



Honey's Canine Health Guide N°12

ADDISON'S

By Dr. Nick Thompson

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Overview

Thomas Addison was a quiet, humble doctor, dedicated to his students and patients at Guy's Hospital, London. He was passionately interested in diseases of the skin and this led to his discovery of what we now call Addison's – a disease which affects both humans and dogs. Addison noticed that six of his patients with bronzing of the skin developed hypoadrenocorticism as a result of tuberculosis damage to the adrenal gland.

Understanding the disease

In order to understand Addison's, which is also referred to as hypoadrenocorticism, we need to study the adrenal gland. In humans this gland sits atop (hence the name for it is 'ad-renal') the kidney. It is a small but essential endocrine gland with a core, the Medulla, and an outer area, the cortex.

The core produces the well-known adrenalin hormone, much loved of horror-movie buffs and roller-coaster revellers, of course. The cortex is much more interesting. It produces sex hormones, cortisol (for stress and, blood sugar and anti-inflammatory effects) and aldosterone, vital to salt and blood pressure regulation.

Cortisol (it comes from the 'cortex') is known as a glucocorticoid because it is central to glucose regulation in the body especially during exercise and times of stress. Aldosterone, is known as a 'mineralocorticoid' because of its association with sodium and potassium regulation.

If your dog's adrenal cortex is damaged or misfunctions, then it can lead to one of two different problems:

If the adrenal glands begin overproducing hormones the result can be Cushing's disease or *hyperadrenocorticism*.

If the adrenal gland underproduces hormones, in this case aldosterone and cortisone, the result can be Addison's or *hypoadrenocorticism*.

Cushing's and Addison's are, therefore, opposite ends of the same problem. One is the result of too much steroid, the other, too little. Scientists do not really understand yet what causes the adrenal gland to malfunction in this way.

Symptoms

Addison's can be a difficult disease to diagnose in dogs because the symptoms are often vague and may come and go. Some breeds are more susceptible than others. Standard Poodles, Westies, Danes, Beardies, Portuguese Water Dogs, Nova Scotia Duck Tolling Retrievers and Soft Coated Wheaten Terriers are more prone, suggesting a genetic component to the disease.

Symptoms to watch for include:

- Depression
- Lethargy
- Anorexia (lack of appetite)
- Weight loss
- Vomiting
- Diarrhoea
- Bloody stools
- Alopecia (hair loss)
- Increased urination
- Increased thirst
- Dehydration
- Shaking
- Weak pulse
- Irregular heart rate
- Low temperature
- Painful abdomen
- Hypoglycemia
- Hyperpigmentation of the skin

Addison's disease is often only diagnosed during what is referred to as an Addisonian crisis – this is where the disease reaches an acute stage, and the patient experiences life-threatening symptoms such as shock and collapse.

As soon as the dog has been treated for the crisis and the condition has been stabilised, your vet will perform a number of tests to determine what caused the collapse and to rule out other diagnoses. They will take blood and urine and may even use an electrocardiogram (ECG) to check your dog's heart. If there is still some doubt, there is something called the adrenocorticotrophic hormone (ACTH) stimulation test, which monitors the function of the adrenal glands.

Treatment

Dogs with Addison's are hormone-deficient. The most important part of the treatment is, therefore, to provide the missing hormones:

A mineralocorticoid is given to mimic aldosterone either by tablet daily or by injection periodically.

Glucocorticoids, 'steroids', are usually given daily at a low dose, although an increased dose may be given during times of stress.

Some vets also prescribe salt, although recent research suggests that this is not necessary.

Finding the right dose of these two hormones can be tricky. Frequent blood tests are needed to monitor blood electrolytes (salts) and hormone assays, but these reduce as the patient stabilises. With time, many people recognise their dogs needs the amount of mineralocorticoid or glucocorticoid varied and can adjust the dose accordingly. The majority of patients do well on this regime and live out their full life span without problems from Addison's or the medication.

Holistic treatment

Many vets consider Addison's to be incurable, but diet and other holistic interventions may support stability and reduce the risk that stress may upset the equilibrium.

