

## **Doesn't sugar/starch do the same thing?**

Sugars (glucose, fructose, corn syrup) are very hydrophilic. That means they need to be given with large amounts of water or they may draw water into the gut from the body. In some dogs this causes gastric upset (vomiting/diarrhea) and even dehydration! Starches (bread, potatoes, rice, barley) require digestion to break them down into sugars that can be absorbed. This process takes time and, unfortunately, the window of opportunity to utilize the GLUT4 pathway closes long before the starch can be fully digested.

## **What's so bad about insulin?**

Insulin is necessary to transport sugars into cells. As long as enough sugar is present, the body is balanced. Unfortunately, the sugar level in the blood drops before the insulin level, resulting in hypoglycemia (low blood sugar). Hypoglycemia causes fatigue and a sluggish response to commands. This effect is especially evident when large doses of sugar (or starches) are given.

## **Why doesn't maltodextrin release insulin?**

Maltodextrin is not a sugar. It is a small complex carbohydrate that doesn't trigger the release of insulin.

## **When do I give Glyco-Gen Energy Shakes?**

Glyco-Gen Energy Shakes should be given within 30 minutes of exercise. A second dose 45-60 minutes later may provide additional benefit to a very exhausted dog. In addition, if a dog tends to get exhausted during work, a half-dose given 15-20 minutes before work could prove helpful.

### ***Improved Energy!***

**Carbohydrates are the fuel of fast twitch muscle fibers used for sprinting, climbing, jumping . . ANY bursts of energy!**

### ***Improved Mental Ability and Focus!***

**Carbohydrates power the brain! As the stores are depleted, the dog loses focus and ability to respond to commands.**

### ***Improved Stamina!***

**Without "targeted nutrition", muscles can be depleted of their glycogen stores in 1-2 days.**

### ***Improved Recovery!***

**Replace up to 80% of carbohydrates used with "Glyco-Gen Targeted Nutrition"!**