

Addison's disease (hypoadrenocorticism)

General information on Addison's disease:

The adrenal glands produce a hormone called cortisol, which the body needs to cope with stress. They also produce a hormone called aldosterone which regulated body sodium and potassium levels. These are salts that keep cells filled with water. Movement of sodium and potassium also allows nerve impulses to be transmitted. If the salt levels are abnormal then nerve impulse conduction doesn't work well. Common signs are a slow heart beat and muscle weakness or tremor.

Addison's disease usually develops when the body's immune system attacks and destroys parts of the adrenal glands. There is a genetic predisposition to this condition in some breeds (Bearded Collie, Poodle, Great Dane, Westie and Basset). The immune attack has usually been going on for some time, but the dog only shows signs once 85-90% of the adrenal cells have been destroyed. Some dogs have been vaguely ill for some time before they are diagnosed, others become suddenly very ill, usually after a period of stress. Dogs with this sort of Addison's disease need medication for the rest of their life.

Diagnosis: There are changes in the blood sodium and potassium levels as well as in the white cells that can give us clues that your dog may have Addison's disease. The condition is confirmed with an ACTH stimulation test where we inject the hormone that tells the adrenals to release cortisol. We measure cortisol before and after the injection. If your dog's cortisol levels remain very low, the diagnosis is confirmed

Treatment: We need to replace the hormones that the adrenal no longer produces.

- **Cortisol** is replaced by giving **prednisolone / prednisone**. This is often only given once daily **in the morning** once the dog is well
- **Aldosterone** is replaced by giving **Florinef** (fludrocortisone acetate). This is best given twice daily.

The correct dose needs to be determined for each individual dog and may change over the course of its life. Your vet will use blood tests to help determine the correct dose. Florinef doses may increase slightly in the first 18 months post diagnosis. Prednisone doses can be stopped in about ½ the dogs. The other half do better with a low dose daily / every other day.



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Prednisone and Florinef can both cause your dog to drink and urinate more. The prednisone is more likely to do this. If the drinking and urinating side effect becomes a problem it is possible to switch from Florinef to an injection called DOCP. This has to be imported specially for each patient and your vet would need to apply for special treatment authorization from the medicine's control council. Your vet can contact me for details should this become necessary.

NB !!! During times of stress (eg kenneling, traveling, illness, elective surgery) dogs that are off prednisone will need treatment again and those that are still getting treated usually need higher doses. This is because their body cannot respond to stress by making more of their own cortisol hormone.

If your dog is a working dog (eg hunting) you would want to double the prednisone dose on days where he is working. Your dog may also be more prone to low blood sugar levels (hypos) while exercising strenuously.

Prognosis:

Dogs with Addison's disease can lead normal lives as long as they get their pills every day and as long as you respond promptly to any illness by calling your vet and giving more prednisone (the dose should be discussed with your vet)