

HYPOADRENOCORTICISM = ADDISON'S DISEASE

About Addison's disease

Hypoadrenocorticism is commonly referred to as Addison's disease, a serious life threatening endocrine disorder. Addison's is caused by damage or malfunctioning of the adrenal glands which normally release two types of natural steroids, the glucocorticoids including cortisol, and mineralcorticoids. Both are required in adequate amounts to facilitate normal metabolic function. In Addison's, the adrenals fail to secrete the steroids. Mineralcorticoids are needed to maintain normal electrolyte balance in the blood, including sodium (Na⁺), potassium (K⁺), and chloride (Cl⁻). Electrolyte imbalance leads to heart, liver, kidney, and gastrointestinal damage, and in acute crisis, can cause death due to severe shock & cardiac arrest (when the heart stops beating). Often Addison's goes undetected for long periods of time causing mild but chronic signs such as weight loss and intermittent diarrhea & vomiting. Eventually, the disease progresses to a point where the animal decompensates and presents in a life threatening "**Addisonian crisis**". **Aggressive medical care** is required to stabilize the dog, and once diagnosed, treatment for Addison's must be continued for life.

Symptoms- usually a progressive onset

- Weight loss
- Progressive anorexia
- Increased urination and drinking (PU/PD)
- Weakness / lethargy- intermittent
- Diarrhea- intermittent
- Vomiting- intermittent
- Muscle wasting

Symptoms- *Addisonian Crisis*- A Medical Emergency

- Acute collapse quickly progressing to being flat out and non-responsive
- Severe dehydration
- Severe shock- cold extremities, weak pulses
- Non stop vomiting and diarrhea- often turning bloody

Diagnosis

- An **ACTH STIMULATION TEST**- will **confirm** a diagnosis of Addison's disease.
- If a dog has a history of intermittent symptoms such as vomiting, lethargy, and weight loss, they should be tested for Addison's to rule out the disease
- Dogs with a heavy load of whip worms in their intestines can also present with similar signs as a dog with Addison's disease

A **Presumed diagnosis** of Addison's in a dog suffering an **Addisonian crisis** is made on

clinical signs until the results of the ACTH stim test are available.

- Low heart rate (bradycardia) despite severe dehydration, hypovolemic shock, and low blood pressure
- Blood work shows electrolyte imbalances- a high potassium level and low sodium level in the blood (sodium/potassium ratio- less than 25)
- CBC will show an abnormally high percentage of eosinophils- a particular type of white blood cell
- Additional blood work often shows low albumen (a blood protein) and low glucose (blood sugar)
- Rapid improvement when treated aggressively with intravenous (IV) fluids and steroid injections.

**As mentioned previously, many animals go undetected as symptoms wax and wane, until they go into a full crisis.

Treatment- a life long commitment for confirmed Addisonians

Addisonian dogs must be given supplemental steroids for the rest of their lives

- **Mineralcorticoid replacement-** tablets given orally on a daily basis, or a injection of long acting steroids given approximately once a month by your veterinarian.
- **Glucocorticoid replacement-** a low dose of prednisone given orally daily or every other day.
- Special attention must be given to animals in stressful situations such as when boarding at a kennel or being hospitalized. Your veterinarian may adjust the dose or frequency of the prednisone administration during these times.

Treatment- during a *Addisonian Crisis*

- Aggressive intravenous fluid therapy
- Steroid administration
- Supportive care & treatment of organ damage secondary to the crisis (kidney, heart, GI tract etc.)

Prognosis

- Confirmed Addisonians that are medicated properly at the correct dosage and monitored throughout their life should have a normal life expectancy.
- Owner compliance is very important to successful treatment of Addison's disease.
- The prognosis for patients presenting in an Addisonian crisis varies widely depending on how long they have been in crisis and how quickly they receive emergency care. The sooner the medical care is initiated, the better the prognosis.