

FACT SHEET

Cushing's Disease or Hyperadrenocorticism

Cushing's disease, also known as Hyperadrenocorticism, results when the adrenal glands excrete too much Cortisone and it is a common hormonal disease normally encountered in older dogs. Some breeds like Poodles, Cavalier King Charles and Boxers appear to be predisposed to this condition but it can affect any breed.

The adrenal glands occur in pairs. Located in front of the kidneys, each gland has two areas of function: the Medulla produces adrenaline in response to situations where the animal may be required to flee, and the Cortex produces corticosteroids and the adrenal sex hormones. The most important corticosteroid is Cortisol (hydrocortisone) as it affects blood sugar levels, fat metabolism, kidney and liver function, nervous and cardiovascular systems and immune response; excessive Cortisol levels result in Cushing's disease.

The levels secreted by the adrenal cortex are governed by the pituitary gland in the brain, which secretes a hormone called ACTH (adrenocorticotrophic hormone) at times of stress including infection, trauma and cold temperatures. ACTH prompts the cortex into secreting Cortisol into the blood, once the level has been suitably raised, a message should be sent back to the Pituitary gland to cease production of ACTH and therefore stop the Cortisol secretion. However, in Cushing's disease the level is not managed in this way, either the Pituitary gland is continuously producing ACTH, or the Cortex is continually secreting Cortisol.

Causes

The cause of Cushing's can be attributed to:

- Increased levels of ACTH from the pituitary gland due to a small tumour (85% of naturally occurring Cushing's)
- From a tumour of the Cortex in one of the Adrenal Glands (15% of naturally occurring Cushing's)
- From veterinary influence e.g. prednisone for allergies over a long period of time

Symptoms

The symptoms of Cushing's disease can be vague and as they often appear gradually it is easy to mistake them as general aging conditions. The general symptoms may include:

- Increased or excessive drinking
- Increased or excessive urination, including accidents in house-trained dogs
- Increased or excessive appetite, out of character scavenging
- Distended abdomen, pot-bellied
- Weakening of the muscles, often seen in the rear legs
- Thinning of the hair, often appears in a symmetrical pattern on each side of the body
- Thinning and/or darkening of the skin – hyperpigmentation
- Skin growths, crusty or calcified lumps
- Obesity, change in fat distribution
- Increased infections
- Bony appearance to head
- Lethargy, exercise intolerance
- Increased panting, actively seeking cool areas to lie down
- Dull, sparse coat

This list unfortunately also lends a lot of its symptoms to other diseases and conditions but the symptoms commonly indicating the disease to the owner are the drinking and urinating symptoms, and the changes in the coat, as these can be quite sudden in their onset and difficult to manage.

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Diagnosis

Diagnosis of Cushing's disease is attained through blood tests; the first test demonstrates Cushing's as the disease, followed by a second test to determine the origin of the cause, i.e. pituitary or cortex. If an adrenal tumour is the source then surgical removal is often the ultimate course of action. Pituitary tumours are not removed but suitable medication is administered to counteract the effects of excessive pituitary hormone, treating the symptoms, not the cause. Cushing's disease is manageable, with the quality of life being improved once successfully diagnosed and the commencement of treatment.

How can Naturediet help?

Cushing's disease can cause insulin resistance with some animals becoming glucose intolerant; it is therefore recommended that the animal be treated as a diabetic. The most suitable diet is one which contains high fibre and low protein. High fibre diets contain more complex carbohydrates. These have to be broken down into glucose before being released into the blood stream. This process takes time to occur thus helping to maintain stability in the level of glucose in the blood. Naturediet products are made to a consistent formula and contain complex carbohydrates and added fibre. Our Naturediet Senior/Lite diet is often recommended by veterinary surgeons as this has the higher fibre level and lower protein content.

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