

# Vet's Notes

By JOHN KOHNKE

**Greyhounds** are particularly prone to developing cramped muscles if they are not fit enough for the speed or distance of racing, or if their diets are imbalanced or lack physiological salts such as potassium to counteract increased losses.

Cramping is the failure of a contracted muscle to relax so that it remains contracted and appears hard or “knotted up” when examined.

Studies indicate 10% of cramping occurs in the shoulder over the front triceps area, 30-40% in the back line muscles, and more than 50% of cramping involved the larger hind limb driving muscles.

Cramping can occur before a race, during a race, or within 60 minutes after a race.

One major muscle, such as the semitendonsis, or a group of muscles may become knotted as muscle relaxation is prevented.

In hard walking, excitable greyhounds, or those that become stressed when travelling or waiting in the kennels or starting boxes prior to racing, cramping can severely affect their performance.

Feeding a high starch diet, such as more than two slices of bread or a high starch, low protein dry food or biscuit, can increase the risk of cramping in some greyhounds.

A lack of vitamin E, calcium and electrolytes such as potassium and magnesium in the diet can also increase the frequency of muscle cramps.

## **Subclinical cramping**

Up to 40% of greyhounds that finish poorly in a race and slow down in the home straight are likely to have developed a less acute form of muscle cramping, often referred to as subclinical cramping.

Affected greyhounds do not show obvious signs of restricted stride, hunching in the back or dragging a leg as is typical in more severe forms.

However, they will react to pressure applied over the muscle groups involved when caught and examined immediately after racing.

These symptoms often disappear by the time the greyhound is rested and walked back to the kennels, as walking will often relieve the knotted muscles and restore normal muscle function.

Often this form of cramping is confined to the hindlimb driving muscles in then left hind leg, which tire more quickly in an unfit greyhound, or one that is suffering from dehydration and reduced blood profusion or body salt imbalances in the blood.

If these greyhounds are not examined to identify the

subclinical muscle cramp, the underlying reason for repeated poor performances may not be recognised.

## **Severe cramping**

Greyhounds are most likely to cramp up after the first 300 metres of a race.

In an unfit or an anaemic greyhound, this is thought to be caused by oxygen debt in the rapidly contracting muscles during the gallop.

Cold conditions, particularly at night race meetings, also increase the risk of cramping, especially in greyhounds that have been kennelled for long periods waiting for later races.

Nervy, excitable greyhounds, especially bitches, are more likely to cramp if not warmed up properly by a brisk walk or muscle massage prior to being boxed.

The cramped muscles feel firm, hard and knotted, and if cramping occurs in the hind limb driving muscles, the greyhound will be reluctant to walk because of the pain and restriction in stride.

## **Exercise hyperthermia**

This is associated with heat stress from long distance travel, over-excitement in the kennels, and can also be due to inherited risk of cramping referred to as Exercise Induced Malignant Hyperthermia in certain bloodlines.

Lactic acid levels in the muscles and body temperature reach their peak immediately after a race.

This condition can lead to severe pain, distress and internal damage to the affected muscles if a greyhound overheats during a race or gallop.

Cramped muscles virtually break down in their structure, with protein loss and pigment excretion, leading to dark urine, dehydration and loss of body weight and muscle mass in severe cases, often referred to as exertional rhabdomyolysis.

Hot weather, dehydration and build-up of lactic acid in the driving muscles can result in an acute acidosis syndrome caused by physical stress due to an extreme effort, often combined with dehydration or electrolyte imbalance.

*\* Reprinted from the Greyhound Star England's foremost greyhound racing publication.*