

Vet's Notes



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When the greyhound is severely stressed either physically, or psychologically, for any length of time, there is a release of the hormone Adrenalin from the inner segment of the Adrenal Glands (called the Adrenal Medulla) which are located on each side of the body adjacent to each kidney.

In actual fact, there is a range of Adrenalin Hormones e.g. Nor-Adrenalin and others - which are grouped into a category referred to as the Catecholamines.

If this Catecholamine release continued for too long, the greyhound would die from stroke or heart attack caused by the enormous rise in blood pressure resulting from these hormones.

However, the body avoids this, by reducing the effect of the Adrenalin and its related hormones, with another hormone known as Hydrocortisone which is produced by the outer coating of the Adrenal Glands (called the Adrenal Cortex).

Again, there is a range of Hydrocortisone related hormones grouped into the general category of Corticosteroids - all with similar effects.

The main effects of these Corticosteroids are:

- * To reduce the heat, redness, pain, and swelling of any inflammation, whether it be from bruising or other damage to muscle, bone, or nerve fibres - as seen for example in Track Leg, Metacarpal Periostitis, or even allergic symptoms - and
- * To combat the effects of severe or chronic stress within the body by producing a feeling of well-being and relief from anxiety, together with a

renewal of energy by raising blood glucose levels from body stores of glycogen.

There is an interesting side effect of prolonged Corticosteroid release in chronically stressed greyhounds, and that is a suppression of other types of hormones that are produced by the Pituitary Gland located at the base of the brain.

These include:

- * The Follicle Stimulating Hormone that aids sperm and egg production and available as Folligon.
- * Leuteininiing Hormone that aids release of eggs from the ovary and the maturation of freshly generated sperm and available as Chlorulon
- * Reduced Testosterone produced by the Testicle causing reduced libido - and -
- * Reduced Thyroid Hormone from the Thyroid Gland resulting in Bald Thigh Syndrome, Anaemia, and a feeling of lethargy.

DIAGNOSIS of the Stress Reaction, (which is really an - HYPERADRENOCORTICISM), is based on:

- * The recognition of the signs shown by the patient, AND, a recognition of the prevailing stressful circumstances. Remember, what stresses one greyhound may have no effect on another greyhound!

- * A Blood Test to confirm the problem.

This test, if positive for the problem will characteristically show a fall in the Total White Cell Count to around 2500 or less per cu ml, also, a rise in the ratio of Neutrophils to Lymphocytes (normally averaging 2:1); a fall in Lymphocyte count below 1000 per cu ml to around 650-800 per cu ml; often, a rise in

Cholesterol levels and Glucose levels ; an elevation in Total Protein due to some degree of Dehydration but with a fall in Globulin Proteins which are produced by Lymphocytes, and which are the greyhound's antibodies against disease and infection - that is why these patients are so prone to recurring minor infections requiring antibiotics from time to time.

- * Another sign of Hyper-Adrenocorticism is a slow healing rate for skin and other wounds, and a tendency for freshly healed wounds to open up again. Remember those recurring Track Leg skin splits?

* Caution must be exercised when interpreting blood tests taken from Hyper- Adrenocortic patients as many of the changes seen in the blood cell figures are similar to those seen in virus infections - so be guided by your veterinarian's clinical examination of the greyhound, as well as the blood test results.

THERAPY for HYPERADRENOCORTICISM

- 1 REDUCTION OF THE

STRESSFUL ENVIRONMENT -

In acute situations such as travelling by car or airline, this may not be easy, although rest alone may be adequate. Medication before travelling for the reduction of anxiety and tension should be considered employing a Tranquilliser such as Acepromazine (3mgm into muscle), or, Reserpine (0.25 mgm into muscle) - but do note that these medications may give a positive post-race swab for 5-7 days after the injection.

Alternatively, one may prefer to administer Tryptophane in doses of 500mgm, orally, together with 10 ml of Aminolyte 34X orally, twice daily

for the 5 days before travelling, including the day of travel, This will produce a reduction of anxiety and nervousness without any problem of a positive swab.

Restrict exercise to walking, swimming, free running for 3-7 days after arrival.

In chronic situations of stress such as very hot weather, aggressive kennel mates, excessive workload for that particular greyhound and so on, it may be best to rely on the use of Tryptophane (500mgm) plus the Aminolyte34X (10ml), both orally, twice daily, indefinitely - and that there is no risk of a positive swab.

In all cases do your best to minimise the stressful situation or circumstances for that particular greyhound.

Remember, you may have six greyhounds in your kennel, but only one with a spooky, nervous disposition leading to Hyper-Adrenocorticism resulting in reduced or variable performance - so learn to recognise the signs and employ appropriate measures to restore this greyhound to normal.

Another medication to reduce the stress reaction is Glutamine, given in doses of 500 mgm three times daily for 14 days, then twice daily for as long as required. Glutamine & Tryptophane work well together.

2 TREAT CHRONIC STRESS SYMPTOMS -

* Dehydration may be detected or suspected using the "skin pinch test" over the backline.

Lift a fold of skin and release it - if it

snaps back there is no dehydration - if the fold of skin stays there, or, returns slowly, then there is a degree of dehydration roughly equivalent in severity to the speed of return of that skin fold.

Treat with electrolyte supplement - especially Potassium (K Salt, Slow K), to aid retention of fluid, and be aware that high levels of corticosteroid causes a loss of Potassium which predisposes to Acidosis after a hard run. Medication with Florinef Tablets (Florinef, 0.1mgm) using half a tablet twice daily for 5 days, then half a tablet daily for 7-14 days may be indicated, but you must keep up the Potassium supplement with this medication,. Also be advised by your veterinarian regarding the implications of a positive swab with Florinef.

* Check the skin at the back of the thighs for hair loss, indicating "Bald Thigh Syndrome".

If detected or suspected, request a "Free T 4" blood test to determine the extent of suppression of Thyroid function.

This will provide the information necessary for calculating the dose of Thyroxine (Thyroid Hormone Supplement) needed by the patient (= Oroxine, or, Thyroxine Tablets).

* The Hormone Serotonin is produced naturally in the brain of greyhounds, and is associated with rest and reduced tension or anxiety. This is destroyed by the Adrenalin & corticosteroids of the stress reaction.

However, brain stores of Serotonin can be improved by administering the amino acid Glutamine, in doses of 500mgm three time daily for 14 days, then twice daily indefinitely throughout the period of stress reaction without any problem of a positive swab too!

* Maintain a good general Mineral/ Vitamin Supplement in the food daily - especially including at least 50 mgm of nonacidic Vitamin C daily (= Sodium or Calcium Ascorbate).

* Watch the workload - keep the greyhound fit but fresh with walking, swimming, free runs, handslips and straight runs rather than regular weekly trials. Space the circle runs to 10-14 days apart for these patients.

* Keep on the lookout for minor infections by conducting a simple blood test once a month.

This will show up any anaemia as well.

Most trainers will be aware of any major infection affecting a greyhound by the obvious signs of illness, but minor infections can be much more difficult to recognise, especially in their early stages - so, early prevention is better than a delayed health risk and lost performance or time out of racing.

* Anabolic Steroids will prevent loss of muscle, weight, and performance. Try Stanazol, .5ml into muscle once each 5 days, or, Nandoral, one tablet twice daily for 7 days, then one tablet daily.