



CANINE CUSHING'S DISEASE

What is Cushing's Disease?

Cushing's Disease is a disease in which the adrenal glands overproduce certain hormones. Another medical term for this disease is *hyperadrenocorticism*.

The adrenal glands produce several vital substances, which regulate a variety of body functions and are necessary to sustain life. The most widely known of these substances is cortisol, commonly known as cortisone. Either deficient production or excessive production of these substances may be life-threatening.

How does this disease occur?

There are three mechanisms by which this disease can occur. Regardless of the cause, the clinical signs are essentially the same. It is important to identify the cause, however, because the various forms are treated differently and have different prognoses.

Pituitary gland tumor. The most common cause of Cushing's Disease (85% of all cases) is a tumor of the pituitary gland. The tumor may be either benign or malignant. The tumor causes the pituitary to overproduce a hormone, which stimulates the adrenal glands. Excessive cortisone secretion results. The tumor may be either microscopic or quite large. Depending on the size of the tumor, the presence of signs other than Cushing's will be variable. Generally, if the activity of the adrenal gland can be controlled, many dogs with this form of Cushing's Disease can live normal lives for many years as long as they take their medication and stay under close medical supervision. Growth of the pituitary tumor would give the patient a less favorable prognosis.

Adrenal gland tumor. Cushing's Disease may be the result of a benign or malignant tumor of the adrenal gland. If benign, surgical removal cures the disease. If malignant, surgery may help for a while, but the prognosis is less favorable than for a benign tumor.

Iatrogenic. Iatrogenic Cushing's Disease means that the excess of cortisone has resulted from excessive administration of cortisone. This may occur from oral or injectable medications. Although the injections or tablets were given for a legitimate medical reason, their excess is now detrimental.

What are the clinical signs?

The most common clinical signs associated with Cushing's Disease are a tremendous increase in appetite, water consumption, and urination. Lethargy, or lack of activity, and a poor hair coat are also common. Many of these dogs develop a bloated appearance to their abdomen due to an increase of fat within the abdominal organs and a stretching of the abdominal wall as the organs get heavier. The pot-bellied appearance also develops because the muscles of the abdominal wall become weaker. Panting is another common finding with this disease.

How is it diagnosed?

A number of tests are necessary to diagnose and confirm Cushing's Disease. The primary one is the ACTH Stimulation Test. If it does not confirm the diagnosis, the Low-Dose Dexamethasone Suppression Test is performed. Other tests are needed to decide which form of the disease is present. An ultrasound examination can be a valuable part of the testing process. This permits us to visualize the adrenal gland tumor and determine its size. Although some of these tests are somewhat expensive, they are necessary.