



**Wilson Street
Cambridge
PH: (07) 827 7099**

Hyperadrenocorticism (Cushing's Disease)

Cushing's disease is an imbalance from over production of a steroid called Cortisol, from the adrenal glands. Cortisol is normally produced in times of stress to break down protein (muscle) and fat of the body, to produce sugar. The release of this hormone is controlled by another hormone, called **ACTH**, in the pituitary. There are two forms of this disease:

- **Pituitary Dependent form:** Most common type of the disease. In this form there is an over-production of pituitary ACTH causing an increased production of steroid from *both* adrenal glands.
- **Adrenal Dependent form:** This is a cancerous process in one adrenal gland causing it to enlarge, and over produce Cortisol. In this situation, the other adrenal gland is small.

The disease is commonly seen in older dogs of both sexes. The breeds with higher prevalence are Poodles, Dachshunds, Boston Terriers, Boxers and Beagles. This disease is rare in cats. Signs of the disease can vary, but include:

- Increased thirst and urination
- Pendulous (hanging) abdomen
- Hair loss
- Lethargy
- Muscular weakness / wasting
- Mineralized areas in the skin
- Panting
- Sometimes neurologic signs (rare)
- Hypertension
- Diabetes can occur if Cushing's disease is not treated

Cause of Disease: The pituitary dependent form of the disease is caused by microscopic tumours within the pituitary gland. They rarely enlarge or spread. Cancer of one adrenal gland causes the adrenal dependent form of the disease.

Diagnostics: Since there are many diseases that can produce signs similar to Cushing's disease (e.g. Kidney disease, Diabetes mellitus, Hyperthyroidism (Feline), Liver disease...), your veterinarian may suggest a number of clinical diagnostics tests to help assess what disease is affecting your pet:

- **A complete blood count and chemistry** will help your veterinarian to determine if there is infection, if there is a low red blood cell count or platelet

count. Changes may be suggestive of disease of the kidney, liver, pancreas or metabolic disease is present.

- **Urinalysis:** This will allow your veterinarian to assess the kidney's ability to concentrate urine and expel toxins as well as check for urinary tract infections.
- **Blood pressure measurement:** Due to concerns of hypertension, your veterinarian may suggest measuring blood pressure to check if your pet has increased blood pressure.
- **X-ray:** X-rays can help to rule out possible disease of abdominal organs, tumours or changes in the abdomen.
- **Ultrasound:** Your veterinarian may suggest an ultrasonic examination to help assess the internal architecture of the liver, kidneys, intestines and other abdominal organs. The adrenal glands can also be examined and checked for masses or abnormal enlargement.

Treatment: Treatment is based on the presentation of the animal and the severity of the disease noted.

- **Hospitalization and Support:** In animals that are severely affected, in shock, or have multiple body systems affected, your pet may need to be admitted to the hospital for fluid therapy, medications and monitoring. If there is hypertension (high blood pressure) or Diabetes present, then your pet will have to be started on medication to help regulate these diseases as well.
- **Medications:** With pituitary dependent disease, there are drugs, which are focused at stopping steroid production in the body or selectively destroying the cell layer, which produces the cortisol.
- **Surgery:** With adrenal tumours, removal of the affected adrenal gland is recommended.