Diet is, of course, the cornerstone of all health, and this disease is no exception.

A well balanced raw diet benefits all dogs and all aspects of physiology. The quality, unrefined, unheated, unprocessed fats and oils found in a raw diet are the building blocks for all the body's hormones. They support any struggling endocrine metabolism. Omega-3 fatty acids found in fish or flax oils are potent anti-inflammatories and contribute to the health of hormones, joints and skin.

Raw diets, being generally more free of preservatives, colourants and stabilisers commonly found in tinned and dry kibble food confront the body with less foreign chemicals to process. They are usually better digested and maintain gut health, essential as many Addisonian patients show digestive problems.

Liquorice (*Glycyrrhiza glabra*) is an ancient herb known for its adrenal tonic effects. It enhances glucocorticoid activity, and it mimics aldosterone by potentiating the effects of cortisol. Consider its use with your herbal or holistic vet along with the adaptogen Rehmannia (*Rehmanniaglutinosa*). Rehmannia is deemed an adrenal 'trophorestorative', that is, it rectifies deficiency or weakness in the gland. Its effects may not be temporary.

Consider, too, other stress modifier herbs. Hops (*Humulus lupulus*), wild lettuce (*Lactucavirosa*), lavender (*Lavandula angustifolia*) and passionflower (*Passifloraincarnata*) could make colourful and joyous additions to the toolkit of the pet guardian tending an Addisonian patient.

Essential oils are well known as mood enhancers and relaxants in people. The same is true in dogs, but care must be taken in their use as the dog's sense of smell is vastly more sensitive than our own. Consider valerian (*Valeriana officinalis*), vetiver (*Vetiverazizanoides*), petitgrain (*Citrus aurantium leaf*), sweet marjoram (*Origanummorjorana*), and sweet orange (*Citrus sinensis*) essential oils in your calming mixes. Start well diluted and never apply neat to the dog's skin.

The role of diet

A natural, raw diet will aid and support optimum health. Species appropriate feeding is, therefore, to be recommended in all but very complicated cases (such as where the dog may have had recent bowel surgery). It is probably advisable to avoid feeding potassium-rich foods (such as pork and bananas) in excess.

If you live in the UK, Honey's Health Team will be delighted to devise a special dietary plan for your dog. Feeding a natural diet couldn't be easier and we can do all the hard work for you – working out exactly what your dog should eat each day (and how much, of course), explaining what to buy and how to prepare it. If you would prefer, and you will be under no obligation, we will be happy to supply the food you need and deliver it straight to your door.

Free expert advice

At Honey's we will be delighted to provide you with unlimited, free advice – we don't mind if you never, ever plan to become a customer. Moreover, you can also consult our Health Team (which includes vets, veterinary nurses and other experts) free of charge. We will be pleased to show you how to make your own food, too. We maintain a list of holistic vets, who we are happy to recommend.



Free book

If you want to know about canine health and nutrition, then please visit our website and download our free book *Honey's Natural Feeding Handbook for Dogs*, or contact us direct and, if you are based in the UK, we will pop a free copy in the post.

General information about raw feeding

There is growing evidence that dogs live longer, healthier and happier lives if they eat the same sort of diet they would enjoy in the wild. That is to say: raw, fresh meat, bones and vegetables. Such a diet is referred to as biologically appropriate *aka* natural feeding *aka* raw feeding *aka* (what a lot of things it is *also known as*) the BARF diet.

Dogs and their wolf cousins have been eating raw food for over a million years and they thrive on it. If your dog has any health issues, a raw food diet could make a huge difference. Benefits include a glossy coat, healthy skin, lean muscle tone, robust immune system, sweet-smelling breath, healthy teeth and gums, increased energy, better digestion and a strong heart.

Indeed, if your dog has any health issues now (even minor problems such as allergies, dry skin, bad breath and what the Americans refer to, euphemistically, as 'gas') it is quite likely that a switch to a raw food diet will clear them up.



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The advice and information contained in this fact sheet is for guidance only. The Honey's Health Team (vets, veterinary nurses and other experts) is here to help you in any way we can. However, nothing can replace a physical examination by a vet or other qualified professional.