



## 2. Surgical removal of the thyroid gland(s).

### Advantages

- Curative
- Low rate of recurrence

### Disadvantages

- Decision of which thyroid to remove
  - a. The largest may not be the problem
  - b. May be both right and left thyroid lobes
  - c. The abnormal tissue may be normal sized thyroid lobe
  - d. Abnormal tissue may be in the chest (ectopic)
- Difficult surgery
  - a. Thyroids are small
  - b. Damage to adjacent important structures can cause serious side effects.
    1. nerve damage
    2. damage to para-thyroid glands
- Risks associated with anesthesia and surgery

## 3. Radioactive iodine therapy (I131)

### Advantages:

- A single injection (“shot”) of radioactive iodine (iodine-131)
- Curative
- Recurrence rate is extremely low
- Essentially no side effects.

### Disadvantages

- The cat must be hospitalized in a special facility for about 3-5 days, while the animal is excreting the radioactivity. Many pet owners “worry” about their cat during this hospitalization period; however, the vast majority of these cats do “great” while hospitalized. Most of them eat well and are relaxed during their stay; some may actually gain weight while hospitalized.
- This procedure is fairly expensive as a one time bill; however, when the long term care costs associated with methimazole are added over a period of time and compared to I131 therapy, the “breakeven” time for the costs associated with radioactive iodine versus oral medication is approximately 10-18 months
- Limited access, as only a few facilities offer this treatment.

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## How does radioactive iodine cure hyperthyroidism?

The thyroid glands use iodine to make thyroid hormone. Each thyroid hormone has iodine incorporated into the hormone. This iodine is generally obtained from your cat’s diet. With radioactive iodine therapy, we merely give your cat a shot of radioactive iodine. Then the body will use the iodine to make thyroid hormone and the radiation will kill the overactive thyroid tissue.

## Will my cat need medication after radioactive iodine therapy?

Usually not. Because the normal thyroid cells are suppressed in hyperthyroid animals, when the radioactive iodine is given, it will concentrate in the abnormal thyroid tissue, which is overproducing thyroid hormone. Thus the normal cells are spared and can “turn back on” and make normal amounts of thyroid hormone following treatment. In this way, cats treated with radioactive iodine typically do not need any medication following radioactive iodine therapy.

## Where can I get my cat treated with radioactive iodine?

The only facility with a full time veterinary radiologist in south central Texas offering this service is Veterinary Imaging Center of South Texas, P.A. This facility is located in San Antonio, operating within Veterinary Referral and Emergency Center of South Texas.

## Which treatment is best? How should I treat my cat?

Radioactive iodine therapy is typically known as the gold standard in treatment options; however, you should speak to your regular veterinarian regarding treatment options that best suit you, your cat’s lifestyle and your cat’s individual needs.



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OF SOUTH TEXAS, P.A.



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# Feline Hyperthyroidism

Definition  
Clinical Signs  
Diagnosis  
Treatment



Veterinary Imaging Center  
OF SOUTH TEXAS, P.A.

### What is feline hyperthyroidism?

Hyperthyroidism is when there is too much thyroid hormone. This hormone regulates body metabolism and causes a high metabolic rate. This is common in older cats.

### What are the problems associated with untreated hyperthyroid disease?

Because thyroid hormone affects the whole body, many systems may be affected. Eighty-seven percent (87%) of hyperthyroid cats will have some type of heart disease, including increased heart rate, irregular rhythm, and thick heart muscle (hypertrophic cardiomyopathy). Your hyperthyroid cat may also have abnormal blood analysis, including liver damage, abnormal blood counts and muscle damage.

### What are the common symptoms or signs associated with this disease?

- Weight loss
- Loss of the normal hair coat luster and patchy hair loss
- Normal to increased appetite
- Irritability and/or restlessness
- Intermittent vomiting and diarrhea
- Increased water consumption and urination
- Decreased appetite or anorexia (uncommon)

### What physical findings may my doctor notice in my cat that could suggest thyroid disease?

- No signs or symptoms
- Normal physical examination
- Palpably enlarged thyroid gland
- Normal sized thyroid glands (not felt)
- Rapid heart rate or irregular rhythm
- Loss of coat luster
- Thin cat or weight loss

### How can my veterinarian check for thyroid disease in my cat?

- Review the cat's history
- Physical exam findings
- Clinical signs
- Bloodwork to check the thyroid hormone levels (T3 and T4) T4; Free T4; T3; T4 by ED
- Nuclear thyroid scan (technetium 99m)

### If my cat has normal blood thyroid hormone, does that mean the disease is not present?

**NO!!!** Thyroid hormone can fluctuate up to 24-28%. Up to 42% of cats that are proven to be hyperthyroid will have T3 and/or T4 values that are in the normal range.

### How do we really find out whether or not my cat has hyperthyroidism?

A diagnostic thyroid scan is the most sensitive and specific method to diagnose feline hyperthyroidism. The scan is easily performed, fairly inexpensive and quick. To perform a scan, the cat is injected with a very small amount of a radioactive solution called technetium (99mTc). This radionuclide acts like iodine in the body, and since iodine is used to make thyroid hormone, this allows the thyroid glands to be imaged. In normal euthyroid cats, the amount of uptake in the thyroid glands is equal to that of the salivary glands. In hyperthyroid cats, there is much more uptake in the thyroids when compared to that of the salivary glands. (See photos). Besides confirming the diagnosis of hyperthyroidism, imaging of the thyroid glands allows us to evaluate the size, location, shape, and pattern of uptake for each thyroid gland, which is highly predictive of benign disease versus that of a malignant thyroid tumor. This is important because circulating thyroid hormone levels cannot differentiate benign versus malignant disease and treatment options and prognosis are drastically different for benign versus malignant thyroid conditions.

### Can my veterinarian perform a thyroid scan?

Probably not. This study is generally limited to referral hospital and specialty centers as special licensing is required to handle the radioactive substances.

### Which cats should be evaluated for thyroid disease?

All cats over 10 years of age should have an annual physical evaluation and blood analysis. Any cat exhibiting the above mentioned signs associated with thyroid disease, especially older cats, may need a thyroid scan.

### How can we treat feline hyperthyroidism?

#### 1. Medication called, tapazole (methimazole).

##### Advantages:

- The drug itself is inexpensive
- Easily accessible
- Available as oral pill or for transdermal application (in the ear)

##### Disadvantages:

- Need for recheck appointments and blood work
- It is not a cure for the disease, but merely a treatment
  - a. The drug must be administered at least once a day
  - b. Challenge to administer the drug
  - c. Challenge to catch the cat daily
- Side effects include vomiting, diarrhea, blood problems, and liver toxicity
- Tapazole is not intended for long term use, as it is intended to be used to ameliorate hyperthyroidism in preparation for a more definitive treatment.

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