



Cushing's disease

Cushing's disease (Hyperadrenocorticism) is a very complicated and potentially serious disease. It can be difficult to diagnose and difficult to treat. There are several forms of Cushing's disease, all of which are caused by an excessive amount of steroid or cortisone in the body. This excess cortisone is what causes the problem.

The production of cortisone in the body is controlled by the pituitary gland in the brain. Messages from the pituitary gland are sent via the blood stream to the adrenal glands which are found near the kidneys. The adrenal glands then produce and release the cortisone to the rest of the body. Alterations in this relationship can lead to Cushing's disease.

There are 3 forms of Cushing's disease recognized.

1. Pituitary-Dependent Cushing's Disease

- ◆ Most common form, ~ 85% of dogs with Cushing's disease have this form.
- ◆ Caused by a very small, non-cancerous tumor of the pituitary
- ◆ The pituitary tumor sends excessive messages to the adrenal glands to make and release cortisone.

2. Adrenal Gland Tumors

- ◆ Second most common form of Cushing's, ~15% of dogs with Cushing's disease have this form.
- ◆ Caused by a tumor of the adrenal gland, of which about 50% are cancerous.
- ◆ The adrenal tumor spontaneously makes and releases cortisone *independent* of what the pituitary is telling it.
- ◆ More common in female dogs.

3. Iatrogenic Cushing's Disease

- ◆ This uncommon form of Cushing's disease is caused by us.
- ◆ Prolonged or excessive use of cortisone (prednisone) to manage other problems leads to the symptoms of Cushing's disease.

Symptoms of Cushing's disease are varied and non-specific. They can resemble other diseases. While many symptoms are readily apparent to owners, some are apparent on physical exam, while others are only apparent with diagnostic testing.

- ❖ Pot-bellied appearance
- ❖ Symmetrical hair loss
- ❖ Dull, dry hair coat
- ❖ Thin skin
- ❖ Pigmented skin
- ❖ Muscle atrophy
- ❖ Excessive urination
- ❖ Excessive thirst
- ❖ Recurrent infections
- ❖ Panting
- ❖ Lethargy
- ❖ Weakness

Dogs affected with Cushing's disease are typically middle-aged to older. Any purebred or mixed breed dog can be affected. Those at a higher risk are: poodles, dachshunds, Boston Terriers and boxers.

The diagnosis of Cushing's disease is based on the pet's history, physical exam and diagnostic tests. A complete blood count, chemistry panel and urinalysis should be performed as a baseline amount of information. If there are suspicious results found in the baseline data, then more provocative testing should be pursued as well as radiographs (x-rays) and possibly an abdominal ultrasound.

Treatment for Cushing's disease will depend on which form they have. Two oral medications exist for the treatment of pituitary-dependent Cushing's disease. They are Lysodren® and Vetoryl®. Each has risks and benefits. If the disease is being caused by an adrenal tumor, then surgery or oral medication may be indicated. If it is being caused by the administration of steroids, then judicious removal of the medication should be considered.

The life expectancy of a dog with Cushing's disease can be shorter than for normal dogs. The average survival time after diagnosis is 2 years in some cases. Complications that may arise include embolisms (blood clots), chronic infections, hypertension, heart failure, pancreatitis, diabetes and numerous other maladies. The decision to pursue the diagnosis and then to treat is not clear-cut and is not the same for every pet or for every pet's family. Decisions can only be made with a clear understanding of the disease and its associated risks.