

Balancing the Diet for Athletic Performance

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Introduction

The Greyhound sprint athlete has unique nutritional requirements for speed, stamina, strength and soundness. Many rearers and trainers feed home-mixed diets using their own combinations of fresh-meat, vegetables, and proprietary dry complete dog foods and supplements. As a result of this largely unscientific approach to feeding, many greyhounds suffer impaired athletic performance due to nutritionally unbalanced diets fed during both the rearing and competition phases of their careers. Proper diet balance can improve lifetime performance.

Digestive system

Dogs are natural carnivorous omnivores with a short simple digestive system including a large stomach, designed to eat small numbers of relatively large meals. Food is bolted with little chewing or saliva addition and then moves quickly through the digestive tract. Food must be highly digestible and dogs, like all mammals, can't digest fibre.

Nutrient Requirements

Although pet dog nutrition has received more focus, research-based nutrient requirements for greyhounds are available. The US Nutrient Requirement Council's (NRC) *"Nutrient Requirements of Dogs and Cats, 2006"*, published by the National Academy of Sciences is a useful reference (www.nap.edu).

Energy and Protein

Dietary Energy level and source are critical for performance. Dogs, as natural hunters, are designed for low carbohydrate diets. Greyhound muscle is made up of mainly fast-twitch fibres capable of metabolising fat twice as fast as a human athlete. Total diet recommendations for high-energy complete dry racing foods are "medium to high Fat" (14.4-24%) and "moderate Protein" (24%). Lower values are recommended for lower energy foods.

Minerals & Vitamins

Mineral balance is important particularly during the rearing phase for proper bone mineralisation and soundness. Mixing other ingredients with complete dry food can upset the mineral balance with long-term consequences. Proper Vitamin nutrition is important at all stages. Antioxidant vitamins including Vitamin E and natural tocopherols, Vitamin C and Carotenoids can improve athletic performance, particularly important on high fat diets.

Fresh Meat

Fresh meat is popular in home-mixed diets for adult racing dogs. However, lean meat provides much higher protein and lower fat levels than those recommended above for adult racing greyhounds, and without bone, meat is very deficient in minerals, particularly calcium for bone strength. Adding fresh meat to dry "complete dog foods" therefore unbalances the total diet. Fresh meat also poses a disease threat and increases the workload.

Vegetables

Many trainers like to feed fresh vegetables for various reasons including variety. At higher feeding rates, diets need to be rebalanced for the particular vegetable used. Potatoes have starch and protein levels similar to cereals. Peas are high in starch but much higher in protein. Beetroot provides sugar and fibre but is 90% water.

Milk

Rearers often feed fresh milk as a source of quality proteins and calcium. However, maturing dogs lose the ability to digest milk sugar (lactose) and are prone to lactose intolerance leading to flatulence and loose faeces.

"Trucal", Glanbia's milk mineral extract provides the bone-building benefits of milk for use in a dry dog food.

Essential Fatty Acids

Precise fatty acid balance is important for optimum performance. Omega 6 fatty acids are usually well supplied from poultry fat, soya oil and cereals in commercial dog foods. Strong Omega 3 EFA levels, important for heart health, skin condition, joints and nervous system will be supplied from linseed/flax, rape or fish, in better foods.

Stool quality

Quality food produces quality stools. Highly digestible, high energy foods require lower feeding rates and produce less indigestible residue with better odour. Meat protein is more digestible than vegetable protein. Rice and Corn (Maize) are more digestible than Wheat. Fibre is important. A low total diet fibre level combined with a precise soluble/insoluble fibre balance is critical for stool quality. And vitally, the dog food must be properly cooked to guarantee digestibility and digestive health. Better foods will include specific plant extracts e.g. plant saponins to further reduce faecal odour. The ingredient list on a food bag provides useful quality information. Inferior greyhound foods produce large quantities of poorly formed, unpleasant smelling residue!

Super-Premium Complete Foods

Most rearers and trainers use balanced "complete" dry greyhound foods but don't feed them as complete foods. Fresh meat, milk, vegetables, oils, and supplements are commonly added so diets are no longer balanced. New higher quality "super-premium" complete dry greyhound foods can eliminate the necessity to home-mix.

Gain Record Breaker and **Gain Puppy & Sapling** combine the latest nutrition with specialist US dry dog food manufacturing technology to provide a highly convenient totally balanced nutrition option from birth to track.