



## **ADDISON'S DISEASE (Hypoadrenocorticism)**

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

It is an endocrine (glandular) disorder caused by deficient production by the adrenal glands of glucocorticoids (cortisol) or mineralocorticoids (aldosterone) or both. Primary hypoadrenocorticism is caused by disease or injury to the adrenal glands that leads to deficiencies in cortisol and aldosterone. Secondary hypoadrenocorticism is caused by administration of cortisones or by pituitary gland disease that causes reduced production of adrenal gland stimulating hormone. Secondary hypoadrenocorticism causes glucocorticoid deficiency with preservation of mineralocorticoid function.

Aldosterone deficiency causes inability for the kidneys to excrete potassium and to retain sodium. Sodium deficiency then leads to diminished blood volume, which in turn contributes to kidney malfunction, hypotension, dehydration, weakness, and depression. Elevated potassium levels (along with other metabolic derangements) may cause heart muscle toxicity. Glucocorticoid (cortisol) deficiency contributes to loss of appetite, vomiting, black stool, lethargy, and weight loss, predisposes to low blood sugar, and results in impaired excretion of water that is free of sodium.

The disease is uncommon to rare in dogs and extremely rare in cats. Breed predilections include the Great Dane, Rottweiler, Portuguese Water Dog, Standard Poodle, West Highland White Terrier, and Wheaten Terrier. No predilection in cats. Female dogs are at higher risk than males. It usually occurs in middle-aged animals.

### **What Are the Symptoms of Addison's Disease?**

Signs vary from mild in some patients with chronic hypoadrenocorticism to severe and life-threatening in patients with acute Addisonian crisis. Signs may include: Lethargy, loss of appetite, vomiting, weight loss, waxing-waning course, diarrhea, previous response to treatment, shaking, and increased water consumption and urine production.

Physical examination findings may include: Dogs—depression, weakness, dehydration, collapse, hypothermia, slow blood capillary refill time, black

stool, weak pulse, slow heart rate, painful abdomen, and hair loss; Cats—dehydration, weakness, slow blood capillary refill time, weak pulse, and slow heart rate.

### **How is It Diagnosed?**

Blood tests are required to diagnose Addison's disease. The definitive diagnosis is by demonstration of an undetectable to low serum cortisol concentration that fails to increase after administration of adrenal stimulant. Primary and secondary Addison's disease are differentiated on the amount of adrenal stimulating hormone naturally present.

### **How is It Treated?**

A pet in acute Addisonian crisis is a medical emergency requiring intensive hospital treatment. Treatments for patients with chronic hypoadrenocorticism depend on the severity of clinical signs, although initial stabilization is conducted in the hospital in most cases.

Lifelong glucocorticoid or mineralocorticoid replacement or both will be required. Increased dosage of replacement glucocorticoid may be required during periods of stress such as travel, hospitalization, and surgery. Chronic Primary Hypoadrenocorticism is treated with glucocorticoid replacement (prednisone) daily and mineralocorticoid replacement with fludrocortisone acetate daily or DOCP every 21-30 days (adjusted if needed on the basis of serum electrolyte tests).

### **What is the Prognosis?**

Once stabilized, most Addisonian pets can lead normal lives providing they are treated regularly and have periodic blood electrolyte tests (once or twice yearly).

### **Call Us If...**

- You have trouble giving your pet its medicine.
- Its general health seems to diminish.
- It loses its appetite.
- It is very lethargic and inactive.
- It develops diarrhea, vomiting or black stool.

*Thank You for This Opportunity to Serve You!*