

Hyperthyroidism in Cats

The thyroid gland is located in the neck and plays a very important role in regulating the body's rate of metabolism. Hyperthyroidism is a disorder characterized by the overproduction of thyroid hormone and a subsequent increase in the metabolic rate. This is a fairly common disease of older cats. Although the thyroid gland enlarges, it is usually a nonmalignant change (benign). Less than 2% of hyperthyroid cases involve a malignancy.

Many organs are affected by this disease, including the heart. The heart is stimulated to pump faster and more forcefully; eventually, the heart enlarges to meet these increase demands for blood flow. The increased pumping pressure leads to a greater output of blood and high blood pressure. About 80% of cats with hyperthyroidism have high blood pressure.

Clinical Signs

The typical cat with hyperthyroidism is middle-aged or older; on the average, affected cats are about 12 years of age. The most consistent finding is a ravenous appetite with a cat that gradually loses weight. The weight loss may be so gradual that some owners will not even realize it has occurred. Affected cats usually drink a lot of water and urinate more. There may be periodic soft stool or diarrhea, and the hair coat may be unkempt. In some cats, anorexia develops as the disease progresses.

Secondary complications include hypertension (high blood pressure) and a heart disease called thyrotoxic cardiomyopathy. Both of these problems are reversible with appropriate treatment of the disease.

Diagnosis

In most instances, diagnosis of this disease is relatively straightforward. If the thyroid gland can be palpated (felt) during the physical exam, the disease is very likely. Confirmation is with a blood test that measures the level of one of the thyroid hormones, called thyroxine (or T4).

Treatment Options

Because less than 2% of these cats have cancerous growths of the thyroid gland, treatment is usually very successful. There are three choices for treatment.

When possible, tests are done before adopting any form of treatment. These tests are needed to evaluate the overall health of the cat and predict the chances for complications. Such tests include blood work and urinalysis, and x-rays; if available, an EKG and cardiac ultrasound may be performed.

1. Oral medication. Administration of an oral drug, methimazole, can control the effects of the overactive thyroid gland. Side effects are rare, but can include vomiting, lethargy, anorexia, fever, and anemia. Methimazole does not destroy the abnormal thyroid tissue, but rather ties up the excess thyroid hormone. Therefore, the drug must be given for the remainder of the cat's life. Periodic blood tests must be done to keep the dosage regulated.
2. Radioactive iodine. The most effective way to destroy all of the abnormal tissue is with radioactive iodine therapy. It causes no damage to normal thyroid tissue or to the nearby parathyroid gland. This requires one or two weeks of hospitalization at a veterinary clinic licensed to administer radiation therapy.
3. Surgery. Surgical removal of the affected thyroid lobe(s) is sometime very effective. As the disease involves both lobes of the thyroid gland, two surgeries may be required, depending on the surgeon's choice of procedures. This surgery is done at a specialty center. If surgery is the treatment method chosen, the cat is usually treated with an anti-thyroid medication for several weeks prior to the operation.

One potential consequence of treating hyperthyroidism is kidney disease or failure. In some geriatric cats, kidney function has declined with age. When hyperthyroidism is present, it helps the cat partially compensate for this loss of kidney function. The hypertension that accompanies hyperthyroidism serves to increase blood flow to the kidneys. When the hyperthyroid state is treated, renal blood flow is diminished and the cat may develop kidney failure. This occurs in only a small number of hyperthyroid cats.