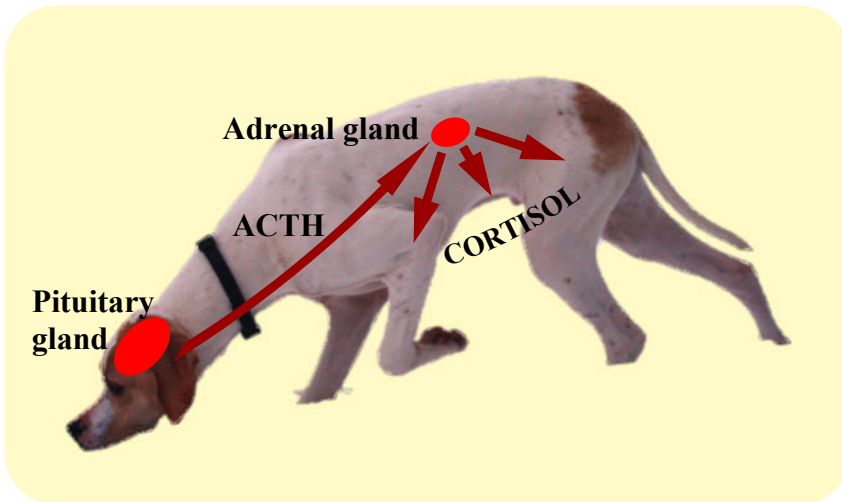


Cushing's disease



What is Cushing's disease?

Cushing's disease is overproduction of the steroid cortisol by the adrenal glands, which are situated next to the kidneys.

Cortisol production is stimulated by ACTH, which is produced by the pituitary gland, at the base of the brain.

There are two forms of Cushing's disease.

1. Pituitary dependent Cushing's, in which a small tumour in the pituitary gland stimulates excess cortisol production due to increased levels of ACTH.
2. Adrenal dependent Cushing's in which a tumour of one or both adrenal glands produces excess cortisol, without increased ACTH levels.

Most cases of Cushing's disease are pituitary dependent.

What does cortisol do?

Cortisol is normally produced at times of stress, and prepares the body for the "fight or flight" response. It has wide-ranging effects on several parts of the body, including the immune system, liver and kidneys. Long term overproduction of cortisol causes damage to these body systems.

Signs of Cushing's disease

- Increased appetite
- Increased drinking
- Weight gain
- Pot belly
- Hair loss
- Muscle wastage
- Increased urination

Cushing's disease usually occurs in older dogs, and is more common in toy breeds.

How is Cushing's disease diagnosed?

Cushing's disease can be diagnosed by determining the level of cortisol in the blood. Because of the normal variation in cortisol levels, an ACTH stimulation test is used, to test the maximum amount of cortisol the adrenal glands can produce.

Routine blood tests, and sometimes urine tests, are usually run first to rule out other causes of the symptoms.

Ultrasound scans may be carried out to look for adrenal tumours, and a blood test for ACTH levels can also be used to test for pituitary dependent Cushing's.



How is it treated?

Cushing's disease is usually treated using capsules which block production of cortisol by the adrenal gland. The capsules are given daily, by mouth.

Close monitoring of treatment is important to ensure the appropriate dose rate of treatment - as underdosing will fail to control the disease, while overdosing can cause heart and kidney problems. Blood tests are used to ensure the correct dose, and to check kidney function. An initial blood test is carried out ten days after starting treatment, and thereafter blood tests are recommended every one to three months, depending on the response to treatment.



What is the prognosis?

With close monitoring and appropriate treatment dosing, most dogs with Cushing's disease will lead a normal life for several years. Dogs with malignant adrenal tumours carry a poor prognosis as the tumour tends to spread - however these account for less than 10% of cases of Cushing's disease.

Occasionally the brain tumour in Pituitary dependent Cushing's disease can cause behavioural problems, however this is not common.

The key to successful treatment is close monitoring and veterinary supervision.

Left untreated, Cushing's disease tends to cause several problems over time, including diabetes, heart disease and kidney disease.

For more information on Cushing's disease and its treatment, please contact the surgery.