## **Adrenal Gland Disease**

Adrenal Gland Disease is becoming more common with the larger "ferret farms" shipping kits to pet stores. It is a complex disease with symptoms that are frequently evident by just looking at the ferret. That's not to say that every ferret displaying some of the symptoms have this disease, but it is a possibility. If you see anything out of the ordinary happening with your ferret, **go see your vet.** The information on this handout is from experienced ferret owners, not a vet. It is meant to be an informative guide only.

The adrenals are a complicated pair of small glands lying on both sides of the chest. The left gland is the gland that is most commonly affected by this disease and it is also the easier of the two to remove. The right gland lies very close to a blood vessel, the vena cava. If nicked or cut during the surgery, it can lead to the ferret bleeding to death. It is becoming more common (and safer) to see the gland(s) tissue being frozen rather than actually removed. The process of freezing the tissue causes the gland to shrivel up and die and the body reabsorbs the tissue.

Some of the most frequent signs of Adrenal Gland Disease are: fur loss, a decrease in appetite, extreme itching, decreased energy, mounting and sexual aggression, prostate problems (in males), or swollen vulva (in females). A common myth is that fur loss starts on the tail first. As the gland(s) enlarge and begin to secrete too many hormones, the ferret becomes increasingly bald. It can start anywhere but is can be seen as thinning between the shoulder blades, the top of the head, and between the toes, and of course, the tail as stated previously. However, a bald tail can also be the result of blackheads (look for little black dots on the tail) and can easily be treated by washing the tail daily for a week or so with Phisoderm. When in doubt, check with your vet.

The glands control many things, one of the most prevalent being the control of a number of hormones. They secrete steroids that are responsible for the "fight or flight" response, regulate mineral balances and sex hormones. When the adrenal(s) become enlarged, the ferret's system kicks into overdrive. This is not a disease that will just go away. One of the most deadly problems with adrenal lies with the male's prostate. It can become enlarged, so much so that the ferret cannot urinate. This then becomes an emergency situation. If left untreated, the effects of the increase in estrogen can result in the urinary complications as mentioned above, muscle wasting, hind end weakness and anemia.

There is a blood test that can be run called the Tennessee Panel, that measures the level of several things. However, it is very expensive and currently several weeks to complete. Usually, the diagnosis of Adrenal is reached by what symptoms are seen. If your ferret is generally healthy, surgery is a relatively safe procedure. Generally, Adrenal Gland Disease is seen in petstore ferrets starting around the age of four or five, however no ferret is immune to it. There is an alternative to surgery for ferrets that are in fragile health or too old or thin to survive surgery. Lupron is a synthetic hormone (it is given by injection) that only masks the symptoms. There is also a chance that the tumor may be malignant. However, the percentage of the adrenal tumor metastasizing (spreading) to other organs is small and the prognosis is considered to be the same as if it were benign.

No one really knows why the gland(s) enlarge although there is speculation that because people are keeping ferrets in the house, nature's light/dark cycles are unnatural for them and their bodies are adjusting to their human's schedule. Other factors may include nutrition, genetics, early spay/neutering, environmental factors or a combination of these things. Whatever the reason, Adrenal Gland Disease is a common and treatable disease in ferrets.