

## **FELINE HYPERTHYROIDISM**

Feline hyperthyroidism is the most frequently diagnosed endocrine disorder of the cat. A small benign tumor (thyroid adenoma) involving one or both thyroid lobes is the most common cause of hyperthyroidism in the cat. The tumor behaves autonomously, producing excessive amounts of the thyroid hormones T4 and T3 resulting in a variety of clinical signs. Malignant tumors (thyroid carcinomas) are also seen on occasion.

Treatment options include oral antithyroid medications, surgical removal, and radioactive iodine. Although effective at controlling the symptoms of hyperthyroidism, oral antithyroid medications do not destroy the growing nodules and must be administered daily for the lifetime of the cat. Surgical thyroidectomy is also highly effective, but greater than two-thirds of the cats have involvement of both the right and left lobes making anesthesia and surgical complications a possibility resulting in significant morbidity and mortality.

Radioiodine has become the treatment of choice for hyperthyroidism because it is rapidly absorbed by the hyper functioning thyroid tissue and no other tissues. The radioiodine emits beta and gamma rays in the abnormal tissue. The tumor is destroyed but normal tissue is undamaged. Thyroid function returns to normal usually in 1-3 months.

Before treatment with radioiodine, a thyroid scan using a low-energy, short half-life radioisotope (technetium pertechnetate) is performed. The scan will confirm the diagnosis, identify the number of abnormal lobes and the presence of any ectopic tissue and aid in determining the radioactive dose required for effective treatment. It also helps identify those animals with thyroid carcinomas.

The majority of cats (>90%) need to be treated only once. Some animals may require a second treatment. Most cats are hospitalized from 4-9 days, depending on the dose of radioiodine administered and the excretion rate of the iodine. Cats with high thyroid levels and/or large tumors usually have to stay in the hospital longer. Once admitted, your cat cannot be discharged until his or her radiation exposure rate is at the legal, safe level. You will not be allowed to visit because of the radiation safety regulations. Toys or blankets can be left but will not be returned to you. If your cat has a favorite food, please bring some with you or let us know. Your cat is also required to be up-to-date on vaccinations for upper respiratory viruses. We encourage you to call and check on your cat during its stay. If any problems or complications arise, you will be notified immediately.

When your cat returns home, radioactive safety precautions must continue for another 2 weeks. You will receive detailed instructions at the time of release, but the basic recommendations are as follows: 1) your cat must be confined to your premises; 2) prolonged close contact (sleeping with you, sitting in your lap) must be kept to a minimum; 3) exposure to children or pregnant women should be avoided. The amount of radiation remaining in your cat is extremely low. Human patients receiving the same treatment are sent home the same day. The amount of radioiodine your other pets will receive by sharing food dishes and litter pans is negligible. They do not need to be separated.

After treatment, thyroid levels should be reevaluated at one and three months. The one month sample may be low, normal, or high. During the first months you may notice that your cat is sleeping more, eating less, gaining weight, and shedding excessively. All of these are normal. The three month test should be normal.

The cost for treatment will range from \$1600-\$2000. This includes your initial office examination, thyroid scan, radioiodine treatment, hospitalization, nursing care, and radioactive waste disposal. If repeated doses of radioiodine or additional tests, medications, or treatments are indicated, fees may be slightly higher. We ask that a deposit of 60% of estimate is left at the time of admission and the remainder paid in full when your cat is released from the hospital.