

## Hyperthyroidism

Hyperthyroidism is the most common hormonal disease of older cats. It is usually seen in cats older than eight years, although it has been seen in cats as young as three years of age. The thyroid glands are located within the neck on either side of the windpipe or trachea. In hyperthyroidism, the hormones (T4 and T3) that are used by the body to regulate metabolism are overproduced by these glands. This is usually due to a benign tumor although in 1 to 2 percent of the cases a malignant tumor may be present. The result is an increase in metabolism. Various symptoms will often be noticed by owners including a ravenous appetite, weight loss, hyperactivity, increased vocalization, vomiting, diarrhea, and possibly an increase in drinking and urinating. Veterinarians may notice a heart murmur or arrhythmia that has not been noticed before upon examination. Untreated, this condition can lead to heart failure and ultimately be fatal. In 65-70% of the cases both thyroid glands are affected.

Kidney failure is also a common disease in older cats. The possibility of unmasking kidney disease exists with all thyroid treatment options. The increase in metabolism with hyperthyroidism results in an increase in blood flow to the kidneys resulting in damage to the kidney cells but also an increase in excretion of toxins. If this metabolism is slowed down, silent kidney disease may become apparent.

There are three treatment options for hyperthyroidism. The first treatment option is radioactive iodine therapy. This is the treatment of choice. A radioactive isotope attached to iodine is injected into the cat and taken up by the thyroid gland exclusively. This results in destruction of the thyroid gland. There are almost no side effects to this treatment. Your cat will need to be at a referral facility for three days while the iodine is cleared from their system. Bloodwork, chest xrays, and a urinalysis are performed prior to referral. The cost of the procedure itself is \$1200.

The second option involves a medication called Tapazole. Tapazole is usually given twice daily to suppress the thyroid gland for the life of the cat. Some cats are unable to tolerate medication and may have a decreased appetite, vomiting, or a skin rash. Tapazole usually costs about \$60/month. Also, blood tests are necessary to monitor dosages.

The third choice is surgical removal of the thyroid gland. Tapazole is usually given for a couple weeks prior to surgery to help stabilize metabolism. Even so, a lot of hyperthyroid cats do not make good surgical candidates due to their age and concurrent problems. During surgery it is important to preserve a second set of glands that are closely associated with each thyroid gland called the parathyroid. The parathyroid glands help regulate calcium metabolism. Damage to the blood supply of these glands can happen no matter how carefully the thyroid is removed. The cat will need to be monitored closely for signs of low calcium (hypocalcemia) such

as weakness, muscle tremors, and seizures. Because of these risks, often only one thyroid will be removed at a time. Hypothyroidism is a very rare complication. Recurrence of hyperthyroidism, even with bilateral removal is 10% within 1-3 years after surgery. If a thyroid is not palpable during physical exam, surgery is not an option. Thyroidectomy will cost \$600-800.

Hyperthyroidism is a very common disease in older cats. It is possible to keep the disease under control with medication or cure it with radioactive iodine therapy or surgery. The treatment option that you choose will depend upon you and your cat. We will be happy to assist you in making this decision and answering any of your questions.