up to, 24 hours a day. Our staff will also provide you with daily updates on how your cat is doing.

After Treatment

Once your cat has been discharged from the hospital, be aware that they will still be emitting small amounts of radiation for a short period of time. For this reason, you will need to adhere to some guidelines after taking your cat home:

Your cat will need to be isolated in a room in your house, separate from your normal living quarters, for 1 week following discharge from the hospital (2 weeks if there are children under 18 or pregnant persons in the house). You can go into the room to feed and take care of your cat for short periods of time, but close personal contact (like hugging or having the cat sit on your lap) should be avoided.

You will need to save litter box waste in a bag or bin in an out of the way area for 90 days before discarding in the trash. This allows time for any residual I131 in the waste to decay to safe levels for disposal. Alternately, you can use flushable litter and dispose of it in the toilet.

You will need to return to your regular veterinarian for follow-up exams and bloodwork at 1 month and 3 months after treatment. Most cats return to normal thyroid levels by 3 months, though some cats can take longer.

Cost of Treatment

The cost of radioiodine treatment is comparable to thyroidectomy surgery, and also comparable to medically managing the disease with methimazole over a 2 year period. The cost is \$1950, and includes the following:

- Pre-treatment review of medical records and prior bloodwork
- Pre-treatment consultation with the referring veterinarian
- Intake exam and consultation with the client
- Treatment with I131

- Medications or treatments during your cat's stay as needed to allow them to be comfortable, reduce stress, maintain appetite, and prevent nausea.
- Hospitalization and monitoring until your cat can be safely discharged (as early as 48 hours after treatment, but may be longer depending on individual variables).
- Daily evaluation by the treating veterinarian during the hospitalization period.
- Telephone follow up after release to ensure that your cat is doing well once at home.

Due to the nature of the treatment and cost of the radioiodine, payment must be made at the time of your cat's intake exam. Payment for any additional tests or treatments performed during your cat's stay will be due at the time of discharge. A \$500 fee will be charged at the time of scheduling the appointment to cover the cost of ordering the radioiodine. The fee is non-refundable if the appointment is not cancelled at least 48 business hours prior to the scheduled treatment day.

Why choose Riverside Cat Hospital

We understand that you have options when deciding how to care for your hyperthyroid cat, and where to seek radioiodine treatment. At Riverside Cat Hospital, we are 100% committed to caring just for cats. We've created an environment that is welcoming and comfortable for your cat, and every effort goes in to reducing the stress that many cats associate with a visit to the vet. All of our veterinarians and staff are trained and experienced in cat-friendly handling techniques. We are also committed to working closely with your primary care veterinarian to make sure we fully understand your cat's medical history, and we will work as a team with you and your veterinarian to ensure your cat receives the care they deserve.

The vast majority of cats who receive radioiodine treatment do very well and have excellent outcomes. 99% are cured of their hyperthyroidism and have a swift return to normal life. Radioiodine treatment is a very good option for many cats. We look forward to working with you to successfully treat your cat!

