**Cushing’s Disease (Hyperadrenocorticism)**

**What is Cushing’s Disease?**

Cushing’s Disease is where the adrenal glands are over producing certain hormones.  Too much of the hormone called *cortisol* is responsible for the clinical signs seen with Cushing’s Disease.

There are two ways in which Cushing’s disease can occur.  Firstly and most commonly (in approximately 85% of animals), is a tiny tumour on the pituitary gland in the brain.  This causes the body to not recognise when there is enough cortisol and therefore it tells the adrenal glands to keep producing cortisol.  The second and far less common cause is a tumour on the adrenal gland itself.

**What are the clinical signs?**

The most common clinical signs associated with Cushing’s Disease are:

1. Significant increase in appetite, often with weight gain
2. Increase in water intake and urination
3. Panting
4. Pot-bellied appearance
5. Poor hair coat - often with symmetrical thinning of hair over the body
6. Lethargy

**How is Cushing’s diagnosed?**

The presence of some or all of these clinical signs, in addition with the age and breed of the dog can strongly increase suspicion of the disease.  The first step is to perform screening blood and urine tests. This will help to further increase suspicion of the disease but more importantly, rule out other disease which could be responsible for similar signs.

Specific tests of adrenal function will then be performed.  There are two different tests which can be performed to diagnose a dog with Cushing’s Disease.  Some animals require just one of these tests to be performed for a positive diagnosis, others need both to be done.  Unfortunately, there is nothing to determine those animals for which both tests will be required.

**How is treatment undertaken?**

The drug we use with good success in achieving long-term control is called mitotane.  This drug reduces the size of the adrenal gland so that it will produce the amount of cortisol the body needs, no more.  This is achieved in two stages.

1. *Induction Phase* - this is where the mitotane is given TWICE DAILY for up to 5 days.  The aim of this phase is to reduce the production of cortisol back to the normal level.
2. *Maintenance Phase* - this is where the mitotane is given TWICE WEEKLY for life.  The aim of this phase is to keep the adrenal glands producing the right amount of cortisol.

**Do most dogs easily and quickly respond to treatment?**

Yes.  Dogs diagnosed with Cushing’s disease generally respond very well to this medication.  Determining the ideal maintenance dose can sometimes be challenging though. Some dogs in the first few months of treatment will ‘yo-yo’ between too much and too little cortisol.  Do not despair! With commitment and close observation along with regular monitoring blood tests, adjustments to dosing will result in tight control.

**My dog seems happy - do I have to treat?**

Cushing’s disease is not a life-threatening disease and many dogs live with it without treatment.  Left untreated, it will shorten the life expectancy and the clinical signs will get worse with time.  When a dog is successfully treated and good control is achieved, they will be MUCH happier - more energy, reduced hunger and thirst, less panting.

**Can the mitotane permanently affect the adrenal glands?**

Some dogs will be particularly sensitive to the mitotane in the induction phase and end up producing too little cortisol.  This is called Addison's Diseaseor *hypoadrenocorticism*.  This disease can be life threatening and require emergency treatment.  In the few dogs in which this occurs, MOST will recover enough adrenal function after a couple of weeks and then start maintenance dosing.  Very occasionally, the animal will remain Addisonian and require lifelong treatment.

**How often does my dog need monitoring blood tests?**

In the first few months, monitoring blood tests (called ACTH stim tests) will need to be performed every 2-4 weeks.  The frequency is dependent on how quickly and easily good control is achieved. Once well controlled, an ACTH stim every 3 months is needed to ensure control is being maintained.