

# Heathcote Veterinary Clinic

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Hospital Hours  
Monday to Friday 9.00am – 7.00pm  
Saturday from 9.00am  
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## CUSHING'S DISEASE

### *What is Cushing's Disease?*

In dogs with Cushing's syndrome, there is a chronic overproduction of cortisol by one or both of the adrenal glands over weeks and months. The excessive amount of cortisol released into the bloodstream has a harmful effect on the function of many organs and the body's metabolism.

### *How does this disease occur?*

1. Approximately 85% of cases have a benign tumour of the pituitary gland. The tumour cells produce large amounts of the hormone ACTH, which in turn stimulates the adrenal glands to overproduce cortisol.
2. The other cause of Cushing's (approximately 15% of cases) is a tumour of one (or very rarely both) of the adrenal glands, which produces excessive amounts of cortisol.

### *What are the clinical signs?*

Irrespective of the cause of Cushing's syndrome in your dog, the result is always the same - more cortisol is produced than is actually needed by the body. These signs usually come on very gradually and, because of this slow onset, these changes are often written off as part of the normal aging process. The following list of common symptoms that an owner might observe in their pet at home is:

### **The most common symptoms owners see are:**

1. **Excessive drinking and urinating** - Owners often notice that lately the water bowl must be filled more frequently than in the past. Each day a dog should drink about no more than 100ml per kilogram of body weight.
2. **Pot-bellied Appearance** - This symptom, seen in over 90% of Cushing's syndrome dogs, results from hormonal redistribution of body fat plus a breakdown of abdominal musculature.
3. **Increased or even Ravenous Appetite**
4. **Panting or shortness of breath**
5. **Muscle Weakness** - exercise intolerance, lethargy, or reluctance to jump up on furniture or climb stairs.
6. **Skin Disease**
  - Hair loss on the main body sparing the head and legs
  - Thin, wrinkled skin with poor wound healing
  - Hair that does not grow back after clipping.
  - Blackheads and darkening of the skin, especially on the abdomen.
  - Persistent or recurring skin infections (especially if the dog is not itchy during times when the skin infection is cleared)
  - Calcinosis cutis - these are raised, hard, almost rock-like areas that can occur almost anywhere on the body.

### ***How is it diagnosed?***

A number of tests are necessary to diagnose and confirm Cushing's Disease. A routine blood test will be performed first. If the results suggest Cushing's, a more specialized test is then needed to confirm the disease. The most common tests to detect Cushing's Disease is the Low-Dose Dexamethasone Suppression Test. This test is done in clinic over a span of 8 hours with results back on the same day. An ultrasound examination can be a valuable part of the testing process. This permits visualization of the adrenal glands and determines their size and the presence of a tumor. Although some of these tests are somewhat expensive, they are necessary.

### ***What are the treatment options?***

1. **Iatrogenic Cushing's Disease:** This is due to the patient being on a high dose of steroid treatment already. Treatment of this form requires a discontinuation of the steroid that is being given. This must be done in a very controlled manner so that other complications do not occur. Unfortunately, it usually results in a recurrence of the disease that was being treated by the steroid. Because there may have been adverse effects on the adrenal glands, treatment is also needed to correct that problem.
2. **Adrenal Tumor.** Treatment of an adrenal tumor requires major surgery at a specialist center. Although this is a high risk surgery, if successful and the tumor is not malignant, there is a good chance that the dog will regain normal health. If surgery is not an option, some of these patients can be managed with the medication discussed next. Approximately 50% of adrenal tumors are benign and 50% are malignant. If treated early, even malignant adrenal tumors can be cured with surgery.
3. **Pituitary Tumor:** Treatment of the pituitary-induced form of Cushing's Disease is the most complicated. Lysodren is the primary drug used to destroy the abnormal adrenal gland tissue. Lysodren is also known as mitotane or o,p'-DDD. If not enough drug is used, the abnormal tissue persists and the disease continues. If too much is used, most or all of the adrenal cortex will be destroyed, which can be life-threatening. Therefore, careful, regular monitoring of the dog is necessary in order to achieve good results. Because the pituitary is not being affected by the treatment, it continues to stimulate the adrenal gland. This means that continued treatment and regular blood tests, usually every 6 months, are necessary.

### ***Potential Complications***

1. Dog's that have Cushing's disease have an increase in the degree of clotting of blood. This could result in the development of a blood clot that lodges in the lungs; the result is severe breathing difficulty or death
2. Potential complication of Lysodren treatment is complete destruction of the adrenal glands and a condition called Addison's disease

**If at any time your pet becomes ill (vomiting, diarrhea, won't eat, lethargic) he or she should be seen by a veterinarian as soon as possible.**

### ***Prognosis***

Prognosis is good if the owner is watchful and medications are adjusted regularly based on bloodwork results.

Many of these older dogs have arthritis or allergy problems which were masked by the cortisol and surface after therapy is initiated.