

## **Physical Examination of the racing Greyhound.**

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A physical examination of a racing greyhound will reveal a number of painful muscles, joints and bones. There is a need to ascertain which painful areas are significant and require treatment.

The recognition of common injury patterns allows an understanding of the list of injuries detected and in particular helps to decide on the severity of the overall pain state.

The history will frequently indicate the probable injury pattern. A complete examination is always required.

A description of the most recent gallop will in most cases narrow the likelihood of possible injuries and suggest their location. For example, running wide at the corner would indicate a problem in the right hind leg, either medial vastus muscle injury or hock injury being the most likely explanation. Not running the last section in the anticipated time would suggest a left hind leg problem, in particular the origin of the lateral vastus muscle.

Trainer observation of resolved lameness and length of time to resolution, e.g. front leg mild lameness of short duration is indicative of a deltoid injury, while a more persistent lameness suggests a carpal problem.

Be aware that some gallop histories are indicating that the animal is unhealthy or has lost their competitive desire. Some slow early dogs and dogs running wide are in fact keeping their distance from the opposition so as not to be interfered with. A solo trial will often produce a different performance in these cases. Slow final section may be due to health issues (liver, infection, anaemia or cramping) or to an injury in the left hind leg.

Slow post gallop recovery and indifferent mental attitude for some days after a gallop may indicate the presence of a significant pain state or the onset of poor health.

**Injury patterns commonly observed in the racing Greyhound** (no particular order).

### **Running wide at the corner(s).**

Almost always the problem is to be found in the right hind leg with or without a right fore leg compensation.

The Medial vastus will be painful on palpation; there will be a variable degree of pain in the low bicep / calf. A strain of the tarsus may be present (fracture or chip of tarsus will present as a lameness of variable duration). In a competitive animal there will be compensatory injury in the right triceps, latissimus +/- a mild deltoid, in some cases a painful right carpus is also apparent.

If the history includes an increase in last section time or any degree of polydipsia – polyuria (PD-PU) compensation will also have occurred in the left hind leg.

Young dogs with a left or right metacarpal injury may run wide but usually not as wide those with a right hind injury.

Less common variations on this pattern include right side abdominals / psoas, right fibula injury, right metatarsal injury.

Treatment: Identify and adjust vertebral problems (chiropractic), injection<sup>1</sup> into sore muscle areas until pain state subsides, treat tarsal / carpal pain (strain) as indicated. The next gallop should be up the straight and the action of the right hind should be observed.

### **Right hind incorrect galloping action**

The leg is held too far away from the body (the trainers describe the galloping action as the leg taking a circular lateral action).

This is primarily a right medial vastus injury *with concurrent coupling discomfort* (ext oblique and transverse abdominal); the tensa fascia (+/- proximal lateral vastus) is often painful.

Treatment – identify and treat chiropractic issues, inject painful muscle areas.

### **Decreased first section speed.**

Often the problem is not physical. If a dog is repeatedly interfered with shortly after leaving the box it can lose its desire to compete.

The most common explanation for lost early speed is lumbar discomfort due to chiropractic problems. Often bilateral hamstring / calf / distal bicep problems are found.

### **Decreased last section speed.**

A profile may be indicated as poor health is often found in these dogs.

Injured left origin of lateral vastus muscle is the most common injury found in this category.

Detection of this injury requires a palpation technique different to that used on all other muscles. (As demonstrated)

*This injury will invariably lead to elevated CPK levels.*

The tensor fascia and left medial vastus will show some discomfort; often the lateral calf / hamstring may also be involved. A left tarsal or metatarsal injury is occasionally the cause of the vastus injury. Post race PD-PU and mild dehydration will be observed in more severe cases which only occur in good chasers that have a high pain tolerance. Treatment: the vastus injury *is the only muscle injury* that may require the inclusion of a small dose of *cortisone mixed with traumeel* (0.1 ml Voren plus 0.9 ml Traumeel). This mixture is only used when polydypsia is significant and the trainer has agreed to not race the dog for a minimum 10 day period.

Where possible always re-examine, as complete resolution of the pain state occurs *after* PD-PU has resolved.

If dehydration is apparent and / or the mental attitude is subdued, consider 1 litre Hartmans<sup>2</sup> solution intravenously (I prefer rapid administration i.e. 1 litre / 30 minutes).

## **Lameness**

(The following is an incomplete list but it does include the most common causes seen in greyhound practice)

- Foreleg - deltoid muscle spasm (a mild lameness of short duration)
- the origin of the common digital flexor (mild )
  - sesamoid, pad injury, fractured phalanges, partial or complete phalangeal collateral ligament rupture.
  - fracture of the distal ulna.
  - scapular fracture, particularly after a fall while galloping.
  - carpal injury, metacarpal injury (left 5, right 2). Pain may or may not also be apparent in the shoulder muscles. The degree of shoulder pain will accurately reflect the severity of damage in the bone / joint.
  - corns, papilloma, foreign bodies, cuts, abrasions, infections.
  - shoulder OCD in the young dog.
  - damage to the dew claw and flexor tendons of the metacarpal region while painful do not invariably cause visible lameness.
- Hind leg
- tarsal acute strain and fracture, metatarsal fracture, proximal fibular fracture.
  - stifle strain (pain on extension of the stifle joint accompanied by pain in all the medial stifle muscles with a toe out stance and incomplete weight bearing.
  - complete or partial tear of the tensor fascia and gracilus often cause little or no gaiting abnormality or lameness.

## Appendix

### 1. Injectable solution for muscle spasm and trigger point therapy.

Any non irritant solution can be used - a greater part of the effect is due to the micro trauma caused by needle insertion. Dry needling is very effective but requires that the needle be withdrawn and reinserted many times leading to a very painful treatment method.

Commonly used mixtures - Normal saline, saline and vitamin B12.  
Adenosine triphosphate mixtures.  
Antibiotic (Lincocin).  
Dilute low dose short acting cortisone.  
Homeopathic preparation – Traumeel .  
Coforta.

I strongly advise against any mixture that includes a sclerosing agent on the theoretical basis that fibrosis is not required and it will reduce the flexibility of muscle tissue. Even in cases of gross tearing (gracilus, tricep, tensor fascia) the natural healing reaction will produce an abundance of fibrosis to the extent that while muscle continuity will be restored, flexibility will be reduced. The treatment of gross tears requires controlled early galloping to stretch the scar as it is being produced to maintain flexibility.

2. Fiona REID\*, Dileep N. LOBO\*, Robert N. WILLIAMS\*, Brian J. ROWLANDS\* and Simon P. ALLISON† (Ab)normal saline and physiological Hartmann's solution: a randomized double-blind crossover study.

2. FDA <http://www.drugs.com/pro/lactated-ringers.html>

2. D.A.Storey Hyperchloraemic Acidosis : Another misnomer Clinical Practice Review