

Energy and the Canine Athlete

Understanding how your canine athlete uses energy is important when trying to improve performance. Fatigue can lead to a sluggish response to commands and injury resulting in an overall diminished performance. Preventing or decreasing fatigue may be the difference between winning or merely finishing.

Canine athletes derive energy primarily from fats in the form of free fatty acids (FFA) and carbohydrates in the form of glycogen. FFA's are the preferred source of energy for endurance activity. In addition, fat stores in the dog are generally large and easily replenished with a balanced diet. Glycogen is necessary for the initial minutes of activity and for bursts of energy such as sprinting. Glycogen stores, however, are relatively small and not so easily replenished. Dogs have relatively small glycogen stores in their muscles that can be quickly depleted. In general, a dog on a well balanced diet will replace, on average, only 40% of pre-exercise levels of glycogen in a 24 hour period. Consider the canine athlete working or competing on consecutive days. That dog will eventually deplete its glycogen stores leading to fatigue and diminished performance.

Fortunately, we can improve glycogen replacement by taking advantage of GLUT4 pathways on muscle cells that are active during exercise and for short periods after exercise. By providing a "good carbohydrate" within 30 minutes of exercise, glycogen stores can be refilled to approximately 85% of pre-exercise levels. That's more than twice the glycogen restored!

Glyco-Gen Energy Shakes & Bones

Glyco-Gen Energy Shakes and Bones contain the perfect canine carbohydrate plus protein. By using a specific type of carbohydrate called maltodextrin, Glyco-Gen Energy Shakes and Bones are able to replenish the canine athlete's glycogen stores in the muscle when it is needed most... within 30 minutes of exercise.

The maltodextrin in Glyco-Gen Energy Shakes and Bones is rapidly absorbed without drawing water into the gut, thereby avoiding gastric upset and the potential fluid imbalance that can lead to dehydration. Once in the bloodstream, maltodextrin is readily utilized by the GLUT4 pathway without the release of insulin and is transported into muscle cells where it is stored as glycogen. The added protein in Glyco-Gen Energy Shakes and Bones improves the muscle uptake and storage of maltodextrin. In addition, the protein provides essential building blocks necessary for muscle repair resulting in healthy muscles with a good energy store!

Using Glyco-Gen Energy Products

After exercise: Give 1 scoop (1 scoop = 1 tbs) per 10# dog weight within 30 minutes of exercise. A second dose 45-60 minutes later may provide additional benefit to a very exhausted dog. Be sure to allow the dog to rest (no vigorous exercise) for at least 2 hours for best results.

Before exercise: Give a half dose 15-30 minutes before exercise. This will provide a readily available source of carbohydrate for the dog to use before using stored carbohydrates thereby increasing the total carbohydrates available. If using the Glyco-Gen Shake mix in this manner, be sure to use the lowest volume of water necessary. Be sure to follow with a full dose after exercise for the best results.

During exercise: Give half doses every 45-90 minutes during long or strenuous exercise to slow depletion of glycogen from the muscles. If using the Glyco-Gen Shake mix in this manner, be sure to use the lowest volume of water necessary. Be sure to follow with a full dose after exercise for the best results.

Glyco-Gen Energy Shake Mix and Bones contain: Dextrins, Dried Whey, Vanilla